Two Essays on Perceptions of Victimhood

by

Brendan Strejcek

B.A., The University of Chicago, 2006
M.Sc., Northwestern University, 2017

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

(Business Administration)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

March 2022

© Brendan Strejcek 2022
The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, the dissertation entitled:

Two Essays on Perceptions of Victimhood

submitted by Brendan Strejcek in partial fulfillment of the requirements for
the degree of Doctor of Philosophy
in Business Administration

Examining Committee:
Karl Aquino, Professor, Marketing and Behavioural Science, UBC
Co-supervisor

Katherine White, Professor, Marketing and Behavioural Science, UBC
Co-supervisor

Steven Heine, Professor, Psychology, UBC
Supervisory Committee Member

Mark Schaller, Professor, Psychology, UBC
University Examiner

John Ries, Professor, Strategy and Business Economics, UBC
University Examiner
Abstract

In this dissertation I explore the consequences of perceptions of victimhood in two substantive domains: intergroup conflict between disadvantaged groups and consumer hostility toward firms. In the intergroup conflict domain, I examine competitive victimhood, which is seeing one's own group as having suffered more than an outgroup (Young & Sullivan, 2016). In the domain of consumer/firm interactions, the service failure literature has considered consequences of service failures, such as consumer complaining behavior, and methods to recover from failures, but little work has considered the psychology underlying hostile reactions of consumers to firms following commercial interactions where service failure is absent. Hostile reactive attitudes prompted by victim framing provides a unifying framework with which I consider intergroup relations between members of disadvantaged groups and interactions between consumers and firms.

Essay 1 explores the conditions under which disadvantaged groups engage in mutual derogation. Particular identities, often connected to perceptions of historical injustice or contemporary discrimination, suffuse social life, both in political discourse (Fukuyama, 2018; Schlesinger, 1998) and, increasingly, both the marketplace and the workplace. Historically, groups have mostly sought portrayal as powerful, as power signified virtue. However, in modern times, portrayal as a victim is one way to justify concern and extract resources, providing a benefit from competing for victimhood. I propose that competitive victimhood of this form emerges from a zero-sum perception that resources available are limited.

Essay 2 identifies a practical consequence for firms and consumers of victimhood beliefs. Specifically, I investigate victim signaling behaviors (Ok et al., 2020), a stable individual difference. Across four studies, I demonstrate that victim signaling is positively associated with hostile reactive attitudes toward firms when service is neutral (compared to service failure). Essay 2 contributes to the existing literature on consumer reactions to service failure and individual differences in victim signaling behavior.
Abstract

Together, these two chapters show how victim framing influences intergroup relations and consumer to firm dynamics. I propose, and find evidence for, intrapsychic processes to explain the relationships between victim framing and competitive victimhood (zero-sum thinking) and between victim framing and hostile reactive attitudes (consumer perception of discrimination).
Lay Summary

This dissertation investigates two aspects of victimhood perception. In the first part, I examine competitive victimhood between two disadvantaged groups, where groups struggle over recognition of suffering. I propose that zero-sum thinking, the belief that resources are fundamentally limited, like a pie of fixed size, is one psychological explanation of competitive victimhood between disadvantaged groups. In the second part, I examine reactions of consumers to firms following commercial interactions, showing that consumer self-perceptions involving victimhood are associated with negative reactions. Based on these results, I discuss implications of victimhood perception in general for social interactions involving members of identity-based groups.
Preface

I am the primary author of the work presented in this Ph.D. dissertation. I performed the literature review, developed the hypotheses, designed the experiments, collected the data, analyzed the data, and prepared the manuscript. I discuss additional contributions below.

For essay 1, Karl Aquino and Katherine White assisted in designing the experiments and provided intellectual contributions.

For essay 2, Karl Aquino and Katherine White assisted in designing the experiments and provided intellectual contributions. Ekin Ok discussed the design of study 3 with me.

The UBC Office of Research Services Behavioural Review Board (Human Ethics) provided ethical approval for all experimental studies under the following certificates: Essay 1: H19-01656, Essay 2: H18-02925.
# Contents

Abstract ................................................................. iii

Lay Summary ............................................................ v

Preface ................................................................. vi

Contents ................................................................. vii

List of Tables .......................................................... xi

List of Figures .......................................................... xii

Acknowledgements ...................................................... xiii

1 Competitive Victimhood Between Disadvantaged Groups ............... 1

1.1 Conceptual Development ........................................ 3

1.2 Competitive Victimhood Between Disadvantaged Groups .......... 4

1.3 Zero-Sum Thinking ................................................ 6

1.4 Social Identity Theory ........................................... 7

1.5 Hypotheses ........................................................ 10

1.6 Studies Overview ................................................ 13

1.7 Study 1A: Twitter #BiVisibilityDay ............................ 15

1.7.1 Data Description ............................................. 16

1.7.2 Method ....................................................... 16

1.7.3 Results ....................................................... 18

1.7.4 Discussion .................................................... 18

1.8 Study 1B: Reddit r/NonBinary .................................... 19
## Contents

1.8.1 Data Description .................................................. 19
1.8.2 Method ................................................................. 20
1.8.3 Results ................................................................. 20
1.8.4 Discussion ............................................................. 21
1.9 Study 2: Lay Beliefs of Attitudes Between Disadvantaged Groups . . . . . . . . . . 22
  1.9.1 Method ................................................................. 22
  1.9.2 Results ................................................................. 23
  1.9.3 Discussion ............................................................. 24
1.10 Study 3: Zero-Sum Thinking and Competitive Victimhood ............................. 24
  1.10.1 Method ................................................................. 25
  1.10.2 Results ................................................................. 27
  1.10.3 Discussion ............................................................. 31
1.11 Study 4: Minimal Group Paradigm ...................................... 33
  1.11.1 Method ................................................................. 34
  1.11.2 Results ................................................................. 37
  1.11.3 Discussion ............................................................. 41
1.12 General Discussion ..................................................... 43
  1.12.1 Limitations .......................................................... 45
  1.12.2 Future Directions ................................................... 46

2 Victimhood Perception and Commercial Interactions ................................... 50
  2.1 Hostile Reactive Attitudes .............................................. 52
  2.2 Virtuous Victim Signaling .............................................. 53
  2.3 Hypotheses ............................................................... 54
  2.4 Study 1: Customer Reaction to Service Failure .......................... 55
    2.4.1 Method ................................................................. 55
    2.4.2 Results ................................................................. 57
    2.4.3 Discussion ............................................................. 59
  2.5 Study 2: Customer Reaction to Service Failure (Conceptual Replication) ........ 59
    2.5.1 Method ................................................................. 59
B.3 Chapter 1 Study 4: Minimal Group Paradigm .................................................. 111
B.4 Chapter 2 Study 1: Customer Reaction to Service Failure .................................. 113
B.5 Chapter 2 Study 2: Customer Reaction to Service Failure (Conceptual Replication) 116
B.6 Chapter 2 Study 3: Customer Reaction to Product Failure ................................. 119
B.7 Chapter 2 Study 4: Consumer Perception of Discrimination ............................... 121

C Supplementary Analyses ......................................................................................... 124
C.1 Chapter 1 Study 2: Lay Beliefs of Attitudes Between Disadvantaged Groups .......... 124
   C.1.1 Sample Demographics .............................................................. 124
   C.1.2 Zero-Order Correlations ....................................................... 125
C.2 Chapter 1 Study 3: Zero-Sum Thinking and Competitive Victimhood ................... 126
   C.2.1 Sample Demographics .............................................................. 126
   C.2.2 Zero-Order Correlations ....................................................... 127
   C.2.3 Moderation by Social Dominance Orientation .......................... 128
   C.2.4 Group-Based Disadvantage Beliefs ........................................ 128
C.3 Chapter 1 Study 4: Minimal Group Paradigm ..................................................... 129
   C.3.1 Sample Demographics .............................................................. 129
   C.3.2 Zero-Order Correlations ....................................................... 130
C.4 Chapter 2 Study 1: Customer Reaction to Service Failure ..................................... 131
   C.4.1 Zero-Order Correlations ....................................................... 131
C.5 Chapter 2 Study 2: Customer Reaction to Service Failure (Conceptual Replication) 131
   C.5.1 Zero-Order Correlations ....................................................... 131
C.6 Chapter 2 Study 3: Customer Reaction to Product Failure .................................. 132
   C.6.1 Zero-Order Correlations ....................................................... 133
C.7 Chapter 2 Study 4: Consumer Perception of Discrimination ............................... 133
   C.7.1 Zero-Order Correlations ....................................................... 134
# List of Tables

1.1 Chapter 1: Studies Overview ........................................... 14
1.2 Twitter: Regression Results (DV: Sentiment Composite) ............ 18
1.3 Reddit: Regression Results (DV: Sentiment Composite) ............. 20
1.4 Reddit: Regression Results, 10+ Words (DV: Sentiment Composite) 21
1.5 Summary of Scenarios and Expected Group Attitudes ................. 23
1.6 Minimal Group Paradigm: Regression Results (DV: Competitive Victimhood) .... 28
1.7 Study 3: Regression Results (DV: “Devalues” Measure) ............. 30
1.8 Regression Results (DV: Attitude Measure) .............................. 30
1.9 Ingroup Favoritism Choice Matrix .......................................... 37
1.10 Minimal Group Paradigm: Regression Results (DV: Competitive Victimhood) ...... 38
1.11 Minimal Group Paradigm: Regression Results (DV: Ingroup Favoritism) .... 40

2.1 Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes) .... 57
2.2 Regression Results Victim Signaling (DV: Hostile Reactive Attitudes) ........ 58
2.3 Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes) . 59
2.4 Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes) .... 62
2.5 Regression Results Victim Signaling (DV: Hostile Reactive Attitudes) ........ 63
2.6 Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes) . 63
2.7 Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes) .... 67
2.8 Regression Results Victim Signaling (DV: Hostile Reactive Attitudes) ........ 67
2.9 Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes) . 67
2.10 Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes) .... 70
2.11 Regression Results Victim Signaling (DV: Hostile Reactive Attitudes) ......... 71
2.12 Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes) . 71
# List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Sample Tweets</td>
<td>17</td>
</tr>
<tr>
<td>1.2</td>
<td>Study 3: Competitive Victimhood (Civil Rights Measure)</td>
<td>28</td>
</tr>
<tr>
<td>1.3</td>
<td>Study 3: Region of Significance (Civil Rights Measure)</td>
<td>29</td>
</tr>
<tr>
<td>1.4</td>
<td>Minimal Group Paradigm: Competitive Victimhood</td>
<td>39</td>
</tr>
<tr>
<td>1.5</td>
<td>Minimal Group Paradigm: Ingroup Favoritism</td>
<td>41</td>
</tr>
<tr>
<td>2.1</td>
<td>Study 1: Airline</td>
<td>58</td>
</tr>
<tr>
<td>2.2</td>
<td>Study 2: Airbnb</td>
<td>62</td>
</tr>
<tr>
<td>2.3</td>
<td>Study 3: Ikea</td>
<td>66</td>
</tr>
<tr>
<td>2.4</td>
<td>Study 4: Airbnb</td>
<td>70</td>
</tr>
<tr>
<td>2.5</td>
<td>Mechanism: Perceived Discrimination</td>
<td>72</td>
</tr>
</tbody>
</table>
Acknowledgements

Thanks to everyone at UBC who believed in me. Special thanks to Karl, Kate, Steve, Darren, and Joey.

Additionally, the encouragement of Ulf, Kent, Moran, Chelsea, Jessica, Chris (×2), Blake, and Megan was invaluable.

Finally, thanks to Chenbo for everything.
Chapter 1

Competitive Victimhood Between Disadvantaged Groups

... at one in their faith in the morality of mutual pity, as if it were morality in itself and the pinnacle, the attained pinnacle of man, the sole hope of the future, the consolation of the present and the great redemption from all the guilt of the past – at one, one and all, in their faith in the community as the saviour...

Beyond Good and Evil

Nietzsche (1886/2003, section 202)

Despite often sharing interests in the struggle against oppression, intergroup relations between disadvantaged groups are regularly contentious. For example, racial minorities have found the slogan “gay rights are civil rights” to be offensive, devaluing the historical experience of racial struggle (Victoria & Belcher, 2009, p. 4). The relations between other disadvantaged groups can be similarly antagonistic. A notable book by a lesbian feminist scholar, The Transsexual Empire (Raymond, 1979), argued that trans women appropriate female bodies and by so doing participate in patriarchal misogyny. The scholar Carol Riddell wrote that the work of Raymond “did not invent anti-transsexual prejudice, but it did more to justify and perpetuate it than perhaps any other book ever written” (Riddell, 2006, p. 131). People concerned about economic inequality have highlighted the negative consequences of gay gentrification on lower socioeconomic status communities (Knopp, 1997; Maxwell, 2019). The senator and presidential candidate Bernie Sanders has prioritized economic disadvantage (Waldman, 2015), and he was criticized for speaking relatively less about racial issues (Clark, 2019; Zhou, 2019). The wide variety of disadvantaged groups struggling
to highlight their own disadvantage poses the question of how to theoretically explain these similar but diverse phenomena. I propose to investigate the psychological processes involved in internecine struggle between disadvantaged groups, building on and extending the competitive victimhood and intergroup relations literatures. I will argue that zero-sum thinking—the belief that gains for one group necessarily come with losses for other groups—leads people with disadvantaged identities to highlight their own victimhood to recruit support from others. When people think there is only so much to go around the implicit belief may be that one must prove one’s own suffering to stand out from other potential causes.

Competitive victimhood is defined as a response to claims about the suffering of an outgroup by belief or counterclaim that one’s own group has suffered comparatively more (Young & Sullivan, 2016). For example, to engage in competitive victimhood, a white person who identifies as gay might, when confronted with claims about racism affecting an outgroup, focus on the suffering and discrimination gay people face. Research has documented competitive victimhood responses in struggles between adversarial groups, such as belligerents engaged in violent conflict or identity groups that sometimes come into direct social conflict, such as men and women. For example, Catholics and Protestants in the geopolitical conflict over Northern Ireland highlight their group’s own suffering when confronted with the suffering of an adversarial group (Noor, Brown, Gonzalez, et al., 2008). A series of experiments by Sullivan et al. (2012) found that when confronted with claims of sexism, men will respond by increasing belief in male disadvantage. In such direct, adversarial conflicts, the mantle of wronged party can be a valuable resource, vindicating aggression, justifying recompense, and garnering the sympathy of third parties.

The conflicts between disadvantaged groups described above, such as between self-identified feminists and transgender women, demonstrate a competition for victimhood, but the conflicts are often indirect, with groups lacking direct antagonism, unlike the direct antagonism studied by earlier research on competitive victimhood. Subsequent experimental work has examined support by members of disadvantaged groups for other disadvantaged groups when ingroup discrimination is salient (Craig et al., 2012; Craig & Richeson, 2014), but little research exists on competitive victimhood responses when confronted with the plight of other disadvantaged groups. In this dissertation, I document phenomena of derogation and competitive victimhood between disadvantaged groups. Additionally, I investigate the role of a potential mechanism to explain such competitive victimhood
1.1 Conceptual Development

Historically, groups, such as tribes, polities, or family lineages, have mostly sought to be portrayed as powerful, as power signified virtue. However, in modern times, portrayal as a victim is one way to recruit support from others (Campbell & Manning, 2018), leading to what Nietzsche characterized as a reversal of values (Nietzsche, 1887/1992). This perception of ingroup suffering expressed in competitive victimhood can either be in the same domain as that perceived in the outgroup or in a different domain. For example, people can focus on personal hardships of a general nature also suffered by an outgroup (Taylor Phillips & Lowery, 2015) or lack of recognition (compared to other groups) of specific past suffering (De Guissmé & Licata, 2017). Conceptually, one could see drawing attention to a previously overlooked aspect of suffering as being a viable way to recruit support, but most of the existing experimental work, such as that previously referenced by Young and colleagues, focuses on perceptions in the same domain (partly because it is easier to compare responses across groups to the same question).

Research has found that adversarial groups exhibit competitive victimhood responses (Noor et al., 2012). This research has often focused on intractable, violent geopolitical conflicts such as in the Balkans (Andrighetto et al., 2012), Chile (Noor, Brown, & Prentice, 2008), Northern Ireland (Ferguson et al., 2010; Noor, Brown, et al., 2008; Rosland, 2009) and Palestine (Maoz & McCauley, 2005). Researchers have examined the role of various beliefs in perpetuating such seemingly intractable conflicts (Bar-Tal, 1998, 2000), including beliefs about ingroup justness, societal security, positive ingroup self-image, victimization, and delegitimation of opponents. Participants in these struggles often perceive that gain for one side corresponds to loss for the antagonist (Nash, 1951; Różycka-Tran et al., 2015), and group members often see such conflicts as having zero-sum outcomes (Bar-Tal, 1998, p. 724). Additionally, research has found that zero-sum thinking is a significant, though not the only, predictor of conflict between groups that engage in competitive victimhood (Maoz & McCauley, 2009). Unlike other predictors, such as particular religious or ideological beliefs, zero-sum thinking is a psychological process which may support a general explanation of competitive victimhood dynamics across various group identities or societal contexts.
and so provides a good candidate for a generalized account of competitive victimhood processes.

The emergence of competitive victimhood responses has several consequences, including reinforcing a sense of historical victimhood (Bar-Tal, 2000), creating a victim perspective (Bar-Tal, 2007), increasing ingroup identification (Kelman, 2008), and decreasing the chances of reconciliation (Noor, Brown, Gonzalez, et al., 2008). Direct antagonists in open conflict are not the only groups that compete for victimhood, however.

1.2 Competitive Victimhood Between Disadvantaged Groups

One reason for parties involved in direct conflict to compete for victimhood is to avoid being cast as the aggressor in a conflict (Sullivan et al., 2012). However, there are other reasons that groups may compete for victimhood. Two disadvantaged groups may compete for resources, such as publicity or donations, by claiming victimhood. A disadvantaged group is one that has been subjected to prejudice within society without regard to individual qualities (CFR, 2016). For the purposes of this research, having a disadvantaged identity involves the personal endorsement of belonging to such a group. As the subjective belief about disadvantage is the key factor relevant to the psychological processes I investigate, it is not necessary for a person to suffer objectively measurable group-based prejudice or be a member of a minority in the numerical sense to count as having a disadvantaged identity; the belief that the group-based disadvantage exists is sufficient, though on average the two criteria may overlap heavily. That is, objectively measurable group-based disadvantage, such as apartheid-era ethnic restrictions in South Africa (Dubow, 2014), Jim Crow segregation laws in the southern states of the USA prior to the major advances of the civil rights movement in North America (Haws, 1978), or the lack of women’s voting rights prior to the women’s suffrage movement (Crawford, 2003), is responsible for the existence of many disadvantaged identities. However, historically advantaged groups may also sometimes see themselves as examples of identities that suffer group-based disadvantage. For example, some Christians have complained about increasing levels of societal anti-Christian prejudice (Yancey, 2018) and the contemporary men’s rights movement believe in the dominance of “feminist ideology” or unfair treatment toward men when it comes to legal disputes such as alimony (Rafail & Freitas, 2019). Whether or not these grievances reflect objective facts, they still constitute subjective disadvantaged identities as studied in this
Unlike the struggles between direct antagonists, such as intractable geopolitical conflict, various disadvantaged groups often occupy a less adversarial position by default, and might even share interests in resisting some dominant, oppressive third party. In non-adversarial competitive victimhood, the contest is over which group suffered more, the cause of which can be specific—such as the experiences of different groups at the hands of the Nazis during World War Two (Garrrard, 1995; Grau & Shoppmann, 2012; Kelso, 2013; Lukas, 1986; Rosenfeld, 1999; Stein, 1998)—or diffuse—such as beliefs about structural inequality (Kahalon et al., 2019). There is also extensive documentation of non-adversarial competitive victimhood in treatments of specific historical or political contexts, journalistic accounts, or advocacy (Chang, 1997; Williams, 2013).

Research on intergroup relations between disadvantaged groups has found that salience of discrimination against one’s own group can influence attitudes concerning and behaviors toward other disadvantaged outgroups. For example, among white women, reading about pervasive sexism intensifies negative attitudes about racial minorities (Craig et al., 2012). However, similarity between disadvantaged ingroup and outgroup, such as shared stereotypes, mitigates intergroup hostility (Craig & Richeson, 2014). When perceiving discrimination against an ingroup, people react more positively toward other disadvantaged groups stigmatized along similar dimensions of identity and more negatively to groups stigmatized along different dimensions (Craig & Richeson, 2016).

Though the perceived interests of disadvantaged groups might align when considering shared oppression, perceived interests might diverge when competing for resources perceived as scarce, such as attention or money. Previous research has described the zero-sum nature of direct conflict between two parties as an important precondition of competitive victimhood reactions (Sullivan et al., 2012, p. 783). When groups are directly in conflict, advancement of one group may come at the expense of another, such as contested claims over physical territory. For intergroup relations between disadvantaged groups, where the conflict between groups is indirect rather than direct antagonism, group members might see attention that society bestows on one disadvantaged group as unavailable to help other disadvantaged groups. This proposition is consistent with research suggesting that competitive victimhood claims strategically pursue the satisfaction of perceived group needs (McNeill et al., 2017).
1.3 Zero-Sum Thinking

In any particular intergroup relation, people can have various beliefs about how resources can be distributed. In game theory, a zero sum game is one where the sum of all payments equals zero (Von Neumann & Morgenstern, 1953, section 4.2.3). That is, in a zero-sum game, gains for one player come at the loss of another player. Outside of formal game theoretic specifications, people rarely possess full knowledge of potential outcomes, making potential resource distribution a matter of personal belief, which then guides related judgments and decisions. Researchers have studied the general belief that outcomes are governed by the principles of zero-sum games and validated a scale to measure such beliefs (Różycka-Tran et al., 2015), defining the construct as a belief that one person’s gain is possible only based on the loss of others—that is, social relations are inherently antagonistic. Researchers have also studied domain specific beliefs about zero-sum outcomes for categories such as gender, race (Wilkins et al., 2015), and romantic relationships (Burleigh et al., 2017).

Research suggests several reasons that zero-sum thinking might be implicated in the tendency to engage in competitive victimhood. In particular, zero-sum thinking leads to decreased cooperation (Różycka-Tran et al., 2015), lower support for immigration (Esses et al., 2001), rationalization for discriminatory behavior (Burleigh, 2016), decreased workplace helping (Sirola & Pitesa, 2017), and prejudice against consensual non-monogamy in romantic relationships (Burleigh et al., 2017). Notably, many of these consequences involve intergroup conflict, competition, derogation or hostility.

Several studies have shown that zero-sum thinking can play a role in intergroup relations between majority and disadvantaged groups. For example, whites in North America—a majority group—perceive decreases in bias against blacks—an outgroup—as increases in bias against the racial ingroup (Norton & Sommers, 2011). One study presented data showing that men in hyper-competitive work cultures reacted to information about female status gains (women represented at higher levels) with increased gender bias, and this effect was mediated by changes in zero-sum thinking (Kuchynka et al., 2018). Together, this work suggests that zero-sum thinking may also play a role when people perceive limited limited resources to be critical to advancing the cause of a disadvantaged group. This belief in zero-sum outcomes may cause people to present their
own identity group as relatively more victimized, and outgroup disadvantaged identity groups as relatively less victimized. This can be a benefit to a group looking for assistance, as victimhood is associated with deservingness (Smyth, 2001). Thus, claiming victimhood helps a group pursue external support but this status may be perceived as threatened by other groups making similar claims (whether or not they are in direct conflict), resulting in competitive victimhood beliefs.

Many instances of competitive victimhood documented in the literature depend on historical details of particular group conflicts, such as beliefs about patriarchal oppression or geopolitical conflicts. A claim about explaining intergroup hostility or competitive victimhood by means of psychological processes has the limitation that group-based details are generally present in observational data or experimental stimuli. As such, historical particularity, even given conceptual replication across multiple group comparisons, often remains a potential alternative explanation. Discovering similar dynamics in groups without connection to history, such as those induced in laboratory experiments, would provide some evidence against such an alternative theoretical account. Social identity theory provides a framework for testing identity processes with less content specificity (that is, unconnected to the historical struggle of conflict between particular groups)—the minimal group paradigm, which I use in study 4.

### 1.4 Social Identity Theory

According to social identity theory, people naturally define themselves in terms of ingroup and outgroup, with mere categorization being sufficient to induce group differentiation and prompt discrimination (Brewer, 1979; Locksley et al., 1980; Tajfel et al., 1971). The theory holds that social identities satisfy psychological needs such as seeing the self positively. Many different social identities can serve this psychological role, including national, ethnic, interest-based, and other identities. According to social identity theory, such identities provide ways to form a self-concept based on social categories. Tajfel and Turner (1979) argued that the underlying motivational principle driving the formation of social identity is the need for positive self-concept, and even objectively low-status group memberships can provide ways to maintain positive self-concept based on the social component of the self-concept. For example, a member of a disadvantaged group can generate positive self-concept from a social self-concept through downward positive comparisons.
1.4. Social Identity Theory

with another group, ignoring ingroup weaknesses, and focusing on ingroup strengths (Hornsey, 2008).

The starting point for social identity theory was investigating ingroup favoritism, such as the classic Robbers Cave field experiment (Sherif, 1951; Sherif et al., 1961). In this field experiment (participants were 11 year old boys), researchers induced group identities that did not previously exist by presenting common goals (within groups) and then observed the intergroup conflict between these groups based on competition due to incompatible goals (between groups). The researchers demonstrated a subsequent reduction of intergroup conflict after introducing superordinate (shared) goals. This study, and others like it, contributed to Sherif’s broader realistic conflict theory, a program of research which examined the influence of resource competition on intergroup conflict.

Later theories in the social identity theory tradition, such as optimal distinctiveness theory (Brewer, 1991), focused on the factors necessary for, or limiting of, the expression of social identity dynamics. In the case of optimal distinctiveness theory, which argued that people are motivated to maintain positive self-concept both in terms of group affiliation and personal uniqueness, the motivations can sometimes be in tension, with threats to individual identity leading to decreased focus on the social self-concept and threats to collective identity leading to decreased focus on the individual self-concept. Self-categorization theory (Turner et al., 1987; Turner et al., 1994) was another development in the social identity theory tradition which proposed factors underlying the salience of social categorization, the kinds of social categories that developed, and consequences of social category activation. In this way, social category theory speaks to the processes of group formation and intergroup behavior.

Based on several bodies of research, one would expect disadvantaged groups that have experienced discrimination would support each other and cooperate. For example, research has found that shared experiences can make negative experiences less painful (Raghunathan & Corfman, 2006). In the context of race, philosophers have argued that shared experience is one of the three bases of solidarity among people experiencing adversity (Blum, 2007). Such processes may contribute to traditional maxims such as “misery loves company” and similar proverbs. The social identity approach, which explains behavior in terms of social affiliations and group labels, would also predict several mechanisms by which members of disadvantaged groups might make common cause in the face of discrimination. According to self-categorization theory, a development of so-
Social identity theory originally developed to explain group identity formation, social identities are fluid and people have some degree of flexibility, depending on the situation and other social affordances, to categorize themselves (or others) as members of different groups. One such affordance is a fault line, defined as a set of attributes that divide groups into subgroups (Lau & Murnighan, 1998). Shared fault lines dividing members of disadvantaged groups from others could, according to self-categorization theory, provide the basis for superordinate identity formation, facilitating cooperation and decreasing derogation when confronted with discrimination.

Yet, research has documented intergroup conflict between disadvantaged groups, to the degree that various common vernacular shorthand has emerged to characterize the predictable strife such as “oppression olympics” (Cepeda, 2017; A.-M. Hancock, 2011). This may at first seem surprising based on the shared fault line attributes described above, but optimal distinctiveness theory, another development of social identity theory, provides a possible explanation. According to optimal distinctiveness theory, people have needs beyond simple affiliative needs such as the need to belong. People also have a need for distinctiveness at the group identity level. While coalitions based on superordinate identity may benefit group members with regard to overcoming oppression, it may be more difficult to establish favorable distinctiveness contrasted with a dominant perceived oppressor compared to another disadvantaged group. In this case, a common superordinate identity shared with other disadvantaged groups would end up threatening the need for distinctiveness more than it satisfied the need to belong, making some form of competition to establish distinctiveness more probable.

The core of optimal distinctiveness theory is agnostic about the methods people can use to repair deficits in distinctiveness. However, the concerns salient to members of disadvantaged groups suggest several possible strategies. One would involve a downward social comparison, as might be predicted by the original formulation of social identity theory, to boost distinctiveness (and thus esteem) of the collective self. This could take many forms, such as derogation of a non-disadvantaged outgroup. Such a strategy may be difficult, almost by definition, on dimensions related to agentic virtues such as influence, for a group experiencing disadvantage. Other methods to bolster distinctiveness of the collective self are available, in the form of comparison with other disadvantaged groups. Given the salience of mitigating disadvantage, a common concern among highly identified group members is to cultivate interest in the disadvantage suffered by their group (Westbrook,
According to Westbrook (2020b, p. 207), victimhood is a “compelling narrative within the social problems marketplace.” In this way, the practical imperative of attracting attention to the disadvantaged ingroup cause and the psychological imperative of establishing distinctive social identity compared to other disadvantaged groups dovetail, suggesting that resource dependence (both in the indirect form of attention and the direct form of monetary resources) might contribute to a propensity to compete for victimhood status in part to cultivate optimal distinctiveness.

In this dissertation, I draw primarily on two aspects of the social identity theory tradition, one conceptual and one operational. Conceptually, the basic assumption of social identity theory that competitive intergroup behavior can arise from social identity motivations (Hornsey, 2008, p. 207). Specifically, the need to see the ingroup as distinctive in a positive way, as suggested by optimal distinctiveness theory, means that when people think in zero-sum terms, engaging in competitive victimhood might be more likely. Operationally, the experimental procedures that studies in the social identity tradition use generally abstract the group processes from details of particular group memberships. Using an approach such as the minimal group paradigm, described in more detail for study 4 below, allows me to explore the relationship between membership in a disadvantaged group and zero-sum thinking without using particular, historically-grounded groups. Using the minimal group paradigm also makes some alternative explanations of the competitive victimhood behaviors I observe less plausible. For example, from self-categorization theory I could derive the prediction that prototypic dissimilarity might explain competitive victimhood, with members of disadvantaged groups likely to engage in less competitive victimhood with members of disadvantaged outgroups sharing prototypic characteristics. However, if the effect emerges in contexts lacking such details, I can have more confidence in zero-sum thinking as an explanatory factor.

1.5 Hypotheses

As noted above, much previous work on competitive victimhood explores phenomena involving groups that are in direct conflict (such as the geopolitical examples) or involves identities where tension is often explicit, such as conflict between the genders (Sullivan et al., 2012). As such, the perspective of the group in conflict seems likely to match the perception of a general observer, who is a potential source of support, at least in terms of the general acknowledgement of grounds for
1.5. Hypotheses

conflict, even if attitudes may vary regarding the degree to which a conflict is truly intractable. However, the general perceptions matter practically to disadvantaged groups as sources of support, especially if the disadvantaged group perception of zero-sum outcomes diverges from the general observer perspective. My first hypothesis, that general observers are likely to predict that disadvantaged groups will be more likely to cooperate rather than engage in derogation or hostility arises from these observations. However, the behavior of members of disadvantaged groups may be different than these expectations, though my perspective suggests that this should be true only if they engage in zero-sum thinking. My intent with hypothesis 1 is to document that my core prediction is counter to conventional lay wisdom.

If people with disadvantaged identities feel like support from third parties is limited to a greater degree, then they might be more likely to emphasize ingroup disadvantage, or downplay the disadvantage of other possibly disadvantaged outgroups, compared to how people with non-disadvantaged identities might react to such disadvantaged outgroups. Further, I would expect that the disadvantage experienced by members of disadvantaged groups would make recruiting support a greater immediate consideration for disadvantaged groups compared to non-disadvantaged groups (which may not feel a need to recruit support at all). This leads to my second hypothesis which predicts that the relationship between zero-sum thinking and competitive victimhood beliefs will be stronger for people with disadvantaged identity, compared to people with non-disadvantaged identity, when confronted with the plight of a disadvantaged outgroup.

Hypothesis 2 concerns the comparison of reactions between members of disadvantaged and non-disadvantaged groups when presented with the disadvantage of a disadvantaged outgroup. If zero-sum thinking processes contribute to competitive victimhood between members of disadvantaged groups, then framings of disadvantage which facilitated (or inhibited) consideration of relative disadvantage in comparative terms would allow me to experimentally identify the effect, increasing the internal validity of my potential findings, since I can induce different framings of disadvantage using random assignment. This is the design that I use in the study that uses the minimal group paradigm (study 4).

Several framings of the disadvantage suffered by a disadvantaged outgroup are possible. To illustrate these different framings, I will use a running example: imagine that the participant belongs to a racial minority that is disadvantaged. As part of this example, consider a disadvantaged
outgroup defined by sexual preference. First, the outgroup disadvantage could be presented, but without direct comparison. In the running example, this might occur when a member of the racial minority group is presented with information about the disadvantage suffered by members of the sexual preference minority, such as a charity donation appeal. Second, the ingroup disadvantage could be presented alone, making ingroup concerns salient. In the running example, this might occur when a member of the racial minority group reads a news story about a racist incident that an ingroup member experienced (with no mention explicitly made of any disadvantaged outgroup). Third, the outgroup disadvantage could be presented in explicitly comparative terms, making the relative suffering unambiguous. In the running example, this might occur when a member of the racial minority looks up statistics about incarceration and discovers that ingroup members tend to have different criminal justice outcomes compared to members of the minority sexual preference. (This running example is only intended to summarize the structural setup of the disadvantage framings, rather than reflecting objective conditions faced by actual disadvantaged groups.)

This does not exhaust all possible framings, but it allows me to test whether exposure to appeals regarding the disadvantage faced by a disadvantaged outgroup is sufficient to trigger perceptions of competitive victimhood, and if zero-sum thinking explains this difference in reactions. I predict that zero-sum thinking will be more-weakly associated with competitive victimhood responses for the ingroup disadvantage and comparative disadvantage framings compared to the common disadvantage framing. Both of these framings provide less scope for influence of zero-sum thinking. In the ingroup disadvantage framing, participants only receive information about the ingroup disadvantage. In the comparative framing, participants receive explicit information that ingroup disadvantage is greater than outgroup disadvantage. Though serves as a strong test of my framework because though the framing seems like it might facilitate conflict, the explicit information provides less scope for the role of zero-sum thinking in beliefs about intergroup relations. In contrast, when the disadvantage of an outgroup becomes salient, members of (other) disadvantaged groups adopt the mindset of competitive victimhood to the degree that they engage in zero-sum thinking. Based on this logic, I propose hypothesis 3: zero-sum thinking is associated with competitive victimhood responses to a greater degree when the disadvantage framing presents the disadvantage of both ingroup and outgroup but lacks direct comparative information about the relative objective suffering of each group. In study 4, I represent this situation in the com-
1.6. Studies Overview

In summary, my hypotheses for chapter 1 are:

H1. Third-party observers of intergroup relations between disadvantaged groups expect such groups to cooperate rather than engage in derogation or hostility.

H2. When the disadvantage of an outgroup is salient, zero-sum thinking is positively associated with competitive victimhood responses to a greater degree for people with disadvantaged identities compared to people without disadvantaged identities.

H3. Zero-sum thinking is associated with competitive victimhood responses when presented with the disadvantage of an outgroup using common framing, compared to ingroup framing or comparative framing.

1.6 Studies Overview

I first present several preliminary studies to document the phenomenon of disadvantaged groups engaging in mutual hostility and competitive victimhood. In these preliminary studies, I analyze social media content to document intergroup derogation and competitive victimhood responses between multiple pairings of disadvantaged groups. Study 1A measures sentiment around the 2019 #BiVisibilityWeek hashtag on Twitter, testing whether tweets containing this hashtag tend to be more or less positive when mentioning words related to the broader LGBT community. I assume, based both on examining tweet contents and the broader discourse around this hashtag, that most of the people using this hashtag have a bisexual identity, so I can measure intergroup relations and attitudes by examining how these tweets discuss other disadvantaged groups. In this study, I use LGBT identity as a disadvantaged outgroup. This study finds that such tweets tend to be more negative when mentioning LGBT-related words, consistent with intergroup derogation. Study 1B replicates this effect using a different social media platform—Reddit—and an alternative pair of

\[\text{mon framing}\] condition, and compare responses in that condition to an \text{ingroup framing} condition (where no cues about the suffering of a disadvantaged outgroup are present) and a \text{comparative framing} condition, which provides direct comparative information (in favor of the ingroup) about the relative disadvantage suffered.

Though “bisexual” nominally is part of the LGBT initialism (as the B), the broader LGBT identity functions as a disadvantaged outgroup in this context (Marcus, 2018).
1.6. Studies Overview

<table>
<thead>
<tr>
<th>Study</th>
<th>Method</th>
<th>Sample</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>social media</td>
<td>Twitter</td>
<td>intergroup conflict; sentiment</td>
</tr>
<tr>
<td>1b</td>
<td>social media</td>
<td>Reddit</td>
<td>conceptual replication (diff. identities); sentiment</td>
</tr>
<tr>
<td>2</td>
<td>survey</td>
<td>Mturk</td>
<td>lay judgments</td>
</tr>
<tr>
<td>3</td>
<td>survey</td>
<td>Mturk</td>
<td>zero-sum thinking and competitive victimhood</td>
</tr>
<tr>
<td>4</td>
<td>experiment</td>
<td>Mturk</td>
<td>zero-sum thinking, minimal group paradigm</td>
</tr>
</tbody>
</table>

Table 1.1: Chapter 1: Studies Overview

comparison groups—nonbinary people and transgender people. On Reddit, posts in r/NonBinary tend to be more negative when mentioning transgender-related words compared to mentions of the word straight. Study 2 examines the beliefs third parties have about intergroup attitudes between disadvantaged groups (and tests hypothesis 1). This study looks at whether lay beliefs are consistent with historical, journalistic, and anecdotal examples described above, finding that respondents believe that disadvantaged groups are likely to have attitudes that facilitate coalition formation.

In Study 3, I find that zero-sum thinking is positively associated with competitive victimhood beliefs for members of disadvantaged groups when confronted with the plight of disadvantaged outgroups (preliminary correlational support for hypothesis 2). In addition to examining the role of zero-sum thinking, the expression of competitive victimhood beliefs in study 3 is contrary to the attitudes expected by respondents in study 2, who report that they believe disadvantaged groups share interests and are likely to work together.

The minimal group paradigm (Smith, 2010), a methodology developed by social identity theory researchers, provides a way to test whether competitive victimhood effects between disadvantaged groups stem from particularities of historical identities or whether the response arises as part of group membership as such, when combined with zero-sum thinking. I use this approach in study 4. In this experiment, I find that zero-sum thinking is associated with competitive victimhood responses when confronted with the disadvantage of an outgroup that may also be trying to recruit the same limited resources, providing experimental evidence for hypotheses 2 and 3.

In summary, studies 1a, 1b, and 2 document the phenomenon of competitive victimhood between disadvantaged groups and explore the assumptions of third parties about such intergroup interactions, which are relevant to whether competitive victimhood behaviors are actually adaptive.
when recruiting support from third parties. These initial studies explore the tenor of intergroup relations, and the attitudes of both general observers and observers belonging to a disadvantaged identity, without examining specific scarce resources that might be contested or measuring zero-sum thinking. I designed studies 3 and 4 to investigate the processes underlying the phenomena observed in the earlier studies. These phenomena include hostile intergroup interactions, represented by negative sentiment expressed in social media messages (Studies 1a and 1b) and general assumptions of cooperation between disadvantaged groups (Study 2). Studies 3 and 4 investigate psychological processes that may explain these observed phenomena. Study 3 examines whether zero-sum thinking is associated with competitive victimhood beliefs using stimuli involving two historical groups, black people and gay people. Study 4 extends study 3 by using the minimal group paradigm, rather than actual identities with historically-grounded associations, to test my hypothesis that zero-sum thinking is involved in the psychological processes that result in competitive victimhood dynamics. Study 4 also measures both attitudinal and behavioral competitive victimhood outcomes.

1.7 Study 1A: Twitter #BiVisibilityDay

To investigate competitive victimhood between groups based on disadvantaged identity, I looked at tweets around a recent “hashtag event” on Twitter, #BiVisibilityDay. In a hashtag event, people use a common hashtag to discuss an issue or happening (Blaszka et al., 2012). The point of #BiVisibilityDay is to allow bisexual people an opportunity to display their identity. Though the broader LGBT acronym stands for lesbian, gay, bisexual, and transgender—representing sexual preference and gender identification minorities—bisexual people often feel like they are not accepted by either heterosexual or homosexual communities. If people with bisexual identities compete for victimhood with other disadvantaged groups over perceived scarce resources, this phenomenon may emerge in social media contexts, given publicity of the signal and the tendency of people to cluster in social networks around shared identities. This case is particularly notable, as people with bisexual identities are potentially competing with and derogating a broader grouping which nominally contains their own identity group. However, the broader group can still serve as an outgroup from the bisexual perspective, as expressed by the notion of “bisexual erasure” (Marcus,
In my analysis of this social media data, I examine sentiment scores as a proxy for intergroup attitudes related to competitive victimhood. Sentiment scores capture the positive and negative attitudes toward topics in text and have been used as a proxy for interpersonal and intergroup attitudes. Intergroup hostility is correlated with competitive victimhood behavior more generally (Young & Sullivan, 2016), making sentiment scores a reasonable, if imperfect, first approximation of picking up on intergroup conflict in large bodies of textual data. The tool I used to assign sentiment scores, Vader (Hutto & Gilbert, 2014) has been used to explore conflict between communities online (Kumar et al., 2018). Additionally, Direct examination of many messages in this data suggest the expressed hostility is often characteristic of competitive victimhood beliefs.

Though I make no attempt to measure explicit competition for resources or zero-sum thinking in the textual data, instead focusing on documenting derogation between disadvantaged groups, there is a clear resource that people compete for on social media: attention (Jung, 2021). As researchers studying nongovernmental organizations seeking publicity have written (Thrall et al., 2014, p. 138):

*As a result, the competition for attention is a zero-sum game. Any attention one actor gains is attention lost by another. On any given day, the volume of issues and voices looking for attention vastly exceeds the carrying capacity of any of these audiences.*

1.7.1 Data Description

Using the Python module *Tweepy* I downloaded all the tweets containing the hashtag *#BiVisibilityDay* in September 2019, up through September 27th, 2019. This resulted in 215,845 tweets ($M_{\text{chars}} = 118.15$, $SD_{\text{chars}} = 31.79$). 16,250 of these tweets contained any of the strings “LGBT”, “lesbian”, or “gay” (case-insensitive). I used the presence of these substrings as a proxy for attitudes toward members of a disadvantaged outgroup.

1.7.2 Method

I first coded tweets for whether they contained any of the strings “LGBT”, “lesbian”, or “gay” (case-insensitive). There are many different potential sets of words that could be chosen to represent
1.7. Study 1A: Twitter #BiVisibilityDay

Figure 1.1: Sample Tweets

mention of LGBT-related concepts. Given the potential flexibility of choice, I chose the simplest possible set of terms drawn from the initialism LGBT apart from the relevant ingroup (which is “bisexual” for the purposes of this study). This led to the set of words listed above: the initialism itself (“LGBT”) and the two other identity subgroups (“lesbian” and “gay”). Then, I used Vader (Hutto & Gilbert, 2014) to assign sentiment scores to each tweet. Vader is optimized for scoring data on social media, handling content such as emojis, punctuation, and slang (Elbagir & Yang, 2019). Vader has been used in hundreds of scholarly publications in domains ranging from tourism (Alaei et al., 2017) to consumer research (Humphreys & Wang, 2018). Vader assigns four scores to each datum: positive, negative, neutral, and a normed composite score ranging from −1 (negative sentiment) to +1 (positive sentiment). For example, one tweet that received a score below −.75:

QUEER ENOUGH TO DIE, BUT NOT GAY ENOUGH TO STAY STOP DEPORTING BI+ MIGRANTS! We’re holding a vigil today at the Vauxhall Pleasure Gardens for #BiVisibilityDay, to stand together against the harm, violence and abuse caused by bi erasure and the deportation of Bi+ people.

One tweet that received a positive normed composite score above +.75:
1.7. Study 1A: Twitter #BiVisibilityDay

Honored to be part of this amazing community where all it’s about love BE PROUD OF WHO YOU ARE AND WHO YOU LOVE #BiVisibilityDay.

1.7.3 Results

To test whether tweets containing words associated with LGBT identity were more emotionally negative, I regressed the Vader composite sentiment score on dummy-coded variables for each term ($F(1,215842) = 626.63, p < .001$). Across all comments, mentioning LGBT-related words was associated with more negative (less emotionally positive) sentiment ($b_{LGBT} = −.11, SE = .003, t = −33.97, p < .001, 95\% CI [−.114, −.102]$). Mentioning “straight” was associated with less negative (more emotionally positive) sentiment ($b_{straight} = −.03, SE = .008, t = −3.98, p < .001, 95\% CI [−.048, −.016]$). It is notable that the tweets containing LGBT-related terms involved more negative sentiment compared to tweets presumably related to a non-disadvantaged outgroup provides. See table 1.2 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGBT (indicator 0/1)</td>
<td>−.11</td>
<td>.003</td>
<td>−33.97</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Straight (indicator 0/1)</td>
<td>−.03</td>
<td>.008</td>
<td>−3.98</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Constant</td>
<td>.40</td>
<td>&lt; .001</td>
<td>468.93</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 1.2: Twitter: Regression Results (DV: Sentiment Composite)

1.7.4 Discussion

This pilot study provides an example of competitive victimhood between disadvantaged groups in a large, recent dataset from a popular social media platform. Specifically, when people tweeting about #BiVisibilityDay expressed more negative sentiment when discussing topics that mentioned terms related to a disadvantaged outgroup (the broader “LGBT” community). Mentioning “straight”—a non-disadvantaged outgroup, so presumably not in direct competition for support—was associated with less negative sentiment.

This study, and the additional social media study that uses a comparison between different identity groups, have several limitations. They are constrained by measurement instruments available, but speak to the tendency of disadvantaged groups to compare their ingroup with another disadvantaged outgroup, which is a necessary component of expressing competitive victimhood.
(and, as will be seen, is contrary to the general lay beliefs). Specifically, I do not measure zero-sum thinking or attempt to establish the presence of psychological causes in the behavior reflected by this data. That said, the context is rife with dynamics involving competition for scarce resources such as attention (as mentioned above).

Though the effect of mentioning LGBT on tweet sentiment is substantial, even given the large number of observations, it is possible that the effect is driven by details specific to these two particular identity groups. However, in the next study, I replicate this effect using different identity groups and a different social media platform: people with nonbinary identities on Reddit.

1.8 Study 1B: Reddit r/NonBinary

I examined online discourse between members of a disadvantaged group—people with nonbinary gender identity—to determine whether discussion included expressions of competitive victimhood. People with nonbinary gender identity see themselves as having a gender different than male or female (Richards et al., 2017). People with nonbinary gender identity report experiencing oppression (A. Austin, 2016), feel misunderstood by healthcare providers (Lykens et al., 2018), and experience negative workplace outcomes (Davidson, 2016). If people with disadvantaged identities believe that victimhood is a scarce resource over which various disadvantaged groups must struggle, then discussion focusing on groups with which they might be in competition should exhibit more derogation, hostility, or negativity compared to discussions about non-disadvantaged groups. In this study, people with transgender identity represent another disadvantaged group.

1.8.1 Data Description

Reddit is particularly well-suited to investigating phenomena related to disadvantaged identities due to the topic-based discussion format. 11 percent of Americans use Reddit (Perrin & Anderson, 2019) and Reddit is the sixth most popular website in the United States (Alexa, 2019). Reddit is organized around topic-focused forums called subreddits.

I downloaded all comments within the r/NonBinary subreddit from February 14, 2019 to the September 24, 2019 ($N = 71500$). The r/NonBinary subreddit bills itself as: for people of every stripe who feel that they don’t fit into a preference-binary or gender-binary culture and
examination suggests that most participants identify as nonbinary themselves. r/NonBinary has 29.6k members—people that can post on the subreddit—with several hundred active (“Online”) at any given time. In the following analyses, I assume that a substantial majority of participants identify as nonbinary. Of these comments, 3402 included the text “trans” and 510 included the text “straight” (all classification is case insensitive).

1.8.2 Method

As with the Twitter study, I used Vader (Hutto & Gilbert, 2014) to assign sentiment scores to each comment, resulting in four scores for each datum: positive, negative, neutral, and a normed composite score ranging from −1 (negative sentiment) to +1 (positive sentiment).

1.8.3 Results

To test whether discussions including the text “trans” were more negative compared to discussions overall (baseline) and discussions including the text “trans,” I regressed the Vader composite sentiment score on dummy-coded variables for each term ($F(2, 71497) = 22.54, p < .001$). Across all comments, mentioning “trans” was associated with more negative sentiment ($b_{trans} = -.02, p = .022$) while mentioning “straight” was associated with more positive sentiment ($b_{straight} = .13, p < .001$). See Table 1.3 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>SE</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans (indicator 0/1)</td>
<td>-.02</td>
<td>.008</td>
<td>-2.30</td>
<td>&lt;.022</td>
</tr>
<tr>
<td>Straight (indicator 0/1)</td>
<td>-.13</td>
<td>.020</td>
<td>6.45</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Constant</td>
<td>.43</td>
<td>.002</td>
<td>249.15</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Table 1.3: Reddit: Regression Results (DV: Sentiment Composite)

Given that Reddit comments have no character limit, the variance in message length is higher than on Twitter. To check whether message length influenced results, I performed the same analysis on comments restricted to the arbitrary threshold of 10 words or greater ($n_{\text{words}=10+} = 37927, n_{\text{trans}} = 3249, n_{\text{straight}} = 486, F(2, 37924) = 22.54, p < .001$). Again, mentioning “trans” was associated with more negative sentiment ($b_{trans} = -.06, t = -6.67, p < .001$) while mentioning “straight” was associated with more positive sentiment ($b_{trans} = .09, t = 3.89, p < .001$). See table...
1.8. Study 1B: Reddit r/NonBinary

1.4 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans (indicator 0/1)</td>
<td>-0.06</td>
<td>0.009</td>
<td>-6.67</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Straight (indicator 0/1)</td>
<td>0.09</td>
<td>0.023</td>
<td>3.89</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Constant</td>
<td>0.49</td>
<td>0.003</td>
<td>179.73</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 1.4: Reddit: Regression Results, 10+ Words (DV: Sentiment Composite)

1.8.4 Discussion

In this study, I showed, in a substantial real-world dataset, that people with nonbinary identity expressed more negative sentiment when discussing topics that mentioned “trans”—a disadvantaged outgroup relative to the assumed commenters in the dataset. Mentioning “straight”—a non-disadvantaged outgroup, so presumably not in direct competition for resources such as donations or publicity—was associated with more positive sentiment.

There are many different ways to analyze textual data such as this Reddit dataset, and one limitation of these results is the inherent flexibility. I chose a simple, easy to understand operationalization, and I reported all the coding schemes I tried to avoid capitalizing on chance associations. Given that I code messages by the presence of words, it is also possible this may introduce some measurement error due to missing details of context or other complexities of language such as sarcasm.

There are a number of other methodologies under active development that could be used to investigate these dynamics in social media datasets potentially given proper validation studies to ensure that the constructs measured map to concepts of interest (Conway & O’Connor, 2016; Markowetz et al., 2014). For example, machine learning techniques can be used to infer author gender in social media text (Sboev et al., 2016) and political ideology (Ansari et al., 2020). However, challenges remain before such techniques are practical for behavioral research (Yan et al., 2017).

Despite these limitations, these results conceptually replicate the results of the Twitter study, showing a similar effect using alternative identity groups and a different social media platform, increasing confidence in the existence of a more general phenomenon of competitive victimhood between disadvantaged groups. In the next study, I examine general lay beliefs about predicted conflict between disadvantaged groups.
1.9 Study 2: Lay Beliefs of Attitudes Between Disadvantaged Groups

This study examines the lay beliefs about whether members of disadvantaged groups are likely to have positive or negative attitudes towards other disadvantaged groups. Specifically, I hypothesize that general observers of intergroup relations between disadvantaged groups expect such groups to cooperate (H1).

1.9.1 Method

Participants and Design

I recruited 204 participants from Amazon’s Mechanical Turk. After excluding 12 responses for failing an attention check, 192 responses remained for analysis ($M_{\text{age}} = 36.41$, $SD_{\text{age}} = 10.68$). Gender breakdown was 81 Female, 111 Male, 0 Nonbinary. Ethnicity was 6 Asian, 38 Black or African American, 4 Other, 5 Two or more races, and 139 White.

Procedure

Participants read four scenarios, presented in a random order. Each scenario presented a message advocating for the issues of a disadvantaged group. After each scenario, participants judged whether a majority or disadvantaged group would be more likely to have positive attitudes toward the message, captured by three items.

For example, one stimulus (noted as “ACLU statement” below; see table [1.5]) was:

The ACLU has the following statement about LGBT rights: The ACLU works to ensure that lesbian, gay, bisexual, and transgender people can live openly without discrimination and enjoy equal rights, personal autonomy, and freedom of expression and association. Please consider how members of the following two groups would respond to this statement: Straight People, Bisexual People.

The other stimuli had a similar structure, but using different contexts and groups. The Lesbian strength march stimulus described a march celebrating all lesbians past and present from all walks
1.9. Study 2: Lay Beliefs of Attitudes Between Disadvantaged Groups

of life. The CNN town hall stimulus described Bernie Sanders highlighting the plight of the poor across all races. See section B.1 on page 105 for details of all stimuli.

For the attitude measures after each scenario, the three items represented affective (which group would like this statement more?), cognitive (which group would benefit more from this statement?), and behavioural (which group would be more likely to support this statement?) attitude components with the two groups as anchors. For example, in the “poverty” context listed in 1.5, the scale format of these items was (1 = White People . . . 7 = Black People). I based the three components from the classic model of attitudes (Fazio & Petty, 2008), anchoring each side of the scale with relevant social groups. For example, in scenario B, participants read about a “Lesbian Strength March” and judged whether non-transgender or transgender people would like the scenario described using three different attitude measures.

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>Scenario</th>
<th>Context</th>
<th>Privileged Group</th>
<th>Disadvantaged Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>LGBT</td>
<td>ACLU statement</td>
<td>Straight</td>
<td>Bisexual</td>
</tr>
<tr>
<td>B</td>
<td>Lesbian</td>
<td>Strength March</td>
<td>Non-Transgender</td>
<td>Transgender</td>
</tr>
<tr>
<td>C</td>
<td>Gay</td>
<td>Workplace Policies</td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>D</td>
<td>Poverty</td>
<td>CNN Town Hall</td>
<td>White</td>
<td>Black</td>
</tr>
</tbody>
</table>

Table 1.5: Summary of Scenarios and Expected Group Attitudes

Participants also completed the zero-sum thinking scale (Różycka-Tran et al., 2015), included for exploratory purposes. Sample items include “Successes of some people are usually failures of others” and “Life is so devised that when somebody gains, others have to lose” (1 = Strongly Disagree . . . 7 = Strongly Agree). Finally, participants provided demographics—age, gender, race/ethnicity, political ideology on two dimensions (social, economic), sexual orientation, transgender identity, and socioeconomic status. I embedded an attention check within the demographic measures.

1.9.2 Results

For each scenario, I scored the attitude expectation judgments by averaging the indicators: LGBT rights (α = 0.88; 3 items), lesbian strength march (α = 0.90; 3 items), gay rights HR policy (α = 0.84; 3 items), and CNN town hall (α = 0.82; 3 items). The means for expected attitudes were significantly above the midpoint of the scale for all four scenarios: LGBT rights (t(191) = 21.47, p < 0.001, M = 5.94, H₀ = 4, dₓCohen = 1.55; one-sample t-test) lesbian strength march
1.10. Study 3: Zero-Sum Thinking and Competitive Victimhood

In other words, on average, respondents believed that disadvantaged groups are likely to have a positive attitude toward the attempts of other disadvantaged groups to advocate for change.

1.9.3 Discussion

These results show that general observers tend to have the intuitive beliefs that the interests of disadvantaged groups align, based on scores for anticipated attitudes toward various messages advocating for particular group issues. In the preliminary studies using social media datasets, in contrast, I show that members of disadvantaged groups often engage in derogation and competition for victimhood status.

This mismatch between lay beliefs and behavior of people with disadvantaged identity means that competitive victimhood behaviors may be less effective than other potential strategies for recruiting support or improving societal conditions for disadvantaged groups, as competing claims of victimhood may increase observer uncertainty (Belavadi & Hogg, 2018). It also poses a question to the researcher: how can we explain this phenomenon that is contrary to observer’s expectations? In study three, I provide initial evidence for why zero-sum thinking may provide such an explanation.

While I examine some of the group pairings used in the stimuli for this study in other studies (such as bisexual/LGBT and black/gay), the other pairings show the wide variety of potential intergroup conflict between members of disadvantaged groups. Future research can explore the generality of the competitive victimhood effect across all these, and other, group pairings.

1.10 Study 3: Zero-Sum Thinking and Competitive Victimhood

The purpose of this study is to examine whether zero-sum thinking is associated with competitive victimhood beliefs in members of disadvantaged groups. Specifically, I look at the beliefs of members of a disadvantaged group, compared to members of a non-disadvantaged group, when presented with an appeal to address the suffering of another disadvantaged outgroup. I operationalize the disadvantaged ingroup by recruiting members of a historically disadvantaged group (black people).
The non-disadvantaged comparison group is white people. The appeal to address the suffering of another disadvantaged outgroup is a scenario where a gay HR manager discusses gay rights.

I measure competitive victimhood beliefs in two ways. First, I look at whether members of a disadvantaged group perceive the struggle of the ingroup as being devalued by an appeal to address the suffering of a disadvantaged outgroup. Second, I look at the attitude of disadvantaged ingroup members toward the suffering of the disadvantaged outgroup.

Operationally, this study examines competitive victimhood expressed by black participants (compared to white participants) when confronting the suffering of gay people (which represents the disadvantaged outgroup).

1.10.1 Method

Participants and Design

I recruited 222 participants from Amazon’s Mechanical Turk using TurkPrime to get an equal sample of heterosexual participants that identify as white and black. After excluding 19 participants for failing an attention check, 203 responses remained for analysis ($M_{age} = 45.07$, $SD_{age} = 15.46$). Gender breakdown was 112 Female and 91 Male.

Procedure

Following consent, participants read a scenario about workplace HR policies where a manager compares the progress gay rights has made unfavourably with the progress racial civil rights has made. All participants read the same scenario:

*Please imagine that you work for the HR department of a medium-sized, growing business. One manager, known to be out and gay, discussing the progress of gay rights, said the following at a recent meeting: “The progress of gay rights still has a long way to go. Other groups, such as blacks, have made much more substantial progress. We need to prevent discrimination based on sexual orientation, as distinct from racial discrimination. It is illegal in this country to fire a black person without cause, but in many places it’s still legal to fire a gay person for being gay. The struggle for gay rights is a struggle for civil rights.” The manager then proposed the following policies:*
1.10. Study 3: Zero-Sum Thinking and Competitive Victimhood

- Company civil rights policies should include protections based on sexual preference.
- Given two equally qualified candidates, gay or lesbian candidates should be preferred.
- Company policy should prevent firing employees for being gay, just as with race.
- Develop and promote anti-harassment and anti-discrimination policies that address homophobia.
- Set up networking opportunities LGBT+ staff.

Participants responded to several post-scenario questions, as well as reporting attitude toward the policy using three semantic-differential items (Bad/Good, Unhelpful/Helpful, and Unfair/Fair, all scored from 1 to 7). Several of the belief questions concerned the hypothetical situation, such as asking whether black employees would support the policies. Embedded within these items were two measures which capture competitive victimhood: The sentiment in the scenario devalues the racial struggle for civil rights and Gay rights are civil rights. These two measures constitute my two dependent variables and are both single-item measures. These measures capture competitive victimhood by looking at whether participants believe that the scenario increases discrimination toward the ingroup. Existing measures of competitive victimhood within the literature are often single-item measures based on face-validity, such as the measure of competitive victimhood from Sullivan et al. (2012), which measures competitive victimhood by judging whether the ingroup (gender) experiences more or less discrimination overall. I developed these two items to assess the construct of competitive victimhood in the context of the scenario that participants read. I address this limitation in more detail in the discussion. I also included a scenario comprehension check, which asked participants to choose the topic of the scenario from several options. The belief items used seven-point scales (1 = Strongly Disagree … 7 = Strongly Agree).

Next, participants answered questions about the degree to which various groups faced discrimination, a short scale measuring intolerance of uncertainty (for an unrelated project), the belief in zero-sum game scale (Różycka-Tran et al., 2015), and the social dominance orientation scale (Pratto et al., 1994), included for exploratory purposes (example item: Some groups of people are simply inferior to other groups). Finally, participants made a hypothetical lottery decision (for an unrelated project) and reported demographics, which included age, gender, ethnicity, political ideology
on an economic dimension, political ideology on a social dimension, sexual preference, transgender identity, socio-economic status on a ladder measure (Adler et al., 2000), attitude toward the survey, and were offered a chance to share their thoughts with the researchers using a free-response text box. See section B.2 on page 107 for additional details about measures.

1.10.2 Results

I averaged scale item responses to create scores for zero-sum thinking (α = 0.82; 8 items\(^2\)) and social-dominance orientation (α = .90). I also averaged the three attitude toward the policy items (α = .94).

To assess whether participants believed they belonged to disadvantaged groups, I examined beliefs participants had about group disadvantage. In general, participants believed that Black people faced more discrimination than White people (M\(_{\text{Black}}\) = 5.70, SE\(_{\text{Black}}\) = .10, M\(_{\text{White}}\) = 2.77, SE\(_{\text{White}}\) = .13, n = 203). These results held when considering either Black participants (M\(_{\text{Black}}\) = 6.26, SE\(_{\text{Black}}\) = .12, M\(_{\text{White}}\) = 2.44, SE\(_{\text{White}}\) = .18, n = 96) or White participants alone (M\(_{\text{Black}}\) = 5.20, SE\(_{\text{Black}}\) = .15, M\(_{\text{White}}\) = 3.07, SE\(_{\text{Black}}\) = .17, n = 107). This result provides some empirical support for the assumption that participant ethnicity is a reasonable proxy for disadvantaged identity. See supplementary analyses for additional summary statistics (C.2.4 on page 128). Participant attitudes toward the policy did not differ by ethnicity (t(200.881) = -1.22, M\(_{\text{Black}}\) = 5.01, M\(_{\text{White}}\) = 4.72).

To test my hypothesis that zero-sum thinking is positively associated with competitive victimhood for participants belonging to a disadvantaged group, I performed analyses of covariance for the two measures relevant to competitive victimhood beliefs, the civil rights measure and the de-values racial struggle measure. For both analyses, the measure relevant to competitive victimhood beliefs was the dependent variable. Independent variables were participant group (black = 1, white = 0), zero-sum thinking (z-scored), and the interaction term.

For the “civil rights” belief measure, there was no main effect of participant group (p = .199) and no main effect of zero-sum thinking (p = .528). However, there was a significant interaction (b = -.57, SE = .25, t = -2.28, p = .024). Examining the slopes of the regression lines within

---

\(^2\)Participants responded to 12 items; four were from an older version of the scale included for psychometric investigation in a separate project. The eight indicators that contribute to the score here are those validated by the scale authors (Różycka-Tran et al., 2015, pp. 537-538) and used in my other studies.
participant groups—the simple main effects—is insufficient to clarify this interaction, as one slope is significant ($\frac{dy}{dx}_{\text{white}} = .36, SE = .18, t = 2.00, p < .047$) but the other slope fails to reach conventional significance levels ($\frac{dy}{dx}_{\text{black}} = -.21, SE = .17, t = -1.20, p = .230$). See figure 1.2 for a graphical representation. See table 1.6 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black (indicator 0/1)</td>
<td>-.32</td>
<td>.25</td>
<td>-1.29</td>
<td>.199</td>
</tr>
<tr>
<td>Zero-sum thinking (continuous; z-scored)</td>
<td>.36</td>
<td>.18</td>
<td>2.00</td>
<td>.047</td>
</tr>
<tr>
<td>Black $\times$ Zero-sum thinking</td>
<td>-.57</td>
<td>.25</td>
<td>-2.28</td>
<td>.024</td>
</tr>
<tr>
<td>Constant</td>
<td>5.43</td>
<td>.17</td>
<td>31.70</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Table 1.6: Minimal Group Paradigm: Regression Results (DV: Competitive Victimhood)

To further probe the interaction, since simple main effects were insufficient, I used the Johnson-Neyman procedure (Spiller et al., 2013) to determine the region of significance for the relationship...
between zero-sum thinking and competitive victimhood response. According to this procedure, the region of significance begins slightly above four (the midpoint) of the zero-sum thinking scale. See figure 1.3 for a graphical representation of the region of significance (black participants).

![Graph of Study 3: Region of Significance](image)

**Figure 1.3: Study 3: Region of Significance (Civil Rights Measure)**

For the “devalues racial struggle” measure, there was a main effect of participant group ($b = .68$, $SE = .23$, $t = 2.91$, $p = .004$) and a main effect of zero-sum thinking ($b = .42$, $SE = .17$, $t = 2.44$, $p < .016$), but no significant interaction ($p = .300$). See table 1.7 for model estimates. That is, while participants from a disadvantaged group were more likely to see the appeal of a disadvantaged group as devaluing their own struggle, and zero-sum thinking was positively associated with responses on this “devaluing” measure, in these results the relationship was not stronger for disadvantaged than for non-disadvantaged participants. However, the lack of interaction is less relevant for this measure because the interpretation may differ between participant groups. Specifically, it may only be possible to interpret the belief as an expression of competitive victim-
hood among black participants given that the item *devalues the racial struggle for civil rights* only involves amplifying ingroup suffering for the black participants.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black (indicator 0/1)</td>
<td>-0.32</td>
<td>0.25</td>
<td>-1.29</td>
<td>0.199</td>
</tr>
<tr>
<td>Zero-sum thinking (continuous; z-scored)</td>
<td>0.36</td>
<td>0.18</td>
<td>2.00</td>
<td>0.047</td>
</tr>
<tr>
<td>Black × Zero-sum thinking</td>
<td>-0.57</td>
<td>0.25</td>
<td>-2.28</td>
<td>0.024</td>
</tr>
<tr>
<td>Constant</td>
<td>5.43</td>
<td>0.17</td>
<td>31.70</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Table 1.7: Study 3: Regression Results (DV: “Devalues” Measure)

The two measures of competitive victimhood were negatively correlated ($r(201) = -0.16$, $p = 0.02$), suggesting that they may not cleanly reflect a single, underlying latent competitive victimhood belief.

It could be argued that the attitude toward the policy items also captures a competitive victimhood belief similar to a belief statement that gay rights are civil rights. As such, I also performed a similar analysis to that performed for the other competitive victimhood beliefs above using the attitude measure as dependent variable. There were no effects other than a main effect of zero-sum thinking ($b = 0.43$, $p = 0.017$). See table 1.8 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black (indicator 0/1)</td>
<td>0.18</td>
<td>0.24</td>
<td>0.73</td>
<td>0.468</td>
</tr>
<tr>
<td>Zero-sum thinking (continuous; z-scored)</td>
<td>0.43</td>
<td>0.18</td>
<td>2.41</td>
<td>0.017</td>
</tr>
<tr>
<td>Black × Zero-sum thinking</td>
<td>-0.08</td>
<td>0.24</td>
<td>-0.31</td>
<td>0.755</td>
</tr>
<tr>
<td>Constant</td>
<td>4.78</td>
<td>0.17</td>
<td>28.65</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Table 1.8: Regression Results (DV: Attitude Measure)

**Exploration of Moderation by Social Dominance Orientation**

As an exploratory analysis, I investigated whether social dominance orientation might moderate the relationship between zero-sum thinking and competitive victimhood. Social dominance orientation is the “preference for inequality among social groups” (Pratto et al., 1994, p. 741). I speculated that a high social dominance orientation could amplify the effect of zero-sum thinking on competitive victimhood and that a low social dominance orientation could suppress the effect of zero-sum thinking on competitive victimhood. To test this possibility, I performed analyses of covariance as before, using in turn the civil rights measure and the devalues racial struggle measure.
as dependent variables. The independent variables were also the same, apart from the addition of social dominance orientation (z-scored), and all possible factorial interaction terms. For the civil rights measure dependent variable, the ethnicity × zero-sum thinking interaction was significant \((p = .01)\), the ethnicity × social dominance orientation interaction was significant \((p = .01)\), and the zero-sum thinking × social dominance orientation interaction was significant \((p = .004)\). To understand the meaning of these interactions, I repeated the analysis within each participant group separately. The interaction terms were not significant within Black participants, though they were significant within White participants. Given that my research question involves competitive victimhood between members of disadvantaged groups, I do not discuss these analyses further. For the devalues racial struggle dependent variable, none of the interaction terms were significant. As a cautionary note about interpretation, it would only be possible to detect large two- or three-way interaction effects with this sample size. An analysis of variance with three predictors and factorial design \((2 \times 2 \times 2 = 8; \frac{203}{8} = 25.38\) participants per cell) has relatively low statistical power. See supplementary analyses in section C.2.3 on page 128 for additional details.

1.10.3 Discussion

This study provides preliminary evidence that zero-sum thinking is positively associated with competitive victimhood beliefs for members of a disadvantaged group, compared to members of a non-disadvantaged group, when confronted with appeals to address the suffering of a disadvantaged outgroup using one of the two competitive victimhood measures. The measures used to capture competitive were single measures tied to the hypothetical scenario I used. I based these measures on the existing literature on competitive victimhood, which generally uses belief measures without formal psychometric construct validation, such as the measure from Sullivan et al. (2012), which assesses competitive victimhood by asking simply whether the ingroup experiences more or less discrimination than the outgroup. These results are complemented by additional measures in study 4 which provide some degree of convergent validity, though still rely on face validity. The different results observed for the two measures suggest that measurement of competitive victimhood outcomes would benefit from additional scale validation (or other research geared toward psychometric precision) studies. In particular, it would be helpful to create guidelines by which one could evaluate beliefs about group victimhood for several identity groups relevant to intergroup conflict.
between disadvantaged groups. In terms of choosing between the two measures in this study, few hard conclusions can be drawn given that there are only two items, apart from arguing for the advantage of using multiple indicators when developing a measurement instrument.

Interpreting both results raises several questions. My identification strategy of using non-disadvantaged participants as a comparison group allowed me to distinguish a clear interaction for one of my measures—the gay rights are civil rights belief. Though the interaction was clear, the simple main effect among black participants failed to reach conventional significance levels. The simple main effect among white participants was significant. This could be due to some specific group-specific attitudes. Results were equivocal regarding another measure—the devalues struggle belief. In the second measure, zero-sum thinking predicted the competitive victimhood beliefs for both groups of participants, though there was a main effect of race such that black participants scored higher on this measure than white participants. However, it is worth noting that devalues the racial struggle for civil rights only directly references ingroup disadvantage for one of the participant groups—the black participants. As such, interpreting the association between zero-sum thinking and the devalues struggle belief may only be meaningful within the black participant group. Since the effect was only significant within white participants, the results are ambiguous for testing my hypothesis with this dependent variable (though this would not be true if there had been a simple main effect of within the group of black participants). From this result, we can only identify a main effect of zero-sum thinking on the devalues struggle measure. Additionally, there was no effect on the attitude measure for another potential measure of competitive victimhood.

This study has several limitations regarding specific identities. While recruiting members of specific disadvantaged groups and using stimuli related to real identities increases the external validity of findings, it also increases the chances that any effects may be driven by specific details of the actual groups or aspects of the particular stimuli. The study design introduces another limitation. To identify effects related to the beliefs of people belonging to disadvantaged groups, I used non-disadvantaged participants as a comparison. In doing so, I assume that people self-reporting identification with a disadvantaged (or non-disadvantaged) group perceive themselves as more (or less) disadvantaged in line with historical group stereotypes. I provide evidence without relying on identities with historical associations in the study using the minimal group paradigm.
**1.11 Study 4: Minimal Group Paradigm**

I designed this study to investigate the relationship between zero-sum thinking and competitive victimhood while addressing some of the limitations of previous studies, such as the dependence on group identities with historical characteristics, the limitations of comparison between disadvantaged and non-disadvantaged participants with regard to identifying competitive victimhood beliefs, and the inherently correlational nature of comparisons between participants recruited from specific groups.

This study used a minimal group paradigm (Diehl, 1990; Tajfel, 1970; Tajfel & Turner, 1979) to experimentally control for details particular to group identities with rich historical meaning, a limitation of several earlier studies, and in so doing increases the internal validity of any findings. As discussed in the conceptual development above, the minimal group paradigm creates group identities using “mere” categorization, which means categorization based on seemingly arbitrary characteristics such as randomly assigned shapes (for example, assigning some people the triangle identity and some people the circle identity) or individual idiosyncrasies with little substantive content, such as telling participants (using deception) that they belong to an “over-estimator” or “under-estimator” group, when in reality the labels are purely based on random assignment. Though a more immersive methodology might better capture an ecologically valid situation or a historically weighty identity group, the purpose of this study is to prioritize the internal validity of relationships between constructs, which random assignment supports.

To operationalize group-based disadvantage, I presented participants with information about challenges faced by (minimal) ingroup and outgroup, providing some groups with information about ingroup disadvantage. Random assignment determined the framing of relative disadvantage. That is, rather than compare the reactions of participants from disadvantaged and non-disadvantaged groups, my identification strategy for this study was to induce disadvantaged minimal group identity and then compare the responses of participants to different framings of outgroup disadvantage: *ingroup disadvantage*, *comparative disadvantage*, and *common disadvantage*. I use these framings to investigate whether zero-sum thinking is responsible for competitive victimhood beliefs between disadvantaged groups. The *common disadvantage* condition represents the beliefs members of one disadvantaged group form about other disadvantaged groups, as information is provided about
disadvantage faced by the ingroup and disadvantage faced by an outgroup. I provide no explicit comparative information about the relative disadvantage faced by the two groups in the common disadvantage condition, which reflects the way people generally confront information about outgroups beyond the lab. The other two conditions provide comparisons. The ingroup disadvantage condition represents beliefs a member of a disadvantaged group might hold regarding a member of an unspecified group. In the comparative disadvantage condition, the stimuli provides information about which group suffers greater disadvantage, giving less scope for inferences driven by zero-sum thinking, but potentially still allowing other forms of ingroup-favoring or outgroup-disfavoring biases to emerge if processes other than zero-sum thinking explain competitive victimhood between disadvantaged groups. This framing treatment is not designed to manipulate zero-sum thinking (which is measured as an individual difference), but to create the most experimentally clean, unconfounded example of group identity possible in the context of study constraints.

For consistency with previous studies and past work on competitive victimhood, competitive victim belief was the primary dependent variable. Additionally, the minimal group paradigm typically assesses intergroup discrimination by comparing reward allocation between ingroup and outgroup members (Billig & Tajfel, 1973) yielding a measure of ingroup favoritism. I used a version of this ingroup favoritism measure where participants divided a small bonus sum between (minimal) ingroup and outgroup members. In summary, this study builds on previous results by increasing internal validity (through experimental design) and by measuring a real economic behavior (bonus allocation) in addition to measuring competitive victimhood beliefs.

1.11.1 Method

Participants and Design

I recruited 400 participants using Amazon’s Mechanical Turk. 379 participants passed a bot check (see below for details). I excluded an additional 30 responses for failing an attention check, leaving 349 responses for analysis (\(M_{\text{age}} = 37.45, SD_{\text{age}} = 11.49\), 134 female, 214 male, 1 nonbinary). Survey software assigned participants randomly to one of three experimental conditions (disadvantage framing: common, ingroup, and comparative).
1.11. Study 4: Minimal Group Paradigm

Procedure

As a cover story for the minimal group paradigm, participants first completed a Big 5 personality assessment (BFI2-S; 30 items) prior to minimal group categorization (Soto & John, 2017). This assessment included items such as *I am someone who keeps things neat and tidy* and *I am someone who has few artistic interests*, general personality questions across many different aspects of personality (1 = *Strongly Agree* . . . 7 = *Strongly Agree*). Categorization was random and did not depend upon Big 5 scores. After completing the personality assessment, all participants read:

Thank you for completing the personality questionnaire. Research has found that this questionnaire is predictive of outcomes in the workplace and other domains of life, including how others treat you. People can be categorized into different groups based their results. Based on your responses, you belong to INGROUP. Members of INGROUP tend to have doubts about whether they have made the right decision or done the right thing, have some aspirations that are pretty unrealistic, possess a great deal of unused potential which has yet to be explored, and have a tendency to be self-critical.

Research has found that on average people tend to rate this general description as accurate (Forer, 1949). Survey software randomly counterbalanced whether the ingroup label was *Group B* or *Group C*; software used the other label for the outgroup later during the scenario task. On the following screen, participants completed a comprehension check, choosing assigned ingroup label from several options (*Group A–Group D*).

Next, participants each read one scenario corresponding to randomly assigned experimental condition and then completed three post-scenario questions. In all conditions, participants read about disadvantages that members of the ingroup faced (for example, greater likelihood of being criticized):

Please imagine that research is published showing that, compared to the average worker, members of INGROUP earn lower wages, are less likely to be hired, are less likely to be promoted, and are more likely to be criticized in front of colleagues. However, independent examination of work quality reveals no difference between members of INGROUP and the average worker.
This consisted of the full text for participants in the ingroup disadvantage condition. In the common disadvantage condition, participants also read about how members of an outgroup were bringing attention to their own disadvantages:

Additionally, the research found that members of OUTGROUP, another group, faced various disadvantages in the workplace. Members of OUTGROUP have begun to bring attention to the disadvantages faced by members of their group and advocate for new workplace policies.

The text in the common disadvantage lacked any direct comparison between disadvantaged groups, but based on my theorization, I would expect people high in zero-sum thinking to react with competitive victimhood to defend access to potentially scarce resources such as support from third-parties. In contrast, in the comparative disadvantage condition participants read about how the disadvantage faced by ingroup members was greater than the disadvantage faced by members of the outgroup:

Additionally, the research found that members of INGROUP face significantly greater disadvantage compared to OUTGROUP, another group. However, members of OUTGROUP have begun to advocate for new workplace policies to benefit their group, claiming that disadvantages faced by OUTGROUP deserve greater recognition.

For example, if the ingroup was Group B and the outgroup was Group C, then in the comparative disadvantage condition a participant would have read about the disadvantages faced by Group B, the disadvantages faced by group C, and about how Group B faced greater disadvantage than Group C.

After reading the scenario, participants responded to post-scenario questions about discrimination beliefs (Members of INGROUP are discriminated against; 1 = Strongly Disagree ... 7 = Strongly Agree), competitive victimhood (Compared with OUTGROUP, members of INGROUP experience ______ discrimination; 1 = Less Overall, 4 = As Much, 7 = More Overall), and social media sharing behavior (How likely would you be to share a news article on social media explaining the treatment of INGROUP?; 1 = Extremely Unlikely ... 7 = Extremely Likely). I derived the
1.11. Study 4: Minimal Group Paradigm

first two items from previous work on competitive victimhood (Sullivan et al., 2012). The third was an exploratory measure.

**Ingroup Favoritism (Allocation Task)** Next, participants engaged in a bonus allocation task to measure ingroup favoritism (Allen & Wilder, 1975). In the bonus allocation task, participants distributed a small monetary reward—75 cents US, in 5-cent steps—between non-self ingroup and outgroup members. In the allocation, the participant chose one column from a choice matrix indicating a bonus split between a non-self ingroup and outgroup member. The top row always corresponded to the ingroup and the bottom row always corresponded to the outgroup, with group name labels in a leftmost column. For example, choosing the second column from the choice matrix would award a 10 cent bonus to a non-self ingroup member and award a 65 cent bonus to an outgroup member. Such a decision would represent relatively weak ingroup favoritism.

<table>
<thead>
<tr>
<th>INGROUP</th>
<th>.05</th>
<th>.10</th>
<th>.15</th>
<th>.20</th>
<th>.25</th>
<th>.30</th>
<th>.35</th>
<th>.40</th>
<th>.45</th>
<th>.50</th>
<th>.55</th>
<th>.60</th>
<th>.65</th>
<th>.70</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTGROUP</td>
<td>.70</td>
<td>.65</td>
<td>.60</td>
<td>.55</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
<td>.35</td>
<td>.30</td>
<td>.25</td>
<td>.20</td>
<td>.15</td>
<td>.10</td>
<td>.05</td>
</tr>
</tbody>
</table>

Table 1.9: Ingroup Favoritism Choice Matrix

After the scenario and post-scenario questions, participants completed a measure of zero-sum thinking (Różycka-Tran et al., 2015) and demographic questions. Embedded near the end of the demographic questions were an attention check and bot check. The attention check prompt was *I often visit the moon. This item is just to see if you are paying attention. Please select strongly disagree.* (1 = Strongly Disagree . . . 7 = Strongly Agree). The bot check was a free-response text item (prompt: *What did you eat for your most recent meal or snack?*). I coded responses as bot or human based on whether the text response made sense with respect to the prompt. Within question blocks, survey software randomized presentation of post-scenario questions and zero-sum thinking items.

### 1.11.2 Results

I scored zero-sum thinking by averaging the scale items (α = .93, 8 items). Since I measured zero-sum thinking near the end of the survey, to ensure that experimental condition did not affect this score I performed an analysis of variance with zero-sum thinking score as dependent variable
and experimental condition as independent variable. The analysis of variance revealed no effect of treatment on zero-sum thinking ($F(2, 346) = 0.02, p = .980$), suggesting that the score is acting as an individual difference measure.

To test my hypothesis that competitive victimhood arises from zero-sum thinking when confronted with the disadvantage of an outgroup, I performed an analysis of covariance with competitive victimhood beliefs as dependent variable. Independent variables were experimental condition, zero-sum thinking (z-scored), and the interaction term (adjusted $R^2 = .15$). There were significant effects associated with all predictors ($p < .001$). To examine estimates of the effects, I ran a regression with competitive victimhood beliefs as the dependent variable and the same independent variables, using common disadvantage framing condition as baseline. See table 1.10 for model estimates. Interpreting these estimates, participants in the common disadvantage exhibit lower competitive victimhood beliefs compared to either of the other two conditions (the main effect of experimental condition). Additionally, zero-sum thinking is positively associated with competitive victimhood beliefs (the main effect of zero-sum thinking, a continuous variable). The negative (and significant) coefficient of the comparative disadvantage × zero-sum thinking term indicates that zero-sum thinking shapes competitive victimhood beliefs for members of disadvantaged groups when presented with the suffering of a disadvantaged outgroup, consistent with my hypothesis. The fact that the ingroup disadvantage × zero-sum thinking term is not significant indicates that the influence of zero-sum thinking on competitive victimhood beliefs functions similarly in these two conditions. See figure 1.4 for a visual presentation and below for a statistical analysis of the slopes between conditions.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingroup disadvantage (indicator 0/1)</td>
<td>.83</td>
<td>.19</td>
<td>4.41</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Comparative disadvantage (indicator 0/1)</td>
<td>.82</td>
<td>.18</td>
<td>4.60</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Zero-sum thinking (continuous; z-scored)</td>
<td>.67</td>
<td>.13</td>
<td>5.30</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Ingroup disadvantage × Zero-sum thinking</td>
<td>-.22</td>
<td>.19</td>
<td>-1.16</td>
<td>.247</td>
</tr>
<tr>
<td>Comparative disadvantage × Zero-sum thinking</td>
<td>-.75</td>
<td>.19</td>
<td>-4.14</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Constant</td>
<td>4.49</td>
<td>.12</td>
<td>36.06</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 1.10: Minimal Group Paradigm: Regression Results (DV: Competitive Victimhood)

I compared the effect of zero-sum thinking on competitive victimhood across conditions, focusing on the comparisons between common disadvantage and the other two conditions. The rela-
1.11. Study 4: Minimal Group Paradigm

tionship between zero-sum thinking and competitive victimhood beliefs is captured by the slope of the linear prediction by condition: common disadvantage framing \( (\frac{dy}{dx} = 0.67, SE = .13, p < .001) \), ingroup disadvantage framing \( (\frac{dy}{dx} = 0.45, SE = .14, p = .003) \), and comparative disadvantage framing \( (\frac{dy}{dx} = -0.08, SE = .13, p = 1.000) \). The comparison between the common disadvantage condition and the other two conditions together was significant \( (\frac{dy}{dx} = .48, SE = .16, p = .002) \).

Figure 1.4: Minimal Group Paradigm: Competitive Victimhood

To test whether ingroup favoritism behavior, a common operationalization of discrimination under in a minimal group paradigm, is similarly a function of zero-sum thinking in the common disadvantage context, I performed an analysis of covariance with ingroup favoritism (bonus award allocation) as dependent variable. Independent variables were experimental condition, zero-sum thinking (z-scored), and the interaction term (adjusted \( R^2 = .07 \)). There was a significant main effect of zero-sum thinking \( (p < .001) \) and a significant interaction \( (p = .033) \). To examine estimates of the effects, I ran a regression with ingroup favoritism as the dependent variable and the same
1.11. Study 4: Minimal Group Paradigm

independent variables. See table 1.11 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingroup disadvantage (indicator 0/1)</td>
<td>2.97</td>
<td>1.59</td>
<td>1.87</td>
<td>.062</td>
</tr>
<tr>
<td>Comparative disadvantage (indicator 0/1)</td>
<td>2.73</td>
<td>1.52</td>
<td>1.80</td>
<td>.073</td>
</tr>
<tr>
<td>Zero-sum thinking (continuous; z-scored)</td>
<td>4.88</td>
<td>1.07</td>
<td>4.57</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Ingroup disadvantage × Zero-sum thinking</td>
<td>−4.07</td>
<td>1.58</td>
<td>−2.58</td>
<td>.010</td>
</tr>
<tr>
<td>Comparative disadvantage × Zero-sum thinking</td>
<td>−2.50</td>
<td>1.54</td>
<td>−1.63</td>
<td>.104</td>
</tr>
<tr>
<td>Constant</td>
<td>47.22</td>
<td>1.06</td>
<td>44.71</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 1.11: Minimal Group Paradigm: Regression Results (DV: Ingroup Favoritism)

I compared the effect of zero-sum thinking across conditions, focusing on the comparisons between common disadvantage and the other two conditions. The relationship between zero-sum thinking and ingroup favoritism is captured by the slope of the linear prediction by condition: common \( \frac{dy}{dx} = 4.88, SE = 1.07, p < .001 \), ingroup \( \frac{dy}{dx} = 0.80, SE = 1.16, p = .491 \), and comparative \( \frac{dy}{dx} = 2.37, SE = 1.10, p = .032 \). The comparison between the common disadvantage condition and the other two conditions together was significant \( p = .014 \).
1.11. Study 4: Minimal Group Paradigm

Figure 1.5: Minimal Group Paradigm: Ingroup Favoritism

When we emphasize comparative disadvantage, people will adopt the mindset of competitive victimhood, based on prioritizing ingroup favoritism. I had no theoretical predictions for difference between comparative and ingroup disadvantage framings in competitive victimhood responses as my hypothesis primarily concerned the comparison between common disadvantage and the other conditions. Based on these results, however, my post hoc interpretation is that comparative disadvantage does not completely negate the effect of zero-sum beliefs but weakens the effect of rejecting these beliefs to behave with greater impartiality and less ingroup favoritism.

1.11.3 Discussion

The framing of disadvantage changed how zero-sum thinking influenced competitive victimhood. Specifically, in the comparative condition, zero-sum thinking was not a factor in competitive victimhood responses. However, in the common condition, which represents when a member of a
disadvantaged group is exposed to the appeals of a disadvantaged outgroup, zero-sum thinking shaped responses, consistent with hypothesis 3. Though the influence of zero-sum thinking on competitive victimhood was highest in the common disadvantage condition, one result that is consistent with previous research is worth highlighting: the common condition was also the condition with lowest overall competitive victimhood scores. One way of interpreting this result is that members of disadvantaged groups tend to have more positive attitudes toward other disadvantaged groups that are stigmatized along similar dimensions, as documented in the work of Craig and Richeson (2016), unless zero-sum thinking is high. From another perspective, making only ingroup disadvantage salient, or explicitly providing comparative framing in favor of the ingroup seems to neutralize the effect of zero-sum thinking. This study also contributes to the literature on competitive victimhood by demonstrating the role of zero-sum thinking in both competitive victimhood beliefs and ingroup favoritism behaviors. The pattern of results was slightly different for these two measures, though in both measures the influence of zero-sum thinking was strongest in the common condition. In particular, the slope of effect when in the ingroup condition was steeper for the competitive victimhood item than for the favoritism measure. I had no prediction about this comparison, but speculatively ingroup favoritism and competitive victimhood beliefs, while related, may have different antecedents.

One limitation of this study is that several attitude or belief outcome measures display moderate ceiling effects based on examination of scatter plots, with some degree of clustering toward one end of the scale. Ceiling effects can sometimes inflate the incidence of type 1 errors, but this danger is most pronounced for measures with objective characteristics such as income and alcohol consumption, rather than the subjective Likert-type scales I employ in this research (P. C. Austin & Brunner, 2003).

These results suggest a future direction for research involving the beliefs contrary to zero-sum thinking. Whether such beliefs involve merely the absence of beliefs about the inherent conflict over resources or an explicit constellation of beliefs related to the idea that the success of others can benefit the self or ingroup as well requires further theoretical clarification. Early versions of the zero-sum thinking scale (Różycka-Tran et al., 2015) included four additional reverse-coded items which could be read as characteristic of such shared-interest beliefs. These four items were:
• When a person does much for the good of others, he or she benefits as well.
• Those who give much to others receive much from them.
• People who do much for their own good frequently benefit others as well.
• When the number of rich people increases in the country, the poorer people benefit as well.

Psychometric analysis led the scale’s original authors to recommend dropping those items and only using the other eight items where high scores represented agreement with beliefs characteristic of zero-sum thinking; I followed this recommendation in my studies, based on my initial primary interest in zero-sum thinking as explanation. However, based on my findings, it might yield dividends to explore concepts related to those discarded items, treating them as a separate but related construct that could be a potential predictor of decreased intergroup derogation and decreased competitive victimhood when both ingroup and outgroup disadvantages are salient to members of disadvantaged groups.

1.12 General Discussion

In chapter 1 of my dissertation, I have shown that, contrary to general expectations (study 2), members of disadvantaged groups sometimes engage in intergroup conflict, including responding to claims of disadvantaged outgroup victimhood by competing for victim status (studies 3–4). This adds to the existing literature in two ways. First, I provide empirical evidence consistent with historical and journalistic accounts of disadvantaged groups competing for victim status. Second, I demonstrate the role of a psychological process, zero-sum thinking, in explaining this phenomenon. I demonstrate this effect using a multi-method approach, with content analysis of social media textual data demonstrating intergroup derogation and survey-based experiments demonstrating competitive victimhood between disadvantaged groups.

To explore potential psychological mechanisms, I hypothesized that zero-sum thinking might explain when members of disadvantaged groups engage in competitive victimhood. Zero-sum thinking is difficult to operationalize in textual data, so I performed two survey-based experiments that used a validated self-report measure of zero-sum thinking.

Additionally, to explore whether this effect is bound strongly to particular historical identities, I used the minimal group paradigm (Smith, 2010) to investigate whether people given transient
identities without historical weight might react similarly and whether this effect would also be associated with zero-sum thinking. Results of an experiment supported the role of zero-sum thinking in competitive victimhood between disadvantaged groups in the minimal group paradigm. Along with providing evidence that competitive victimhood seems to occur as a result of general social identity processes, rather than being entirely expressions of particular historical intergroup comparisons, study 5 also demonstrated a behavioral outcome involving allocation of bonuses between ingroup and (disadvantaged) outgroup members.

Though I have primarily investigated one mechanism (zero-sum thinking) to explain competitive victimhood behavior, there are many other potential alternative explanations. For example, earlier when explaining the predictions of self-categorization theory, I mentioned the categorization criteria based on differences or similarities, specifically the role that superordinate identities could play in decreasing competitive victimhood behavior. In the case of complex identity-related phenomena such as competitive victimhood, it seems most plausible that many mechanisms work in parallel to influence beliefs and behaviors. However, some alternative mechanisms identified by previous research may be less likely to be a factor in competitive victimhood as operationalized in these studies. For example, White and colleagues have investigated a phenomenon they term “horizontal hostility” (White et al., 2006). In this research, they argue that more distinctive minority groups will engage in prejudice against less distinctive minority groups. Or, put another way, minorities will be prejudiced against other minorities that are more mainstream. According to this conceptual formulation, “Horizontal hostility … is unidirectional: The targets of horizontal hostility are always members of a similar minority group that is more mainstream than the minority ingroup” (White & Langer, 1999, p. 555). In many of the conflicts identified in journalistic and historical accounts, one could indeed categorize the groups into more mainstream and less mainstream: in competitive victimhood between some feminists and transgender women, feminists would probably be seen as more mainstream. Similarly, in competitive victimhood between racial minorities and minorities defined by sexuality, the racial minority identity might often be seen as more mainstream (by virtue of the civil rights movement history). Despite this seeming applicability, asymmetric hostility does not seem to characterize competitive victimhood, either conceptually or as I have observed empirically in my data. That is, the “more mainstream” disadvantaged identity group often seems to engage in hostility toward the “less mainstream” disadvantaged identity, as well
as vice versa. As such, though I have every reason to believe that horizontal hostility dynamics might emerge as well when degree of group distinctiveness is at play, the two explanations seem orthogonal rather than competing alternative explanations. Future research could perhaps explore additional linkages between these mechanisms.

1.12.1 Limitations

Despite detecting this effect on several different social media platforms, using multiple disadvantaged identities as stimuli, and in online samples with wide demographic coverage, these studies have several limitations. Though the Amazon Mturk participants are more representative of general North American population than many other common convenience samples (such as undergraduate students, which at the very least have a much-constrained range of age and life experiences compared to online panel participants), nonetheless Mturk fails to be a truly representative sample of the North American population (Stritch et al., 2017). As such, I am cautious about generalizing these results, even though the dynamic seems to emerge using the minimal group paradigm. The sample being mostly Western is an even larger limitation, from the perspective of generalization, as results may be peculiar to social dynamics in Western, educated, industrialized nations (Henrich et al., 2010). Additionally, I operationalize competitive victimhood in several different ways, and measure related, but not identical, constructs including intergroup derogation, ingroup favoritism, and general perceptions of whether disadvantaged groups will support appeals to help other disadvantaged groups. This wide variety of beliefs, behaviors, and attitudes represents ways that these dynamics often occur in the field, increasing the external validity (for some outcomes and groups) but presenting challenges to internal validity regarding the application of the zero-sum thinking framework I propose. Finally, many of my studies rely on imagining hypothetical scenarios and self-reports of anticipated behaviors. It is possible that participants might fail to accurately report or predict future behavior, due to issues such as affective forecasting deficits (Wilson & Gilbert, 2005) or lack of salience with regard to personal priorities.

Studies 1A and 1B, my studies that use social media datasets, suffer from limitations present in analyses that use pre-existing objective classifications as independent variables, rather than manipulating constructs of interest directly (such as through experimental random assignment). As such, though my independent variable classifications were based on an examination of common
terms used on these platforms, I could have chosen a different set of terms, or included additional words. I performed no unreported analyses using alternative operationalizations of the independent variables in the social media studies.

Several dependent measures indicate some degree of ceiling effect, displaying decreased sensitivity to detect variation at extreme ends of the construct. For example, the belief that gay rights are civil rights seems to display such a pattern upon examination of the scatter plot.

1.12.2 Future Directions

Many avenues exist for development of future research from these findings. First, my studies focus primarily on antecedents of competitive victimhood between disadvantaged groups. Additional studies could explore potential psychological consequences for people who engage in competitive victimhood. Even if competitive victimhood is sometimes adaptive in bolstering ingroup solidarity or recruiting support for an ingroup’s cause, the act of continually seeing one’s self in the victim role might have various deleterious consequences. There is a notable gap in the existing literature regarding psychological consequences, as most research seems to focus on understanding causes and interventions from an intergroup conflict perspective (for a representative example, see the common ingroup identity model: Gaertner et al., 1993). For example, it is possible that engaging in competitive victimhood over time with regularity may have downstream consequences on outcomes such as well-being or reputation.

My research so far has focused on disadvantaged groups engaged in competitive victimhood when confronted with the suffering of other disadvantaged groups. However, an individual person generally has many identities (Deaux, 1996), some of which could involve disadvantage while others might be situationally neutral or even provide advantages. As such, it is only generally within the context of a specific situation that a person’s constellation of identities settles into specific identity salience, either by intrapsychic processes of attention (thinking about one’s self as a national of a particular country, for example) or external stimuli (such as someone shouting a racial slur). Given that I have found that zero-sum thinking plays a role in competitive victimhood behavior, it is possible that some identities might entail a greater likelihood of engaging in zero-sum thinking compared to others, which would have implications both for moderation by identity type (or perhaps identity class) as well as potential interventions (such as activating identities that are, from a
1.12. General Discussion

Future research could explore whether the historical recency of an identity is more or less associated with the propensity to engage in competitive victimhood. It is possible that the modern business cycle might be too short to enable the examination of new identities, though social media platforms seem to have accelerated the formation of new identities (Gündüz, 2017) or amplify the relevance of existing identities (Ray et al., 2017). And the changes in resources available to different groups as fortunes ebb and flow might also have consequences for competitive victimhood based on my findings. During periods of economic growth, zero-sum thinking might decrease, while the reverse might happen during economic contractions, leading to corresponding decreases and increases in competitive victimhood behavior, assuming appropriate proxies can be found in archival data.

The complexity of identity also may help explain why members of groups that have many objective advantages might choose to engage in competitive victimhood driven by zero-sum thinking as well. For example, a wealthy professional who is also a member of a disadvantaged ethnic group has several identities that could become active, as does a poor person of the dominant ethnic group. In fact, it could be that thinking in zero-sum terms makes it more likely for people to activate identities involving disadvantage.

Another avenue to investigate in future research, as suggested by my preliminary studies, is social media, which is a rich source of data regarding intergroup relations between disadvantaged groups specifically, and identity-based groups more generally, but this very richness is itself a challenge to operationalizing psychological concepts, as many existing validated measures require instruments such as self-report questionnaires. However, automated content analysis, using adaptive techniques such as machine learning, can support analysis of large data sets. In this dissertation, I use software to analyze sentiment in text, but this software is unable to measure more sophisticated psychological concepts such as zero-sum thinking and personality traits. However, researchers are beginning to apply these techniques to measurement of user personality traits by analyzing textual content traces (Bleidorn & Hopwood, 2019; Stachl et al., 2020; Tay et al., 2020). For example, there is work on using deep neural network techniques to predict dark triad personality traits of uses on social media platforms (Ahmad et al., 2020). I hope to use this sort of approach to explore these ideas using social media datasets in the future beyond documenting phenomena.
One interpretation consistent with these results is that the salience of a disadvantaged out-group’s disadvantage functions as a social identity threat because it indicates that other groups might be more deserving of help or recompense than the ingroup. By engaging in competitive victimhood, participants could be bolstering their social identity by virtue of being worse off than others. This account thus identifies both a novel form of social identity threat—an outgroup being more deserving—and a novel form of coping with the social identity threat—reinforcing the sense of ingroup victimhood. The social identity threat is novel with respect to existing literature because most social identity threats fit the model of devaluation based on social identity, such as lack of perceived positive qualities due to social stereotype (Steele et al., 2002). Future research could potentially investigate whether other ways to cope with social identity threat might substitute for the competitive victimhood response. For example, might some other opportunity for self-affirmation decrease competitive victimhood beliefs in members of disadvantaged groups when confronted with the plight of disadvantaged outgroups?

Along with this methodological avenue, these results suggest that understanding the causes of zero-sum thinking, and related constructs, might help paint a fuller picture of the dynamics of competitive victimhood, as identifying such causes would allow identification of when, or by whom, competitive victimhood is likely to occur. For example, the situational sense of scarcity (or plenty) might amplify (or dampen) the effect of zero-sum thinking. In my studies, I either measure proxies for existing identity (such as race) or induce identity using the minimal group paradigm. It seems plausible that some degree of identity salience might be necessary for competitive victimhood responses to occur. be particularly relevant in commercial contexts, where marketers sometimes use scarcity framing to increase desirability. Such work would also add to the broader literature on zero-sum thinking.

Additionally, such understanding would be useful for those who wish to develop interventions to curtail competitive victimhood dynamics, as, according to journalistic and historical accounts, competitive victimhood is associated with intergroup hostility and other negative outcomes, such as intractable conflicts. In the discussion of study 4, I outline one approach which seems to have promise for understanding other constructs that might explain decreased competitive victimhood responses that flows directly from the zero-sum thinking literature: looking at whether there is a shared outcome alternative to zero-sum thinking. It is also possible that other personality or situ-
ational traits may influence when disadvantaged groups in particular engage in zero-sum thinking, with consequences for competitive victimhood beliefs and behavior. For example, high neuroticism or emotional reactivity might amplify the social identity threat experienced and lead to even greater competitive victimhood reaction (or the reverse effect for low neuroticism). In chapter 2 of this dissertation, I explore the effect of an individual difference concerning signaling victimhood; it is plausible that such stable individual differences in victim signaling might also moderate the competitive victimhood outcomes I observe in study 1. Finally, though several of my preliminary studies use extensive real-world data sets, these studies have demonstrated phenomena rather than isolating psychological mechanisms. As such, it would be useful for future research to tackle the external validity of my explanatory framework. This could involve field studies or, as discussed above, other approaches to analyzing data from social media platforms.

Chapter 1 examined perceptions of victimhood as an outcome with implications for intergroup relations, including derogation, ingroup favoritism, and the likelihood of cooperation. In the next essay, I examine a signaling behavior related to the perception of victimhood as a predictor variable rather than as an outcome. I look at the way that differences in virtuous victim signaling—an individual difference that captures whether people signal to others that they are both virtuous but have suffered—predict different attitudes and behaviors for consumers in commercial interactions.
Chapter 2

Victimhood Perception and Commercial Interactions

Consumers can form negative attitudes toward firms based on many factors related to attributes of a specific firm, or its behaviors, including product failure (Day & Ash, 1979), firm moral violations or unethical behaviors (Ferrell et al., 2019; Folkes & Kamins, 1999; Romani et al., 2015), positions on social issues (Sen & Morwitz, 1996), political beliefs (Hollenbeck & Zinkhan, 2006), and corporate scandals (Dawar & Pillutla, 2000; Fong & Wyer, 2012), among other causes. However, consumers also sometimes react negatively toward firms based on factors unrelated to firm attributes or behaviors, such as consumer personality traits. For example, the dark triad personality traits are associated with malicious consumer behavior directed at harming firms or brands (T. Hancock, 2020). Additionally, the online phenomena of “trolling”—a deliberate attempt to provoke reactions from other users (Golf-Papez & Veer, 2017)—shows that some consumers seem to be motivated to attack other people and firms because they find it pleasurable or are attention-seeking by disposition (Lopes & Yu, 2017). The wide variety of firm- and brand-related stimuli online provides ready grist for the troll’s mill (Pehlivan et al., 2011). These examples show that consumer negativity toward firms can emerge from effects grounded in the person of the consumer, rather than entirely as reasoned or emotional consequences of firm attributes or behaviors. In this research, I add to the literature on consumer negativity toward firms grounded in consumer individual differences, examining the role of consumer victimhood perceptions in service experience contexts where personal harm or insult is lacking.

Previous research on consumer hostility in retail contexts has primarily focused on interactions between consumers and sales representatives (Richins, 1983a; Rose & Neidermeyer, 1999). This research often focuses on consumer misbehavior and disruption, often as contingent upon particular
consumer experiences such as service failure (Gelbrich, 2010; Strizhakova et al., 2012). Other forms of consumer negativity that has been studied primarily within the context of causes such as preexisting brand attitudes or service failure include negative word-of-mouth (Laczniak et al., 2001; Richins, 1983b), and consumer complaining (Gilly & Gelb, 1982; Maxham III & Netemeyer, 2002).

Also within the broad umbrella of causes related to preexisting brand attitudes, some consumer hostility is explained by firm- or brand-based hate (Fetscherin, 2019; Kucuk, 2019a). Research has found that poor performance or unethical reputation are antecedents of brand hate (Kucuk, 2019b). Along with such factors, which firms have some degree of direct control over, I suggest that some consumers may, by disposition, be more likely to interpret ambiguous or neutral service experiences negatively.

I investigate this phenomenon using the construct of virtuous victim signaling (Ok et al., 2020), a set of behaviors signaling both virtue and victimization that people use to recruit support from others as signaling victimization indicates harm suffered and signaling virtue deflects attribution from the signaler. For example, behaviors characteristic of this constellation of signals might include publicizing donations to a worthy charity (a virtue signal) and complaining about an ingroup identity is underrepresented in the media (a victim signal). By signaling virtuous victimhood, consumers can make a case for their deservingness based on experiencing unfair oppression or disadvantage. Though virtuous victimhood is a multi-dimensional construct, it can be measured using a validated self-report scale and is an individual difference that is stable over time. As a set of behavioral tendencies, virtuous victim signaling is likely the expression of underlying personality traits. For example, Ok et al. (2020) explored virtuous victim signaling as a strategy positively associated with dark triad traits. I propose that consumers high in virtuous victim signaling will be ready to interpret all commercial interactions through a more critical, grievance-related lens, even when the interaction itself is innocuous, because such consumers have a particular self-view, that they are the kind of person likely to be treated unfairly or discriminated against in commercial interactions. Previous research has show that the effect of virtuous victim signaling on outcomes such as unethical behavior occurs when controlling for identities historically associated with disadvantage (Ok et al., 2020), suggesting that, at least in some cases, virtuous victim signaling need not be tied to specific visible identity categories. In summary, I suggest that consumers high in
2.1 Hostile Reactive Attitudes

Following many commercial interactions with firms, consumers must decide how to react, such as when evaluating service quality, responding to a salesperson, or deciding whether to leave a review. In particular, evaluative reactions to such interactions, such as judging quality or demanding restitution, involve interpreting insult or affront and deciding upon appropriate reactions, which could include ignoring slights, demanding restitution, or even responding with violent aggression (Cohen et al., 1996). Previous research has found that the interpretation of ambiguous situations by consumers is shaped by consumer dispositions. For example, research on the personality of aggression has found that propensity to interpret ambiguous behavior as hostile are more likely to engage in aggression (Dill et al., 1997). Dodge and Coie (1987), in studies among male children, further distinguished between two types of aggressive personality: proactive and reactive, finding that reactive-aggressive types exhibited a bias leading to likelihood to interpret an ambiguous situation as provocation and a consequent propensity to display hostile reactive attitudes and engage in aggressive behavior. These findings have a number of limitations when applied to the general consumers due to the population and study context, but suggest hostile reactive attitudes in ambiguous or neutral cases may be shaped by individual differences in sensitivity to provocation.

The literature documents instances where consumers react negatively to companies even when the consumer has not, themselves, had a negative experience. In one series of studies, researchers showed that schadenfreude associated with product failure experienced by other consumers when using a status brand was associated with negative attitudes toward the brand and led to spreading negative word-of-mouth about the brand (Sundie et al., 2009). Consumers also may react to threatening information about the ingroup by derogating a product associated with an outgroup (Chae et al., 2017), another example of consumer behavior related to negative attitudes without experience product or service failure personally. Johnson et al. (2011) found that consumers having strong relationships with a brand, following brand transgression, were more likely to engage
2.2 Virtuous Victim Signaling

Virtuous victim signaling is a behavioral tendency to highlight personal disadvantage combined with personal virtue (Ok et al., 2020). Signal contents have two underlying dimensions, with one set of signals involving victimhood, such as accusation and unfairness, and the other set of signals involving personal virtue, measured as moral identity symbolization (Aquino & Reed II, 2002). The perceived victimhood dimension includes beliefs about systemic underrepresentation, lack of political voice, and anxiety about broad identity-based rejection. The virtue dimension includes behaviors such as engaging in hobbies, belonging to organization, or buying products that identify one as being virtuous. One function of such signaling is to recruit support from sympathetic third parties, and, as such, virtuous victim signaling behaviors are likely most adaptive in in cultures that prioritize moral status of victims (Campbell & Manning, 2018).

Though claims of victimization and virtue can reflect actual disadvantage, suffering and mistreatment, previous research has found that virtuous victim signaling, after controlling for various
demographic factors associated with systemic disadvantage, is associated with dark triad personality traits. Additionally, the association between virtuous victimhood and several classes of unethical behavior, such as lying and exaggeration to benefit the self, seems to be an expression of dark triad personality traits (Ok et al., 2020). These findings also suggest, though do not test directly, that people high in virtuous victim signaling would find evidence of mistreatment useful for signaling purposes and so would remain vigilant for potential affronts or examples of being treated unfairly, leading to a greater likelihood of detecting affront and then expressing hostile reactive attitudes, such as posting negative reviews or complaining to friends about the experience.

2.3 Hypotheses

I take an individual difference perspective, examining how aspects of consumer traits systematically shape hostile reactive attitudes of consumers toward firms, such as complaints, negative word of mouth, and negative reviews. My first hypothesis flows from the tendency of consumers high in virtuous victim signaling to tell others how they are treated unfairly. I expect that such consumers would be vigilant in any commercial interaction for signs of being treated badly and so would be more likely to have negative reactions in all commercial interactions, rather than only in contexts where service failures (or similar events) have occurred. Further, given the self- and identity-focus of the beliefs associated with virtuous victim signaling, I propose a second hypothesis, that consumers high in victim signaling are more likely to see themselves as the kind of person that experiences discrimination in commercial contexts. Thus:

H1. Virtuous victim signaling is more positively associated with hostile reactive attitudes when commercial experiences are neutral, compared to when commercial experiences are negative.

H2. People who engage in more virtuous victim signaling behaviors are more likely to see themselves as the kind of person who faces discrimination in commercial experiences and this self-perception explains the relationship between virtuous victim signaling and hostile reactive attitudes toward firms.
2.4 Study 1: Customer Reaction to Service Failure

Study 1 tests my first hypothesis, that virtuous victim signaling is positively associated with hostile reactive attitudes when commercial experiences are neutral (as opposed to negative). This study uses an airline service scenario where service quality is either unambiguously negative—being asked to change seats without any justification based on fairness—or neutral.

2.4.1 Method

Participants and Design

I recruited 343 participants using Amazon’s Mechanical Turk in exchange for small monetary compensation. I excluded 27 responses for failing either of two attention checks, leaving 326 responses for analysis ($M_{\text{age}} = 38.50$, $SD_{\text{age}} = 11.86$, 182 female, 141 male, 3 nonbinary). Survey software assigned participants randomly to one of two experimental conditions (service experience: neutral, failure). The design was mixed: 2 (experimental condition) $\times$ continuous (virtuous victim signaling individual difference). I expect service failure will lead to hostile reactive attitudes generally, but high virtuous victim signalers will also exhibit hostile reactive attitudes in the neutral service condition.

Procedure

Participants each read one scenario corresponding to randomly assigned experimental condition and then completed several post-scenario questions. Both scenarios began with the same introductory paragraph:

You board a small plane with a friend in the early hours of the morning. As there are few passengers, the flight attendant tells you to sit anywhere, so you choose seats near the front of the plane and across the aisle from one another.

In the neutral condition, participants imagined an airline commercial experience where a flight attendant asks several passengers to switch seats based on boarding precedence, in an effort to better balance distribution of weight on the plane.
At the last minute, three passengers enter the plane and take seats in front of you. Just before takeoff, the flight attendant tells those three people to move to the back of the aircraft to better balance the plane’s weight. They move to the back.

One of the three other passengers asks the flight attendant why they need to move rather than some other passengers. The flight attendant tells them they need to move because they boarded last. Those passengers take their bags and move to the back of the plane.

In the service failure condition, participants imagined an airline commercial experience with similar events, but the situation involves ambiguous fairness regarding passenger selection.

At the last minute, three passengers enter the plane and take seats in front of you. Just before takeoff, the flight attendant tells you to move to the back of the aircraft to better balance the plane’s weight.

Since you had entered the plane first, you ask why the flight attendant did not request the people in front to move instead of you. The attendant becomes indignant, stating that you had misunderstood intentions, and refuses to talk about the matter any further. You move to the back of the plane.

Following the scenario task, participants responded to several questions about the scenario (fairness, service quality) as manipulation checks and reported hostile reactive attitudes. Examples of hostile reactive attitudes included *Post a negative review about the airline online after the flight* and *Complain to friends about the experience* (1 = Very Inappropriate ... 7 = Very Appropriate).

Participants completed the victim signaling and moral identity scales. As exploratory measures, participants answered questions about personal values drawn from the European Social Survey (ESS, 2016), a four-item measure of beliefs about personal dignity (Ijzerman & Cohen, 2011). Finally, participants completed demographic questions (age, gender, ethnicity, political orientation on the social dimension, and political orientation on the economic dimension). Embedded near the end of the demographic questions was an attention check. The attention check prompt was *I often visit the moon. This item is just to see if you are paying attention. Please select strongly disagree.* (1 = Strongly Disagree, ... 7 = Strongly Agree). Within question blocks, survey software
randomized presentation of scale items.

### 2.4.2 Results

To create aggregate scores for scales, I averaged the items for hostile reactive attitudes ($\alpha = .78$), victim signaling ($\alpha = .89$), and moral identity symbolization ($\alpha = .91$). The moral identity symbolization score and the victim signaling score are correlated ($r(324) = .11$, $p = .046$). Following the procedure validated in Ok et al. (2020), I then standardized the victim signaling and moral identity symbolization items and averaged the two scores to compute a virtuous victim signaling score. Along with reporting results using this aggregate virtuous victim signaling score for ease of comparison with other published findings, I also report analyses using each score (moral identity symbolization and victim signaling) separately to examine whether either of the components are independently more influential.

To test my hypothesis that victim signaling is positively associated with hostile reactive attitudes when service is neutral, I performed an analysis of covariance with hostile reactive attitudes as dependent variable. Independent variables were experimental condition, virtuous victim signaling (z-scored), and the interaction term (adjusted $R^2 = .53$). There was a main effect of experimental condition ($b = 1.65$, $SE = .13$, $t = 12.41$, $p < .001$), a main effect of victim signaling ($b = .53$, $SE = .11$, $t = 4.79$, $p < .001$), and a significant interaction ($b = -.40$, $SE = .14$, $t = -2.88$, $p = .004$). See table 2.1 for model estimates.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>1.65</td>
<td>.13</td>
<td>12.41</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Virtuous Victimhood (continuous; z-scored)</td>
<td>.53</td>
<td>.11</td>
<td>4.79</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Commercial Failure $\times$ Virtuous Victimhood</td>
<td>-.40</td>
<td>.14</td>
<td>-2.88</td>
<td>.004</td>
</tr>
<tr>
<td>Constant</td>
<td>2.83</td>
<td>.10</td>
<td>28.65</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.1: Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes)

To further explore the interaction, I computed the marginal effect of virtuous victimhood on hostile reactive attitudes for each experimental condition: neutral ($\frac{dy}{dx} = .53$, $SE = .11$, $t = 4.79$, $p < .001$) and failure ($\frac{dy}{dx} = 0.13$, $SE = .08$, $t = 1.59$, $p = .114$). The significant slope for the neutral condition means that virtuous victimhood is a good predictor of hostile reactive attitudes only in the experimental condition without commercial failure. See also figure 2.1 for a graphical
2.4. Study 1: Customer Reaction to Service Failure

As noted above, I also performed regressions using each of the components of virtuous victimhood individually. See tables 2.2 and 2.3 for model estimates. As you can see, in this study the victim signaling component seems to be primarily responsible for the effect observed.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>1.62</td>
<td>.13</td>
<td>12.46</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Victim Signaling (continuous; z-scored)</td>
<td>.63</td>
<td>.10</td>
<td>6.02</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Commercial Failure × Victim Signaling</td>
<td>−.41</td>
<td>.13</td>
<td>−3.05</td>
<td>.002</td>
</tr>
<tr>
<td>Constant</td>
<td>2.85</td>
<td>.10</td>
<td>29.57</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.2: Regression Results Victim Signaling (DV: Hostile Reactive Attitudes)
2.5. Study 2: Customer Reaction to Service Failure (Conceptual Replication)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>1.69</td>
<td>.14</td>
<td>12.33</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Moral Identity Symbolization (continuous; z-scored)</td>
<td>.13</td>
<td>.12</td>
<td>1.12</td>
<td>&lt; .263</td>
</tr>
<tr>
<td>Commercial Failure × Moral Identity Symbolization</td>
<td>−.15</td>
<td>.14</td>
<td>−1.07</td>
<td>.287</td>
</tr>
<tr>
<td>Constant</td>
<td>2.79</td>
<td>.10</td>
<td>27.37</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.3: Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes)

2.4.3 Discussion

Study 1 provides preliminary evidence for the relationship between virtuous victim signaling and hostile reactive attitudes, where consumers high in virtuous victimhood are more likely to react with aggressive behaviors in contexts of neutral service compared to service failure than consumers low in virtuous victimhood.

Based on my initial plan of analysis, I analyzed my data using the aggregate virtuous victimhood score. Reanalysis revealed that the victim signaling component was the aspect responsible for the effect observed.

2.5 Study 2: Customer Reaction to Service Failure (Conceptual Replication)

To explore the generality of the effect I observed in study 1, I designed study 2 using an alternative service context, Airbnb. This service is a hospitality platform that competes with hotels, allowing people to rent out their own homes for short stays.

2.5.1 Method

Participants and Design

I recruited 352 participants using Amazon’s Mechanical Turk in exchange for small monetary compensation. I excluded 30 responses for failing either of two attention checks, leaving 322 responses for analysis ($M_{age} = 41.43$, $SD_{age} = 13.72$, 190 female, 130 male, 2 nonbinary). Survey software assigned participants randomly to one of two experimental conditions (service experience: neutral, failure). The design was mixed: 2 (experimental condition) × continuous (virtuous victim signaling
2.5. Study 2: Customer Reaction to Service Failure (Conceptual Replication)

individual difference).

Procedure

Participants each read one scenario corresponding to randomly assigned experimental condition and then completed several post-scenario questions. The design and method were similar to study 1, though I manipulated service failure in a different consumer context to test the generality of the effect across commercial domains. Rather than imagining potential affront in an airline service experience, in the service failure condition we asked participants to imagine booking an Airbnb and then having their booking canceled after updating their profile, providing info about interests and uploading a photo. In the neutral condition, participants imagined booking an Airbnb without incident. In both conditions, the scenario began:

You have been planning a vacation. You decide to book an Airbnb rather than stay in a hotel as the amenities look good, there is a wide selection, and the cost is substantially cheaper than comparable hotels. It is sometimes hard to find good options in the city you have chosen to visit, but you started looking early and were able to find a great location. You make the reservation and the host confirms the reservation shortly thereafter. You buy tickets to some local attractions. All your preparation is complete and you assume everything is in order. A month passes.

About a week before your trip, you login to Airbnb to check your reservation and everything looks good. While checking your reservation, you notice that your profile is incomplete. You go ahead and complete your profile, adding information about your interests and uploading a photo.

In the neutral service condition, the scenario continues:

The next day you receive a message from the host, wishing you an enjoyable visit. Your trip is less than a week away! You notice no other Airbnb options are available at such short notice and even hotel rooms look scarce. It was definitely a good choice to book early.

In the service failure condition, the scenario continues:
The next day you receive an email saying that the host has cancelled your booking. Your trip is less than a week away! You notice no other Airbnb options are available at such short notice and even hotel rooms look scarce. The host gives no reason, writing only that the apartment is no longer available on those dates.

Following the scenario task, participants reported hostile reactive attitudes and responded to several other questions about the scenario. Next, participants completed a battery of measures, including victim signaling, moral identity, and universal values.

Finally, participants completed demographic questions. Embedded near the end of the demographic questions was an attention check. The attention check prompt was I often visit the moon. This item is just to see if you are paying attention. Please select strongly disagree. (1 = Strongly Disagree, . . . 7 = Strongly Agree). Within question blocks, survey software randomized presentation of scale items.

2.5.2 Results

To create aggregate scores for scales, I averaged the items for hostile reactive attitudes ($\alpha = .83$), victim signaling ($\alpha = .86$), and moral identity symbolization ($\alpha = .85$). The moral identity symbolization score and the victim signaling score are correlated ($r(320) = .76$, $p < .001$). I standardized the victim signaling and moral identity symbolization items and averaged the two scores to compute a virtuous victim signaling score.

To test my hypothesis that victim signaling is positively associated with hostile reactive attitudes when service is neutral, I performed an analysis of covariance with hostile reactive attitudes as dependent variable. As with study 1, I also report analyses using each score (moral identity symbolization and victim signaling) separately to examine whether either of the components are independently more influential. Independent variables were experimental condition, virtuous victim signaling (z-scored), and the interaction term (adjusted $R^2 = .53$). There was a main effect of experimental condition ($b = 2.54$, $SE = .14$, $t = 18.26$, $p < .001$), a main effect of victim signaling ($b = .58$, $SE = .10$, $t = 5.58$, $p < .001$), and a significant interaction ($b = -.44$, $SE = .14$, $t = -3.17$, $p = .002$). To further explore the interaction, I computed the marginal effect of virtuous victimhood on hostile reactive attitudes for each experimental condition: neutral ($\frac{dy}{dx} = .58$,}
2.5. Study 2: Customer Reaction to Service Failure (Conceptual Replication)

\( SE = .10, t = 5.58, p < .001 \) and failure \( (\frac{dy}{dx} = 0.14, SE = .09, t = 1.45, p = .148) \). The significant slope for the neutral condition means that virtuous victimhood is a good predictor of hostile reactive attitudes only in the experimental condition without commercial failure. See also figure 2.2 for a graphical representation. See table 2.4 for model estimates.

![Study 2: Airbnb](image)

Figure 2.2: Study 2: Airbnb

<table>
<thead>
<tr>
<th>Predictor</th>
<th>( b )</th>
<th>( SE )</th>
<th>( t )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.54</td>
<td>.14</td>
<td>18.26</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Victim Signaling (continuous; z-scored)</td>
<td>.58</td>
<td>.10</td>
<td>5.58</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Commercial Failure ( \times ) Victim Signaling</td>
<td>-.44</td>
<td>.14</td>
<td>-3.17</td>
<td>.002</td>
</tr>
<tr>
<td>Constant</td>
<td>2.44</td>
<td>.10</td>
<td>23.41</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.4: Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes)

Unlike study 1, in study 2 both components of virtuous victimhood were important independent predictors of hostile reactive attitudes. See tables 2.5 and 2.6 for model estimates. Additionally,
though my sample size is too small to be adequately powered to interpret a three-way interaction given the effect size I observed, as an exploratory analysis I fit a model using all three predictors using a factorial design (all possible interactions). In this model, the interaction between victim signaling and moral identity symbolization was significant ($b = .33, p = .001$) which is consistent with both components of virtuous victimhood working together to facilitate hostility toward firms.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.52</td>
<td>.14</td>
<td>18.20</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Virtuous Victimhood (continuous; z-scored)</td>
<td>.60</td>
<td>.11</td>
<td>5.71</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Commercial Failure × Virtuous Victimhood</td>
<td>−.44</td>
<td>.14</td>
<td>−3.14</td>
<td>.002</td>
</tr>
<tr>
<td>Constant</td>
<td>2.46</td>
<td>.10</td>
<td>23.67</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.5: Regression Results Victim Signaling (DV: Hostile Reactive Attitudes)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.54</td>
<td>.14</td>
<td>17.54</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Moral Identity Symbolization (continuous; z-scored)</td>
<td>.31</td>
<td>.11</td>
<td>2.86</td>
<td>.005</td>
</tr>
<tr>
<td>Commercial Failure × Moral Identity Symbolization</td>
<td>−.28</td>
<td>.15</td>
<td>−1.95</td>
<td>.052</td>
</tr>
<tr>
<td>Constant</td>
<td>2.45</td>
<td>.11</td>
<td>22.60</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.6: Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes)

### 2.5.3 Discussion

Study 2 replicates and generalizes the effect discovered in study 1, that consumers high in virtuous victimhood will be more likely to react with hostility toward a firm even in a neutral service context, using a different commercial context. I observed a similar effect for Airbnb as I did for airline service. This conceptual replication provides preliminary evidence that the effect is due to more than some particularity of the airline scenario.

As with study 1, I also reanalyzed my data to examine whether the effect was driven primarily by one or the other components of virtuous victimhood. Unlike study 1, both components contributed to the effect observed.
2.6 Study 3: Customer Reaction to Product Failure

The purpose of study 3 was to conceptually replicate the relationship between virtuous victimhood and hostile reactive attitudes in the product domain. Specifically, the context involves purchasing furniture and the resulting performance of the product. This study helps ensure that there is not something specifically about services, such as interpersonal interaction, that might be an important precondition for the effect to emerge.

2.6.1 Method

Participants and Design

I recruited 403 participants from Amazon’s Mechanical Turk who completed a survey in exchange for small monetary compensation. Due to increased concerns about data quality in online samples during data collection (Matherly, 2019), the survey included an initial attention screen, which directed participants to ignore the text of a prompt (How often do you watch horror movies?) and select both Often and Never from several options. I excluded 100 responses that answered less than 5% of survey questions. The initial attention screen resulted in no exclusions—though note the heavy attrition due to responses which provided almost no data, but finished the survey. I further excluded 16 responses for failing either of two attention checks, leaving 287 responses for analysis ($M_{age} = 38.32, SD_{age} = 12.77$, 168 female, 118 male, 1 nonbinary). Survey software assigned participants randomly to one of two experimental conditions (service experience: neutral, failure). The design was mixed: 2 (experimental condition) × continuous (virtuous victim signaling individual difference).

Procedure

In study 3, participants completed the measure of victim signaling and moral identity, using the same items as studies 1 and 2. Then, participants were asked to read and imagine a scenario involving a bookcase from Ikea. In all conditions, the scenario began:

---

3I noticed a potential issue when the initial attention screen seemed to be excluding around a quarter of responses. Upon examination, the initially excluded participants belonged entirely to a group that clicked through the survey and provided answers for less than 5% of items requesting responses. I believe it is clearer to exclude these non-participants directly rather than report the attrition based on the initial attention screen, despite being a post-hoc decision. The substantive results remain the same either way.
Please imagine that you bought a bookcase from Ikea that required home assembly. The bookcase arrived. When you went to assemble it, you found the instructions to be complex. After spending some time, however, you were able to assemble the bookcase. You put some books and other things on the bookcase.

In the neutral condition, the scenario continued:

The next day, after you returned home, you noticed the bookcase as you came in, your possessions on the shelf, and it seemed to be just what you needed for the space.

In the failure condition, the scenario continued:

The next day, after you returned home, you noticed the bookcase had collapsed, spilling your possessions on the floor, causing damage to some of them.

After the scenario, participants reported hostile reactive attitudes and answered several questions about the scenario. The prompts measuring hostile reactive attitudes were similar to studies 1 and 2, but adjusted to match the scenario stimulus—Post a negative review about the bookcase, Organize a boycott of Ikea, Complain to friends about the bookcase—(1 = Very Inappropriate ... 7 = Very Appropriate). Participants also completed an exploratory three-item measure of blame (example item: An incident with this bookcase is the fault of Ikea). Finally, participants provided demographics (age, gender, ethnicity, education, sexual orientation, social political orientation, and economic political orientation).

### 2.6.2 Results

To create aggregate scores for scales, I averaged the items for hostile reactive attitudes ($\alpha = .76$), victim signaling ($\alpha = .83$), moral identity symbolization ($\alpha = .84$), and blame ($\alpha = .83$). I then standardized the victim signaling and moral identity symbolization items and averaged the two scores to compute a virtuous victim signaling score. The moral identity symbolization score and the victim signaling score are correlated ($r(285) = .73$, $p < .001$). There were no relationships between any of the primary independent variables and the exploratory measure of blame so I do not discuss it further.
To test my hypothesis that victim signaling is positively associated with hostile reactive attitudes when service is neutral, I performed an analysis of covariance with hostile reactive attitudes as dependent variable. Independent variables were experimental condition, virtuous victim signaling (z-scored), and the interaction term (adjusted $R^2 = .53$). There was a main effect of experimental condition ($b = 2.04$, $SE = .12$, $t = 17.24$, $p < .001$), a main effect of victim signaling ($b = .36$, $SE = .08$, $t = 4.48$, $p < .001$), and a significant interaction ($b = -.23$, $SE = .12$, $t = -1.98$, $p = .049$). To further explore the interaction, I computed the marginal effect of virtuous victimhood on hostile reactive attitudes for each experimental condition: neutral ($\frac{dY}{dx} = .36$, $SE = .08$, $t = 4.48$, $p < .001$) and failure ($\frac{dY}{dx} = .13$, $SE = .09$, $t = 1.46$, $p = .144$). The significant slope for the neutral condition means that virtuous victimhood is a good predictor of hostile reactive attitudes only in the experimental condition without commercial failure. See also figure 2.3 for a graphical representation. See table 2.7 for model estimates.

![Study 3: Ikea](image)

Note: $n = 287$, scatter plot adds 6% random spherical noise to avoid overprinting

Figure 2.3: Study 3: Ikea
2.6. Study 3: Customer Reaction to Product Failure

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.01</td>
<td>.12</td>
<td>17.24</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Virtuous Victimhood (continuous; z-scored)</td>
<td>.36</td>
<td>.08</td>
<td>4.48</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Commercial Failure × Virtuous Victimhood</td>
<td>-.23</td>
<td>.12</td>
<td>-1.98</td>
<td>.049</td>
</tr>
<tr>
<td>Constant</td>
<td>2.05</td>
<td>.08</td>
<td>24.19</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.7: Regression Results Virtuous Victimhood (DV: Hostile Reactive Attitudes)

In this study, in neither analysis looking at separate components was the interaction significant by conventional thresholds. See tables 2.8 and 2.9 for model estimates. As an exploratory analysis I fit a model using all three predictors using a factorial design (all possible interactions). In this model, the interaction between victim signaling and moral identity symbolization was significant ($b = .23, p = .003$). As with the previous study, I would be cautious about interpreting this result due to the sample size, but it does indicate some possibility of the two subcomponents working together.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.00</td>
<td>.12</td>
<td>17.00</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Victim Signaling (continuous; z-scored)</td>
<td>.36</td>
<td>.08</td>
<td>4.49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Commercial Failure × Victim Signaling</td>
<td>-.16</td>
<td>.12</td>
<td>-1.38</td>
<td>.169</td>
</tr>
<tr>
<td>Constant</td>
<td>2.07</td>
<td>.08</td>
<td>24.59</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.8: Regression Results Victim Signaling (DV: Hostile Reactive Attitudes)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.04</td>
<td>.12</td>
<td>16.70</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Moral Identity Symbolization (continuous; z-scored)</td>
<td>.18</td>
<td>.09</td>
<td>2.09</td>
<td>&lt; .038</td>
</tr>
<tr>
<td>Commercial Failure × Moral Identity Symbolization</td>
<td>-.19</td>
<td>.12</td>
<td>-1.51</td>
<td>.131</td>
</tr>
<tr>
<td>Constant</td>
<td>2.04</td>
<td>.09</td>
<td>23.34</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 2.9: Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes)

2.6.3 Discussion

Study 3 conceptually replicates the effect I observed in studies 1 and 2 using product, rather than service, stimuli. The effect was slightly weaker in study 3 compared to the other studies reported in this chapter. One difference between this study and others in chapter 2 is that participants completed the items related to virtuous victim signaling before, rather than after, the scenario.
2.7. Study 4: Consumer Perception of Discrimination

In study 4, I explore one potential mechanism underlying the relationship between virtuous victim signaling and hostile reactive attitudes: the perception of discrimination in a commercial interaction. Study 4 uses the same service context as study 2: booking an Airbnb for a vacation. Additionally, this study serves to directly replicate the main finding of studies 1 and 2.

2.7.1 Method

Participants and Design

I recruited 351 participants using Amazon’s Mechanical Turk in exchange for small monetary compensation. I excluded 14 responses for failing an attention check, leaving 337 responses for analysis ($M_{age} = 38.36$, $SD_{age} = 12.24$, 164 female, 172 male, 1 nonbinary). Survey software assigned participants randomly to one of two experimental conditions (service experience: neutral, failure). The design was mixed: $2 \times$ continuous (virtuous victim signaling individual difference).
2.7. Study 4: Consumer Perception of Discrimination

Procedure

The scenario details, including random assignment and post-scenario questions, were identical to study 2. After completing the scenario-related tasks, participants completed the victim signaling measure and the moral identity scale. Additionally, in study 4 participants completed a 15 item measure of consumer perception of discrimination (Klinner & Walsh, 2013). Several example items include: Compared to other customers, employees are often offensive toward me, Compared to other customers, it sometimes happens that employees insult me, and Compared to other customers, employees often do not heed my needs or problems (1 = Strongly Disagree, 7 = Strongly Agree). Finally, participants completed the same collection of demographics.

2.7.2 Results

To create aggregate scores for scales, I averaged the items for hostile reactive attitudes ($\alpha = .86$), victim signaling ($\alpha = .89$), moral identity symbolization ($\alpha = .88$), and consumer perception of discrimination ($\alpha = .98$). I then standardized the victim signaling and moral identity symbolization items and averaged the two scores to compute a virtuous victim signaling score. The moral identity symbolization score and the victim signaling score are correlated ($r(335) = .75, p < .001$).

To test my hypothesis that virtuous victim signaling is positively associated with hostile reactive attitudes when service is neutral, I performed an analysis of covariance with hostile reactive attitudes as dependent variable. Independent variables were experimental condition, virtuous victim signaling (z-scored), and the interaction term (adjusted $R^2 = .65$). There was a main effect of experimental condition ($b = 2.96, SE = .12, t = 23.84, p < .001$), a main effect of virtuous victim signaling ($b = .62, SE = .09, t = 6.99, p < .001$), and a significant interaction ($b = -.63, SE = .12, t = -5.09, p < .001$). To further explore the interaction, I computed the marginal effect of virtuous victimhood on hostile reactive attitudes for each experimental condition: neutral ($\frac{dy}{dx} = .63, SE = .09, t = 6.99, p < .001$) and failure ($\frac{dy}{dx} = -.00, SE = .09, t = -.03, p = .976$). The significant slope for the neutral condition means that virtuous victimhood is a good predictor of hostile reactive attitudes only in the experimental condition without commercial failure. See also figure 2.4 for a graphical representation. See table 2.10 for model estimates.
Like study 1, victim signaling seemed to be a more reliable predictor of hostile reactive attitudes, as the model which only included moral identity symbolization did not result in a significant interaction. See tables 2.11 and 2.12 for model estimates. As an exploratory analysis I fit a model using all three predictors using a factorial design (all possible interactions). In this model, the interaction between victim signaling and moral identity symbolization was significant ($b = .40$, $p = .001$).
2.7. Study 4: Consumer Perception of Discrimination

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.93</td>
<td>.12</td>
<td>23.67</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Victim Signaling (continuous; z-scored)</td>
<td>.62</td>
<td>.08</td>
<td>7.03</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Commercial Failure $\times$ Victim Signaling</td>
<td>-.69</td>
<td>.12</td>
<td>-5.58</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Constant</td>
<td>2.09</td>
<td>.09</td>
<td>23.03</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Table 2.11: Regression Results Victim Signaling (DV: Hostile Reactive Attitudes)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Failure (indicator 0/1)</td>
<td>2.96</td>
<td>.13</td>
<td>22.60</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Moral Identity Symbolization (continuous; z-scored)</td>
<td>.29</td>
<td>.09</td>
<td>3.11</td>
<td>&lt;.002</td>
</tr>
<tr>
<td>Commercial Failure $\times$ Moral Identity Symbolization</td>
<td>-.22</td>
<td>.13</td>
<td>-1.70</td>
<td>.091</td>
</tr>
<tr>
<td>Constant</td>
<td>2.06</td>
<td>.10</td>
<td>21.50</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Table 2.12: Regression Results Moral Identity Symbolization (DV: Hostile Reactive Attitudes)

To test whether perception of discrimination explained part of the relationship between virtuous victim signaling and hostile reactive attitudes, I fit a moderated mediation model (Hayes, 2017, model 14). The independent variable ($X$) was virtuous victim signaling score. The dependent variable ($Y$) was hostile reactive attitudes score. The mediator variable ($M$) was consumer perception of discrimination score (standardized). The moderator variable ($V$) was experimental condition. In model 14, the moderator affects the path from the mediator to the dependent variable. I ran this model using a Python implementation of the PROCESS macros (André, 2019) with 5000 bootstrap samples to compute bias-corrected confidence intervals. There was a significant index of moderated mediation ($index = -0.26, SE = 0.04, 95\% CI [-0.353, -0.180]$). For ease of visualization, I also performed separate mediation analyses splitting the sample by experimental condition (see figure 2.5).
2.7. Study 4: Consumer Perception of Discrimination

If experimental condition (service failure) moderates the relationship between the mediator (consumer perception of discrimination) and the dependent variable (hostile reactive attitudes), one would expect the three variable model to show a significant mediation in one condition but not the other. This is indeed what I observe in figure 2.5, where the mediation is significant in the neutral service condition but not significant in the failure condition. That is, participants high in virtuous victim signaling seem to consider themselves the kind of person likely to be discriminated against in a commercial interaction generally, but this self-perception is only related to hostile reactive attitudes in the neutral service condition.

Note: standard errors computed with 5000 resamples. * = p < .05, ** = p < .01, *** = p < .001
2.7.3 Discussion

The results of study 4 directly replicated the effect I observed in study 2, that hostile reactive attitudes are associated with virtuous victimhood only in the neutral condition. Additionally, study 3 provided evidence for a psychological process explaining this effect, with consumer perception of discrimination mediating the relationship.

Consumer perception of discrimination is consistently associated with virtuous victim signaling, but only associated with hostile reactive attitudes in the neutral service condition, suggesting that the people reacting with hostility to companies might be bringing a sense of persistent grievance to bear on an unrelated situation. It seems plausible to assume that such respondents might assume they are being treated unfairly in other contexts as well.

In the reanalysis examining the subcomponents of virtuous victimhood independently, while the aggregate score resulted in a significant interaction, only the victim signaling score showed the same result. This could be an indicator that both components are important to the construct of virtuous victimhood. In any case, it does seem like victim signaling is more consistently related to the outcome of hostile reactive attitudes when examined alone, as this was true of three out of four studies that I ran for chapter 2.

2.8 General Discussion

Consumers increasingly prioritize identity concerns when making purchase decisions and when discussing companies or brands. Firms have responded to this preoccupation using many elements of the marketing mix, from products aimed at particular disadvantaged groups to promotions and advertising highlighting the plight of victims (Chaney et al., 2019). In this research, I identify a kind of consumer which tends to interpret commercial interactions through the lens of virtuous victimhood, and a mechanism—increased perception of discrimination—that explains why these consumers may react with hostility toward firms even when no direct commercial failure occurs.

Based on these findings, marketing managers may wish to think twice before basing promotions heavily on disadvantage narratives, as such appeals may draw the attention of customers particularly sensitive to slight and prone to interpret commercial service as discrimination.

This research contributes to literatures on moral cultures (Cohen & Nisbett, 1994, L. Leung,
2.8. General Discussion

2009), service failure, and perception of victimhood. The responses I detect in these studies may be characteristic of the developing victimhood culture which involves recruiting support from others and greater sensitivity to moral insult (Campbell & Manning, 2014, 2018). Much of the work to date on victimhood culture involves sociological theory. The current research contributes to this literature by presenting experimental findings that align with the predictions made by the theory of victimhood culture (Campbell & Manning, 2018). Additionally, I add to a growing body of work on the way in which victimhood can function as a positional good (Hirsch, 2005) in modern commercial society, with people signaling virtuous victimhood as a way to recruit support from others that may otherwise be disinclined to provide assistance.

Future directions for research include more fully mapping out the ways that virtuous victim signaling may shape the emerging dynamics of victimhood culture. It is possible that virtuous victim signaling may be associated with other victimhood culture behaviors, such as gossip, protest, and various kinds of formalized complaints (Campbell & Manning, 2014). In addition to consumer behavior in the marketplace, such phenomena may influence the behavior in organizational contexts as well. Based on the likelihood of consumers high in virtuous victim signaling to interpret ambiguous stimuli as discriminatory, it is also possible that such consumers might have broader notions of what constitutes harms, consistent with what Haslam (2016) has discussed as concept creep. Further, existing research has found evidence for several antecedents of virtuous victimhood, such as dark triad personality traits, specifically the “amoral manipulation” dimension of Machiavellianism and communal narcissism, a self-perceptions of superior prosociality (Ok et al., 2020, study 5). In addition to looking at causes of virtuous victimhood, there is also space to elaborate on the consequences side of the nomological net. Existing consequences include lying to earn a bonus, indication of willingness to purchase counterfeit products, and exaggerating claims of harm in a workplace context for personal benefit. However, the research to date does not examine in detail how the virtuous victim signal is perceived by others. Whether consciously or not, presumably consumers engaging in virtuous victim signaling assume that it serves broader goals such as drawing sympathy or recruiting support. However, it remains an open question how third-party perceivers interpret virtuous victim signaling behaviors.

The performative aspect of social media interactions (Choi & Bazarova, 2015), where people change their behavior or expression due to expectation of wider audience, make such data sets
particularly well suited to measuring signaling behavior, and it may be possible to measure many of the dynamics I document in the chapter 2 experiments in the (social media) field, expanding the practical relevance of this conceptual relationship.
Chapter 3

Conclusion

This dissertation demonstrates the role that perceptions of victimhood can play in the judgments and decisions of consumers. Using multiple methods, I show mechanisms through which perceiving victimhood can influence intergroup attitudes, with implications for both cooperative behaviors and hostility. Specifically, chapter 1 shows how zero-sum thinking contributes to competitive victimhood between disadvantaged groups. Chapter 2 shows how self-perceptions of victimhood shape consumer attitudes toward firms. Together, these essays reveal both antecedents and consequences of victimhood perceptions.

This research contributes to the broader field of intergroup relations by drawing attention to group comparison processes in the interactions of disadvantaged groups. This applies to interactions both with other disadvantaged groups and with other social actors, such as firms. Previous perspectives, such as the common ingroup identity model (Gaertner et al., 1993; Shnabel et al., 2013), have focused more on social categorization processes, emerging as they did from the social identity approach to studying intergroup interaction. As Gaertner et al. (1993, p. 2) note, this leads to prioritizing transformations of cognitive representation as a path to shaping or decreasing intergroup bias and conflict. While these findings and conclusions are useful and illuminating, in practice group boundaries often resist redefinition, limiting the scope or effectiveness of strategies involving recategorization. These findings add to the literature by suggesting some reasons why members of disadvantaged groups particularly might resist such identity redefinition. Specifically, members of disadvantaged groups might be motivated to maintain currently conceived identity schemas due to perceived pressures in the situation, such as scarcity or competition with other groups. As such, even the mention of the plights other groups face might make zero-sum construal more likely as a defensive reaction, leading to a downward spiral (from the perspective of forming a common ingroup with members of other disadvantaged groups). This suggests a com-
plex interplay between motivated processes (to protect the ingroup and defend limited resources) and cognitive processes (the process of drawing group boundaries and self-categorizing) that is particularly fraught for members of disadvantaged groups.

If anything, group boundaries, particularly those defined by disadvantaged identity, have become more entrenched (Fukuyama, 2018), and previously secondary forms of division, such as ideological or political partisanship, take more prominent positions on the stage of ingroup conflict (West & Iyengar, 2020). Intersectional categorization increases the complexity of the identity landscape (Petsko & Bodenhausen, 2020). While this trend may have benefits for acknowledging the diversity of lived experience, it challenges common ingroup approaches to intergroup bias reduction. As such, group comparison approaches, such as the role of victimhood perception, may have an increasing role to play in understanding and navigating group identity dynamics. Along these lines, there are some reasons to suspect that various historical dynamics have been, and might continue to, increase the prevalence of several key variables studies in this research, including independent variables, dependent variables, and psychological mechanisms. That is, though competitive victimhood is not a new phenomenon historically speaking, it does seem to be on the rise. For example, as discussed in the conceptual development of chapter 1, culture seems to have changed such that people are more likely to publicize their victimhood with a corresponding decrease in victim blaming. For just a few examples of this shift, consider the increasing literature on rape culture (Phillips, 2016) and moral condemnation on social media platforms (Hillstrom, 2018; Rentschler, 2015). Additionally, some research has shown that perceptions of competitive climate have risen over time, a reasonable proxy for zero-sum thinking (Sánchez-Rodríguez et al., 2019). If this holds more generally, my research would predict an increase over time of competitive victimhood, due to increased zero-sum thinking, and an increase over time of hostile reactive attitudes, due to increased willingness to signal victimhood, all else equal.

Across both essays, this research has explored different ways that people experience themselves as victims. In chapter 1, people seem to increase their beliefs in victimhood when in a comparative intergroup context. In chapter 2, I explore how propensity to signal victimhood is related to other marketplace behaviors. Neither of these studies looks directly at the welfare of people experiencing themselves in this way, though the broader conceptual framing offers the possibility that people may be attempting to recruit support from others for their ingroup, a potentially altruistic motive.
(though also limited in terms of moral horizon). However, the means of achieving this potentially altruistic motive involves externalizing personal outcomes as the very nature of victimhood is to accept the narrative of others (the victimizing agent) determining outcomes. Much research has found negative consequences for well-being in such externalization, and research in clinical psychology on exposure therapy would suggest that accepting (or even embracing) victimhood might compromise the ability of people to deal with setbacks and adversities. As such, the consequences of living life thinking one is a victim (whether or not this accurately reflects specific personal events or societal opportunities) may be at best ambivalent. Over time, perhaps such identity based on grievance could be part of the means to overturn unjust relations, but based on historical examples outlined in chapter 1, it also seems likely to entrench conflict.

My research also connects two mostly unrelated bodies of research concerning intergroup behavior by considering a trait-level explanation of conflict-related (competitive victimhood) behavior. Previous explanations have focused mostly on social-cognitive factors such as identity strength and common ingroup. For reviews, see Noor et al. (2012), Young and Sullivan (2016), and Noor et al. (2017). When considering specific identity conflicts, particularly intractable geopolitical or ethnic conflict, explanations often incorporate situational factors or beliefs relevant to the particular conflict in question. For example, forgiveness and beliefs about past violence are key to the model advanced by Noor, Brown, et al. (2008). But what about when competitive victimhood emerges between groups that do not have a clear history of direct violence or the possibility of forgiveness, such as competitive victimhood between Black people and gay people (Davis, 2021), between some feminists and transgender people (Jeffreys, 2014), or between Asian people and Black people (Morris, 2021)? The frameworks used to understand competitive victimhood between majority/minority groups, such as racism or sexism in the North American context, or between adversarial groups, such as the geopolitical conflicts in Northern Ireland or Palestine, may be less well equipped to offer guidance regarding intergroup relations between disadvantaged groups.

My research considers a dispositional explanation, as zero-sum thinking appears to be a stable trait (Różycka-Tran et al., 2015) that affects a wide variety of social behavior. Social psychological explanations sometimes consider zero-sum framing of intergroup relations as a factor relevant to conflict and competitive victimhood at the situation level, but have yet to investigate psychological processes directly involved with zero-sum thinking. Though zero-sum thinking behaves like a
trait in terms of stability over time, as a “social axiom” it has important differences from classic personality psychology traits such as agreeableness or extraversion. A social axiom is defined as a generalized expectancy at a level of abstraction “likely to relate to social behaviors across a variety of contexts, actors, targets, and time periods” (K. Leung et al., 2002). This perspective has adopted trait constructs such as locus of control (Rotter, 1966) as examples of social axioms. One can think of social axioms as existing at a higher, less fundamental level than the core substrate of personality, but a lower, more fundamental level than situational cues, such as framing effects, or transient internal psychological states, such as anxiety. As such, social axiom beliefs probably exist at an intermediate position on the state-trait continuum (Kenny & Zautra, 2001). Research is still needed to fully articulate the degree to which these traits overlap or represent emergent dimensions at different levels of analysis. However, in the context of competitive victimhood behavior, the intermediate abstraction of social axioms, such as zero-sum thinking, offers a useful perspective, given the intransigence of competitive victimhood in the face of situational interventions and the fact that more fundamental personality theories may be too general to apply easily in contexts concerning particular identity conflicts.

Though there is a developing body of research on zero-sum thinking in intergroup relations, most research that uses zero-sum thinking as an explanatory factor involves topics such as political ideology, group membership, and attitudes toward refugees (Davidai & Ongis, 2019; Piotrowski et al., 2019; Smithson et al., 2015). My research contributes by showing a direct way in which zero-sum thinking can influence intergroup conflict.

Though I have studied the two constructs related to perception of victimhood (competitive victimhood and victim signaling) separately, there are conceptual reasons to suspect that zero-sum thinking may also be an antecedent of virtuous victim signaling, and indeed could be a manifestation of competitive victimhood beliefs or behaviors in certain contexts. While I do not at present have data that speaks to this question, connecting these two streams of research at the operational level is another opportunity for future directions. Given that competitive victimhood involves seeing one’s own group as suffering more than relevant outgroups, and victim signaling involves communicating to others about how one has been treated unfairly, there seems to be enough conceptual overlap that I might predict the frequency of virtuous victim signaling to increase when zero-sum thinking is high. Zero-sum thinking could in this case either be measured as an individual difference, as I do
in chapter 1, or perhaps investigated using variations in the situation, such as the sense of societal scarcity. Additionally, a virtuous victim signaler might be more likely to engage in competitive victimhood as a way to more effectively signal victimhood to others, especially if the competitive victimhood could be expressed in a context observed by others.

Though I focus primarily on theoretical relationships, my findings have several practical implications which are relevant for cultures, such as the contemporary West, where social and political polarization have been rising (Rapp, 2016; Yarchi et al., 2020). Researchers of consumer behavior are just beginning to investigate these phenomena—for example, in the literature on stigmatized-identity cues (Wooten & Rank-Christman, 2019). My research contributes to this growing body of knowledge, identifying processes relevant to intergroup conflict with special focus on conflict between disadvantaged groups. In particular, zero-sum thinking, and related conceptual assumptions such as fixed pie bias (Bazerman & Neale, 1983; Thompson & Hastie, 1990) are likely to increase competitive victimhood beliefs and behaviors. This literature may provide additional methods to decrease fixed pie assumptions based on systemic changes, such as using accountability to induce group members to focus on accurate information (such as shared interests) rather than bolstering esteem through competing for a blameless victim status at the expense of other disadvantaged groups (de Dreu et al., 2000). By implication, societal or contextual factors which emphasize zero-sum thinking, such as scarcity, are also likely to amplify these dynamics. In terms of marketplace behavior, I show how perceptions of victimhood are relevant to marketers and firms in the hostile reaction that consumers high in virtuous victim signaling exhibit toward firms in commercial interactions.

As discussed previously, consumer identity can be a powerful force shaping behavior, and this includes behavior in the marketplace and in organizations. It may be tempting for decision makers in organizations to appeal to identity for many reasons. For example, appealing to consumer identity can be a coherent product or service marketing strategy, given that brands can be used by consumers to buttress or construct identity (Aaker, 1997; Escalas & Bettman, 2005). In an era when competition has made many products comparable on basic dimensions of utility, appealing to consumer identity can create added value or even a durable competitive advantage if a brand is well-positioned to satisfy particular identity needs. For example, multinational corporations have appealed to disadvantaged identity in major marketing campaigns (Draper & Belson, 2018; Kates,
Such campaigns come with several immediate benefits and risks. Some research has found limits to the ability of brands to satisfy consumer needs for identity (Chernev et al., 2011). There may be benefits for society in representation for disadvantaged groups. However, based on the findings in chapter 1, such marketing campaigns may also increase competitive victimhood beliefs among some members of disadvantaged groups, particularly those high in zero-sum thinking. I have approached this particular factor from an individual differences perspective in this dissertation, but it is likely that a commercial context exacerbates this dynamic due to the inherent nature of scarcity in marketing many products and services. I leave it to future research to investigate the details of how this psychological process may manifest in the marketplace.

Chapter 2 offers some guidance specific to the commercial context apart from general societal concerns potentially of interest to managers and marketers. Specifically, that consumers who tend to signal victimhood may be more likely to react with hostility toward firms even when nothing goes wrong with a product or service. Future research will need to be done to determine what kinds of marketing attracts such consumers high in such signaling behavior. Combined, the findings from both chapters suggest that it may be wise for companies to tread carefully around marketing strategies that rely on invoking consumer identity.

However, I want to emphasize that this research was designed to test, in the formulation of Calder et al. (1981), the application of general scientific theory rather than the application of specific effects in particular contexts. This concern is also framed sometimes in terms of external validity, which is “whether or not an observed causal relationship should be generalized to and across different measures, persons, settings, and times” (Calder et al., 1982, p. 240). Trouble with the external validity of laboratory studies has long plagued behavioral science research (Mitchell, 2012), particularly for findings involving small and medium effect sizes. Additionally, one of the lessons of the replication crisis (Shrout & Rodgers, 2018; Simmons et al., 2011), along with other methodological critiques and advances (Friese & Frankenbach, 2020; Schimmack, 2020), is to approach scientific findings involving the complexity of social and identity dynamics with a greater degree of epistemological humbleness.

Taken together, this research has several limitations. Though I draw from multiple populations by using both online data sources and textual content analyses, most or all data comes from North America. As such, I would take care in generalizing these findings beyond this cultural context.
Chapter 3. Conclusion

Though cross-cultural research suggests that zero-sum thinking may be a common psychological dynamic in many cultures (Różycka-Tran et al., 2015; Różycka-Tran et al., 2019), the stimuli I use to operationalize my investigations, whether identity groups or firms, remain bound historically and culturally to the populations I sampled. Additionally, though several studies in both essays involve conceptual replications of various propositions, my studies still involve a limited collection of stimuli drawn from a much larger potential set. There may remain undetected commonalities between stimuli which represent undiscovered boundary conditions or explanatory factors.

Both major findings in this dissertation revolve around the interest people have in extracting resources from the environment. In chapter 1, members of different disadvantaged groups seem to compete for access to victimhood status, a potential resource in the struggle for attention and recognition, necessary for garnering support. In chapter 2, people high in virtuous victim signaling, an individual difference associated with the dark triad of personality traits, were more likely to perceive affront and respond negatively toward firms even in neutral service contexts. While these behaviors may sometimes result in adaptive outcomes for the self or ingroup in the short term, such as attracting preferential sympathy to the ingroup or gaining benefits in a commercial interaction, the long-term interests, both for the ingroup and society at large, may have downsides or be less effective than members of disadvantaged groups expect. For example, recent research has shown that disruptive protest actions may decrease support for particular causes (Feinberg et al., 2020). Though appeals perceived as competitive victimhood by third parties may not always rise to the level of disruptive protest actions, there may be more effective ways to improve the well-being of people across society.

Broadly considered, the studies I ran for chapter 1 add to the literature by demonstrating the role of zero-sum thinking in competitive victimhood, as well as demonstrating the relationship within existing experimental paradigms of intergroup interactions, such as the minimal group paradigm. Additionally, though more work should be done to fully operationalize some of these constructs in field settings, the social media analyses increase confidence that these relationships could emerge in societally important contexts. Finally, these studies for both chapters taken together add to the literature by showing that perceptions of disadvantage can play an important role in explanations both as antecedents of marketplace behaviors (chapter 2) and consequences of direct interest (chapter 1).
References


References


Hayes, A. F. (2017). Model templates for PROCESS v2.16 for SPSS and SAS.


References


References


References


Stritch, J. M., Pedersen, M. J., & Taggart, G. (2017). The opportunities and limitations of using mechanical turk (MTURK) in public administration and management scholarship. Inter-


References


Appendix A

Common Measures

A.1 Belief in Zero-Sum Game

1. Successes of some people are usually failures of others.
2. If someone gets richer, it means that somebody else gets poorer.
3. Life is so devised that when somebody gains, others have to lose.
4. In most situations, interests of different people are inconsistent.
5. Life is like tennis game—A person wins only when others lose.
6. When some people are getting poorer, it means that other people are getting richer.
7. When someone does much for others, he or she loses.
8. The wealth of a few is acquired at the expense of many.

Response options: 1 = Strongly Disagree . . . 7 = Strongly Agree.

Różycka-Tran et al. (2015).

A.2 Moral Identity Scale

Listed alphabetically below are some characteristics that might describe a person:

CARING, COMPASSIONATE, FAIR, FRIENDLY, GENEROUS, HELPFUL, HARDWORKING, HONEST, KIND

The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act.

When you have a clear image of what this person would be like, please click the button below to proceed and answer the following questions.

1. It would make me feel good to be a person who has these characteristics.
A.3. Victim Signaling Scale

2. Being someone who has these characteristics is an important part of who I am.
3. I would be ashamed to be a person who has these characteristics.
4. Having these characteristics is not really important to me.
5. I strongly desire to have these characteristics.
6. I often wear clothes that identify me as having these characteristics.
7. The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.
8. The kinds of books and magazines that I read identify me as having these characteristics.
9. The fact that I have these characteristics is communicated to others by my membership in certain organizations.
10. I am actively involved in activities that communicate to others that I have these characteristics.

Response options: 1 = Strongly Disagree . . . 7 = Strongly Agree.

The first five items constitute the internalization dimension of moral identity. The last five items constitute the symbolization dimension of moral identity. In these studies, I present the items in a random order.

Aquino and Reed II (2002)

A.3 Victim Signaling Scale

1. Discussed how my concerns and needs are not being heard by political leaders.
2. Discussed how I don’t feel financially secure.
3. Shared how I don’t feel comfortable with my body.
4. Pointed out how I am not able to pursue my goals and dreams because of external factors.
5. Disclosed that I don’t feel like I am in control of my future.
6. Disclosed that I struggle with mental health issues.
7. Explained how I don’t feel accepted in the society because of my identity.
8. Spoke about how people who share my identity are criminalized by society.
9. Expressed how people like me are underrepresented in the media and leadership.*
10. Made it known that I can’t move freely within or outside of my country.
A.4 Demographic, Miscellaneous, and Concluding Questions

Unless otherwise specified, I included demographic measures to describe the characteristics of samples and guide inferences about generalization.

- **Age.** *What is your age?* (free-response number)

- **Gender.** *What is your gender?* (Female, Male, Nonbinary)

- **Sexual Preference.** *What is your sexual orientation?* (Heterosexual, Homosexual, Bisexual, Other free-response text)

- **Transgender.** *Are you transgender?* (Yes, No, Prefer not to say)

- **Political Orientation (Social).** *How would you describe your political outlook with regard to social issues?* (1 = Very Left Wing . . . 7 = Very Right Wing)

- **Political Orientation (Economic).** *How would you describe your political outlook with regard to economic issues?* (1 = Very Left Wing . . . 7 = Very Right Wing)

A.4.1 Ethnicity

For measuring ethnicity, surveys included the following items all on one page and in this order.

Race, Ethnicity, and Origin

*What is your race or ethnicity?* (Asian, Black or African American, Native Americans and Alaska Natives, White Two or more races (specify below), Other (specify below))

*Are you of Hispanic or Latino origin?* (Yes, No)

Optional: if you selected “Two or more races” or “Other” above, provide additional details in the box below. You may also provide further specification here for any selected category (such as Chinese, Dominican, German, Nigerian, and so forth). (free-response text)
A.4.2 Socioeconomic Status

Think of this ladder as representing where people stand in our society. At the top of the ladder are the people who are the best off, those who have the most money, most education, and best jobs. At the bottom are the people who are the worst off, those who have me least money, least education, and worst jobs or no job.

Please select the number that best represents the rung where you stand on the ladder.

Responses were reverse coded so that the high numbers indicated higher status in the recorded data.

A.5 Concluding Questions

- **Attitude Toward Survey.** Relative to other research surveys you have taken, how much did you like this survey? This question will help us design better surveys in the future. (1 = Strongly Dislike ... 7 = Strongly Like)
- **Pay Fairness.** Relative to other research surveys you have taken, how fair was the compensation? (1 = Very Unfair ... 7 = Very Fair)
- **Share.** Optional: Is there anything else you would like to share with us? (free-response text)

A.6 Attention Check

- *I often visit the moon without a spacesuit. This item is just to see if you are paying attention.*

Please select strongly disagree. (1 = Strongly Disagree ... 7 = Strongly Agree)
Appendix B

Study Procedures

This appendix contains a description of study measures. For common measures used in multiple studies, such as the Belief in Zero-Sum Game scale and various demographic questions, I provide references to the appropriate entry in Appendix A (which begins on page 101). For survey elements unique to specific studies, I include the full text that I presented to participants, as well as details about randomization. Unless otherwise stated, the order of item presentation is as specified below. Bold generally indicates a content summary from the perspective of the researcher and was not visible to participants.

B.1 Chapter 1 Study 2: Lay Beliefs of Attitudes Between Disadvantaged Groups

1. Scenarios. All four presented in a random order.

   • Scenario A

   *The ACLU has the following statement about LGBT rights:*

   **LGBT RIGHTS**

   The ACLU works to ensure that lesbian, gay, bisexual, and transgender people can live openly without discrimination and enjoy equal rights, personal autonomy, and freedom of expression and association.

   *Please consider how members of the following two groups would respond to this statement:*

   - Straight People
   - Bisexual People

   • Scenario B
The following describes a march intended to support lesbians.

**LESBIAN STRENGTH MARCH AND RALLY**

We invite all lesbian women to a march. Say NO to LESBIAN ERASURE!

We want to celebrate all lesbians past and present from all walks of life.

Our sincere desire is for all lesbians to be able to embrace themselves, to be comfortable with their sexuality and for them to know that they are loved and appreciated just as they are.

We acknowledge and condemn the lesbophobia and misogyny still very much present in our communities today all over the world and the resulting prejudice, persecution and violence our lesbian sisters face every day.

Please consider how members of the following two groups would respond to this statement:

- Non-Transgender People
- Transgender People

**Scenario C**

The following is from a set of principles guiding the development of workplace policies.

**WORKPLACE POLICIES FOR MINORITIES**

Human rights mean equal rights, opportunities, and recognition of the dignity and worth of every person. It should not be permitted to discriminate against someone because of their sexual orientation or their marital status. This includes same-sex relationships.

This right to be free from discrimination and harassment applies to employment, services, housing, and other aspects of life.

A person cannot be treated unequally or harassed in these because he or she is gay, lesbian, heterosexual or bisexual.

Please consider how members of the following two groups would respond to this statement:

- White People
- Black People

**Scenario D**
Responding to a question in a recent CNN town hall, Bernie Sanders, a democratic candidate for president, said the following:

"Today in America, in the midst of massive income and wealth disparity, we have another level of disparity between black and white. African American families have one-tenth the wealth that white families have, and that is unacceptable, and we have got to deal with it. Now, the way I think we can most effectively deal with that -- and this is an idea -- I didn't come up with it. A guy, a congressman from South Carolina, Jim Clyburn, he called it the 10-20-30 legislation, which means that you use 10 percent of federal funds -- that is a lot of money -- to focus on communities all over this country, often minority communities, black communities, Latino communities, Native American communities, white communities, who have long-term poverty and we focus on those communities."

Please consider how members of the following two groups would respond to this statement:

- White People
- Black People

1. **Belief in Zero-Sum Game.** See section A.1 on page [101]

2. **Demographics and Concluding Questions.** Age, gender, ethnicity, political ideology (social), political ideology (economic), attention check, sexual preference, transgender status, socioeconomic status (ladder measure), attitude toward survey, pay fairness

---

**B.2 Chapter 1 Study 3: Zero-Sum Thinking and Competitive Victimhood**

1. **Scenario**

   **WORKPLACE POLICIES**

   Please imagine that you work for the HR department of a medium-sized, growing business.

   One manager, known to be out and gay, discussing the progress of gay rights, said the following at a recent meeting:

   The progress of gay rights still has a long way to go. Other groups, such as blacks, have made much more substantial progress. We need to prevent discrimination based on sexual orientation, as distinct from racial discrimination.
It is illegal in this country to fire a black person without cause, but in many places it’s still legal to fire a gay person for being gay.

The struggle for gay rights is a struggle for civil rights.

The manager then proposed the following policies:

- Company civil rights policies should include protections based on sexual preference.
- Given two equally qualified candidates, gay or lesbian candidates should be preferred.
- Company policy should prevent firing employees for being gay, just as with race.
- Develop and promote anti-harassment and anti-discrimination policies that address homophobia.
- Set up networking opportunities LGBT+ staff.

Next, we will ask you several questions about the passage you read.

When you are ready to proceed, please click the button below.

2. Post-scenario questions (presented one per page)

- Devalues. The sentiment in the scenario devalues the racial struggle for civil rights.
  
  \[(1 = \text{Strongly Disagree} \ldots 7 = \text{Strongly Agree})\]

- Deserves. The historical and ongoing discrimination gay people face in society deserves greater recognition.
  
  \[(1 = \text{Strongly Disagree} \ldots 7 = \text{Strongly Agree})\]

- Decrease. The proposed policies would decrease efforts to address racial inequality.
  
  \[(1 = \text{Strongly Disagree} \ldots 7 = \text{Strongly Agree})\]

- Civil Rights. Gay rights are civil rights.
  
  \[(1 = \text{Strongly Disagree} \ldots 7 = \text{Strongly Agree})\]

- Support. Black employees would support the proposed policies.
  
  \[(1 = \text{Strongly Disagree} \ldots 7 = \text{Strongly Agree})\]

- Advocate. How likely do you think black people would be to advocate for these policies?
  
  \[(1 = \text{Very Unlikely} \ldots 7 = \text{Very Likely})\]
• Comprehension Check. The topic of the scenario I read was:

(Gay rights, Washing machines, Feminism, Talent shows)

3. Attitude toward the policy. The policy in the scenario is...

- 1 = Bad ... 7 = Good
- 1 = Unhelpful ... 7 = Helpful
- 1 = Unfair ... 7 = Fair

4. Transition to belief measures

Next, we will ask you several questions about your beliefs.

Please click the button below when you are ready to proceed.

5. Group Disadvantage (exploratory; group order randomized)

<table>
<thead>
<tr>
<th>To what degree do the following groups experience discrimination?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>African Americans</td>
</tr>
<tr>
<td>White People</td>
</tr>
<tr>
<td>Native Americans</td>
</tr>
<tr>
<td>Muslims</td>
</tr>
<tr>
<td>Latinos</td>
</tr>
<tr>
<td>Lesbian, Gay, Bisexual</td>
</tr>
<tr>
<td>Women</td>
</tr>
<tr>
<td>Transgender People</td>
</tr>
<tr>
<td>Disabled People</td>
</tr>
</tbody>
</table>


This survey included a 12-item version of this scale. Różycka-Tran et al. (2015) validate (and recommend using) the eight-item version of the scale. I included the full preliminary 12-item
version to explore the psychometric properties of the scale. The additional four items are: 9. *When a person does much for the good of others, he or she profits as well.* 10. *Those who give much to others receive much from them.* 11. *People who do much for their own good frequently benefit others as well.* 12. *When the number of rich people increases in the country, the poorer people benefit as well.*

7. **Transition to social dominance orientation scale**

*Over the next few pages, we will show you several statements or objects. Please indicate whether you have a positive or negative feeling toward each of these statements or objects. There are no right or wrong answers, so please be as honest as you can. Please click the button below when you are ready to proceed.*

8. **Social dominance orientation scale.** Presented in a random order (Pratto et al., 1994).

(1 = Very Negative … 7 = Very Positive)

- Some groups of people are simply inferior to other groups.
- In getting what you want, it is sometimes necessary to use force against other groups.
- It’s OK if some groups have more of a chance in life than others.
- To get ahead in life, it is sometimes necessary to step on other groups.
- If certain groups stayed in their place, we would have fewer problems.
- It’s probably a good thing that certain groups are at the top and other groups are at the bottom.
- Inferior groups should stay in their place.
- Sometimes other groups must be kept in their place.
- It would be good if groups could be equal.
- Group equality should be our ideal.
- All groups should be given an equal chance in life.
- We should do what we can to equalize conditions for different groups.
- Increased social equality.
- We would have fewer problems if we treated people more equally.
- We should strive to make incomes as equal as possible.
• No one group should dominate in society.

9. **Demographics and Concluding Questions.** Age, gender, ethnicity, political ideology (economic), political ideology (social), attention check, sexual orientation, transgender, socioeconomic status, attitude toward survey, anything else to share?

**B.3 Chapter 1 Study 4: Minimal Group Paradigm**

Participants were randomly assigned to one of three conditions: *Common Disadvantage*, *Ingroup Disadvantage*, or *Comparative Disadvantage*. Participants were also randomly assigned an ingroup name (“Group B” or “Group C”), referred to as **INGROUP** below. The name used for the outgroup was the one not chosen as ingroup from that pair, referred to as **OUTGROUP** below.

1. **Instructions**

   *Thanks for your interest in our survey! First, we will ask you to complete a brief personality questionnaire. After the personality questionnaire, we will ask you to read a short passage and then answer several questions about it. Next, we will ask you about some of your beliefs and opinions. Finally, we will ask you to tell us a few things about yourself. Please click the button below when you are ready to proceed.*

2. **BFI2S.** 30 items (Soto & John, 2017). Completing this scale was only part of the mere categorization procedure for the minimal group paradigm.

3. **Categorization.**

   *Thank you for completing the personality questionnaire. Research has found that this questionnaire is predictive of outcomes in the workplace and other domains of life, including how others treat you. People can be categorized into different groups based their results.*

   *Based on your responses, you belong to **INGROUP**.*

   *Members of **INGROUP** tend to have doubts about whether they have made the right decision or done the right thing, have some aspirations that are pretty unrealistic, possess a great deal of unused potential which has yet to be explored, and have a tendency to be self-critical.*
4. **Comprehension.** Based on the personality questionnaire at the beginning of this survey, to which group do you belong?

5. **Experimental Conditions.** Participants saw one of the following three:

- **Common Disadvantage**

  Please imagine that research is published showing that, compared to the average worker, members of **INGROUP** earn lower wages, are less likely to be hired, are less likely to be promoted, and are more likely to be criticized in front of colleagues. However, independent examination of work quality reveals no difference between members of **INGROUP** and the average worker.

  Additionally, the research found that members of **OUTGROUP**, another group, faced various disadvantages in the workplace. Members of **OUTGROUP** have begun to bring attention to the disadvantages faced by members of their group and advocate for new workplace policies.

- **Ingroup Disadvantage**

  Please imagine that research is published showing that, compared to the average worker, members of **INGROUP** earn lower wages, are less likely to be hired, are less likely to be promoted, and are more likely to be criticized in front of colleagues. However, independent examination of work quality reveals no difference between members of **INGROUP** and the average worker.

- **Comparative Disadvantage**

  Please imagine that research is published showing that, compared to the average worker, members of **INGROUP** earn lower wages, are less likely to be hired, are less likely to be promoted, and are more likely to be criticized in front of colleagues. However, independent examination of work quality reveals no difference between members of **INGROUP** and the average worker.

  Additionally, the research found that members of **INGROUP** face significantly greater disadvantage compared to **OUTGROUP**, another group. However, members of **OUTGROUP** have begun to advocate for new workplace policies to benefit their group, claim-
6. Post-Scenario Questions

1. **Discrimination.** Members of **INGROUP** are discriminated against.
   
   (1 = Strongly Disagree ... 7 = Strongly Agree)

2. **Competitive Victimhood.** Compared with **OUTGROUP**, members of **INGROUP** experience _______ discrimination.
   
   (1 = Less Overall ... 4 = As Much ... 7 = More Overall)

3. **Social Media Share.** How likely would you be to share a news article on social media explaining the treatment of **INGROUP**?
   
   (1 = Extremely Unlikely ... 7 = Extremely Likely)

7. **Ingroup Favoritism.** Bonus allocation between non-self INGROUP and OUTGROUP members. See section [1.11.1 on page 37](#) for explanation.

8. **Belief in Zero-Sum Game.** See section [A.1 on page 101](#).

9. **Demographics and Concluding Questions.** Age, gender, transgender status, sexual preference, ethnicity, socioeconomic status (ladder measure), attitude toward survey, anything else to share? (free-response text).

### B.4 Chapter 2 Study 1: Customer Reaction to Service Failure

1. **Random Assignment: Service Failure, Neutral Service**

2. **Instructions**

   *In the following screen, we will ask you to read a short passage and imagine yourself in the situation.*

   *We will ask for your thoughts about the passage afterwards, so please read it carefully.*

   *Please click the button below when you are ready to proceed.*

3. **Experimental Condition**
4. Post-Scenario Questions

In the next few screens, we will ask you to consider some actions in response to being asked to move seats.

For each action, we would like to know how appropriate it would be in the situation you read about.

Please click the button below when you are ready to proceed.
1. Organize a boycott of the airline.
   
   \[(1 = \text{Very Inappropriate} \ldots \ 7 = \text{Very Appropriate})\]

2. Post a negative review about the airline online after the flight.
   
   \[(1 = \text{Very Inappropriate} \ldots \ 7 = \text{Very Appropriate})\]

3. Demand that the flight attendant apologize for treating you unfairly.
   
   \[(1 = \text{Very Inappropriate} \ldots \ 7 = \text{Very Appropriate})\]

4. Refuse to move and resist physically if necessary.
   
   \[(1 = \text{Very Inappropriate} \ldots \ 7 = \text{Very Appropriate})\]

5. Complain to friends about the experience.
   
   \[(1 = \text{Very Inappropriate} \ldots \ 7 = \text{Very Appropriate})\]

6. Raise voice toward the flight attendant.
   
   \[(1 = \text{Very Inappropriate} \ldots \ 7 = \text{Very Appropriate})\]

7. In the scenario I read, the three other passengers were of what gender? (Mixed, both male & female, Male, Female)

8. After the flight, you realize that the airline undercharged you by almost 50%. You are sure it was a mistake. How likely are you to bring this mistake to the airline’s attention?
   
   \[(1 = \text{Very Unlikely} \ldots \ 7 = \text{Very Likely})\]

9. How do you think the flight attendant decided which passengers should move? (free-response text)

10. The outcome in the scenario I read was fair.

    \[(1 = \text{Strongly Disagree} \ldots \ 7 = \text{Strongly Agree})\]

11. Imagining yourself the in the scenario you read, how would you rate the airline’s quality of service?

    \[(1 = \text{Very Bad} \ldots \ 7 = \text{Very Good})\]

12. Comprehension Check. In the scenario I read, the flight attendant...

    - Asked some passengers to be quiet
    - Asked some passengers to move to the back of the plane
B.5. Chapter 2 Study 2: Customer Reaction to Service Failure (Conceptual Replication)

- Asked whether passengers would like to purchase snacks


7. Demographics and Concluding Questions. Age, gender, ethnicity (free-response text), political ideology (economic), political ideology (social), attention check, attitude toward survey, anything else to share? (free-response text)

B.5 Chapter 2 Study 2: Customer Reaction to Service Failure
(Conceptual Replication)

1. Instructions

   In the following screen, we will ask you to read a short passage and imagine yourself in the situation.

   We will ask for your thoughts about the passage afterwards, so please read it carefully.

   Please click the button below when you are ready to proceed.
2. Experimental Condition

- Service Failure

BOOKING AN AIRBNB

You have been planning a vacation. You decide to book an Airbnb rather than stay in a hotel as the amenities look good, there is a wide selection, and the cost is substantially cheaper than comparable hotels. It is sometimes hard to find good options in the city you have chosen to visit, but you started looking early and were able to find a great location. You make the reservation and the host confirms the reservation shortly thereafter. You buy tickets to some local attractions. All your preparation is complete and you assume everything is in order. A month passes.

About a week before your trip, you login to Airbnb to check your reservation and everything looks good. While checking your reservation, you notice that your profile is incomplete. You go ahead and complete your profile, adding information about your interests and uploading a photo.

The next day you receive an email saying that the host has cancelled your booking. Your trip is less than a week away! You notice no other Airbnb options are available at such short notice and even hotel rooms look scarce. The host gives no reason, writing only that the apartment is no longer available on those dates.

- Neutral Service

BOOKING AN AIRBNB

You have been planning a vacation. You decide to book an Airbnb rather than stay in a hotel as the amenities look good, there is a wide selection, and the cost is substantially cheaper than comparable hotels. It is sometimes hard to find good options in the city you have chosen to visit, but you started looking early and were able to find a great location. You make the reservation and the host confirms the reservation shortly thereafter. You buy tickets to some local attractions. All your preparation is complete and you assume everything is in order. A month passes.

About a week before your trip, you login to Airbnb to check your reservation and everything looks good. While checking your reservation, you notice that your profile is incomplete. You go ahead and complete your profile, adding information about your interests and uploading a photo.

The next day you receive a message from the host, wishing you an enjoyable visit. Your trip is less than a week away! You notice no other Airbnb options are available at such short notice and even hotel rooms look scarce. It was definitely a good choice to book early.
3. Post-Scenario Questions

- Post a negative review about the experience.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Organize a boycott of Airbnb.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Complain to friends about the experience.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Alert Airbnb that you experienced discrimination or prejudice.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Post the host’s name, address, and phone number on a forum for Airbnb users so other guests know about the host.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Send a direct message to the host demanding compensation for the inconvenience.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Send a direct message to the host making clear the potential negative consequences for how they treated you.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- Demand that the host apologize for treating you unfairly.
  
  (1 = Very Inappropriate ... 7 = Very Appropriate)

- The outcome in the scenario I read was fair.
  
  (1 = Strongly Disagree ... 7 = Strongly Agree)

- Imagining yourself the in the scenario you read, how would you rate the Airbnb quality of service?
  
  (1 = Very Bad ... 7 = Very Good)

- Comprehension. In the scenario I read, I imagined myself...
  
  - Asking some people to be quiet
  - Booking accommodations for a trip
– Searching the web to find a good movie to watch

4. **Victim Signaling.** Randomized. See appendix A.3 on page 102

1. **Moral Identity Scale.** Randomized. See appendix A.2 on page 101

2. **Demographics and Concluding Questions.** Age, gender, ethnicity (free-response text), political ideology (economic), political ideology (social), attention check, attitude toward survey, anything else to share? (free-response text)

### B.6 Chapter 2 Study 3: Customer Reaction to Product Failure

1. **Victim Signaling.** Randomized. See appendix A.3 on page 102

2. **Moral Identity Scale.** Randomized. See appendix A.2 on page 101
3. **Experimental Condition.** One of the following two scenarios were randomly presented:

- **Product Scenario: Failure.**

  
  **BUYING A BOOKCASE**

  Please imagine that you bought a bookcase from Ikea that required home assembly.

  The bookcase arrived. When you went to assemble it, you found the instructions to be complex. After spending some time, however, you were able to assemble the bookcase. You put some books and other things on the bookcase.

  The next day, after you returned home, you noticed the bookcase had collapsed, spilling your possessions on the floor, causing damage to some of them.

- **Product Scenario: Neutral.**

  
  **BUYING A BOOKCASE**

  Please imagine that you bought a bookcase from Ikea that required home assembly.

  The bookcase arrived. When you went to assemble it, you found the instructions to be complex. After spending some time, however, you were able to assemble the bookcase. You put some books and other things on the bookcase.

  The next day, after you returned home, you noticed the bookcase as you came in, your possessions on the shelf, and it seemed to be just what you needed for the space.

4. **Transition to Post-Scenario Questions.**

   *In the next few screens, we will ask you to consider some actions you might take in response to the scenario you imagined.*

   *For each action, we would like to know how appropriate it would be in the situation you read about.*

   *Please click the button below when you are ready to proceed.*

5. **Post-Scenario Questions**
• Post a negative review about the bookcase.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)

• Organize a boycott of Ikea.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)

• Complain to friends about the bookcase.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)

• Send a message to Ikea demanding compensation.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)

• Send a message to Ikea making clear the potential negative consequences for how they treated you.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)

• Demand that Ikea apologize for the treatment you received.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)


  • Ikea is responsible for the performance of the bookcase.
  • Ikea should be held accountable if there were some problem with the bookcase.
  • An incident with this bookcase is the fault of Ikea.

7. **Demographics and Concluding Questions.** Gender, age, ethnicity, education, sexual preference, political ideology (economic), political ideology (social), religiosity, English fluency, anything else to share? (free-response text)

**B.7 Chapter 2 Study 4: Consumer Perception of Discrimination**

1. **Scenarios.** See appendix B.5 on page 116; I used the same stimuli.

2. **Post-Scenario Questions**

  • Post a negative review about the experience.
  \( (1 = \text{Very Inappropriate} \ldots 7 = \text{Very Appropriate}) \)
• Organize a boycott of Airbnb.
  (1 = Very Inappropriate ... 7 = Very Appropriate)

• Complain to friends about the experience.
  (1 = Very Inappropriate ... 7 = Very Appropriate)

• Send a direct message to the host demanding compensation for the inconvenience.
  (1 = Very Inappropriate ... 7 = Very Appropriate)

• Send a direct message to the host making clear the potential negative consequences for how they treated you.
  (1 = Very Inappropriate ... 7 = Very Appropriate)

• Demand that the host apologize for treating you unfairly.
  (1 = Very Inappropriate ... 7 = Very Appropriate)

3. Next, we are going to ask you about your experience in the scenario. Please click the button below when you are ready to proceed.

• In the scenario, I experienced inferior service.
  (1 = Strongly Disagree ... 7 = Strongly Agree)


• Compared to other customers, I am often verbally abused by service employees.

• Compared to other customers, it sometimes happens that employees insult me.

• Compared to other customers, it often happens that employees make remarks that humiliate me.

• Compared to other customers, it often happens that the behavior of the employees humiliates me.

• Compared to other customers, employees are often offensive toward me.

• Compared to other customers, employees often do not heed my needs or problems.

• Compared to other customers, employees are often patronizing toward me.

• Compared to other customers, employees often take little time to advise me and quickly go to the next customer.
• Compared to other customers, employees are often very distant to me.
• Compared to other customers, I am frequently being critically observed by employees.
• Compared to other customers, employees often make me wait longer.
• Compared to other customers, the tone of the employees is often condescending toward me.
• Compared to other customers, employees frequently give me derogatory looks.
• Compared to other customers, employees often give me condescending looks.
• Compared to other customers, the tone of employees is often patronizing toward me.

5. Negative Emotions. Exploratory.

• Imagining myself in the scenario I read, I feel uneasy.
• Imagining myself in the scenario I read, I feel frustrated.
• Imagining myself in the scenario I read, I feel angry.
• Imagining myself in the scenario I read, I feel uncertain.


• The outcome in the scenario I read was fair.
  (1 = Strongly Disagree . . . 7 = Strongly Agree)
• In the scenario you read, how would you rate the Airbnb quality of service?
  (1 = Very Bad . . . 7 = Very Good)
• Comprehension. In the scenario I read, I imagined myself . . .
  – Asking some people to be quiet
  – Booking accommodations for a trip
  – Searching the web to find a good movie to watch


8. Demographics and Concluding Questions. Age, gender, ethnicity (free-response text),
  political ideology (economic), political ideology (social), attention check, attitude toward
  survey, pay fairness, anything else to share? (free-response text).
Appendix C

Supplementary Analyses

C.1 Chapter 1 Study 2: Lay Beliefs of Attitudes Between Disadvantaged Groups

C.1.1 Sample Demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>107 White</th>
<th>96 Black</th>
<th>154 No</th>
<th>38 Yes</th>
<th>154 Heterosexual</th>
<th>28 Bisexual</th>
<th>10 Homosexual</th>
<th>174 No</th>
<th>15 Yes</th>
<th>2 Prefer not to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Preference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transgender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Race, Ethnicity, and Origin:

- 139 White
- 38 Black or African American
- 6 Asian
- 5 Two or more races
- 4 Other
C.1.2 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>36.41</td>
<td>10.68</td>
<td>0.03</td>
<td>[-1.7, 1.1]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Polit. Soc.</td>
<td>3.74</td>
<td>1.98</td>
<td>-0.04</td>
<td>0.85***</td>
<td>[-0.18, 0.10]</td>
<td>[0.81, 0.89]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Polit. Econ.</td>
<td>3.99</td>
<td>1.95</td>
<td>-0.04</td>
<td>0.85***</td>
<td>[-0.18, 0.10]</td>
<td>[0.81, 0.89]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SES</td>
<td>5.18</td>
<td>2.08</td>
<td>-0.20**</td>
<td>0.07</td>
<td>0.08</td>
<td>[-0.33, 0.06]</td>
<td>[-0.07, 0.21]</td>
<td>[-0.06, 0.22]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. BZSG</td>
<td>4.30</td>
<td>1.40</td>
<td>-0.22**</td>
<td>0.24**</td>
<td>0.19**</td>
<td>0.04</td>
<td>[-0.35, 0.08]</td>
<td>[0.10, 0.37]</td>
<td>[0.05, 0.32]</td>
<td>[-0.11, 0.18]</td>
</tr>
<tr>
<td>6. A. LGBT/Bi</td>
<td>5.94</td>
<td>1.25</td>
<td>-0.09</td>
<td>-0.17*</td>
<td>-0.13</td>
<td>-0.16*</td>
<td>-0.17*</td>
<td>[-0.05, 0.23]</td>
<td>[-0.31, -0.03]</td>
<td>[-0.26, 0.02]</td>
</tr>
<tr>
<td>7. B. Les./Trans.</td>
<td>4.75</td>
<td>1.63</td>
<td>0.16*</td>
<td>0.07</td>
<td>0.04</td>
<td>-0.00</td>
<td>0.02</td>
<td>0.23***</td>
<td>[-0.02, -0.29]</td>
<td>[-0.08, 0.21]</td>
</tr>
<tr>
<td>8. C. Gay/Black</td>
<td>4.71</td>
<td>1.44</td>
<td>-0.04</td>
<td>0.07</td>
<td>-0.02</td>
<td>-0.09</td>
<td>0.17*</td>
<td>0.35***</td>
<td>[-0.18, -0.10]</td>
<td>[-0.07, 0.21]</td>
</tr>
<tr>
<td>9. D. SES/Black</td>
<td>5.61</td>
<td>1.28</td>
<td>0.09</td>
<td>-0.14</td>
<td>-0.12</td>
<td>-0.13</td>
<td>-0.11</td>
<td>0.62***</td>
<td>[-0.06, -0.23]</td>
<td>[-0.27, -0.09]</td>
</tr>
</tbody>
</table>

* means $p < .05$, ** means $p < .01$, *** means $p < .001$. Values in square brackets indicate the 95% confidence interval for each correlation.

- Age is participant age
- Polit. Soc. is participant political ideology regarding social issues
- Polit. Econ. is participant political ideology regarding economic issues
- SES is participant subjective socioeconomic status (ladder measure)
- BZSG is score on the belief in zero-sum game scale
- A. Straight/Bi is the expected attitude of straight and bisexual people toward a scenario an ACLU statement on LGBT rights (score is the average of 3 items)
- B. Cis./Trans. is the expected attitude of non-transgender and transgender people toward a scenario involving a Lesbian march (score is the average of 3 items)
- C. Wht./Black is the expected attitude of White and Black people toward a scenario involving gay rights in the workplace (score is the average of 3 items)
- D. Wht./Black is the expected attitude of White and Black people toward a scenario involving the struggles of people with little wealth (score is the average of 3 items)

In all cases for the scenarios, lower scores represent belief that groups facing less disadvantage
would like the content presented in the scenario more while higher scores represent participant belief that groups facing more disadvantage would like the content presented in the scenario more. See section B.1 on page 105 for item prompt wording.

C.2 Chapter 1 Study 3: Zero-Sum Thinking and Competitive Victimhood

C.2.1 Sample Demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>112 Female</td>
<td>91 Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Preference</td>
<td>203 Heterosexual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transgender</td>
<td>202 No</td>
<td>1 Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>107 White</td>
<td>96 Black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>194 No</td>
<td>5 Yes</td>
<td>4 missing values</td>
<td></td>
</tr>
</tbody>
</table>

(Missing values indicate that the participant skipped the question.)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>45.07</td>
<td>15.46</td>
<td>19</td>
<td>90</td>
</tr>
<tr>
<td>SES</td>
<td>6.05</td>
<td>2.10</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Political Ideology (Social)</td>
<td>3.84</td>
<td>1.63</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Political Ideology (Economic)</td>
<td>3.87</td>
<td>1.61</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>
### C.2.2 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. BZSG</td>
<td>.16*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.02, 29]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Devalue</td>
<td>.23**</td>
<td>.20**</td>
<td>.09</td>
<td>.05</td>
<td>-.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.09, .35]</td>
<td>[.06, .33]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Deserve</td>
<td>.09</td>
<td>.05</td>
<td>-.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-.05, .22]</td>
<td>[-.09, .19]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Decrease</td>
<td>.17*</td>
<td>.30**</td>
<td>.51***</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.03, .30]</td>
<td>[.17, .42]</td>
<td>[.40, .60]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Civil Rights</td>
<td>-.09</td>
<td>.02</td>
<td>-.16*</td>
<td>.66***</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-.22, .05]</td>
<td>[-.12, .16]</td>
<td>[-.29, .02]</td>
<td>[.58, .73]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Support</td>
<td>.14*</td>
<td>.21**</td>
<td>-.23**</td>
<td>.42***</td>
<td>-.12</td>
<td>.38***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.01, .28]</td>
<td>[.08, .34]</td>
<td>[-.35, -.09]</td>
<td>[.29, .52]</td>
<td>[.25, .02]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Advocate</td>
<td>.05</td>
<td>.11</td>
<td>-.24***</td>
<td>.45***</td>
<td>-.14*</td>
<td>.43***</td>
<td>.67***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-.09, .18]</td>
<td>[-.02, .25]</td>
<td>[-.36, -.10]</td>
<td>[.29, .52]</td>
<td>[.26, .49]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Attitude</td>
<td>.09</td>
<td>.23**</td>
<td>-.30***</td>
<td>.50***</td>
<td>-.15*</td>
<td>.41**</td>
<td>.57***</td>
<td>.52***</td>
<td></td>
</tr>
<tr>
<td>10. SDO</td>
<td>-.07</td>
<td>.30***</td>
<td>.07</td>
<td>-.32***</td>
<td>.08</td>
<td>-.27***</td>
<td>.03</td>
<td>-.14</td>
<td>-.06</td>
</tr>
</tbody>
</table>

* means $p < .05$, ** means $p < .01$, *** means $p < .001$. Values in square brackets indicate the 95% confidence interval for each correlation. Ethnicity is coded as 1 = *Black*, 0 = *White*. See section B.2 on page 107 for item prompt wording.
C.2.3 Moderation by Social Dominance Orientation

Following are the full results of analysis of covariance using the civil rights measure as dependent variable and factorial design for independent variables to investigate potential moderation by social dominance orientation. All continuous predictors (BZSG and SDO) are z-scored. Ethnicity is coded 1 = Black, 0 = White. As described in Chapter 1 Study 3 (section 1.10.2 on page 30), despite the presence of significant interactions in the three-way interaction model, social dominance orientation did not moderation the influence of zero-sum thinking on competitive victimhood for black participants.

\[
\begin{array}{c}
\text{N obs} = 203 \\
\text{Root MSE} = 1.60948 \\
\text{R-squared} = 0.1984 \\
\text{Adj R-squared} = 0.1696
\end{array}
\]

<table>
<thead>
<tr>
<th>Source</th>
<th>Partial SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Prob&gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>124.98583</td>
<td>7</td>
<td>17.855119</td>
<td>6.89</td>
<td>0.0000</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>6.2826642</td>
<td>1</td>
<td>6.2826642</td>
<td>2.43</td>
<td>0.1210</td>
</tr>
<tr>
<td>BZSG</td>
<td>5.3520718</td>
<td>1</td>
<td>5.3520718</td>
<td>2.07</td>
<td>0.1522</td>
</tr>
<tr>
<td>Ethnicity × BZSG</td>
<td>17.336495</td>
<td>1</td>
<td>17.336495</td>
<td>6.69</td>
<td>0.0104</td>
</tr>
<tr>
<td>SDO</td>
<td>61.915043</td>
<td>1</td>
<td>61.915043</td>
<td>23.90</td>
<td>0.0000</td>
</tr>
<tr>
<td>Ethnicity × SDO</td>
<td>16.645242</td>
<td>1</td>
<td>16.645242</td>
<td>6.43</td>
<td>0.0120</td>
</tr>
<tr>
<td>BZSG × SDO</td>
<td>21.624420</td>
<td>1</td>
<td>21.062442</td>
<td>8.35</td>
<td>0.0043</td>
</tr>
<tr>
<td>Ethnicity × BZSG × SDO</td>
<td>7.3212714</td>
<td>1</td>
<td>7.3212714</td>
<td>2.83</td>
<td>0.0943</td>
</tr>
<tr>
<td>Residual</td>
<td>505.1324</td>
<td>195</td>
<td>2.5904225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>630.11823</td>
<td>202</td>
<td>3.1193972</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C.2.4 Group-Based Disadvantage Beliefs

To explore beliefs about group-based disadvantage, participants reported the degree to which groups experienced discrimination (1 = Very little . . . 7 = Very much). The groups selected were based on Jonathan Haidt’s discussion of victim groups (Leo, 2016). The measure presented groups in a

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transgender People</td>
<td>203</td>
<td>5.76</td>
<td>1.42</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>African Americans</td>
<td>203</td>
<td>5.70</td>
<td>1.47</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Muslims</td>
<td>203</td>
<td>5.70</td>
<td>1.40</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Lesbian, Gay, Bisexual</td>
<td>203</td>
<td>5.55</td>
<td>1.43</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Native Americans</td>
<td>203</td>
<td>5.19</td>
<td>1.63</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Latinos</td>
<td>203</td>
<td>5.18</td>
<td>1.55</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Disabled People</td>
<td>203</td>
<td>5.05</td>
<td>1.61</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Women</td>
<td>203</td>
<td>4.99</td>
<td>1.60</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>White People</td>
<td>203</td>
<td>2.77</td>
<td>1.84</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

See section B.2 on page 107 for measure details.

C.3 Chapter 1 Study 4: Minimal Group Paradigm

C.3.1 Sample Demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>n</th>
<th>Gender</th>
<th>Sexual Preference</th>
<th>Transgender</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Straight</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Gender</td>
<td>214</td>
<td>134</td>
<td>98</td>
<td>17</td>
<td>96</td>
</tr>
<tr>
<td>SES</td>
<td>349</td>
<td>5.20</td>
<td>2.40</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Political Ideology (Social)</td>
<td>347</td>
<td>4.59</td>
<td>1.87</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>
### C.3. Chapter 1 Study 4: Minimal Group Paradigm

<table>
<thead>
<tr>
<th>Demographic</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Ideology (Economic)</td>
<td>348</td>
<td>4.74</td>
<td>1.73</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Race, Ethnicity, and Origin:

- 221 *White*
- 92 *Black or African American*
- 25 *Asian*
- 4 *Native Americans and Alaska Natives*
- 3 *Two or more races*
- 1 *Other*

#### C.3.2 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. BZSG</td>
<td>.16*</td>
<td>[.02, 29]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Devalue</td>
<td>23**</td>
<td>[0.09, 35]</td>
<td>20**</td>
<td>[0.06, 33]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Deserve</td>
<td>.09</td>
<td>[.05, .22]</td>
<td>.05</td>
<td>[.09, .19]</td>
<td>-.13</td>
<td>[.26, .01]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Decrease</td>
<td>.17*</td>
<td>[.03, .30]</td>
<td>.30**</td>
<td>[.17, .42]</td>
<td>.51***</td>
<td>[.40, .60]</td>
<td>.02</td>
<td>[.12, .16]</td>
<td></td>
</tr>
<tr>
<td>6. Civil Rights</td>
<td>-0.9</td>
<td>[-.22, .05]</td>
<td>.02</td>
<td>[-.12, .16]</td>
<td>-.16*</td>
<td>[.28, .02]</td>
<td>.66***</td>
<td>[.58, .73]</td>
<td>.00</td>
</tr>
<tr>
<td>7. Support</td>
<td>.14*</td>
<td>[.01, .28]</td>
<td>.21**</td>
<td>[.08, .34]</td>
<td>-.23**</td>
<td>[.35, -.09]</td>
<td>.42***</td>
<td>[.29, .52]</td>
<td>-.12</td>
</tr>
<tr>
<td>8. Advocate</td>
<td>.05</td>
<td>[-.09, .18]</td>
<td>.11</td>
<td>[.02, .25]</td>
<td>-.24***</td>
<td>[.36, -.10]</td>
<td>.45***</td>
<td>[.33, .55]</td>
<td>-.14*</td>
</tr>
<tr>
<td>9. Attitude</td>
<td>.09</td>
<td>[-.05, .22]</td>
<td>.23**</td>
<td>[.10, .36]</td>
<td>-.30***</td>
<td>[.42, -.17]</td>
<td>.50***</td>
<td>[.38, .59]</td>
<td>-.15*</td>
</tr>
<tr>
<td>10. SDO</td>
<td>-.07</td>
<td>[-.21, .06]</td>
<td>.30***</td>
<td>[.17, .42]</td>
<td>-.07</td>
<td>[-.07, .20]</td>
<td>-.32***</td>
<td>[.43, -.19]</td>
<td>.08</td>
</tr>
</tbody>
</table>
### C.4 Chapter 2 Study 1: Customer Reaction to Service Failure

#### C.4.1 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition</td>
<td>0.55</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moral Int.</td>
<td>2.80</td>
<td>0.93</td>
<td>-0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-1.11, 10]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Moral Sym.</td>
<td>4.25</td>
<td>1.38</td>
<td>0.01</td>
<td>0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-0.10, 12]</td>
<td>[-0.03, 19]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Vict. Sig.</td>
<td>1.96</td>
<td>0.76</td>
<td>0.09</td>
<td>-0.30***</td>
<td>0.11*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-0.02, 19]</td>
<td>[-0.40, -20]</td>
<td>[0.00, 22]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. V. Vict</td>
<td>0.00</td>
<td>0.75</td>
<td>0.07</td>
<td>-0.15**</td>
<td>0.75***</td>
<td>0.75***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-0.04, 17]</td>
<td>[-0.26, -04]</td>
<td>[0.69, 79]</td>
<td>[0.69, 79]</td>
<td></td>
</tr>
<tr>
<td>6. Hostile</td>
<td>3.72</td>
<td>1.49</td>
<td>0.57***</td>
<td>-0.14**</td>
<td>0.03</td>
<td>0.30***</td>
<td>0.22***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.49, 64]</td>
<td>[-0.25, -03]</td>
<td>[-0.08, 13]</td>
<td>[0.20, 40]</td>
<td>[0.11, 32]</td>
</tr>
<tr>
<td>7. Polit. (Soc.)</td>
<td>3.40</td>
<td>1.71</td>
<td>0.16**</td>
<td>-0.10</td>
<td>0.22***</td>
<td>-0.04</td>
<td>0.12*</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.05, 26]</td>
<td>[-0.21, 01]</td>
<td>[0.12, 32]</td>
<td>[-0.15, 07]</td>
<td>[0.01, 23]</td>
</tr>
<tr>
<td>8. Polit. (Econ.)</td>
<td>3.76</td>
<td>1.77</td>
<td>-0.10</td>
<td>0.12*</td>
<td>-0.10</td>
<td>0.01</td>
<td>-0.01</td>
<td>0.76***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-0.01, 21]</td>
<td>[-0.19, 02]</td>
<td>[0.01, 22]</td>
<td>[-0.21, 00]</td>
<td>[-0.10, 12]</td>
</tr>
</tbody>
</table>

* means $p < .05$, ** means $p < .01$, *** means $p < .001$. Values in square brackets indicate the 95% confidence interval for each correlation. Condition is coded as 1 = *Service Failure*, 0 = *Neutral Service*. See section B.4 on page 113 for item prompt wording.

### C.5 Chapter 2 Study 2: Customer Reaction to Service Failure

(Conceptual Replication)
C.5.1 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition</td>
<td>0.56</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moral Int.</td>
<td>2.69</td>
<td>0.98</td>
<td>-02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-09, .13]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Moral Sym.</td>
<td>4.34</td>
<td>1.26</td>
<td>-04</td>
<td>.22***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-15, .07]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Vict. Sig.</td>
<td>2.01</td>
<td>0.70</td>
<td>-00</td>
<td>-.25***</td>
<td>.14*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-11, .10]</td>
<td>[-35, .14]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. V. Vict.</td>
<td>0.00</td>
<td>0.76</td>
<td>-03</td>
<td></td>
<td>.76***</td>
<td>.76***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-14, .08]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hostile</td>
<td>3.88</td>
<td>1.80</td>
<td>-05</td>
<td>.06</td>
<td>.19***</td>
<td>.16**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-13, 0.09]</td>
<td>[.05, .17]</td>
<td>[08,.29]</td>
<td>[06,.27]</td>
<td></td>
</tr>
<tr>
<td>7. Polit. (Soc.)</td>
<td>3.46</td>
<td>1.76</td>
<td>-.17**</td>
<td>.16**</td>
<td>-.02</td>
<td>.10</td>
<td>.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-27,.06]</td>
<td>[.06,.27]</td>
<td>[-13,.09]</td>
<td>[-01,.20]</td>
<td>[-07,.14]</td>
</tr>
<tr>
<td>8. Polit. (Econ.)</td>
<td>3.83</td>
<td>1.73</td>
<td>-03</td>
<td>.13*</td>
<td>.06</td>
<td>.04</td>
<td>.03</td>
<td>.80***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-14,.08]</td>
<td>[.02,.24]</td>
<td>[-17,.04]</td>
<td>[-07,.15]</td>
<td>[08,.14]</td>
</tr>
</tbody>
</table>

* means $p < .05$, ** means $p < .01$, *** means $p < .001$. Values in square brackets indicate the 95% confidence interval for each correlation. Condition is coded as 1 = Service Failure, 0 = Neutral Service. See section B.5 on page 116 for item prompt wording.

C.6 Chapter 2 Study 3: Customer Reaction to Product Failure
## C.7. Chapter 2 Study 4: Consumer Perception of Discrimination

### C.6.1 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition</td>
<td>0.51</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moral Int.</td>
<td>2.88</td>
<td>0.95</td>
<td>-.09</td>
<td></td>
<td>-.21***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Moral Sym.</td>
<td>4.24</td>
<td>1.13</td>
<td>.08</td>
<td>.21*</td>
<td>.21***</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Vict. Sig.</td>
<td>2.15</td>
<td>0.76</td>
<td>.04</td>
<td>-.28**</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. V. Vict.</td>
<td>0.00</td>
<td>0.73</td>
<td>-.02</td>
<td>-.05</td>
<td>.07</td>
<td>.73**</td>
<td>.73**</td>
<td>.73**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hostile</td>
<td>3.10</td>
<td>1.45</td>
<td>.70***</td>
<td>-.28**</td>
<td>.00</td>
<td>.23**</td>
<td>.16**</td>
<td>.16**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Blame</td>
<td>4.72</td>
<td>1.20</td>
<td>.04</td>
<td></td>
<td>.01</td>
<td>.03</td>
<td>.03</td>
<td>.04</td>
<td>.17*</td>
<td></td>
</tr>
<tr>
<td>8. Polit. (Soc.)</td>
<td>3.26</td>
<td>1.82</td>
<td>-.03</td>
<td>-.25***</td>
<td>.08</td>
<td>-.09</td>
<td>-.00</td>
<td>.05</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>9. Polit. (Econ.)</td>
<td>3.72</td>
<td>1.82</td>
<td>-.06</td>
<td>-.15**</td>
<td>.02</td>
<td>-.16**</td>
<td>-.09</td>
<td>-.01</td>
<td>-.01</td>
<td>.78***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-21, .02]</td>
<td>[0.09, 0.32]</td>
<td>[0.07, 0.16]</td>
<td>[-39, -17]</td>
<td>[0.04, 0.19]</td>
<td>[0.67, 0.78]</td>
<td>[0.67, 0.78]</td>
<td>[0.64, 0.75]</td>
</tr>
</tbody>
</table>

* means $p < .05$, ** means $p < .01$, *** means $p < .001$. Values in square brackets indicate the 95% confidence interval for each correlation. Condition is coded as 1 = Service Failure, 0 = Neutral Service. See section B.6 on page 119 for item prompt wording.
C.7. Chapter 2 Study 4: Consumer Perception of Discrimination

C.7.1 Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition</td>
<td>0.54</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moral Int.</td>
<td>2.66</td>
<td>1.00</td>
<td>-0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-1.17, 0.05]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Moral Sym.</td>
<td>4.34</td>
<td>1.29</td>
<td>-0.05</td>
<td>0.19***</td>
<td>[0.08, 0.29]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-1.16, 0.06]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Vict. Sig.</td>
<td>2.04</td>
<td>0.80</td>
<td>-0.02</td>
<td>-0.36***</td>
<td>0.13*</td>
<td>[0.02, 0.23]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-0.09, 0.12]</td>
<td>[-0.45, -0.26]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. V. Vict.</td>
<td>-0.00</td>
<td>0.75</td>
<td>-0.02</td>
<td>-0.11*</td>
<td>0.75***</td>
<td>0.75***</td>
<td>[0.70, 0.79]</td>
<td>[0.70, 0.79]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-0.13, 0.08]</td>
<td>[-0.22, -0.01]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hostile</td>
<td>3.66</td>
<td>1.90</td>
<td>0.05</td>
<td>0.15**</td>
<td>0.14*</td>
<td>[0.03, 0.24]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[0.72, 0.81]</td>
<td>[-0.25, -0.04]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. CPD</td>
<td>2.51</td>
<td>1.44</td>
<td>0.19***</td>
<td>-0.45***</td>
<td>0.19***</td>
<td>0.55***</td>
<td>0.49***</td>
<td>0.43***</td>
<td>[0.34, 0.51]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[0.09, 0.29]</td>
<td>[-0.53, -0.36]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Polit. (Soc.)</td>
<td>3.56</td>
<td>1.76</td>
<td>-0.02</td>
<td>-0.12*</td>
<td>0.24***</td>
<td>0.09</td>
<td>0.22***</td>
<td>0.09</td>
<td>0.21***</td>
<td>[0.10, 0.31]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-0.12, 0.09]</td>
<td>[-0.22, -0.01]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Polit. (Econ.)</td>
<td>3.87</td>
<td>1.78</td>
<td>-0.08</td>
<td>0.22***</td>
<td>0.03</td>
<td>0.17**</td>
<td>0.04</td>
<td>0.17**</td>
<td>0.86***</td>
<td>[0.83, 0.89]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[-0.19, 0.03]</td>
<td>[0.12, 0.32]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* means p < .05, ** means p < .01, *** means p < .001. Values in square brackets indicate the 95% confidence interval for each correlation. Condition is coded as 1 = Service Failure, 0 = Neutral Service. See section B.7 on page 121 for item prompt wording.