

The Psychology of Loyalty and its Impact on Harm Perception

by

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor of Philosophy
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ABSTRACT

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Abstract

This dissertation examines how people's loyalty to their groups influences their perception of harm. Specifically, people who are loyal (vs. not loyal) to their ingroup perceive negative actions by an outgroup against their group as more harmful. Three studies provided support for this hypothesis. Students loyal to their university's basketball team perceived greater harm from its rival basketball team than those who were not (Studies 1 and 2). The effect held controlling for related group constructs, such as group identification (Studies 1 and 2), and related moral constructs, such as belief in a just world (Study 1). The association between loyalty and harm perception generalized to a country context by showing that Americans more loyal to the United States were more likely to perceive foreign tariffs as harmful (Study 3). Rather than differences in memory recall or general negative perceptions of the outgroup, this effect appeared to be due to loyalists exaggerating the perceived harm inflicted (Studies 2 and 3). Furthermore, as perceptions of harm increased, desire for punitive actions also increased (Study 3).

Dedication

This dissertation is dedicated to my family. I could not have done it without the love and support of my brother, mother and father, who have inspired me, made me laugh, and encouraged me when I most needed it. Also, I suspect they will be the only ones to ever read this purely out of loyalty and devotion.

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1. Introduction

As #MeToo – the female empowerment movement – gathered, Steve Bannon, the ex-White House strategist, saw the threat it posed to the Republicans and to Trump, and tried to alert his party to the movement’s harmfulness (Green, 2018). If he saw the movement as harmful, he could have sounded off a general alarm as other public figures have done (Goldberg, 2018; Safronova, 2018; Stephens, 2017). And yet he has not done so, nor he has made the same observation regarding the harm that #MeToo could cause to the Democrat party, even though Democrat leaders have had their share of scandal. Interestingly as well, some other Republican Party members have had less vehement responses to the effects of the movement on the party (Tesfaye, 2017).

What reasons might account for his specific perception that the movement is harming his party? Described as a loyalist to Donald Trump and to his political party (Allen, 2018; Stephenson, 2017), one possibility may be that his loyalty magnifies his perception that the movement is harming his party. That is, his loyalty to his group – his moral belief that being partial to his group is the right thing to do – increases how harmful he perceives an outgroup’s actions are.

This dissertation examines this idea. I first discuss the idea of harm and its subjective nature (Section 1.1). I then propose how the moral principle of loyalty increases perception of harm (Section 1.2) due to how people loyal to their group interpret the harmfulness of an action (Section 1.5), and how increased perceptions of

harm through loyalty also increases desire to punish outgroup members (Section 1.6).

Because loyalty is theoretically similar to group identification and organizational commitment, I also review the similarities, differences and overlaps between loyalty and the other two constructs (Sections 1.3 and 1.4).

1.1 Harmfulness as determined through the eyes of the perceiver

Society often prescribes what is harmful or not using objective determinations, such as amount of bodily harm inflicted (LexisNexis, 2015), and some theories of morality base morality and harm upon templates of objectivity or universality, in which people are generally assumed to be able to agree on the morality of an issue and the harmfulness of an action (e.g., Kohlberg, Levine & Hower, 1983; Rest, 1986). Indeed, people often believe that their moral judgments are objective facts (Goodwin & Darley, 2008; Shweder, 2002). Empirical findings on moral judgments, however, has demonstrated, like the Steve Bannon example above, that *what* people perceive to be morally wrong, and *the extent to which* they perceive something to be harmful (even when presented with identical situations), often varies substantially from person to person (Cohen et al., 2011; Haidt & Graham, 2009; Schein & Gray, 2017; Skitka, Bauman & Sargis, 2005). That is, what is perceived to be harmful can be subjective, and an action that is harmful from one person's perspective may not be from another's perspective.

Harm perception has important implications, as it increases judgments of blame (Malle et al., 2014), punishment (Carlsmith, Darley & Robinson, 2002), negative

intergroup interactions (e.g., Alther, 2013), and, in the case of Steve Bannon, moral panic and divisive strategies that polarize political and cultural groups (Hindman, 2017). Given the importance of harm perception and its subjective nature, people may thus react to the same action differently depending on how harmful it is perceived to be. It is thus important to understand the contributing factors that influence people's perception of how harmful an action is. What might these factors be? The Theory of Dyadic Morality (Schein & Gray, 2017) provides one answer: the (salience of and) violation of moral principles.

1.2 The influence of moral principles on harm perception

At its core, the Theory of Dyadic Morality (TDM; Schein & Gray, 2017) is a bidirectional causal model based upon harm perception. It posits that moral judgments revolve around a cognitive template of harm, in which harm is the damage or suffering caused by an intentional agent to a vulnerable patient, whether it is a man hitting a little girl or a boy talking back to his father. In particular, the bidirectional link from harm to immorality means that (1) perceived harmfulness of an act causes it to be judged as immoral; and (2) when a moral principle is violated (an act seems morally wrong), the act seems harmful. Of particular interest here is the second premise, in which harm perception is influenced by violations of moral principles that an individual holds, such as honesty, purity, and – the construct of interest here – loyalty (Graham et al., 2011; Rai & Fiske, 2011; Schein & Gray, 2017).

Some past research has provided support for the second link in the model. When people read about immoral scenarios (e.g., desecrating a bible – a transgression of impurity), they become more likely to interpret a child's frown as a consequence of suffering (harm) rather than boredom (a negative non-harm), compared to when they read about neutral scenarios (e.g., reading a book; Gray, Schein & Ward, 2014). In another study, after reading scenarios involving moral transgressions, participants were more likely to think that a Chinese character means “harm,” rather than “sad” or “neutral” (Gray et al., 2014). These findings show that when a moral value is salient and violated (in this case, purity), people become more likely to perceive harm.

In a similar way, the moral principle of loyalty to one's group may also be associated with perceptions of harm. As a moral principle, loyalty is defined as the “principle of partiality to an object that gives rise to expectations of behavior on behalf of that object, such as sacrifice, trustworthiness, and pro-sociality” (Hildreth, Gino & Bazerman, 2016, p. 17). That is, one holds the belief that being partial to one's close other, group, or other institution, such as one's friends, sports team, work organization, or country, is the moral and right thing to do. When one feels loyal to a group, the group becomes morally important to oneself (Rozin, 1999; Skitka et al., 2005). People may then become more sensitive to acts that cause suffering to the group, and any negative action against one's group may loom larger than if one were not loyal to the group. Just as Steve Bannon, whose loyalty to his political party motivates him to perceive the #MeToo

movement as harmful to his party, loyalty to one's group may increase one's perception that an outgroup's actions are harmful to one's group.

Related research on how one's group membership influences people's perceptions provide support for this hypothesis. Students watching a game between two schools encode and recall more fouls from the other school's team (Hastorf & Cantril, 1954), and news consumers perceive a political report as biased and unfair when it is unfavorable towards their party (Vallone, Ross & Lepper, 1985). Other indirect, but related, empirical research also lends support to the idea. Work in the field of political psychology, for instance, show that political conservatives, who are more likely to uphold loyalty as a moral value (Graham et al., 2011) and more likely to be patriotic (Gilmore, Meeks & Domke, 2013), are also more likely to harbor negative views of outsiders (Altemeyer, 1998; Van Hiel, Pandelaere, & Duriez, 2004). They are also more likely to draw attention to the threats and danger that outsiders pose (Pantucci, 2016).

Other work in evolutionary psychology also supports the link between loyalty and harm perception. Loyalty is a product of our tribal heritage, leading to behaviors designed to protect our ingroup in the most extreme circumstances. Violence and conflict were common in our evolutionary past (Pinker, 2010), and tribal members often had to defend their territory. Soldiers fighting wars were more likely to perceive the enemy as dangerous (Cruikshank, 2011; Wilcox, 2014), and tribal members facing competing groups were more willing to suffer injuries themselves (Chagnon, 1988) or

even risk mortality (Tooby & Cosmides, 1988) in order to protect the group's interest. These tribal coalitions have appeared in other forms in the present day, such as sports fandoms (Winegard & Deaner, 2010), and sports fans may punish fans from another team (Cushman, Durwin & Lively, 2012). These instincts have been argued to have residual effects, such that even today, when we belong to "imagined communities" (e.g., countries), we are still motivated to sacrifice for our communities due to our loyalty motivations (Stern, 1995).

Although these findings provide indirect support for the link between loyalty and harm perception, these studies do not differentiate between groups to which the participants belong and the loyalty that participants feel towards these groups. They thus also suggest that in addition to loyalty, the strength of one's identification with the group may predict perceptions of harm. This may indeed be true, and both loyalty and group identification may positively predict harm perception. However, given the theoretical link between morality and harm in situationist and dispositional models of morality (e.g., Aquino & Reed, 2002; Cohen et al., 2011; Graham et al., 2011; Gray, 2017; Kohlberg, 1984; Rai & Fiske, 2011; Reynolds, 2006; Rozin et al., 1999; Schein & Shweder, 1997), loyalty, as a moral construct, may be an arguably more proximal and stronger predictor of harm perception. That is, loyalty may continue to predict harm perception, even controlling for how strongly someone identifies with the group. I thus propose the following hypothesis:

H1: Loyalty to one's group increases perceived harmfulness of an outgroup's behavior towards one's group, even controlling for group identification.

Even though loyalty may be a better predictor than group identification of harm perception, it may be useful to provide a literature review of loyalty as a construct, and its similarities, differences and overlaps between it and other related constructs. In the following two sections (Sections 1.3 and 1.4), I discuss the construct of loyalty, and how it is related to but distinct from similar constructs, before returning to the discussion of loyalty's influence on harm perception and its consequences (Sections 1.5 and 1.6).

1.3 Literature review of loyalty as a moral principle

The documentation and exploration of the idea of loyalty extends as far back as Sophocles and Confucius, who noted the importance of loyalty to societal institutions, such as one's family and country (Ross, 2010; Sophocles, 2005). And although loyalty pervades our social and organizational lives, it has not been a well-defined concept in social science research, including disagreement over whether it is a behavior or an attitude.

In the organizational literature, Hirschman (1970) first formally introduced the concept of "loyalty" when he discussed how employees respond to organizational dysfunction, such as organizational failures or lapses. However, scholars have expressed frustration at his lack of development of the construct (Barry, 1974; Leck & Saunders, 1992; Withey & Cooper, 1989). He at once conceptualizes it as an attitude, but at other

times conceptualizes it as a behavior, and still at other times refers to it as a construct that moderates whether people engage in exit (leaving an organization) or voice (speaking up). As a result, some have developed the construct of loyalty as an attitude (e.g., Graham et al., 2011; Hildreth, Gino & Bazerman, 2016; van Vugt & Hart, 2004), whereas others have developed it as a behavior (e.g., Rusbult, 1988; Liden & Graen, 1980; Liden & Maslyn, 1998; van Vugt & Hart, 2004). Within this set of work, the definitions focus on different, and even contradictory behaviors, with Rusbult positing that loyalty is staying silent, Liden and Graen positing that loyalty is speaking up, and van Vugt and Hart positing that it is staying in the group even when members can obtain better outcomes by leaving the group.

There are certainly behaviors that people would generally agree are “loyal behaviors,” such as defending one’s loved one despite their obvious wrongdoing, or willingly and knowingly giving up an attractive option in favor of an inferior one. One must be careful to give one strict behavioral definition of loyalty, however, as the same behavior can also be motivated by different psychological reasons that one would not necessarily associate with being loyal. In the marketing literature, for example, loyalty is sometimes defined as the repeated purchasing of a product (Jacoby & Kyner, 1973), although that obscures the possibility that one is repurchasing a product due to habit or because of a bias towards the status quo. As another example, if a bank employee opens fake accounts, is it because they were forced to do so under duress or pressure (e.g., the

Wells Fargo bank scandal in 2016; Kingson & Cowley, 2017)? Or is it because they believe that opening these accounts would promote the best outcome for the organization and protect it from rival banks? Both may lead to the same behavioral outcome, but the former would arguably not be reflective of loyalty. These examples reflect the constraints needed to identify loyal behavior.

In contrast to behavioral definitions, an emerging body of work on loyalty has been defining it attitudinally. These definitions have centered on an actor's moral desire to promote the best interests for the object of loyalty. Management scholars Dooley and Fryxell (1999), for example, defined loyalty as "a disinclination toward opportunism" (p. 394), whereas the philosopher Stieb (2006) defined it as, "willing and practical and thoroughgoing devotion of a person to a cause beyond the private self" (p. 76; adapted from Royce, 1908). Later work in organizational behavior by Hildreth and his colleagues (2016) noted that "loyalty is an ethical principle" (p. 17), and defined it as the "principle of partiality to an object (e.g., a group) that gives rise to expectations of behavior on behalf of that object such as sacrifice, trustworthiness, and pro-sociality" (p. 17).

Importantly, these cognitive definitions also reveal a vital signature of loyalty – its moral nature. Scholars, from historians to philosophers to psychologists to organizational behaviorists, have noted the moral aspects inherent in loyalty (e.g., Coughlan, 2005; Dooley & Fryxell, 1999; Ladd, 1967; Graham et al., 2011; Haidt & Graham, 2007; Hildreth et al., 2016; Ranlet, 1991; Royce 1908). That is, loyalty entails

putting the interest of the object of loyalty (e.g., group) first and being partisan to it when situations of impartiality arise. Thoughts and behaviors that ensure that principle is upheld is considered right and moral. In fact, Haidt and his colleagues (Graham & Haidt, 2010; Graham, Haidt & Nosek, 2009; Graham et al., 2011; Haidt, Graham, & Joseph, 2009; Haidt & Joseph, 2007), who are the architects of the influential Moral Foundations Theory, argue for loyalty as one of the six foundations, or types, of morality (the other five being Fairness, Harm, Authority, Purity, and Freedom).

1.4 Loyalty is related to but distinct from group identification or commitment

Although social science research has been slow in providing a precise definition of loyalty, the idea of loyalty has frequently been used as part of the definitions of other constructs – such as group or organizational identification (Graham, 1991; Thomas et al., 2017; Zdaniuk & Levine, 2001), leader-member exchange¹ (LMX; see Bernerth, 2007), commitment (Meyer & Allen, 1991), or trust and confidence (Gordon et al., 1980; Ladd, Gordon, Beauvais & Morgan, 1982). Even Haidt and his colleagues, who introduced loyalty as a foundation of moral concern, have termed the loyalty dimension as the “ingroup/loyalty foundation,” thus leaving open the opportunity for researchers to treat

¹ LMX is based upon social exchange, in which the leader and the follower have a reciprocal and quid pro quo relationship. The concept of LMX itself has received mixed treatment, with different definitions by different researchers. A detailed review by Bernerth (2007), however, clarifies its social exchange relationship, and loyalty is an affective outcome of LMX, rather than inherent in the LMX relationship.

group membership interchangeably with loyalty². And in fact, interchanging group identification or commitment with loyalty has been most prevalent in the empirical literature. This is not surprising, as these constructs are related and have overlapping qualities. However, loyalty may merit consideration as a construct in its own right.

In the following two subsections, I will discuss distinctions among these constructs. Although group identification shares aspects of attachment with loyalty, and normative commitment shares aspects of obligation (or moral imperative) with loyalty, theorizing and empirical work have suggested that loyalty has distinctive properties, and thus the concept of loyalty may generate unique theoretical predictions.

1.4.1 Group identification

On a very broad level, group identification focuses on the sense of belonging that one feels towards one's group, and its ability to provide its group members with a positive sense of self (Hogg & Hains, 1996; Hogg, 2000; Ellemers et al., 1999; Turner, 1986). Similar to group identification, loyalty also includes a sense of attachment – to one's supervisor, friend, team or organization (Chen, Tsui & Farh, 2002; Ladd, 1967; Oglensky, 2008; Schrag, 2001; Tang, Morewedge, Larrick, & Klein, 2017). Because feelings of attachment are often present in both constructs, group identification may be

² Haidt and his colleagues established loyalty as a moral foundation in the Moral Foundations Theory (Graham & Haidt, 2010; Graham, Haidt & Nosek, 2009; Graham et al., 2011; Haidt & Graham, 2007; Haidt & Joseph, 2007); however, because they have treated loyalty as part of group preferences, the items used to measure loyalty include a mix of loyalty, ingroup preferences, as well as patriotism and national pride.

an antecedent of loyalty. Belonging to, fitting in, and having the same attitudes and beliefs as the group (Hogg & Hains, 1996) may shape moral attitudes and relationships with the group (Haidt & Kesebir, 2010; Skitka, 2010), and thus be conducive to increasing loyalty. They may even subsequently arise together (e.g., during sports games, when a fan both identifies with their team as the team scores a goal and continues to feel loyal to the team even when it violates the rules of the game). The two constructs are related; however, there are two key properties that make group identification and loyalty unique from each other: self-esteem and morality.

Group identification's role in bolstering self-esteem. A key component of group identification is the group's importance to the self. Group identification³ is a vehicle from which people derive self-esteem (Ellemers, 2007; Luhtanen & Crocker, 2001; Tropp & Wright, 2001; Turner & Tajfel, 1986). By dividing the social world into "us" and "them," the ingroup facilitates promotion of a positive sense of self, such as higher self-esteem and reduced self-uncertainty. This could also be true even in minimal group paradigms, in which participants are randomly assigned to different groups, and group membership in the impoverished group setting is the only way for the participants to

³ Some scholars make a distinction between group identification and social identity, in which group identification is about feeling of belonging to a group and social identity is how important the group is to the self; however, because social identity is also often measured using belongingness measures (Ellemers, 2007) and group identification can also lead to the same outcomes as social identity (e.g., Hogg, 2000), I will not distinguish between them.

make sense of the experimental situation (Ellemers, et al., 1999). When one is arbitrarily assigned group membership with little other information, how participants feel about themselves *within* that experimental setting may depend on the group's performance.

When a group performs well, group identification boosts its members' self esteem (Turner, 1984), and they will choose to remain in the group. However, when a group performs badly, it would theoretically no longer serve to enhance self-esteem, leading to an increased likelihood of exit. On the other hand, because self-esteem is not part of the conceptualization of loyalty, it may have little effect on exit. In other words, whereas both group identification and loyalty lead a group member to stay when its performance is superior to an outgroup's performance (Ellemers et al., 1999), loyalty may be a better predictor of a group member choosing to stay when it is performing poorly. This possibility is evident in sports, where fair-weather fans, or "bandwagon fans," cheer for their sports teams when they do well (Dimengo, 2015; Wann & Branscombe, 1990), but die-hard fans cheer for their sports teams even if their team never wins (Berkon, 2015).

The morality of loyalty. In addition to the role of self-esteem in group identification, the morality aspect of loyalty – that promoting and protecting the group's interest is a *virtue* – is another theoretically derived nuance between identification and loyalty. Past research on individual differences (Aquino & Reed, 2002; Cohen et al., 2012; Cohen, Panter & Turan, 2012) and in social psychology (Goodwin, 2015) suggests that

morality plays a distinct role in how people perceive themselves and others. Because loyalty is intricately linked to morality, loyalty may be a better predictor of one's moral self-image than group identification would be. Inherent in loyalty is the feeling that devotion to the group and promotion of the group's wellbeing is the right thing to do and what one should do. Caring about one's group is a virtue. By extension, a member's loyalty to their group would lead them to feel like a good person. On the other hand, group identification is not inherently good or bad – it is a reflection of how much belonging one feels towards one's group and how much one likes the group. Not liking one's group does not necessarily make one a bad person. Thus, perceiving oneself as loyal may enhance how moral one sees oneself – how good of a person one views oneself – whereas identifying with one's group may only weakly do so.

A further nuance between loyalty and group identification, then, is perhaps the role that group identification versus loyalty plays regarding protecting the moral self – one's belief that one is a good person. People normally feel guilt for engaging in unethical behavior, such as cheating, and will try to find ways to reaffirm that they remain moral individuals after behaving unethically (Ariely, 2013). Group identification and loyalty may help maintain their moral sense of self under different circumstances and through different pathways. Group identification may protect the moral self when *cheating benefits the self, particularly when other ingroup members are also cheating for self-gain* (e.g., Gino, Ayal, & Ariely, 2009). This is because, when the group norm is to cheat (vs. to

behave honestly), cheating does not appear as bad, and the cheater can engage in motivated reasoning that they are not a bad person because they are behaving as other group members are. On the other hand, loyalty may protect the moral self when *cheating benefits the group rather than the self* (e.g., Hildreth et al., 2016). People loyal to their group want to protect the group's best interests, and when cheating accomplishes that goal, people can engage in motivated reasoning that they are still a good person even though they behaved dishonestly, because the dishonest behavior served to enhance the wellbeing of the group.

Furthermore, loyalty and group identification may predict different moral judgments of a person when the unethical behavior is carried out by *an ingroup member against another group member* (i.e., group membership of the perpetrator and victim are the same). According to the Black Sheep Effect (Marques et al., 1988), group members are more likely to derogate ingroup (vs. outgroup) members, particularly for moral behaviors (Tang, Shepherd & Kay, in prep.). This is because people want to preserve a positive image of the group, and by extension the self, thus derogating ingroup members as a means to signal that the wrongdoer is a black sheep. However, this research has been conducted using group members who are anonymous or strangers. From the perspective of loyalty, in which people feel morally partial towards the wrongdoer, the observer may be less likely to condemn the wrongdoer, and may even protect or rationalize the wrongdoer's behavior.

1.4.2 Commitment

In contrast to group identification, there is one model of commitment that has attempted to include a moral component. Among the more popular and well-known models of commitment in the literature (Kelman, 1958; Chatman & O'Reilly, 1986; Meyer & Allen, 1991), Meyer and Allen's (1991) three-factor model of commitment has a component resembling moral values. The model categorizes commitment into three dimensions – affective, normative and calculative. Whereas calculative commitment and affective commitment are conceptually similar to quid pro quo social exchange and affection for the group respectively, normative commitment refers to the felt obligation to stay in the organization. More generally, the conceptualization of normative commitment is derived from a sense of internalized obligation, either as a “moral duty” or “a sense of indebtedness” (Meyer & Allen, 1991; Meyer & Parfyonova, 2010, p. 284, drawing from Scholl, 1981 and Wiener, 1982). Some items measuring normative commitment, include, for example, “If I got another offer for a better job elsewhere I would not feel it was right to leave my organization,” “I owe a great deal to my organization,” “One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain,” and “Jumping from organization to organization does not seem at all unethical to me (reverse-coded).”

Normative commitment may thus be a form of loyalty in which someone is loyal because they should be. Similar to someone who feels that being a patriot is a virtue unto itself, someone who is high on normative commitment values loyalty for its own sake. In comparison to normative commitment, loyalty may have both affective and normative components, in which there are feelings of both attachment and obligation. Objects of loyalty to which one might feel both affectively and normatively loyal may be natural groups, such as family, friends, and sports teams. So, for example, someone normatively committed or normatively loyal to their family may feel that they should be loyal to their family, even without liking their family very much. On the other hand, someone both normatively and affectively loyal to their family not only feels that they should be loyal to their family, but also a sense of attachment to their family.

Although normative commitment or normative loyalty increases loyalty behaviors (such as organizational citizenship behaviors) compared to no loyalty at all (Meyer, Stanley, Herscovitch, & Tolpolnysky, 2002; Gellatly, Meyer & Luchak, 2006), the effect of loyalty on loyalty behaviors may be strongest when both the affective and normative components are present. For example, the vociferousness with which an employee defends their organization may be stronger when an employee feels normatively loyal to the organization than when they feel no loyalty at all; however, an employee who feels both normatively and affectively loyal to the organization may be the most vociferous in their defense. Furthermore, if the normative component of loyalty

is the only component present, the feelings of indebtedness or internalized pressure to meet organizational interests that arise (Meyer & Parfyonova, 2010, p. 284) may lead someone to experience internal conflict arising from feelings of what they *would* do versus what they *should* do (Ingleby, 2012). That is, they *should* engage in loyalty behaviors, such as staying afterhours, but *would* rather not. If the difference between the two is great enough, they may even experience feelings of helplessness. To avoid this internal conflict, they may try to avoid situations in which they have to engage in loyalty behaviors, even though they feel little attachment to the organization. For example, if they are enjoying personal leisure time, they may avoid looking at their phone in case they receive an email asking them to complete extra work for the good of the firm – which they would do if they saw the email. In contrast, someone who is affectively and normatively loyal to the organization may actively seek out and welcome opportunities for loyalty behaviors. They may, for example, happily check their email even while they are enjoying personal leisure time in case their firm requires their support.

This possibility is supported by related research in altruistic behaviors, showing that when people want to maintain a moral sense of self, but do not want to engage in the costly behaviors associated with a moral self, they tend to avoid situations in which they may encounter prosocial requests (Lin, Schaumberg & Reich, 2016). For example, people would rather avoid a task that would earn them bonus money when they were told that they could choose to donate or keep the bonus money (versus when they were

not given this choice). That is, participants could keep the money in both conditions, but because they were told in the first condition that they would have the choice of acting prosocially (donating it), they avoided the opportunity altogether so as not to risk a negative moral self by earning money but not donating it. Similarly, for people who are loyal for loyalty's sake, they may choose to go above and beyond for the organization when they must make a choice, but may avoid putting themselves in this position of choice in the first place.

In contrast to loyalty with only the normative component, is it possible to have loyalty with only the affective component? Loyalty is an "ethical principle" (Hildreth et al., 2016, p. 17), and so normativity should accompany feelings of loyalty. It is unclear whether loyalty with only an affective component would still be loyalty as it is theoretically defined; however, it is possible to speculate how it may manifest. Without the normative component, perhaps loyalty may resemble liking or group identification, in which someone may engage in loyalty behaviors, but as a "fair-weather supporter" (Wann & Branscombe, 1990). When the organization is doing well and admired, they may happily defend the organization, stay afterhours, and otherwise protect organizational interests. When it is embroiled in a scandal, however, they may be reluctant to do so, particularly if the issue is something that they care about. In contrast, someone who is normatively loyal to the organization may recognize the wrongdoing perpetrated by the organization, but continue to protect its interests; and someone who

is both normatively and affectively loyal to the organization may rationalize the wrongdoing and continue to protect its interests.

Other than the theoretical similarities and differences between loyalty and commitment, another difference between the two may lie in how lay people react to “loyalty” versus “commitment.” How laypeople understand a certain concept impacts their subsequent perceptions, decisions and behaviors, and so if they interpret commitment differently from loyalty, they may also react differently to them. In a set of ongoing studies investigating lay understanding of commitment versus loyalty, evidence suggests that laypeople are more attuned to the moral implications of loyalty than commitment. When an action was described as “not loyal,” people interpreted the actor as having done something wrong or having harmed the object of loyalty, whereas the same action described as “not committed” elicited less judgments of wrongness or harm (Tang, in progress). Using the term “disloyal” evoked an even stronger moral judgment. This is not to say that using “normative commitment” (with the explanation that it connotes the idea that one is committed because they should be) would not elicit the same responses as using “loyalty,” but these findings show that people’s lay reaction to “commitment” is not as normatively or morally oriented as to “loyalty.” People react differently to an action that has a moral undertone than the same action without it (Kreps, Laurin & Merritt, 2017), and they may be more likely to distance themselves

socially from someone or trust someone less when that person is described as “not loyal” compared to “not committed.”

Overall, the review here suggests that morality lies at the heart of loyalty, and that as a moral principle, loyalty encourages people to protect and promote the group’s interest. Having reviewed the construct of loyalty and its theoretical similarities, differences and overlaps with its related constructs, in the following section, I return to the discussion of loyalty and harm perception. Specifically, the following sections will expand on how loyalty increases harm perception even when people are presented with and recall the same information, and the consequences of increased harm perception.

1.5 Harm perception occurs at least partially through an interpretation process

I have suggested that loyalty to one’s group increases harm perception. However, what might be the psychological process by which harm perception increases? The influence of loyalty on harm perception may occur through two processes: In one, loyalists actually recall more, or pay more attention to, actions which threaten their group compared to non-loyalists (the encoding process); in the other, they may perceive more harm because they exaggerate the harmfulness of the same action – they interpret the harm as greater (the interpretation process). Some research suggests that judgments of harm in situations of conflict is linked to encoding processes, such as visual attention (Maner & Miller, 2013), information recall (Hastorf & Cantril, 1954), or self-serving biases (Babcock & Loewenstein, 1997), and people who are loyal to their group may be

predisposed to search for harm. However, perceptions of harm stemming from loyalty may also be at least partially driven by interpretation processes. Even when presented with a set of factual information about their group and an outgroup (e.g., the number of fouls against their team in a game, the length of an economic sanction against their country), perceived harm may still differ between loyalists and non-loyalists. Because harm is subjective (Gray et al., 2014; Schein & Gray, 2017), harm may also loom larger in the eyes of the loyalists despite recalling the information with the same accuracy as non-loyalists. I thus propose the following hypothesis:

H2: People loyal to their group exaggerate how harm an outgroup's actions are, even when they recall the same factual information as those not loyal to the group.

1.6 The punitive consequences of increased harm perception

When an act is perceived as harmful, people feel moral outrage and anger (Batson, Chao & Givens, 2009) and attribute more blame to the wrongdoer (Malle, Guglielmo, & Monroe, 2014). As a consequence, they are more likely to desire punishment and take punitive actions against the transgressor (Hart, 2008; Shultz, Schleifer, & Altman, 1981; Skitka & Houston, 2001).

The link between harm and punishment occurs in a range of settings. For example, in economic exchange settings, third-party participants observing an economic exchange between a giver and a receiver will use their own money to punish the giver if they believed that the giver deprived the receiver of their fair share (Fehr & Fischbacher,

2004). Even when someone did not directly cause the harm, people who witness that person allowing an unfair exchange were more likely to punish that bystander than if the person had redressed the wrong (Martin, Jordan, Rand & Cushman, 2017). In legal settings, participants dispense harsher punishments to a drunk driver when he hits a person than when he hits a bush, even if the circumstances of the accident – the events leading up to the accident and the driver’s state of the mind– were the same (Cushman, 2008).

Similarly, when loyalty increases the perceived harmfulness of an action, a harsher punishment may also follow. That is, those loyal to the group, by perceiving an outgroup’s action towards their ingroup as more harmful, may be more likely to desire harsher punishment, such as retaliatory measures or resource deprivation, on the outgroup. I thus propose the following hypothesis:

H3: Greater perceived harmfulness that arises from greater loyalty to one’s group increases the desire to punish a perceived harm-giver.

1.7 Overview of studies

Three studies test whether loyalty to one’s group can increase perceptions of harm. In Study 1, capitalizing on natural variations of loyalty towards one’s team, I test whether people who are highly loyal to their sports team are more likely to perceive an opposing team as behaving in a harmful way to their team. In Study 2, I use an experimental design to demonstrate causal direction, in addition to homing in on the

nature and mechanism of harm perception. Finally, in Study 3, I test whether loyalty specifically affects harm perception, rather than general negative cognitions about the outgroup, and investigate the consequences of increased harm perception to one's group. Across the studies, to address alternative explanations, I measure and control for factors related to loyalty, such as political orientation (Studies 1 and 3), group identification (Studies 1-3), and related moral constructs (Study 1), which I explain further below. Additionally, to generalize my results, I test my hypothesis in multiple settings, including sports teams, country, and institutions.

1.8 Accounting for other plausible accounts

In testing whether loyalty increases harm perception, I also address the possibility of a third-variable problem – that factors related to loyalty, rather than loyalty itself, are driving harm perception. As group identification has often been interchanged with loyalty, I measure and control for ingroup identification in all three studies. In doing so, results would be able to reveal the predictive power of loyalty on harm perception above and beyond group identification. Additionally, because loyalty is a moral construct, it is possible that the moral aspect of loyalty (rather than the specific construct of loyalty), can increase harm perception. In particular, disgust (Haidt, 2003) and belief in a just world (Lerner, 1980) have both been associated with harm perception (e.g., Staub, 1990; Gray et al., 2014). I thus also measured and controlled for these variables in the first study.

Secondly, research has shown that socioeconomic demographic factors – political orientation, religious affiliation, gender, age and socioeconomic status – are related to loyalty. Evidence from past research suggests that political conservatives, who also tend to be more religious, care more about loyalty than do liberals do (Graham et al., 2011; Haidt & Graham, 2007); men have more group-based friendships than do women (Kashima et al., 1995) and are more likely to demonstrate a tribal mentality (van Vugt, 2012; Winegard & Deaner, 2010); and people low (vs. high) on socioeconomic status and older (vs. younger) individuals are more likely to emphasize community and connectedness (Belmi & Laurin, 2016; Fung & Ng, 2006; Hui & Yee, 1994; Iacoviello & Lorenzi-Cioldi, 2015; Walker, 1995). To account for these possible spurious relationships, I control for these factors in natural observation studies (correlational), and control for group identification in all studies (experimental and correlational).

2. Study 1

Study 1 was designed to test Hypothesis 1 by capturing natural variations in loyalty to and perception of harm to one's group. Specifically, I examined whether feelings of loyalty towards a group increases perceptions of harm in the context of Duke basketball. Duke students are known for their loyalty to and fervor for the team. For example, they will camp outside the basketball stadium continuously for two months in order to secure tickets to the Duke-UNC game. There are several advantages to using sports as a backdrop. First, loyal attitudes and behaviors are frequently exhibited among sports fans (Abrams, Rutland, Pelletier & Ferrell, 2009; Morewedge et al., 2016), and there has been a long history of studying group phenomenon amongst sports fans and sports teams (e.g., Branscombe & Wann, 1991; Brewer & Pierce, 2005; Fisher & Wakefield, 1998; Hogg & Hains, 1996; Mael & Ashforth, 1995; 2001; Wann & Branscombe, 1990). Importantly, organizational phenomena, such as intergroup dynamics, leadership, and ethics, are often embedded in sports contexts (see, e.g., Cairns, 1987; Gamson & Scotch, 1964; Helms & Patterson, 2014; Kilduff, Galinsky, Gallo & Reade, 2016; Totterdell, 2000; To, Kilduff, Ordonez, & Schweitzer, 2017).

Because this study is correlational in nature, it is important to control for variables which could account for the relation between loyalty and harm perception. I thus measured and controlled for group identification, which has often been conflated with loyalty in the past (e.g., Barreto & Ellemers, 2002; Graham et al., 2011; Thomas,

2017; Zdaniuk & Levine, 2001). Because loyalty is a moral construct, it is possible that the moral aspect of loyalty, rather than loyalty itself, influences harm perception. I thus also controlled for other moral constructs which have been demonstrated to increase harm perception. Specifically, I also measured participants' propensity for disgust (Haidt, 2003) and belief in a just world (Lerner, 1980), both of which have been associated with harm perception (e.g., Staub, 1990; Gray et al., 2014). Finally, research has shown that certain socioeconomic demographic factors are related to loyalty – political conservatives and those who are religiously affiliated (Graham et al., 2011; Haidt & Graham, 2007), men (Kashima et al., 1995, van Vugt, 2012; Winegard & Deaner, 2010), and older individuals and lower socioeconomic status individuals (Belmi & Laurin, 2016; Fung & Ng, 2006; Hui & Yee, 1994; Iacoviello & Lorenzi-Cioldi, 2015; Walker, 1995) are more likely to care about loyalty. To account for these factors, I also control for them in my analyses.

2.1 Method

Participants. Two hundred and fifty seven Duke University students and Durham community members participated in the study (65% female, age $M = 25.67$, $SD = 8.11$). Five participants were excluded because they experienced trouble with the survey, leaving 252 participants. These students participated in an hour-long mass testing session, organized by the Behavioral Lab at Duke, in exchange for \$16.

Procedure.

Group identification. Participants first responded to seven items capturing the extent to which they identified with the Duke basketball team, the Duke Blue Devils. The items were taken from Hogg & Hains (1996) and adapted to fit into the context. Example items include: "I identify with the team," "I have similar general attitudes and beliefs as the team," "The team is important to me" ($\alpha = .93$). Two items ("I fit into the team" and "I am glad to be a member of the team") were excluded because participants were not actual members of the team, and those items were less appropriate in this context. The results were analyzed with and without those two items, and they were substantively the same. They were thus included in the reported analyses. The items were rated on a 1 (*not at all*) to 7 (*extremely*) scale.

Loyalty. Participants next responded to five items measuring loyalty to the team. The items were, "I feel loyal to the team," "I feel a sense of allegiance to the team," "I am protective of the team's interests," "I am willing to sacrifice self-interest for the team," and "I feel a moral responsibility to promote the team's interests" on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .94$). The first two items were designed to capture face validity ("loyal," "sense of allegiance") and the last two were drawn from the definition of loyalty ("moral responsibility to promote team's interests" and "protective of team's interest"). The third item was drawn from existing research by scholars who have noted that loyal encompasses a willingness or expectation to sacrifice, or put the group's

interest before, one's own interests (Hildreth et al., 2016; Stern, 1995; van Vugt & Hart, 2004).

Harm perception. Participants then read a brief introduction to the rivalry between Duke and UNC: "As you know, the UNC Tarheels are rivals of the Duke Blue Devils. They are both in Division I, and they play against each other during each basketball season. Each year, the competition between both is fierce." Next, they were asked to report their opinion on Duke and UNC. There were three sections of questions. The first section asked questions about "the games between Duke and UNC in general." The second section asked questions about "past games between Duke and UNC." The third section asked questions about "future games between Duke and UNC in Spring 2018 (during the 2017-2018 season)." For each section, participants answered the following three questions with steam, "In your view, [generally/in the past/in future games], to what extent [does/did/will]:" "...UNC play dirty against Duke" "...display unsportsmanlike behaviors against Duke?" and "...display underhanded behaviors against Duke?" on a scale from 1 (*not at all*) to 7 (*extremely*). The alphas for each section were .96, .97, and .98 respectively.

Disgust. Afterwards, participants responded to a scale designed to measure disgust (Haidt, 2003). Participants responded to the items with the following prompt, "To what extent do you find the following disgusting?" on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .83$). Example items include, "Drinking a bowl of soup stirred with a used but

thoroughly washed flyswatter,” “Seeing a rat run across my path in a park,” and “Hearing someone clear a throat full of mucus.”

Belief in a just world. Participants also responded to a six-item scale (Dalbert, 1999) designed to measure their belief that the world is fair and just ($\alpha = .83$). Example items include, “I think basically the world is a just place,” “I am confident that justice always prevails over injustice,” and “I am convinced that in the long run people will be compensated for injustices.”

Demographic variables. Participants reported their gender (1 = female, 0 = male), age, social political orientation (on a 7-point scale from extremely conservative to extremely liberal), if they had any religious affiliation (1 = yes, 0 = no), and their self-perceived socioeconomic status (SES; on a 7-point scale from very low to very high).

2.2 Results

Preliminary analyses of group identification and loyalty. On average, participants moderately identified with the Duke basketball team ($M = 4.42$, $SD = 1.46$), and they were moderately loyal to the Duke basketball team ($M = 3.87$, $SD = 1.68$). See Table 1 for descriptive statistics.

Confirmatory Factor Analysis. Because group identification and loyalty were correlated, I conducted a Confirmatory Factor Analysis (CFA) for a two-factor solution (group identification and loyalty) and a one-factor solution. The results showed that the

two-factor solution was a better statistical fit for the data, $X^2(252) = 841.34$, RMSEA = .19, CFI = .80, than the one-factor solution, $X^2(252) = 914.22$, RMSEA = .21, CFI = .78.

Harm perception. The data was entered into a hierarchical linear regression. Demographic variables were entered into Step 1, morality variables (belief in a just world and disgust) into Step 2, group identification into Step 3, and loyalty into Step 4.

Table 1. Descriptive statistics for Study 1.

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1 Loyalty Group	3.87	1.67											
2 identification	4.42	1.46	.88**										
3 Belief in just world	3.71	1.09	.26**	.30*									
4 Disgust Gender	4.86	.90	.13*	.15*	.18**								
5 (0=male, 1=female)	-	-	-.04	-.02	.02	.28**							
6 Age	25.72	8.61	-.13*	-.16*	-.14*	-.02	-.14*						
7 Political orientation	5.33	1.40	-.02	-.04	-.15*	-.05	.12	-.03					
8 Relig. (0=no, 1=yes)	-	-	.06	.13*	.16*	.20*	.001	-.06	-.30**				
9 SES	4.29	1.30	.11	.16**	.13*	0.04	-.05	-.08	-.06	-.14*			
10 General harm	3.17	1.37	.31**	.28**	.16*	.19**	.04	-.05	-.02	.04	-.08		
11 Past harm	3.21	1.43	.32**	.29**	.11	.18**	-.01	.02	-.02	.04	-.10	.90**	
12 Future harm	3.10	1.45	.33**	.30**	.20**	.17**	.06	-.04	-.01	.07	-.08	.91**	.88**

* $p < .05$, ** $p < .01$

Perception of general harm. The results showed that, even after controlling for group identification, other moral constructs, and demographic variables, loyalty positively predicted perception of harm, $B = .21$, $SE = .11$, $B = .26$ $t = 2.02$, $p = .044$ (Table 2a). The R^2 change from model 3 to model 4 was significant, $F(1,240) = 4.09$, $p = .044$. The results also showed that, compared to group identification alone, the variance explained in the data was larger after including loyalty as a predictor (Table 2b). The R^2 change from model 1 to model 2 was significant, $F(1,249) = 4.79$, $p = .030$.

Table 2a. Loyalty predicts perception of general harm to the Duke team above and beyond related factors.

Variable	Model 1	Model 2	Model 3	Model 4
Loyalty				.21* (.11)
Group identification			.26** (.06)	.04 (.13)
Belief in a just world		.19* (.08)	.11 (.09)	.11 (.08)
Disgust		.27** (.10)	.23* (.10)	.22* (.10)
Gender	.08 (.19)	-.09 (.19)	-.04 (.19)	-.03 (.19)
Age	-.01 (.01)	-.01 (.01)	-.003 (.01)	-.003 (.01)
Social political orientation	-.02 (.07)	.01 (.07)	-.003 (.06)	-.003 (.06)
Religious affiliation	.09 (.19)	-.06 (.19)	-.11 (.18)	-.07 (.18)
SES	-.09 (.07)	-.12 (.07)	-.15* (.07)	-.14* (.07)
Intercept	3.68** (.68)	1.99 ** (.80)	1.37** (.79)	1.44** (.79)

Adjusted R²	.00	.04	.10	.11
F Value	.61	2.51*	4.55**	4.55**
N	252	252	252	252

* $p < .05$, ** $p < .01$. Coefficients unstandardized.

Table 2b. Loyalty predicts perception of general harm to the Duke team above and beyond group identification

Variable	Model 1	Model 2
Loyalty		.27 (.06)
Group identification	.27** (.06)	.03 (.12)
Intercept	1.99** (.27)	2.13** (.27)
Adjusted R²	.077	.090
F Value	21.86**	13.49**
N	252	252

* $p < .05$, ** $p < .01$. Coefficients unstandardized.

Perception of past harm. Similar to perceptions of general harm, loyalty positively predicted perception of past harm controlling for other potential explanations, $B = .16$, $SE = .05$, $B = .31$ $t = 2.92$, $p = .004$ (Table 3a). The R^2 change from model 3 to model 4 was significant, $F(1,240) = 4.55$, $p = .034$. The results also showed that, compared to group identification alone, the variance explained in the data was larger after including loyalty as a predictor (Table 3b). The R^2 change from model 1 to model 2 was significant, $F(1,249) = 5.60$, $p = .019$

Table 3a. Loyalty predicts perception of past harm to the Duke team above and beyond related factors.

Variable	Model 1	Model 2	Model 3	Model 4
Loyalty				.24* (.11)
Group identification			.29** (.06)	.05 (.13)
Belief in a just world		.14 (.09)	.04 (.09)	.04 (.09)
Disgust		.30** (.11)	.25* (.10)	.24* (.11)
Gender	-.03 (.20)	-.21 (.20)	-.15 (.19)	-.13 (.19)
Age	.02 (.01)	.003 (.01)	.01 (.01)	.01 (.01)
Social political orientation	-.01 (.07)	.003 (.07)	-.01 (.07)	-.01 (.07)
Religious affiliation	.11 (.19)	-.04 (.19)	-.09 (.19)	-.05 (.19)
SES	-.11 (.07)	-.13 (.07)	-.17* (.07)	-.15* (.07)
Intercept	3.66** (.11)	2.09* (.14)	1.40 (.30)	1.47** (.44)

	Adjusted			
R²		.00	.03	.10
F Value		.56	2.07*	4.53**
N		252	252	252

* $p < .05$, ** $p < .01$. Coefficients unstandardized.

Table 3b. Loyalty predicts perception of past harm to the Duke team above and beyond group identification

Variable	Model 1	Model 2
Loyalty		.26* (.11)
Group identification	.28** (.06)	.02 (.13)
Intercept	1.97** (.28)	2.13 ** (.28)
Adjusted R²	.077	.094
F Value	22.06**	14.03**
N	252	252

* $p < .05$, ** $p < .01$. Coefficients unstandardized.

Perception of future harm. Similar to perceptions of general and past harm, loyalty positively predicted perception of past harm controlling for other potential explanations, $B = .16$, $SE = .05$, $B = .34$ $t = 3.22$, $p = .001$ (Table 4a). The R^2 change from model 3 to model 4 was significant, $F(1,240) = 5.21$, $p = .023$. The results also showed that, compared to group identification alone, the variance explained in the data was larger after including loyalty as a predictor (Table 4b). The R^2 change from model 1 to model 2 was significant, $F(1,249) = 5.57$, $p = .019$.

Table 4a. Loyalty predicts perception of future harm to the Duke team above and beyond other related factors

Variable	Model 1	Model 2	Model 3	Model 4
Loyalty				.25* (.11)
Group identification			.28** (.06)	.02 (.13)
Belief in a just world		.26 (.09)	.17* (.09)	.17* (.09)
Disgust		.22 (.11)	.17 (.11)	.17 (.09)
Gender	.12 (.20)	-.03 (.20)	.03 (.20)	.05 (.19)
Age	-.01 (.01)	-.004 (.01)	.001 (.01)	<.001 (.01)
Social political orientation	.003 (.07)	.03 (.07)	.02 (.07)	.02 (.07)
Religious affiliation	.20 (.18)	.05 (.19)	-.01 (.19)	.04 (.19)
SES	-.08 (.07)	-.11 (.07)	-.15* (.07)	-.13 (.07)
Intercept	3.29	1.52	.84	.93

		**		
	(.10)	(.13)	(.28)	(.42)
Adjusted R²	.00	.05	.11	.13
F Value	.69	2.70*	4.91**	5.02*
N	252	252	252	252

* $p < .05$, ** $p < .01$. Coefficients unstandardized.

Table 4b. Loyalty predicts perception of future harm to the Duke team above and beyond group identification

Variable	Model 1	Model 2
Loyalty		.26* (.11)
Group identification	.30** (.06)	.03 (.13)
Intercept	1.79** (.68)	1.95** (.80)
Adjusted R²	.085	.102
F Value	24.44**	15.22**
N	252	252

* $p < .05$, ** $p < .01$. Coefficients unstandardized.

2.3 Discussion

In support of Hypothesis 1, these results provide initial evidence that the more loyal people feel towards their group, the greater the harm perceived to their group. This finding was not sufficiently explained by other psychological variables related to loyalty, such as group identification, moral disgust and belief in a just world, or other demographic variables related to community bonds. Because participants also perceived

more *future* harm – harm which has not yet occurred, it suggests perhaps that some element of vigilance is at work, in which loyal participants may be cautious of any potential harm that has yet to occur. I will discuss this further in the General Discussion.

Despite the natural variation in loyalty captured in this study, it was correlational in design, and cannot determine causal direction. Study 2 sought to address this limitation through experimental manipulation.

3. Study 2

Study 2 built upon Study 1 in two main ways. First, loyalty was manipulated – participants either rated a behavior directed towards a group to which they are loyal versus a group to which they are not loyal. That is, the behavior of a rival group (UNC) was evaluated in the context of one’s own group (Duke) or a different group (Miami). Because loyalty is an ingroup-based moral construct (Graham et al., 2011), I predicted that students would perceive more harm when UNC is playing against a group to which they are loyal than one to which they are not (Hypothesis 1). Specifically, even though UNC’s actions are the same across both conditions, participants would rate UNC’s actions as more harmful when it plays against Duke than against Miami.

Secondly, Study 2 tested Hypothesis 2 by investigating whether perceptions of harm are driven by interpretation processes. That is, rather than purely due to differences in encoding and recall processes, people loyal to the group may recall information as accurately as those who are not loyal to the group, but harm perception increases because any negative information is amplified in their minds. To examine this hypothesis, participants were asked to recall information they read in a memory recall task (“estimates”). If only encoding processes are at work, then there should be a difference in memory recall between information pertaining to a group to which one is loyal and to a group to which one is not loyal. That is, people should be more accurate in recalling information for Duke than Miami. However, if interpretation processes play a

role, then harm perception should be greater for Duke than for Miami even information recall is just as accurate for Duke as for Miami.

Finally, Study 2 investigated whether harm perception may be moderated by the group's outcome. Specifically, it examined whether perceived harm to one's team would differ depending on whether one's team won or lost. Perceived harm may be greater when one's team loses than when it wins, as a negative outcome may (1) increase negative affect and (2) the uncertainty and threat to one's group may enhance the motivation to see the outgroup's actions as harmful. On the other hand, perceptions of harm may not be moderated by the outcome, as group members may be motivated to perceive greater harm to their group as long as they feel loyal to it. I thus did not make an a priori prediction.

Although Study 2 uses an experimental design, in which I attempt to manipulate loyalty through manipulating the team against which UNC is playing, group identification may still play a role in any differences in harm perception. That is, Duke students may identify with the Duke basketball team in addition to feeling loyal to the team. I thus measured and controlled for group identification again in my analyses as in Study 1.

3.1 Method

Participants. Two hundred and twenty six Duke University students and alumni (68% female, 1% not reported, age $M = 22.88$, $SD = 4.64$) participated in the study. Of

these, twenty seven students were recruited from the Psychology pool in exchange for course credit, and other students participated in an hour-long mass testing session, organized by the Behavioral Lab at Duke, in exchange for \$16. One student reported being affiliated with both UNC and Duke and was excluded from analyses.

Procedure. Participants were randomly assigned to a condition in a 2 (team: Duke or Miami) x 2 (game outcome: win or lose) design.

Group identification and loyalty. Participants first responded to the extent to which they identified with the Duke basketball team using the group identification items from Study 1 ($\alpha = .93$). Participants also reported the extent to which they felt loyal to the Duke basketball team using the items from Study 1 on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .92$).

Game report. Instructions on the computer screen then told participants that they would read an excerpt from a basketball game summary between Duke (Miami) and UNC. On the next page, participants then read a supposed report of a basketball game between UNC and Duke or Miami, which detailed that the game between UNC and Duke (Miami) was intense, as the teams “remained close and traded lead on several occasions.” Both teams racked up fouls; UNC with 28 fouls and Duke (Miami) with 14 fouls. In the end, Duke (Miami) either “wins by a margin with 80 points against UNC’s 75 points,” or “loses by a margin with 75 points against UNC’s 80 points.”

Perception of harm. Next, participants rated the extent to which they perceived that UNC harmed the opposing team using the following five items: “UNC displayed unsportsmanlike behaviors against Duke (Miami) during the game,” “UNC played dirty against Duke (Miami) during the game,” “UNC harmed Duke (Miami) during the game,” “UNC made Duke (Miami) suffer during the game,” and “UNC hurt Duke (Miami) during the game.” These items were rated on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .90$).

Estimates. To investigate whether encoding processes or interpretation processes were driving harm perception, participants were asked to recall the information they read by providing estimates of the fouls and points of each team. Participants answered the following four questions: “How many fouls did UNC have?” “How many fouls did Duke (Miami) have?” “How many points did UNC have at the end (the final score)?” and “How many points did Duke (Miami) have at the end (the final score)?”

Finally, participants answered demographic questions as in Study 1.

3.2 Results

Preliminary analyses of group identification and loyalty. On average, students somewhat identified with the Duke basketball team ($M = 4.28$, $SD = 1.34$). Group identification did not differ between the four conditions, $F(1,221) = .24$, $p = .785$. On average, students were moderately loyal to Duke ($M = 4.06$, $SD = 1.34$). Loyalty did not

differ between the four conditions, $F(1,221) = .76, p = .516$. See Table 5 for descriptive statistics.

Confirmatory Factor Analysis. Because group identification and loyalty were correlated, I conducted a Confirmatory Factor Analysis (CFA) for a two-factor solution (group identification and loyalty) and a one-factor solution. The results showed that the two-factor solution was a better statistical fit for the data, $X^2(226) = 696.33, RMSEA = .21, CFI = .78$, than the one-factor solution, $X^2(226) = 764.50, RMSEA = .22, CFI = .75$.

Table 5. Descriptive statistics for Study 2.

	M	SD	1	2	3	4	5	6	7
1 Loyalty	4.06	1.53							
2 Group identification	4.28	1.34	.83**						
3 Gender (0=male, 1=female)	-	-	.05	-.07					
4 Age	22.85	4.65	-.11	-.05	-.14*				
5 Political orientation	5.26	1.54	-.02	.02	.03	-.07			
6 Relig. (0=no, 1=yes)	-	-	.06	-.02	-.12	.01	-.17*		
7 SES	4.24	1.32	.11	.02	-.03	-.16*	.01	.07	
8 Harm perception	3.97	1.34	.33**	.27**	.05	-.08	-.08	-.09	.06

* $p < .05$, ** $p < .01$

Harm perception. There was a main effect of team, in which participants perceived the harm inflicted to be greater when Duke was playing ($M = 4.17, SD = 1.30$) than when Miami was playing ($M = 3.79, SD = 1.35$), $F(1,220) = 4.28, p = .040, \eta_p^2 = .02$. There was no main effect of game outcome, in which the perceived harm when Duke

(Miami) won ($M = 4.13$, $SD = 1.43$) did not significantly differ from when it lost ($M = 3.83$, $SD = 1.24$), $F(1,220) = 2.37$, $p = .125$.

However, these results were qualified by an interaction, $F(1,220) = 4.22$, $p = .041$, $\eta_p^2 = .02$ (Figure 1). Specifically, there was no difference for Miami in perception of harm whether Miami won ($M = 3.29$, $SD = 1.18$) or lost ($M = 3.78$, $SD = 1.52$), $t = .06$, $p = .953$. For Duke, however, participants perceived harm to be greater when Duke lost ($M = 4.51$, $SD = 1.21$) than when it won ($M = 3.86$, $SD = 1.31$), $t = 2.56$, $p = .011$.

To compare whether the difference in perceived harm within the Duke condition was due to increased perceived harm when Duke lost (first test), or due to reduced perceived harm when Duke won (second test), two posthoc contrast tests were conducted. In the first test, Duke losing was coded as 2, Duke winning as 0, and both Miami losing and winning as -1, in order to compare the harm perceived when Duke lost to average harm perceived for Miami (which did not differ in harm perception). In the second test, Duke losing was coded as 0, Duke winning as 2, and both Miami losing and winning as -1, in order to compare the harm perceived when Duke won to average harm perceived for Miami. The first test revealed a significant difference, $t(221) = 3.31$, $p = .001$, while the second test revealed no significant difference, $t(221) = .36$, $p = .717$.

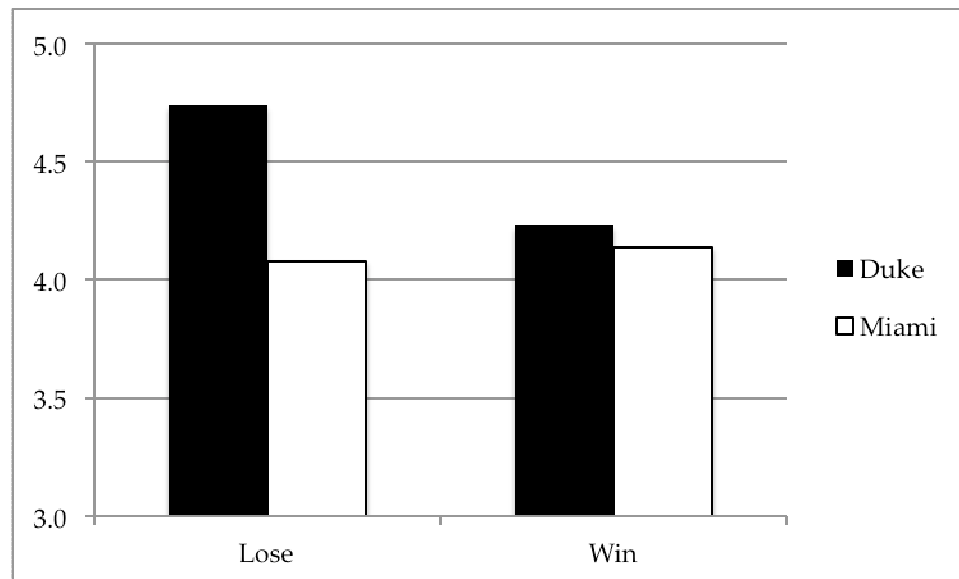


Figure 1. Harm perception is greater for Duke than for Miami, and specifically when Duke loses compared to when it wins.

Estimates. Participants were asked to recall the number of fouls by UNC, the number of fouls by Duke (Miami), the total number of points scored by UNC, and the total number of points scored by Duke (Miami). The winning team scored 80 points, and the losing team scored 75 points. UNC had 28 fouls, and Duke (Miami) had 14 fouls. Two participants did not answer the questions regarding the number of fouls by UNC and Duke (Miami) and one participant did not answer the questions regarding the total score of UNC and Duke (Miami). To analyze the data, I calculated the signed difference by subtracting the true value from the participant's estimate. These tests served to investigate whether encoding processes or interpretation processes were driving harm perception – a significant difference would imply that participants showed a difference in error between conditions and provide support for an encoding process, whereas no

significant difference would imply that they did not and provide support for an interpretation process.

For the number of fouls by UNC, there was a main effect of outcome, in which the error was larger when Duke (Miami) lost ($M = -4.83$, $SD = 9.14$) than when Duke (Miami) won ($M = -2.26$, $SD = 9.37$), $F(1,218) = 4.31$, $p = .039$, $\eta_p^2 = .02$. The means indicate that participants recalled fewer fouls by UNC when its opponent lost. There was no main effect for team ($M_{Duke} = -3.21$, $SD_{Duke} = 8.00$, $M_{Miami} = 3.82$, $SD_{Miami} = 10.47$), $F(1,218) = .17$, $p = .680$. There was also no interaction, $F(1,218) = .43$, $p = .515$.

For the number of fouls by Duke, there were no main effects for team ($M_{Duke} = .04$, $SD_{Duke} = 5.60$, $M_{Miami} = -.03$, $SD_{Miami} = 6.79$), $F(1,218) = .001$, $p = .976$. There was no main effect of outcome ($M_{Duke/Miami\ loses} = .33$, $SD_{Duke/Miami\ loses} = 6.91$, $M_{Duke/Miami\ wins} = -.31$, $SD_{Duke/Miami\ wins} = 5.47$), $F(1,218) = .47$, $p = .492$. There was also no interaction, $F(1,218) = .48$, $p = .489$.

For the total number of points scored by UNC, there was no main effect for team ($M_{Duke} = -.68$, $SD_{Duke} = 4.92$, $M_{Miami} = -2.49$, $SD_{Miami} = 10.39$), $F(1,219) = 2.67$, $p = .104$, and no main effect for outcome, ($M_{Duke/Miami\ loses} = -1.61$, $SD_{Duke/Miami\ loses} = 8.31$, $M_{Duke/Miami\ wins} = -1.54$, $SD_{Duke/Miami\ wins} = 10.74$), $F(1,219) = .01$, $p = .925$. There was also no interaction, $F(1,219) = .27$, $p = .606$.

For the total number of points scored by Duke (Miami), there was no main effect for team ($M_{Duke} = -.67$, $SD_{Duke} = 4.78$, $M_{Miami} = -2.37$, $SD_{Miami} = 9.76$), $F(1,219) = 2.67$, $p = .104$,

and no main effect of outcome ($M_{\text{Duke/Miami loses}} = -1.74$, $SD_{\text{Duke/Miami loses}} = 8.37$, $M_{\text{Duke/Miami wins}} = -1.35$, $SD_{\text{Duke/Miami wins}} = 7.20$), $F(1,219) = .11$, $p = .745$. There was and no interaction, $F(1,219) = .16$, $p = .692$.

3.3 Discussion

The results from Study 2 showed that people who are loyal to the Duke basketball team were more likely to perceive harm from a rival institution's team, supporting Hypothesis 1. It built upon Study 1 by using an experimental method, providing causal evidence that loyalty increases harm perception. Study 2 also builds upon Study 1 by suggesting that the harm perceived by a rival institution was not (fully) due to hatred of the rival. That is, in Study 2, the same action by UNC was perceived as more harmful when playing against Duke than Miami. As rivals, acrimony towards UNC is expected, but if harm perception were purely due to disdain for UNC, perceived harm would not differ between Duke and Miami.

A strength of this study was that, rather than relying on memory of a game that they did not know they would have to recall at a later time (Hastorf & Cantril, 1954), participants knew they would be asked questions about the information, read the information in vivo, and recalled the information right away. Additionally, because this was a fictional game, participants' recall of the information was unlikely tainted by their memory of a real game they might have watched.

In support of Hypothesis 2, recall error for the total number of points scored by each team and fouls by UNC did not depend upon whether UNC was playing against Duke or Miami. Interestingly, recall error in number of fouls by UNC depended on whether it won or lost: participants recalled fewer fouls by UNC when its opponent lost. Perhaps, when UNC won, participants associated playing well with accruing less fouls for UNC, and therefore recalled less fouls.

The results suggest that interpretation processes, rather than encoding, played a bigger role in harm perception – that is, participants in the Duke condition recalled the information to similar degrees as those in the Miami condition, but the size of the perceived harm was exaggerated. Interestingly, although harm perception was greater for a team to which participants are loyal (vs. not loyal), it was greater when their team lost than when it won. Furthermore, analyses revealed that perceived harm for Duke winning (losing) was substantively the same as (greater than) perceived harm for Miami on average, suggesting that it is a negative outcome which increases harm perception for a group to which one is loyal (rather than a positive outcome reducing harm perception). This has important implications for real world conflict, which will be discussed further in the General Discussion.

4. Study 3

Study 3 was designed to conceptually replicate the findings in Studies 1 and 2, in addition to examining Hypothesis 3 by investigating the consequences of harm perception. When an act is perceived as harmful, people feel moral outrage and anger (Batson, Chao & Givens, 2009) and attribute more blame to the wrongdoer (Malle, Guglielmo, & Monroe, 2014). They are subsequently more likely to desire punishment and take punitive actions against the transgressor (Hart, 2008; Shultz, Schleifer, & Altman, 1981; Skitka & Houston, 2001). I thus investigated the desire to punish the outgroup as a result of increased harm perception.

Study 3 was also designed to address whether loyalty increased general negative perceptions of the outgroup, or whether its influence was directed at perceived harmfulness of the outgroup's action. So far, the results show that people loyal to their group were more likely to perceive an outgroup's behaviors towards their group as harmful, but it is unclear whether loyal individuals simply perceive the outgroups negatively or whether it is limited to perceptions of harm. It is possible, for example, that, consistent with research on intergroup conflict, collective-based motivations like loyalty lead to a global negative evaluation of the outgroup, which would include reduced competence and warmth, in addition to how harmful the outgroup is. Thus, in Study 3, measures relating to general negative perceptions of the outgroup – the

competence and warmth of the outgroup, and whether the outgroup treated its members well – were included.

Additionally, to increase the generalizability of the finding that loyalty increases perceptions of harm, loyalty was measured in a different way. Items were adapted from the organizational behavior literature regarding loyalty to supervisors (Chen, Tsui & Farh, 2002). One advantage of measuring loyalty using different items is greater confidence that the association between loyalty and harm perception in the previous studies was not due to the specific items used.

Furthermore, the studies so far investigated loyalty in the context of rival teams in sports, using student populations. One question is subsequently whether the increased perception of harm is limited to rivals or student populations in sports contexts. Although management research has often capitalizes on sports as a context for investigating organizational and other social phenomenon, diversifying the contexts used would increase generalizability of the findings. Thus, in Study 3, loyalty was examined in the context of loyalty to the United States using a general population of U.S. citizens. Study 3 also moved away from a sports context to an economic context. Specifically, how Japan imposing tariffs on the United States would harm the United States.

Because this study is correlational in nature, I measured and controlled for group identification as in Study 1 to determine whether loyalty to the country predicted harm

perception above and beyond a close related construct as group identification.

Additionally, as in Study 1, I controlled for demographic factors that are associated with loyalty – gender, age, political orientation, religious affiliation, and socioeconomic status.

4.1 Method

Participants. Three hundred participants on Amazon Mechanical Turk (52% female, age $M = 36.04$, $SD = 10.91$) participated in this study.

Procedure.

Group identification and loyalty. Participants first rated the extent to which they identified with the United States, and the extent to which they were loyal to the United States. To capture group identification, participants answered the following four items adapted from Ellemers et al. (1999): “Being part of the United States is an important reflection of who I am,” “In general, belonging to the United States is an important part of my self-image,” “Overall, being part of the United States has little to do with how I feel about myself,” (reverse coded) and “The United States is unimportant to my sense of what kind of a person I am” (reverse coded) on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .86$).

To capture loyalty, participants answered the following five items, “I feel loyal to the U.S.,” “I feel a sense of allegiance to the U.S.,” “I feel dedicated to the U.S.,” “I am willing to give up my self-interest for the U.S.,” and “I feel devoted to the U.S.” on a 1

(*not at all*) to 7 (*extremely*) scale ($\alpha = .95$). The first two items were designed to capture face validity (“loyal,” “sense of allegiance”). The third item was drawn from existing research by scholars who have noted that loyal encompasses a willingness or expectation to sacrifice, or put the group’s interest before, one’s own interests (Hildreth et al., 2016; Stern, 1995; van Vugt & Hart, 2004). The last two items were based on the work by Chen, Tsui and Farh (2002), who have noted in their work on supervisor loyalty that loyalty includes dedication and devotion to the supervisor.

News article. Next, participants read a news article on a recent economic current affair: Japanese tariff increases on foreign countries on foreign frozen goods. The Japanese government had recently increased tariffs on multiple nations, including the United States. In the article, participants read that consumer goods make up a sizeable portion of U.S. exports. They then read that Japan is a big consumer of beef, and the Japanese government had recently imposed a hike on tariffs on the U.S. (see Appendices for complete materials).

Harm perception. Participants then rated the extent to which they “think the Japanese government’s tariff hike on U.S. beef import”: “harms the U.S.,” “makes the U.S. suffer,” “hurts the U.S.,” “is unfair to the U.S.,” and “is unjust to the U.S.” on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .93$).

Punishment. Participants next gave their opinion on punishment they wanted to impose on Japan. They were asked, “In response to the Japanese government’s tariff

hike on the U.S., to what extent do you think the U.S. should:" "implement retaliatory measures," "impose an economic sanction on Japan," "institute punitive measures against Japan," "and respond in kind to Japan" on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .93$).

General perceptions of outgroup. Participants then gave their general impressions of the outgroup by rating the outgroup's competence, warmth, and how it treats its members. To measure competence and warmth, participants rated the extent to which they perceived "the Japanese government, in general" as: "capable," "skillful," "intelligent," "competent" ($\alpha = .93$; which formed the competence index) and "warm," "nice," "friendly," "sociable" ($\alpha = .96$; which formed the warmth index) from Cuddy, Fiske Glick (2007) on a 1 (*not at all*) to 7 (*extremely*) scale.

To measure perceptions of how the outgroup treats its own members, participants rated the extent to which they think that the Japanese government "cares about the wellbeing of its citizens" and "treats its citizens poorly" (reverse coded) on a 1 (*not at all*) to 7 (*extremely*) scale ($r = -.44, p < .001$).

Demographics. Finally, participants answered the demographics questions from Study 1.

4.2 Results

Preliminary analyses of group identification and loyalty. On average, participants moderately identified with the United States ($M = 4.28$, $SD = 1.70$) and were quite loyal to the United States ($M = 4.67$, $SD = 1.73$).

Confirmatory Factor Analysis. Because group identification and loyalty were correlated, I conducted a Confirmatory Factor Analysis (CFA) for a two-factor solution (group identification and loyalty) and a one-factor solution. The results showed that the two-factor solution was a better statistical fit for the data, $X^2(203) = 190.48$, $RMSEA = .18$, $CFI = .93$, than the one-factor solution, $X^2(203) = 359.75$, $RMSEA = .25$, $CFI = .85$.

Table 6. Descriptive statistics for Study 3.

		M	SD	1	2	3	4	5	6	7	8	9	10	11
1	Loyalty	4.67	1.73											
2	Group identification	4.28	1.70	.75**										
3	Competence	5.36	1.32	.09	.03									
4	Warmth	3.90	1.49	.16*	.02	.56**								
5	Poor treatment	3.02	1.35	.05	.10	-.48**	-.40**							
6	Gender (0=male, 1=female)	-	-	.08	.01	-.02	.14*	-.11						
7	Age	35.64	10.81	.16*	.15*	.12	.001	-.11	-.04					
8	Political orientation	4.91	1.83	-.29**	-.34**	-.03	-.04	-.11	-.05	-.13				
9	Relig. (0=no, 1=yes)	-	-	.20**	.26**	.15*	-.04	.01	-.13	.34	-.43**			
10	SES	3.41	1.21	.16*	.10	.01	.12	.03	-.12	-.01	.08	.001		
11	Harm perception	4.65	1.37	.41**	.28**	.04	-.03	.07	.01	.03	.05	-.01	.17*	
12	Punishment	3.69	1.56	.46**	.33*	.13	.19**	.11	.07	.10	-.16	.03	.19**	.53**

* $p < .05$, ** $p < .01$

Harm perception. The data were entered into a hierarchical linear regression. Demographic variables were entered into Step 1, group identification into Step 2, and loyalty into Step 3. The results showed that, even after controlling for demographic and factors group identification, loyalty positively predicted perception of harm, $B = .33$, $SE = .09$, $B = .40$, $t = 3.89$, $p < .001$ (Table 7a). The R^2 change from model 2 to model 3 was significant, $F(1,195) = 15.10$, $p < .001$. That is, the more participants were loyal to the United States, the more they perceived harm from the tariffs. Additionally, the results showed that including loyalty as a predictor improved the amount of variance explained compared to group identification alone (Table 7b). The R^2 change from model 1 to model 2 was significant, $F(1,195) = 27.42$, $p < .001$.

These results also remained the same after controlling for perceptions of the outgroup (competence, warmth and outgroup treatment of own members), $B = .35$, $SE = .09$, $B = .42$, $t = 4.09$, $p < .001$ (Table 7c). As above, including loyalty as a predictor improved the amount of variance explained compared to group identification alone. The R^2 change from model 3 to model 4 was significant, $F(1,192) = 14.48$, $p < .001$.

Table 7a. Loyalty to the United States predicts harm perception

Variable	Model 1	Model 2	Model 3
Loyalty			.33** (.09)
Group identification		.16* (.21)	-.08 (.09)
Gender	.17 (.21)	.16 (.21)	.06 (.20)
Age	-.004 (.01)	-.01 (.01)	-.01 (.01)
Social political orientation	.08 (.06)	.13 (.06)	.14* (.06)
Religious affiliation	.06 (.26)	-.01 (.26)	.02 (.25)
SES	.11 (.08)	.08 (.08)	.04 (.08)
Intercept	4.12** (.58)	3.40** (.63)	3.11** (.62)
Adjusted R²	.00	.03	.09
F Value	1.32	3.58**	7.40**
N	203	203	203

** $p < .001$. Coefficients unstandardized.

Table 7b. Loyalty predicts perception of harm to the United States above and beyond group identification

Variable	Model 1	Model 2
Loyalty		.32** (.09)
Group identification	.12** (.06)	-.12 (.09)
Intercept	4.38** (.27)	3.93** (.29)
Adjusted R²	.02	.08
F Value	4.15*	9.46**

N 203 203

 $*p < .05$, $**p < .001$. Coefficients unstandardized.

Table 7c. Loyalty to the United States predicts harm perception, controlling for group identification and general perceptions of outgroup

Variable	Model 1	Model 2	Model 3	Model 4
Loyalty				.35** (.09)
Group identification			.16* (.06)	-.09 (.09)
Competence		.19 (.10)	.18 (.10)	.18 (.10)
Warmth		-.11 (.09)	-.12 (.09)	-.17 (.08)
Outgroup member treatment		.03 (.09)	.01 (.09)	-.01 (.08)
Gender	.17 (.21)	.22 (.21)	.21 (.21)	.12 (.20)
Age	-.004 (.01)	-.01 (.01)	-.01 (.01)	-.01 (.01)
Social political orientation	.08 (.06)	.07 (.06)	.12 (.06)	.13* (.06)
Religious affiliation	.06 (.26)	-.04 (.26)	-.11 (.26)	-.09 (.25)
SES	.11 (.08)	.13 (.09)	.10 (.09)	.06 (.08)
Intercept	4.12** (.58)	3.40** (.89)	2.88** (.91)	2.85 (.87)
Adjusted R²	.00	.00	.03	.10
F Value	.92	1.04	1.70	3.32**
N	203	203	203	203

$*p < .05$, $**p < .01$. Coefficients unstandardized.

Punishment. Loyalty also predicted punishment, in which the more participants felt loyal to the United States, the more they wanted to impose punishments on Japan, $B = .41, SE = .06, B = .46, t = 7.34, p < .001$. The results held even after controlling for group identification, $B = .43, SE = .09, B = .48, t = 5.05, p < .001$, and other demographic variables, $B = .39, SE = .09, B = .44, t = 4.55, p < .001$.

General outgroup perception. Loyalty did not predict perceptions of competence ($B = .07, SE = .05, B = .09, t = 1.22, p = .224$). Loyalty positively predicted warmth ($B = .133, SE = .06, B = .16, t = 2.22, p = .027$), in which the more loyal the participant was to the United States, the warmer they perceived the Japanese government. Loyalty did not predict how poorly participants perceived the outgroup members treated their own members, $B = .04, SE = .06, B = .06, t = .76, p = .446$.

Mediation analyses. To test whether harm perception mediated the relation between loyalty and punishment, the data were analyzed using the bootstrap method with 5000 samples in the SPSS macro (Preacher & Hayes, 2004). Loyalty was entered as the independent variable, harm perception as the mediator and punishment as the dependent variable, with group identification and demographic variables as covariates (the results remain substantively the same without controlling for these factors). Results revealed that harm significantly mediated the pathway from loyalty to punishment, $95\%CI = [.1055, .3038]$, indicating that people who were loyal to the United States perceived more harm by foreign tariffs, and subsequently more likely to desire punishment of the outgroup, such as retaliatory actions (Figure 2).

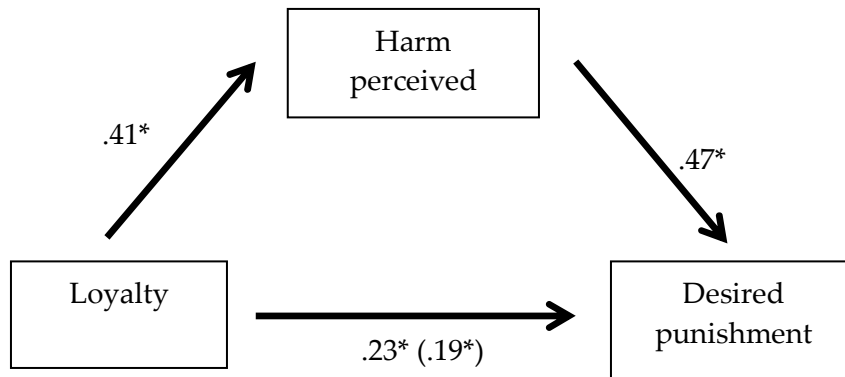


Figure 2. People loyal to the U.S. were more likely to desire punishment due to increased harm perception.

4.3 Discussion

Consistent with the previous studies, people loyal to their groups were more likely to perceive harm by an outgroup. Study 3 further generalized the findings from Studies 1 and 2 by using a different context and measuring loyalty differently, indicating that the previous results were not specific to the context or items used. We also find an important consequence of harm perception – that as harm perception increased, the more people desired punitive measures.

Interestingly, although loyalty did not predict perceptions of competence and poor treatment by the outgroup of its own members, it positively predicted warmth. That is, the more loyal they were to the United States, the more warm they perceived the Japanese government. This finding is unexpected, as not only did Japan engage in an action that was costly economically for the U.S, but those who are loyal to the U.S. also

perceived the Japanese's government's tariff as more harmful. It is unclear why this relationship emerged; however, future research may investigate whether loyalty to one's country increases how warm a foreign country appears generally or whether it is limited to certain countries or situations. Nonetheless, the results overall suggest that increased harm perception is not due to general negative perceptions of the outgroup; instead loyalty appears to be directed at harm perception.

Additionally, past research has shown that people have preconceived opinions of different social groups along the competence and warmth dimensions (Fiske et al., 2002), which may have influenced the results. In future studies, rather than asking participants to rate the warmth and competence of the out group, it may be better to use a general unidimensional scale that does not include specific content regarding an outgroup, such as a thermometer scale (e.g., from 0, negative to 100, positive; Houtman & Baker, 1989), to examine participants' attitudes towards an outgroup.

5. General Discussion

Across three studies, loyalty increased perception of harm. Specifically, loyalty to one's ingroup increased the perception that negative actions by an outgroup against the ingroup were harmful. People who were loyal to Duke's team were more likely to perceive harm, whether general, past, or future harm (Studies 1-3). These results were not limited to rival groups (Study 3), and held after controlling for related constructs, including group identification, moral constructs such as belief in a just world, political orientation, and religious affiliation. Using an experimental manipulation, people were more likely to perceive the same actions as harmful to a group to which they were loyal compared to a group to which they were not (Study 2). The results further showed that this was not driven solely by attention to stimuli (Study 2) or by general negative perceptions of the other group (Study 3); rather, loyalty influenced interpretations of the actions by an opposing group by exaggerating the harm. Perceptions of harm driven by loyalty were consequential – those loyal to their group were more likely to desire punitive measures for the perceived harms.

Interestingly, the difference in harm perception (between a group to which one was loyal and to which one was not loyal) was greater when their group lost than when it won (Study 2). This perhaps suggests that harm perception may be greater when they need to be vigilant about their group's wellbeing – for example, when their group

experiences general uncertainty about future outcomes, when people feel that their group is vulnerable, or when their group's standing is challenged.

Theoretically, this work contributes to the Theory of Dyadic Morality (Schein & Gray, 2017). Specifically, it further develops the second premise that violations of moral principles increase perception of harm. In addition to showing that loyalty, as a moral principle, increases perceived harmfulness of an action towards one's group, it also extends the theory by suggesting that it may not be necessary for the *violation* of a moral principle (desecration, disloyalty) to increase harm perception. Rather, the salience of a moral principle (purity, loyalty) may be sufficient to increase harm perception. I also extend his work by showing that increased harm perception (despite identical actions), increases desires for punishment. This work also speaks to the Moral Foundations Theory (MFT; Graham et al., 2011). Literature on the MFT has largely examined the foundations of morality separately (e.g., by examining how each set of dimension predicts a third variable, Mooijman et al., 2017), perhaps because harm/care is part of the "individualizing" set of foundations and loyalty is part of the "binding" set of foundations (Graham et al., 2011). In my work, I bridge the two sets of foundations by demonstrating the relationship between the loyalty and harm perception, even when the harmful actions are identical.

Practically, this work has important implications for intergroup conflict. As observers, we may ask why conflict occurs, and why it escalates – why did fans of the

losing team get into a fight with fans of the winning team? Why did the members of the nationalist group hurt a protester? This research suggests that the loyalists perceptually amplify the harm perpetrated. This may then also subsequently affect whether people engage in conflict. Because my loyalty towards my sports team increases perceptions of harm perpetrated against my group by the other team, acts of jeering and yelling may be perceived to be worse than they actually are, leading to violent, and even fatal, consequences (Bender, Gomez & Melvin, 2013). Furthermore, it suggests that a possible reason fueling escalation of conflict may be because one side perpetually sees the other side as causing more harm to their side (e.g., Alther, 2013).

Additionally, this work has implications for understanding the underlying processes of intergroup conflict, and implications for ways to solve it. Can we increase accuracy of harm perception by making people accountable or by incentivizing them to be accurate? This research suggests not necessarily. The research here shows that perception of harm is greater because the harm is magnified. Rather than trying to increase accuracy, other types of methods that are directed at attitudes, emotions, and greater understanding of outgroups, such as empathy (Cikara, Bruneau & Saxe, 2011), may be more effective at reducing intergroup conflict.

These results also suggest another possible explanation for why people do not intervene in outgroup conflict. For example, in 1994, the United States had insufficiently intervened in the Rwandan genocide between the Tutsis and the Hutus, leading to over

800,000 deaths. The United States downplayed the genocide and avoided using the morally loaded term, “genocide” for a significant duration of the conflict, instead using words like “fight” (Carroll, 2004). In addition to diffusion of responsibility (Darley & Latane, 1968), situational ambiguity (Clark & Word, 1974), and outgroup derogation (Tajfel, 1982), part of the United States’ failure to intervene could be driven by the influence of loyalty on harm perception – harm inflicted on a group to which one is not loyal appears less harmful than that on a group to which one is loyal.

Limitations

Although results of this set of studies provided support for the hypothesis that loyalty to one’s group increases how harmful negative actions are to one’s group, there are limitations that should be addressed in future studies. One limitation is that these studies were reading-based. In the real world, people often experience negative actions directed to their group in real time, such as watching their own group lose in a competitive political race or at a sports event. It may be beneficial for external validity purposes to test these hypotheses in a field setting.

Even though these studies used groups to which people could naturally be loyal, that also meant that group identification covaried with loyalty. Identification was controlled for statistically in all studies; however, a better test of loyalty would have been to manipulate loyalty without manipulating group identification. In a pilot study, I found that asking participants to write about why they feel loyal the United States (after

reading a prompt about American historical figures being loyal to the country) versus why they enjoy reading (after reading a prompt about American historical figures enjoying reading) increased participants' self-reported loyalty to the country ($F(1, 192) = 5.13, p = .013$) while minimally increasing their group identification ($F(1, 192) = 3.44, p = .065$). Another possibility may be asking people about their moral responsibility to their group in one condition versus asking them about factual descriptions of their group. By inducing feelings of morality, which is central to loyalty but not to group identification, people may increase how loyal they feel towards a group while keeping group identification constant.

Relatedly, these studies tested whether loyalty predicted harm perception above and beyond group identification. A rationale for doing so was because of the similarity between the two constructs conceptually. However, rather than pitting them against each other, it is possible that group identification precedes loyalty (which would be consistent with the finding that loyalty was a better prediction of harm perception than group identification). That is, as I suggested in the introduction, feeling like one belongs to the group may give rise to feelings of loyalty to the group, and a longitudinal study with a cross-lagged panel design measuring both group identification and loyalty at different points in time may address this possibility.

The measurement for punishment was based upon intentions (e.g., desire to retaliate), rather than behavioral punishment (e.g., depriving the outgroup of some

resource). Although behavioral punishment may be closely related to intent to punish (Ajzen, 1991), to show that perception of harm can affect behavioral responses, it would have been good to use economic games, such as the dictator game, the ultimatum game, the trust game, or the third-party punishment paradigm, to show that people would deprive the outgroup of some monetary resource or incur a cost to the self in order to punish the outgroup.

Lastly, across these studies, harm originated from an outgroup. Thus, although they speak to harm perception when an outgroup member perpetrated harm against the ingroup, it does not necessarily speak to harm perception when it is an ingroup member perpetrating harm against the ingroup. This question is important for internal group conflict. Although people generally hold more favorable views and act more favorably towards ingroup (vs. outgroup) members (Brewer, 1999; Nosek & Banaji, 2001; Vaughan, Tajfel & Williams, 1981), people also appear to condemn an ingroup member if that member reflects badly on the group (Marques, Yzerbyt & Leyens, 1988), particularly if their behavior is immoral (Tang, Shepherd & Kay, in prep.) This suggests that, given an anonymous ingroup member versus an anonymous outgroup member, someone loyal to their group may perceive an anonymous ingroup (vs. outgroup) member's harmful actions as causing more suffering and pain to the group.

Future Directions

In addition to addressing the limitations noted above in future studies, there are other interesting questions stemming from this research that are worth exploring.

First, having shown that loyalty increases harm perception, an interesting question that merits further research is the mechanism driving the link between the two. One possibility is the cognitive attribution of the outgroup members, such as their intentions and desires. Do individuals loyal to their group perceive stronger intentions to harm from outgroup members? That is, do loyalists view negative actions to their group as more harmful because they also view those actions as more intentional? This possibility would be consistent with research showing that intentional negative actions appear worse than they actually are (Ames & Fiske, 2011). Answering this question would not only create a richer understanding of real world intergroup conflicts, such as physical, economic, or cyber wars between countries, through identifying the processes involved in increased harm perception, but it would also illuminate solutions for interventions. By severing the tie between loyalty and harm perception, the likelihood of future conflict would reduce, as people would be subsequently less likely to seek punishment or other retaliatory measures.

Second, in this set of studies, participants were both normatively and affectively loyal to the object of loyalty – for example, Duke students are known for both loving Duke basketball and knowing that they should be loyal to the team. This may have been the strongest form of loyalty, which produced the strongest effect on harm perception.

As such, it may be fruitful for future research to investigate whether only loyalty with only a normative component and absent any attachment to the group (“I should be loyal to Duke basketball even though I don’t care about it at all”) may produce a weaker effect. An advantage of investigating this question would be that people who feel normatively loyal to the group without attachment may not identify with the group, hence partialing out the influence of group identification on harm perception in a cleaner way.

Third, future research may delve deeper into the role of vigilance in harm perception. The finding from Study 1 – that students loyal to Duke were more likely to perceive greater harm in future games (events that have yet to unfold) between Duke and UNC – suggests that loyalty may increase vigilance for harm. The finding in Study 2, in which harm perception was greater when Duke lost than when it won the game against UNC, also supported this possibility. In addition to these findings, auxiliary analyses of the estimates (recall of information) in Study 2 hint at the role of vigilance. Although the results for the estimates showed that recall errors did not differ between Duke and Miami, supplemental analyses using absolute differences (rather than signed differences) showed a smaller difference (i.e., the error intervals were smaller) in the Duke than Miami condition. This suggests that participants made smaller errors in recalling information when Duke was playing. Furthermore, in a real world setting, intergroup interactions are often more complex or ambiguous than what was presented here in the studies. For example, when there is both positive and negative information,

those loyal (vs. not loyal) to their group might attend more to negative than positive information. This possibility could be examined using physiological measures, such as eyetracking. Participants who are more loyal to their group may show more intense scanning of information related to harm, such as more saccades on menacing outgroup members or increased visual time spent on harmful versus helpful outgroup behaviors.

Relatedly, another interesting avenue for future research may be to examine the physiological outcomes from harm perception due to loyalty. Morality can often be experienced as a physiological phenomenon (Cushman, Gray & Berry-Mendes; Ortiz & Raine, 2004; Gu, Zhong & Page-Gould, 2013), in which immoral actions may influence physical responses such as elevated heart rate. Similarly, perhaps when one perceives increased harm from their loyalty to their group, physiological changes, such as galvanic stress responses or testosterone levels, increase in preparation for defending the group against potential harm. This possibility would be consistent with evolutionary accounts of group protection (Chagnon, 1988).

Fourth, and related to the idea of vigilance, future studies may further examine how the relationship between loyalty and harm perception changes under threatening situations, such as uncertainty or status loss. Threatening situations may be especially conducive to increased vigilance from group members. The results of Study 2, showing that students perceived more harm when their team lost than when the team won, suggests that loyalty may be especially powerful in increasing harm perception when

their group experiences general uncertainty about future outcomes, when people feel that their group is vulnerable, or when their group's standing is challenged. For example, although people may generally perceive greater harm if their group drops in a top 20 ranking, the perceived harm may be greater when it drops from second to second last than when it drops from second to third.

Conclusion

The influence of loyalty on harm perception in situations of conflict is central to a social world in which we are naturally drawn to form groups and coalitions. These studies here provide initial evidence that loyalty to one's group can increase how harmful an outgroup's actions are, and subsequently increase desires for punitive measures against the outgroup. These results raise further questions, including what the psychological process (e.g., greater perceived intent) are by which loyalty can increase harm perception, such as, and what intervening measures (e.g., empathy) may reduce harm perception. These remaining questions would thus be important and fruitful to explore in future research.

Appendix A

Study 2: Duke (Miami) wins condition

Intense game between Duke (Miami) and UNC; Duke (Miami) wins by a margin

The game between Duke (Miami) and UNC was intense. The seesaw nature of the first half carried over to the second frame, as the teams remained close and traded the lead on several occasions. Crowds were at once rowdy with excitement and silent with bated breath, as no team has a significant lead over the other until the last period of the game. The Tar Heels were able to tie the game at 70-70 with six and a half minutes left, but from there the Blue Devils (Hurricanes) owned the game. UNC struggled to stay in front of their guards, and, thanks to some swift officiating, was sending Duke (Miami) to the line at a rapid pace. UNC racked up 28 fouls, compared to Duke (Miami), which racked up 14. Some of UNC's fouls were minor, but some were quite serious, requiring intervention by the referee and several team members. Duke (Miami) won by 5 despite taking 28 fewer shots than UNC. That deficit proved too much for UNC to overcome, as Duke (Miami) cemented its place atop the ACC entering the conference tournament. The game ended with 80 points to Duke (Miami) and 75 to UNC, with UNC having more fouls against Duke.

Study 2: Duke (Miami) loses condition

Intense game between Duke (Miami) and UNC; Duke (Miami) loses by a margin

The game between Duke (Miami) and UNC was intense. The seesaw nature of the first half carried over to the second frame, as the teams remained close and traded the lead on several occasions. Crowds were at once rowdy with excitement and silent with bated breath, as no team has a significant lead over the other until the last period of the game. The Blue Devils (Hurricanes) were able to tie the game at 70-70 with six and a half minutes left, but from there the Tar Heels owned the game. Duke (Miami) struggled to stay in front of their guards, and, thanks to some swift officiating, was sending UNC to the line at a rapid pace. UNC racked up 28 fouls, compared to Duke (Miami), which racked up 14. Some of UNC's fouls were minor, but some were quite serious, requiring intervention by the referee and several team members. UNC won by 5 despite taking 28 fewer shots than Duke (Miami). That deficit proved too much for Duke (Miami) to overcome, as UNC cemented its place atop the ACC entering the conference tournament. The game ended with 80 points to UNC and 75 to Duke (Miami), with UNC having more fouls against Duke.

Appendix B

Study 3: News article

Japan hike up tariffs on U.S. frozen goods

Goods make up more than two-thirds of U.S. exports. Other than capital goods, such as industrial machines, medical equipment, and telecommunications, a strong source of U.S. export is consumer goods (\$194 billion). These include foods, feeds, and beverages (\$131 billion), such as meat, soybeans, and corn. However, Japan's Ministry of Finance has recently announced that Japan will hike up tariffs on frozen beef imports from the United States. Japan is the biggest Asian market for U.S. beef, and an important source of revenue for the United States. Japan imports almost 90,000 tons of frozen beef. Tariffs on frozen beef will jump to 50%, as a "safeguard" mechanism to protect domestic farmers, the Japanese ministry said in a statement.

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Biography

Simone Tang received her Bachelor of Arts in Psychology (Hons.) and Master of Arts in Criminology from the University of Pennsylvania in 2010, where she was a University Scholar. To date, she has published interdisciplinary work in journals including *Psychological Science* (Tang, Shepherd & Kay, 2014), *Management Science* (Morewedge, Tang & Larrick, 2018), and *Organizational Behavior and Human Decision Processes* (Tang, Morewedge, Larrick & Klein, 2017; Tang, King & Kay, 2017). She has received awards for her academic work and research, including the Sabini Award for her senior honors thesis, the SPSP Graduate Travel Award, and the Dean's Internship at the Duke University Graduate School. She will be receiving her PhD in Business Administration from Duke University in May 2018.