Lehigh University
Lehigh Preserve

Theses and Dissertations

2015

Loyal is as Loyal Does: The Importance of Loyalty Information during Intragroup Evaluation

Nick D'Angelo Ungson
Lehigh University

Follow this and additional works at: http://preserve.lehigh.edu/etd

Part of the Psychology Commons

Loyal is as Loyal Does:

The Importance of Loyalty Information during Intragroup Evaluation

by

Nick D'Angelo Ungson

A Thesis

Presented to the Graduate and Research Committee

of Lehigh University

in Candidacy for the Degree of

Master of Science

in

Psychology

Lehigh University

April 29, 2015

Thesis is accepted and approved in partial fulfillment of the requirements for the Master of Science in Psychology.

Loyal is as loyal does: The importance of loyalty information during intragroup evaluation
Nick Ungson

_____
Date Approved

_____
Dominic J. Packer, Ph.D.
Advisor

_____
Michael J. Gill Ph.D.
Committee Member

_____
Lucy E. Napper Ph.D.
Committee Member

_____
Gordon B. Moskowitz Ph.D.
Department Chairperson

Table of Contents

List of Figures

Abstract

Group members must be attuned to loyalty information when deciding with whom to cooperate to pursue collective goals. We present three studies which examined the effect of loyalty information on impression formation and evaluative processes across multiple intergroup and intragroup contexts. In Study 1, undergraduate students were more ambivalent when categorizing positive traits (i.e., INTELLIGENCE) in a disloyal vs. loyal ingroup member. Importantly, ambivalence was not sensitive to outgroup loyalty, nor was it sensitive to warmth information, suggesting that loyalty may uniquely affect how peripheral traits are perceived during intergroup competition. Study 2 varied intergroup competition and the *preference* and *sacrifice* components of loyalty (Packer & Ungson, 2015) in a fictional promotion scenario. Regardless of competition, an online sample rated ingroup members more favorably when they demonstrated high (vs. low) preference and sacrifice. However, sacrifice was rewarded less when intergroup competition was absent (vs. present). In Study 3, we varied *sacrifice* and *conformity* in a fictional hiring scenario involving a low-status (entry-level) or high-status (CEO) applicant. Targets were rated more positively and awarded a higher salary when they demonstrated high (vs.) low sacrifice and conformity. Furthermore, there was an interaction such that applicants low on one dimension of loyalty were able to "recover" salary losses by demonstrating the other form of loyalty. The present studies speak to the importance of loyalty information when perceiving and evaluating ingroup members across multiple intergroup and intragroup contexts. Furthermore, they demonstrate that certain aspects of loyalty are sensitive to contextual demands. Implications and directions for future group processes research are also discussed.

Introduction

Humans live, work, and play in the context of social groups. Associating with and cooperating with others allows us to achieve what could not be done alone; as such, it is extremely important to identify those others with whom cooperation is both likely and possible. In contexts ranging from work groups to sports teams and political parties, we are often forced to cooperate with other individuals (who may be strangers) to attain a common goal. Because collective cooperation may sometimes entail individual disadvantages (e.g., Van Vugt & Hart, 2004), we cannot assume that every ingroup member will be a faithful, cooperative partner. Indeed, it is important to accurately evaluate the extent to which others are committed to group goals and will actively work towards them. In other words, we are motivated to identify how loyal they are. Until recently, the concept of loyalty has been under-conceptualized in the context of the empirical social psychological literature. For example, many references to loyalty come in the form of brand loyalty or organizational loyalty (e.g., Avakian & Roberts, 2011; James & Cropanzano, 1994). More recently, however, loyalty has been addressed by researchers interested in the moral domain; some researchers argue that loyalty concerns may be as morally-relevant for some individuals as their principles on justice, fairness, and harm (Graham et al., 2011; Graham, Haidt, & Nosek, 2009; Haidt, 2007).

Speaking to the importance of cohesion in social groups, researchers have argued that "binding" foundations such as loyalty constitute a set of human moral concerns that can promote the success of group living (Graham et al., 2011). Within these binding foundations, ingroup loyalty has been identified as a core foundation or source of moral intuitions (Graham et al., 2011; Haidt & Joseph, 2007). Furthermore, because individuals

are motivated to maintain the integrity of their social groups (Marques, Abrams, & Serôdio, 2001; Tajfel & Turner, 1979), it behooves individuals to identify loyal group members. Relatedly, these motivations might also increase vigilance for disloyal individuals who have the potential to harm the ingroup, either by damaging its integrity or by interfering with its pursuit of collective goals. To make these judgments, people often use an individual's behavior as a cue to his or her underlying dispositions or traits (Gilbert, 1998; Uleman, Adil Saribay, & Gonzalez, 2008; Uleman & Moskowitz, 1994). However, there is a dearth of empirical research investigating the importance of loyalty information when individuals form impressions of others – and particularly of fellow group members.

The proposed research is an attempt to shed light on processes underlying loyalty evaluations and the downstream consequences of those evaluations. Study 1 explores the possibility that loyalty evaluations may exert a Gestalt-like influence on the overall impressions formed of potential ingroup members (Anderson & Sedikides, 1991). Specifically, we argue that the classification of someone as loyal or disloyal "colors" their overall impression of that person and subsequently changes the meaning or valence of other traits (i.e., because it is a central trait; Asch, 1946; Nauts, Langner, Huijsmans, Vonk, & Wigboldus, 2014).

Studies 2 and 3 examine how multiple aspects of loyalty influence social judgments under different intergroup (i.e., competition; Study 2) and intragroup (i.e., status; Study 3) conditions. These studies extend previous research in which we attempted to enrich the conceptualization of loyalty and showed that loyalty may be construed in different ways (Packer & Ungson, unpublished data). Loyalty is often

defined mainly as ingroup *preference* – treating ingroup members better than outgroup members (e.g., Waytz, Dungan, & Young, 2013). We hypothesized, however, that loyalty may also be construed in a variety of other ways, including *sacrifice* of time and resources for the group and *engagement* with group goals. We asked participants (*N* = 231) to describe in their own words what it means to "be loyal to groups." Consistent with expectations, ratings by two independent coders revealed that ingroup preference was only mentioned in 12% of all responses, whereas sacrifice and engagement were mentioned in 31% and 42% of responses, respectively. Furthermore, individuals also mentioned *conformity* to group leaders and norms in 34% of responses. The aim of Study 2 is to examine whether different aspects of loyalty (i.e., preference, sacrifice) exert unique influences on social judgments in competitive versus non-competitive intergroup contexts. Study 3 investigates the influence of member status on loyalty evaluations. We look to idiosyncrasy credit theory (Hollander, 1958, 1960) and argue that different forms of loyalty information may be important for low-status versus high-status members. Before proposing three studies that will examine these issues, I will briefly review the empirical evidence regarding how and when loyalty information might influence impression formation, status conferral, and intragroup evaluations.

Loyalty as a Central Trait: Gestalt and Impression Formation

We do not perceive others merely as a constellation of unrelated traits and behaviors; rather, we are motivated to form a consistent, unified impression of others (Asch, 1946; Gilbert, 1998). In one of the first social psychological examinations of traits and impression formation processes, Asch (1946) argued that some personality traits are central to our formation of coherent impressions. For example, two groups of participants

formed an impression of a strangers based only on the following traits: warm/cold, intelligent, skillful, industrious, determined, practical, and cautious (Experiment I). Importantly, each group viewed a list that either contained "warm" or "cold." Although Asch's statistical analyses may have left something to be desired (see Nauts et al., 2014), he presents compelling examples of participants' responses, which seem to support his claim that the change from "warm" to "cold" in otherwise identical trait lists resulted in radically different impressions. For example, a participant in the "warm" group described the target as someone who "is driven by the desire to accomplish something that would be of benefit;" conversely, another respondent described the "cold" target as "calculating and unsympathetic" (p. 263).

Nauts et al. (2014) argued that Asch's (1946) experiments have been erroneously used as evidence for the argument that warmth evaluations are primary and more influential than other trait judgments (e.g., competence; Fiske, Cuddy, & Glick, 2007). In a replication of Asch's studies, Nauts et al. provided evidence that warmth may not always be a central trait; results show that intelligence (i.e., competence) may also be a central trait in the absence of a clear motivational context. More importantly, the results demonstrated how changing a single important trait may "color" how other traits are organized and related within a unitary impression. That is, evaluation of a central trait may change the meaning of other, peripheral traits. Neither Asch (1956) nor Nauts et al. (2014) make the claim that a single trait (e.g., warmth, intelligence) is always a central trait. Rather, they argue that person perception processes are often context-dependent and responsive to situational goals and motivations. In varying motivational contexts, different traits may be central at different times. In the current research, we argue that

loyalty is likely to become a central trait and organize overall impressions when evaluating potential ingroup members, perhaps particularly in competitive intergroup environments.

How Loyal are You and When Does it Matter?

   Intergroup competition. Group members react more positively to group criticism when the source is an ingroup member than when the criticism is made by an outgroup member (e.g., Hornsey & Imani, 2004). Observing the reactions of native Australians to criticism, Hornsey and Imani (2004) demonstrated that individuals not only felt less anger and resent towards ingroup critics, but also tended to agree with criticisms more if they were put forth by fellow Australians. Importantly, amount of experience with the ingroup did not drive this effect; that is, spending many years in Australia did not allow non-Australians to criticize the country (in the eyes of native Australians). Across three studies, however, Hornsey and Imani showed that this "intergroup sensitivity effect" was driven primarily by Australians' perceptions of the critics' constructiveness. That is, positivity and agreement with criticism was predicted by the extent to which critics were believed to be acting in the best interests of the group – perceived loyalty affected how ingroup criticism was received. Importantly, the intergroup sensitivity effect is significantly reduced during intergroup competition (Ariyanto, Hornsey, & Gallois, 2010). Specifically, Indonesian Muslims were less tolerant of criticism by another Muslim when the Indonesian Muslim-Christian conflict was salient. These results speak to the importance of intergroup competition when making judgments about ingroup members who may be violating group norms. In the absence of competition, ingroup critics may be granted clemency. However, when

threatening outgroups are salient, group members judge ingroup critics harshly, even if the critics are perceived as constructive and correct (Ariyanto et al., 2010).

Whereas the intergroup sensitivity effect demonstrates how norm violations by ingroup members are sometimes excused via perceived constructiveness, other researchers have demonstrated that norm violations by ingroup members are thought to reflect poorly on the entire group. In this case, individuals make more extreme global evaluative judgments about likeable and unlikeable ingroup members than when they judge outgroup members – a phenomenon named the "black sheep effect" (Marques et al., 2001; Marques, Yzerbt, & Leyens, 1988; Pinto, Marques, Levine, & Abrams, 2010). Most germane to the current research, Marques et al. (2001) demonstrated that ingroup deviants were judged more harshly than their normative counterparts; specifically they were rated as less nice, loyal, honest, and generous (Experiment 2). Importantly, Marques et al. (2001; Experiment 3) primed intergroup conflict; when participants learned that there was uncertainty regarding their ingroup's ethical level relative to an outgroup, ingroup deviants were rated as less attractive than outgroup deviants, especially when the competitive intergroup context was heightened. Furthermore, participants believed that ingroup deviants were more detrimental to the ingroup's image and integrity than the outgroup deviant was to the outgroup's image and integrity.

Consistent with past research, we argue that loyalty information will be most important during intergroup competition (Dovidio, 2013; Sherif, Harvey, White, Hood, & Carolyn, 1961; Tajfel & Turner, 1979). A striking example of the importance of loyalty in competitive intergroup contexts can be seen in a recent investigation of the perceptions of ingroup defectors and deserters (Travaglino, Abrams, de Moura, Marques, & Pinto,

2014). Using a minimal group paradigm, researchers asked participants to evaluate former ingroup members who had deserted (simply left the group) or defected (left the group to join a competing outgroup). Unsurprisingly, when reacting to deserters only, participants derogated ingroup deserters more than outgroup deserters (Travaglino et al., 2014; Experiment 1). Interestingly, however, whereas ingroup defectors were judged more harshly than ingroup deserters, participants did not distinguish between outgroup defectors and deserters (Experiments 2 and 3). Furthermore, Travaglino et al. found that negative feelings towards the outgroup predicted the degree to which participants were sensitive to disloyalty by members of their own group. This relationship demonstrates how the perception of loyalty-relevant behavior depends on the behavior of ingroup members, as well as the respondents' opinions about the groups with which they are competing. It seems clear, then, that competitive intergroup contexts are environments in which loyalty evaluations may play a large role in individuals' perceptions and impressions of ingroup members.

Evaluating newcomers and potential ingroup members. In addition to competitive intergroup contexts, we argue that the evaluation of new or potential ingroup members might also promote heightened vigilance for loyalty-relevant information. This claim is consistent with past research which investigated reactions to ingroup criticism as a function of experience in a group (Hornsey, Grice, Jetten, Paulsen, & Callan, 2007). Across three studies, Hornsey et al. (2007) exposed participants to ingroup criticisms from either a "newcomer" or "old-timer." As with other research on ingroup criticism, researchers were mainly interested in participants' agreement with the criticism and reaction to the critic. Identical results were obtained for all three studies; old-timers

8

aroused less negativity than newcomers when criticizing the group. Further, criticisms offered by old-timers were met with more agreement than criticisms by newcomers. Most relevant for the current research, Hornsey et al. found that the link between experience and reactions to group criticism was mediated by how identified with the ingroup the participants perceived the critics to be (e.g., "To what extent does [the critic] care about your workplace?"; "To what extent is [the critic] committed to your workplace?"). In other words, although experienced group members elicited less negative reactions after criticizing the ingroup, this was mostly due to the perception that they were more loyal in their criticism. These results are consistent with our claim that the evaluation of potential ingroup members (e.g., college applicants, job applicants) may provide a context in which loyalty-relevant information is prioritized. Although experience is certainly important, whether or not the potential ingroup member will be loyal likely plays a large role during intragroup evaluation. The current research attempts to capitalize on these contexts to show how loyalty is prioritized in this critical group context.

Taken together, the previous research provides compelling evidence for the hypothesis that loyalty information should be influential during impression formation processes and subsequent judgments of potential and current ingroup members, especially in competitive intergroup contexts. It is important to distinguish the current research from previous work (e.g., Marques et al., 2001) which demonstrates that deviant acts evoke more extreme global evaluations of ingroup transgressors (i.e., the Black Sheep effect). Although our view is consistent with this previous work, Studies 1 aims to show that disloyalty on the part of ingroup members does not simply predict negative overall evaluations; specifically, we expect that initial loyalty information might change

the meaning of other traits and the organization of these traits within global impressions (e.g., Asch, 1946; Nauts et al., 2014). The current research will also extend previous research findings by offering a more fine-grained analysis of specific loyalty information that may elicit derogation in some contexts but not others. Whereas the black sheep effect predicts more extreme evaluations of ingroup members than outgroup members more broadly, Studies 2 and 3 are aimed to identify how intergroup competition and intragroup status interact with aspects of loyalty (i.e., preference, sacrifice, conformity; Packer & Ungson, 2015) to elicit more positive evaluations of loyal and negative evaluations of disloyal individuals in some situations but not others.

Study 1: Loyalty Affecting Overall Impressions

Study 1 was designed to investigate how perceived loyalty affects overall impressions of a social target – once people learn that an ingroup member is loyal, how are other social judgments affected? As Asch (1946) proposed and Nauts et al. (2014) confirmed, the manipulation of central traits such as warmth or intelligence elicits a change in valence in open-ended descriptions. In other words, whether someone was warm or cold changed the meaning of other traits; the wise intelligence of a warm individual was experienced as qualitatively different from the ruthless cunning of a cold individual. Importantly, these switches in valence were not observed when other, peripheral traits (e.g., politeness) were manipulated (Asch, 1946; Nauts et al., 2014).

In the current study, we examined when and how loyalty might have the same effect on impression formation in a competitive intergroup context. To demonstrate the unique importance of loyalty in these contexts, we also manipulated warmth. Participants saw traits describing a series of ingroup or outgroup targets. Half of the targets differed

on loyalty (i.e., described as loyal or disloyal), whereas the other half differed on warmth (i.e., described as warm or cold). Participants then categorized peripheral traits (e.g., intelligent, lazy) belonging to each target as either positive or negative. We argue that loyalty is a central evaluative trait in competitive intergroup contexts and we expected that participants' knowledge of ingroup targets as loyal or disloyal would have downstream effects (i.e., increased decisional ambivalence) on the evaluations of other traits belonging to those targets, as well as on global evaluations of the targets themselves.

Hypotheses

Hypothesis 1: Ambivalence while categorizing peripheral traits.

Hypothesis 1a: Ambivalence will be sensitive to loyalty information for ingroup members only. We argue that participants would be sensitive to loyalty information for ingroup members, thus we expected that loyalty information would modulate decisional ambivalence when categorizing both positive and negative peripheral traits for Lehigh (but not Lafayette) students. Specifically, we hypothesized that participants would exhibit less ambivalence when categorizing positive peripheral traits in loyal ingroup members than when they categorized those same positive traits belonging to disloyal ingroup members. Our reasoning was that positive traits like intelligence and productivity are consistent with the positivity associated with a loyal ingroup member, thus categorization of these traits would be made with more certainty and confidence. However, we argue that positive traits in disloyal ingroup members are perceived differently (e.g., Asch, 1946; Nauts et al., 2014); therefore, we expected more ambivalence when positive traits were categorized in disloyal ingroup targets.

Along the same lines of reasoning, we expected ambivalence to be lower when categorizing negative traits in disloyal ingroup members, compared to the same negative peripheral traits in loyal ingroup members. We expected that negative traits such as laziness are more congruent with the negativity associated with a disloyal ingroup member, leading to more confident categorization. Importantly, we expected loyalty information be irrelevant when categorizing positive traits in outgroup members; therefore, we expected to find the expected effects outlined above for ingroup targets only.

1b: Ambivalence will not be sensitive to warmth information, regardless of group membership. We argue that loyalty becomes a central evaluative trait in the context of intergroup evaluation, possibly supplanting the importance of warmth during social evaluation. Thus, we did not expect ambivalence to differ as function of warmth when categorizing positive or negative peripheral traits, nor did we expect target group membership to interact with warmth to influence decisional ambivalence.

Hypothesis 2: Loyalty and warmth will not affect categorization accuracy. We did not expect target group membership, key trait, or peripheral trait valence to influence the accuracy with which participants categorized traits. We reasoned that, even if participants exhibit varying levels of ambivalence when categorizing certain traits, they would still ultimately be accurate, for example, when categorizing "intelligent" as a positive trait and "lazy" is a negative trait.

Hypothesis 3: Evaluation of targets. We expected that loyal/warm targets would be evaluated more positively than disloyal/cold targets. Although this seems a trivial hypothesis, we also propose that loyalty is more important than warmth, especially for

ingroup members in competitive intergroup contexts. Therefore, we also hypothesized that the increase in positive evaluation from disloyal to loyal targets would be larger than the increase from cold to warm targets. Put another way, we expected ingroup targets to be rewarded relatively more for being loyal (vs. disloyal) than they are for being warm (vs. cold).

Method

Participants. A total of 112 participants were recruited from the Lehigh University undergraduate participant pool in the fall of 2014. Six of these individuals were removed from analyses because they did not follow instructions or completed the experiment too quickly (i.e., in less than 15 minutes). In the final sample of 106 participants, there were 72 females and 34 males (two participants did not provide gender) with a mean age of 18.92 years ($SD = 1.32$).

Design. Study 1 utilized a 2 (group: ingroup target vs. outgroup target) x 2 (key trait: loyalty vs. warmth) x 2 (key trait valence: positive vs. negative) x 2 (peripheral trait valence: positive vs. negative) mixed design. Each participant was randomly assigned to one group condition (i.e., to learn about Lehigh or Lafayette targets), whereas the remaining variables were manipulated within-subjects. Because all participants were Lehigh University students, Lehigh University itself was the ingroup of interest. Conversely, Lafayette University, another local university widely regarded as a rival to Lehigh, was used the competitive outgroup. Decisional ambivalence and categorization accuracy were measured during a trait categorization task, and target evaluations were measured using a short questionnaire (see Measures).

Measures.

Trait categorization task. The trait categorization task was administered using MouseTracker, a computer program that tracks respondents' computer mouse trajectories and allows researchers to assess real-time processing (Freeman, Ambady, Rule, & Johnson, 2008; Freeman, Dale, & Farmer, 2011; Freeman & Ambady, 2010). Capitalizing on evidence that motor response trajectories (e.g., hand-mouse movements) are repeatedly updated over time by cognitive-perceptual processes (see Freeman & Ambady, 2010), MouseTracker permits researchers to examine the temporal dynamics of categorical decisions. Generally, MouseTracker trials begin as soon as the "Start" button is pressed at the bottom center of the screen, MouseTracker presents participants with the experimental stimulus (e.g., word, picture, or video). Participants are instructed to categorize the stimulus by using the computer mouse to click on the appropriate category label, usually placed at the top left and top right corner of the screen.

Participants categorized traits belonging to eight different ingroup (or outgroup) targets. Each level of the key trait by key trait valence factors was captured by two of the eight targets; that is, two targets were portrayed as loyal, two targets were portrayed as disloyal, two as warm and two as cold. Importantly, the key trait (e.g., LOYAL, DISLOYAL, WARM, COLD) was always presented first, followed in random order by eight peripheral traits: five positive traits and three negative traits. Peripheral trait words were taken from Asch (1946), Nauts et al. (2014), or chosen as similarly-valenced synonyms. Although the order of peripheral trait words was randomly-ordered, experimenters selected peripheral trait lists for each target to ensure that traits did not

inadvertently contradict each other (e.g., PRODUCTIVE, LAZY; see Appendix A for trait lists).

Decisional ambivalence. One of the advantages of MouseTracker is the ability to calculate the degree to which participants are attracted to non-selected alternatives (Freeman & Ambady, 2010). For example, Freeman et al. (2008) asked participants to categorize a series of male and female faces by clicking on either "Male" or "Female" at the top of the screen. Importantly, although some faces were typical, other faces were atypical (i.e., male faces were feminized, female faces were masculinized). Freeman et al. found that when participants categorized atypical faces, their mouse trajectories were continuously attracted toward the opposite sex category; for example, when categorizing feminized male faces, mouse trajectories showed an attraction to the "Female" response before eventually settling on the correct categorization, "Male." To measure decisional ambivalence, MouseTracker first computes an idealized response trajectory: for example, a straight line from the "Start" button to the selected response. MouseTracker then calculates the geometric area between this idealized trajectory and the actual trajectory observed in participants, which rarely takes the form of a perfectly straight line (Freeman & Ambady, 2010).

The resulting area under the curve (AUC), with higher values indicating more attraction to the unselected alternative, provides a measure of decisional ambivalence that can be averaged and compared across experimental conditions. For each participant, we calculated the AUC for each level of key trait, key trait valence, and peripheral trait valence (e.g., ambivalence when categorizing positive traits in loyal targets; see Appendix B for sample categorization trial and AUC schematic).

Categorization accuracy. Using MouseTracker, we calculated the proportion of accurate categorizations (e.g., categorizing INTELLIGENT as "Positive") within each variable.

Target evaluation. For each target, participants answered four evaluation items on a 7-point Likert-scale (1 = *Strongly Disagree*; 7 = *Strongly Agree*), with higher scores indicating more positive evaluations of the target. One item measured the participants' personal affective evaluation of the target: "Overall, I feel positive about this applicant." The remaining three items measured target evaluations with regards to the target's group: "Lehigh University (Lafayette College) should accept this applicant," "This applicant would be valuable to Lehigh University (Lafayette College)," "This applicant would be disliked by other students at Lehigh University (Lafayette College)" (reverse-coded). The four evaluation scores were averaged to calculate a mean evaluation score for each of the eight targets ($\alpha = .70$).

Procedure. Participants completed the study separately, at individual computer cubicles in the lab at Lehigh University. After providing written informed consent, participants were led to believe that they were helping local universities with a study on college admissions and "how current college students evaluate and think about future college students." They were told that they would learn about eight applicants to local colleges and that their main task was to form an overall impression of the applicants while categorizing their traits as either positive or negative.

After receiving these verbal instructions, participants were brought to a computer cubicle and all subsequent instructions were presented onscreen via MouseTracker. To induce a competitive intergroup context, all participants read a fictitious news article

describing the academic and athletic rivalry between Lehigh University and Lafayette College (see Appendix C). They then completed 10 MouseTracker practice trials to acclimatize them to the task (Freeman & Ambady, 2010); in these practice trials, participants categorized HAPPY, LAUGH, SMILE, LIFE, SUCCESS, ANGRY, CRY, FROWN, and DEATH as "Positive" or "Negative." After the 10 practice trials, participants received demographic information about their first target: name (all targets were male), age (ranging from 17 to 18 years), state of residence (all targets were from Pennsylvania), and school (either Lehigh or Lafayette). Participants then completed the trait categorization task. Participants were then directed to a folder adjacent to the computer which contained the evaluation items for each target. The folder was used to increase believability of the cross-university research cover story. After evaluating the target, participants returned their attention to the computer to categorize traits for the next target. This process repeated for each of the eight targets. After evaluating all 8 targets, participants completed a short demographics questionnaire before being debriefed.

Results

Hypothesis 1a: Ambivalence will be sensitive to loyalty information for ingroup members only. We expected loyalty to modulate decisional ambivalence when categorizing both positive and negative peripheral traits but only for ingroup targets. Specifically, we hypothesized that ambivalence would be significantly lower for loyal ingroup targets than for disloyal ingroup targets when categorizing positive traits. For negative traits, we expected the opposite pattern – ambivalence would be significantly lower for disloyal ingroup targets than for loyal ingroup targets. To test this prediction, we analyzed AUC scores for targets whose key trait was loyalty (i.e., were portrayed as

17

loyal or disloyal). We conducted a 2 (group: ingroup target vs. outgroup target) x 2 (key

trait valence: positive [loyal] vs. negative [disloyal]) x 2 (peripheral trait valence: positive

vs. negative) mixed ANOVA with AUC scores as the dependent variable. The main

effect of group was not significant, $F < 1$, nor was the main effect of key trait valence,

$F(1,104) = 1.43$, $p = .23$. The main effect of peripheral trait valence was significant,

$F(1,104) = 75.29$, $p < .001$, $\eta^2_{partial} = .42$, such that positive peripheral traits ($M = 0.48$,

$SE = .04$) were categorized with significantly less ambivalence than negative peripheral

traits ($M = 1.14$, $SE = .08$). Most importantly, the expected three-way interaction was

significant, $F(1,104) = 4.30$, $p = .04$, $\eta^2_{partial} = .04$. To decompose this three-way

interaction, we examined pairwise comparisons within positive and negative peripheral

trait trials.

Firstly, we expected ambivalence to be significantly lower for loyal ingroup

targets than for disloyal ingroup targets when categorizing *positive* traits. Pairwise

comparison confirmed this prediction; loyal ingroup targets ($M = 0.36$, $SE = .06$) elicited

significantly less ambivalence than disloyal ingroup targets ($M = 0.50$, $SE = .07$), $p = .03$.

Furthermore, ambivalence did not differ between outgroup targets, regardless of loyalty,

$p = .50$ (see Figure 1).

We also expected ambivalence to be significantly lower for disloyal ingroup

targets than for loyal ingroup targets when categorizing *negative* traits. Pairwise

comparisons did not confirm this prediction, all $ps > .05$. When categorizing negative

peripheral traits, participants were not sensitive to loyalty information or group

membership (see Figure 2). Consistent with our expectations, the three-way interaction

was driven mainly by the difference in ambivalence for positive traits between loyal and disloyal ingroup members.

   1b: Ambivalence will not be sensitive to warmth information, regardless of group information. We did not expect ambivalence to differ as function of warmth or warmth's interaction with target group membership or peripheral trait valence. To test this prediction, we analyzed AUC scores for targets whose key trait was warmth (i.e., were portrayed as either warm or cold). We conducted a 2 (group: ingroup target vs. outgroup target) x 2 (key trait valence: positive [warm] vs. negative [cold]) x 2 (peripheral trait valence: positive vs. negative) mixed ANOVA with AUC scores as the dependent variable.

   Consistent with our expectations, the main effect of group was not significant, $F < 1$, nor was the main effect of key trait valence, $F < 1$, nor was the three-way interaction, $F < 1$. However, the main effect of peripheral trait valence was again significant, $F(1,104) = 103.67$, $p < .001$, $\eta^2_{partial} = .50$, such that positive peripheral traits ($M = .38$, $SE = .03$) were categorized with significantly less ambivalence than negative peripheral traits ($M = 1.20$, $SE = .08$). Additionally, there was a significant two-way interaction between key trait valence (i.e., warmth) and peripheral trait valence, $F(1,104) = 4.43$, $p = .04$, $\eta^2_{partial} = .04$. Pairwise comparisons indicated that for positive peripheral traits, ambivalence was lower for warm targets ($M = .32$, $SE = .04$) than for cold targets, ($M = .44$, $SE = .05$), $p = .01$ (see Figure 3). However, warm and cold targets did not differ for negative peripheral traits, $p = .47$. These results indicate that participants were sensitive to warmth information, but only when categorizing positive peripheral traits. Importantly, this effect did not vary as a function of target group membership. Although participants may be

responding differently to positive and negative peripheral traits, group membership does not modulate this effect, further demonstrating the unique importance of loyalty information when perceiving ingroup members.

Hypothesis 2: Loyalty and warmth will not affect categorization accuracy. We did not expect categorization accuracy of peripheral traits to differ as a function of target group membership, key trait, or peripheral trait valence. Accuracy rates were submitted to a 2 (group: ingroup target vs. outgroup target) x 2 (key trait: loyalty vs. warmth) x 2 (key trait valence: positive vs. negative) x 2 (peripheral trait valence: positive vs. negative) mixed ANOVA. Contrary to our expectations, there were a number of significant effects[1]; however, the highest-order relationship was a significant three-way interaction between key trait, key trait valence, and peripheral trait valence, $F(1,104) = 12.17$, $p = .001$, $\eta^2_{partial} = .11$. To decompose this three-way interaction, we examined pairwise comparisons within positive and negative peripheral trait trials.

Pairwise comparisons indicated that categorization accuracy of positive peripheral traits was significantly lower for loyal targets ($M = 0.95$, $SE = 0.01$) than for disloyal targets ($M = 0.97$, $SE = 0.01$), regardless of target group membership. However, there was no difference in categorization accuracy of positive traits between warm and cold targets, regardless of group membership, $p = .25$ (see Figure 4).

---

[1] There was no main effect of target group membership, $F(1,104) = 1.63$, $p = .21$. However, there was a significant main effect of key trait valence, $F(1,104) = 62.45$, $p < .001$, $\eta^2_{partial} = .38$, such that positive key traits (loyal, warm; $M = .96$, $SE = .01$) were categorized more accurately than negative traits (disloyal, cold; $M = .92$, $SE = .01$). There was also a main effect of peripheral trait valence, $F(1,104) = 43.49$, $p < .001$, $\eta^2_{partial} = .30$, such that positive peripheral traits ($M = .97$, $SE = .004$) were categorized more accurately than negative peripheral traits ($M = .92$, $SE = .01$). Additionally, there were two significant two-way interactions: between key trait and key trait valence, $F(1,104) = 5.24$, $p = .02$, $\eta^2_{partial} = .05$; and between key trait valence and peripheral trait valence, $F(1,104) = 78.01$, $p < .001$, $\eta^2_{partial} = .43$.

Pairwise comparisons indicated that categorization accuracy of negative traits was significantly lower for disloyal targets ($M = 0.86$, $SE = 0.01$) than for loyal targets ($M = .97$, $SE = 0.01$), regardless of group membership. The same pattern emerged when warmth was the key trait; accuracy for cold targets ($M = 0.88$, $SE = 0.01$) was significantly lower than for warm targets ($M = 0.95$, $SE = 0.01$), regardless of group membership (see Figure 5).

Taken together, these data show that participants were more accurate when categorizing negative traits in targets whose key trait was positive (i.e., loyal/warm targets). Further, this effect did not change as a function of target group membership or key trait. However, participants did distinguish between loyalty and warmth when categorizing positive traits. They were categorized with the same accuracy in warm and cold individuals, whereas accuracy differed slightly between loyal and disloyal targets. Consistent with our expectations, target group membership did not significantlly modulate any of the observed differences in categorization accuracy[2].

Hypothesis 3: Evaluation of targets. In addition to expecting that loyal/warm targets would be rated more positively than disloyal/cold targets, we also hypothesized that the relative increase in evaluation from disloyal to loyal for ingroup targets would be

---

[2] To take a closer look at the possible effect of target group membership on the three-way interaction, we ran two separate 2 (key trait: loyalty vs. warmth) x 2 (key trait valence: positive vs. negative) x 2 (peripheral trait valence: positive vs. negative) repeated measures ANOVAs for ingroup and outgroup targets, respectively. The three-way interaction was significant for both groups (p's $\leq$ .05). Furthermore, the pattern of means was nearly identical to that reported above. The one difference emerged for categorization accuracy of positive traits in warm and cold targets. Although this difference was non-significant for ingroup targets ($p > .05$), positive traits in cold outgroup targets were rated slightly less accurately than in warm outgroup targets ($M_{\text{diff}} = 0.02$, $p = .02$). Due to the non-significance of the overall four-way interaction ($p = .48$) and relative uniformity of the pattern of means, we chose not to highlight this result.

larger than the increase from cold to warm for ingroup targets. In other words, we

expected ingroup members to be rewarded relatively more for being loyal (vs. disloyal)

than they are for being warm (vs. cold). To test this prediction, mean evaluation scores

were submitted to a 2 (group: ingroup target vs. outgroup target) x 2 (key trait: loyalty vs.

warmth) x 2 (key trait valence: positive vs. negative) mixed ANOVA. The expected main

effect of key trait valence was significant, $F(1,104) = 57.13$, $p < .001$, $\eta^2_{partial} = .36$ –

unsurprisingly loyal/warm targets ($M = 4.62$, SE = 0.05) were rated more positively than

disloyal/cold targets ($M = 4.12$, $SE = 0.06$), regardless of group membership.

Unfortunately, the predicted three-way interaction was non-significant, $F(1,104) = 1.37$,

$p = .25$.

Although the predicted interaction did not reach statistical significance, we used

planned contrasts to investigate the effect of key trait and key trait valence in both

ingroup and outgroup targets. Therefore, two separate 2 (key trait: loyalty vs. warmth) x

2 (key trait valence: positive vs. negative) repeated-measures ANOVAs were conducted

for ingroup and outgroup targets. For ingroup members, the predicted two-way

interaction was marginally significant, $F(1,54) = 3.53$, $p = .07$, $\eta^2_{partial} = .06$. Consistent

with our predictions, planned contrasted showed that the difference between

loyal/disloyal evaluation and between cold/warm ingroup targets ($M_{diff} = -0.32$, $SE =$

0.17) was marginally significant, $p = .07$ (see Figure 6). Importantly, for outgroup targets,

the two-way interaction was non-significant, $F < 1$, as was the planned comparison

between the loyal/disloyal and warm/cold difference, $p = .94$ (see Figure 7). There is

some evidence, then, that participants rewarded ingroup members more for loyalty than

for warmth; furthermore, they did not differentiate between loyalty and warmth when evaluating outgroup members.

Discussion

Study 1 was designed to investigate the influence of loyalty information when evaluating ingroup members in competitive intergroup contexts – furthermore, we also investigated the effects of warmth information, as well as any differences in evaluation between ingroup and outgroup targets.

Firstly, we found that participants were sensitive to the loyalty of ingroup members, such that they were less certain when categorizing positive traits in disloyal (versus loyal) Lehigh students. We argue that this is because loyalty was a central evaluative trait in this context; therefore, the portrayal of an ingroup member as disloyal may have subtly changed the valence of positive trait words. Positive traits (i.e., INTELLIGENCE) in disloyal ingroup members may have evoked initial negativity, which led to increased ambivalence. Importantly, this sensitivity disappeared for outgroup members – positive traits were categorized with the same certainty for Lafayette students, regardless of portrayed loyalty. Participants behaved somewhat differently when categorizing negative peripheral traits. Contrary to our expectations, participants were not sensitive to loyalty or group for negative traits such as LAZY or UNPRODUCTIVE. The lack of loyalty sensitivity may have occurred for a number of reasons. Because there were relatively fewer negative than positive traits within each target, participants were more likely to have switched to a negative trait after having just categorized a positive trait, incurring task-switching costs (e.g., Logan & Gordon, 2001) and augmenting decisional ambivalence. Consistent with this explanation, negative

23

peripheral traits were associated with more ambivalence, regardless of key trait, key trait valence, or target group membership. Alternatively, negative traits are possibly more salient than positive traits (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), thus making them less susceptible to subtle effects of a loyalty manipulation.

Second, we demonstrated that categorization accuracy was not modulated by target group membership. However, participants were more accurate at categorizing positive traits in disloyal targets than loyal targets, collapsing across group membership; however, accuracy was the same between warm and cold targets. Again, negative traits displayed a different pattern: accuracy was lower for disloyal and cold targets, compared to loyal and warm targets. A possible explanation for these effects is that positive traits are incongruent with a disloyal ingroup member, just as negative traits are incongruent with a loyal or warm target. Seeing incongruent trait pairings may have violated participants' expectations, thus increasing their attention to the categorization task and preserving high accuracy. Indeed, researchers have shown that early attentional processes (i.e., ERP) are sensitive to incongruence between social targets and non-stereotypical behaviors (Dickter & Gyurovski, 2012). Another explanation for the effects on accuracy could be the fact that there were more positive than negative traits for each target. This could have led to the decreased differences observed for positive traits due to the larger sample size; small differences in accuracy may have been exaggerated in the few negative traits.

Lastly, we provide marginally significant evidence that ingroup targets were rewarded more for being loyal (vs. disloyal) than they were for being warm (vs. cold), demonstrating the unique importance of loyalty when judging ingroup members.

Importantly, participants did not differentiate between loyalty and warmth when providing global evaluations of outgroup members. Taken together, the results support our general hypotheses and indicate that loyalty is more important than warmth when evaluating ingroup members in a competitive intergroup context; furthermore, loyalty information may have altered construal of peripheral traits in such a way that positive traits in disloyal ingroup members were seen as less positive and thus categorized with more uncertainty.

Study 2: Preference, Sacrifice, and Intergroup Competition

The first study found evidence that global loyalty information modulated the perception of positive traits in ingroup members, as well as influenced explicit global evaluations of those group members. Studies 2 and 3 extend these results by examining specific aspects of loyalty and their interaction with intergroup competition. We also aimed to build on Packer and Ungson (2015), who demonstrated that individuals spontaneously construe loyalty in a variety of ways. Specifically, our prior work was intended to examine if individuals represent loyalty as more than just ingroup *preference* (e.g., Waytz et al., 2013). After analyzing participants' free responses ($N = 224$), this is exactly what we found. Although about 12% of individuals spontaneously mentioned ingroup preference as an important component of group loyalty, other aspects of loyalty were more strongly represented among participants' responses. For example, *sacrifice* for the group (~31%), *engagement* with group goals (~42%), *conformity* to group norms (~34%), and *dependability/integrity* (~33%) were mentioned by more individuals than ingroup preference. Clearly, lay conceptions of loyalty include several important components.

The main purpose of Study 2 is to differentiate between different aspects of loyalty; specifically, we will focus on ingroup preference and self-sacrifice (e.g., Rothgerber, 2014; Van Vugt & Hart, 2004) and investigate whether certain loyalty construals are more or less important under different intergroup contexts. Participants learned about and evaluated a series of fellow employees (i.e., ingroup members) as part of either a no-competition or high-competition hypothetical corporate promotion scenario. Importantly, the fictitious employees varied orthogonally on their respective levels of preference and sacrifice (Packer & Ungson, 2015). That is, some employees were high in both preference and sacrifice, whereas others were high in preference but low in sacrifice, and so on. Because there has been relatively little research directly contrasting different aspects of loyalty against each other, we were primarily interested in how the presence intergroup competition might influence the relative importance of preference and sacrifice, if at all. As such, we did not make directional predictions about which aspect might be more important; however, we reasoned that competing predictions were possible.

Hypotheses

      Hypothesis 1: The effect of preference will increase with competition, but sacrifice will be unaffected by competition. The first hypothesis predicts main effects of both preference and sacrifice, but only preference will interact with intergroup competition. Specifically, high-preference members (compared to low-preference members) will be rewarded more when competition is present than when it is absent. Consistent with this hypothesis, Hornsey and Imani (2004) found that ingroup critics (of the ingroup) were derogated less than outgroup critics in the absence of intergroup

competition; however, the presence intergroup competition eliminated this difference such that ingroup critics were derogated to the same extent as outgroup critics (Ariyanto et al., 2010). Although not criticizing the ingroup is not a typical form of preference, it does represent a form of treating the ingroup favorably. Regarding self-sacrifice, Packer and Ungson (2015) found that when asked about group loyalty, participants spontaneously mentioned self-sacrifice (~31%) twice as often as ingroup preference (~12%); this data suggest that sacrificing time and resources to help other group members (and the group as a whole) is a fundamental aspect of loyalty that may be viewed as important regardless of intergroup competition.

 Hypothesis 2: The effect of sacrifice will increase with competition, but preference will be unaffected by competition. Although this hypothesis also predicts main effects of preference and sacrifice, it also predicts an interaction between sacrifice and competition. Specifically, high-sacrifice members (compared to low-sacrifice members) will be rewarded more when competition is present than when it is absent. This prediction is consistent with Rothgerber (2014), who investigated disloyalty derogation among vegans. Vegans were asked how bad it would be for other vegans to eat meat (i.e., refrain from sacrificing carnivorism for group ideals). Consistent with Hypothesis 2, derogation of disloyal individuals was most strong when intergroup conflict (i.e., veganism vs. vegetarianism vs. omnivorism) was made salient. Additionally, group members are more likely to incur personal costs after being primed with intergroup competition (Van Vugt & Hart, 2004). Regarding preference, we might expect the goal to promote and preserve positive ingroup differentiation (i.e., preference)

to be important regardless of intergroup competition (Tajfel & Turner, 1979, 2004;

Tajfel, 1970).

Method

      Participants. A total of 272 participants located in the United States were

recruited using Amazon's Mechanical Turk (MTurk) online recruitment system in the fall

of 2014. Eight of these individuals were discarded from analyses because they completed

the experiment too quickly or failed an attention check embedded within the Qualtrics

survey. The completion time cutoff point was half the median completion time; thus, any

individuals who completed the study in less than 4.38 minutes were removed. In the final

sample of 264 participants, there were 121 females and 143 males with a mean age of

34.68 years ($SD = 11.91$). The study took about 10 minutes and all individuals were paid

$0.75 for their participation.

      Design. Study 2 utilized a 2 (competition: high vs. none) x 2 (preference: high vs.

low) x 2 (sacrifice: high vs. low) between-subjects design. Each participant was randomly

assigned to one level of all three variables. Dependent variables measured were target

evaluation, as well as a proposed salary item (see Measures).

      Experimental manipulations.

      Intergroup competition prime. Before learning about and evaluating the ingroup

target, participants were randomly assigned to a competition condition. Half of the

participants only read instructions about the corporate promotion task, whereas the other

half read the instructions plus a description of corporate competition. Specifically,

participants in the high-competition condition were told that the task was especially

important to help their company "effectively compete with its rivals" (see Appendix D).

Loyalty behavioral descriptors. Before evaluating the employee during the corporate promotion task, participants read statements which described how the employee "generally acts when working for this company." Three of the five randomly-ordered statements were present for every target, regardless of condition. However, the two critical behavioral descriptors varied by condition, such that participant saw one preference-related behavior and one sacrifice-related behavior (depending on random assignment; see Appendix E).

All critical behavioral descriptors were pilot-tested to ensure that they influenced the appropriate perceptions (e.g., preference-related behaviors only affected perceptions of preference-specific loyalty). In this 2 (preference: high vs. low) x 2 (sacrifice: high vs. low) between-subjects pilot experiment, a sample of 123 MTurk workers (83 males, 40 females; $M_{age} = 33.89$, $SD = 10.33$) learned about one individual and rated the likelihood that the individual would engage in a number of behaviors. Instead of seeing all five behaviors (as in the current study), participants only saw the two critical behavioral descriptors for the target. After viewing the behavioral descriptors, participants rated the likelihood (1 = *Not at all Likely*; 7 = *Extremely Likely*) that the individual would engage in either preference-relevant or sacrifice-relevant behaviors (see Appendix G for behavior list). We averaged the scores for all preference-related and sacrifice-related behaviors to obtain a mean score for that aspect of loyalty.

Two 2 (preference: high vs. low) x 2 (sacrifice: high vs. low) factorial ANOVAs were conducted on the mean preference and mean sacrifice scores. For preference behaviors, there was only a main effect of the preference critical statements, $F(1,119) = 4.72$, $p < .001$, $\eta^2_{partial} = .04$, such that high-preference targets ($M = 2.87$, $SD = 0.42$) were

rated as more likely to engage in preference-relevant loyalty behaviors than low-preference targets ($M = 2.70$, $SD = 0.43$). For sacrifice behaviors, there was only a main effect of sacrifice critical statements, $F(1,119) = 147.18$, $p < .001$, $\eta^2_{partial} = .55$, such that high-sacrifice targets ($M = 3.28$, $SD = 1.09$) were more likely to engage in sacrifice-relevant loyalty behaviors than low-sacrifice targets ($M = 1.85$, $SD = 0.76$). Thus, we were confident that the critical loyalty statements used in the current study adequately affected specific perceptions of target loyalty.

Measures.

Target evaluation. After learning about the appropriate employee, all participants answered five evaluation items on 7-point Likert-scales: for example. "How positive would you feel about this employee being given a raise?" (1 = *Extremely Negative*; 7 = *Extremely Positive*; see Appendix F for all items). The five evaluation scores were averaged to calculate a mean evaluation score for each participant ($\alpha = .86$), with higher scores indicating more positive evaluations of the target.

Proposed salary. As another index of social evaluation, participants answered the following question: "The average industry salary for the position is $50,000 per year. What do you think would be an appropriate starting salary for this applicant?" Participant responses were divided by 1,000 to calculate a score ranging from 1 to 100, with higher numbers indicating a higher-proposed salary.

Procedure. Participants registered for the study by electing to participate in an MTurk HIT entitled, "Provide opinions regarding group-related issues." They were then directed to the Qualtrics survey, through which all instructions and stimuli were presented. After providing informed consent, participants were told that they were taking

part in a fictional corporate promotion scenario in which they would learn about an employee and give their opinions about that employee. Participants then read either the no-competition or high-competition introduction to the task, depending on random assignment. Participants then read five randomly-ordered behavioral descriptors of that employee (according to loyalty condition). Participants were also told that they might have to recall information about the applicant later in the study; this was to ensure that participants paid adequate attention to each behavioral descriptor. After learning about the applicant, participants completed the four target evaluation items and proposed salary items. They also completed a short demographics questionnaire before being debriefed.

Results

 Target evaluation. Mean target evaluation scores were submitted to a 2 (competition: high vs. none) x 2 (preference: high vs. low) x 2 (sacrifice: high vs. low) factorial ANOVA[3]. There was a main effect of preference, $F(1,256) = 140.81$, $p < .001$, $\eta^2_{partial} = .36$, such that employees portrayed as high-preference ($M = 5.73$, $SD = 0.90$) were evaluated more positively than those who were portrayed as low-preference ($M = 4.53$, $SD = 1.00$). Similarly, a main effect of sacrifice, $F(1,256) = 92.25$, $p < .001$, $\eta^2_{partial} = .27$, demonstrated that employees who were willing to sacrifice for the group ($M = 5.62$, $SD = 1.00$) were more positively evaluated than employees who did not demonstrate a willingness to sacrifice ($M = 4.65$, $SD = 1.02$). The effect of preference did not vary as a function of intergroup competition, as evidenced by the non-significant interaction, $F < 1$ (see Figure 8). The only significant interaction was between

---

[3] Unfortunately, Levene's test indicated that these data exhibited unequal variance across conditions, $F(7,256) = 3.25$, $p < .05$. The use of various transformations (i.e., log, square root, reciprocal) did not alleviate this problem (all ps $< .05$). Thus, the following results, reported using the original scale, should be interpreted with caution.

competition and sacrifice, $F(1,256) = 4.19$, $p = .04$, $\eta^2_{partial} = .02$, indicating that the effect

of sacrifice depended on the presence of intergroup competition. Although pairwise

comparisons showed that high-sacrifice employees were evaluated more positively than

low-sacrifice employees regardless of competition (all $ps < .001$), this difference was

larger in the no-competition condition ($M_{diff} = 1.16$, $SE = 0.14$) than in the high-

competition condition ($M_{diff} = 0.76$, $SE = 0.14$), $p = .02$ (see Figure 9).

This pattern of results lends support to Hypothesis 2 in that the effect of sacrifice

depended on intergroup competition, whereas preference was wholly unaffected by it.

However, the pattern of results is somewhat different than what we expected; although

we expected intergroup competition to increase the relative influence of sacrifice on

evaluation, the relative increase from low-sacrifice to high-sacrifice was actually larger

when competition was absent.

Proposed salary. To provide another measure of social evaluation, participants

also indicated what salary they believed the employee deserved. Similar to evaluation

scores, proposed salary scores were submitted to a 2 (competition: high vs. none) x 2

(preference: high vs. low) x 2 (sacrifice: high vs. low) factorial ANOVA[4]. Similar to the

mean evaluation scores, there was a significant main effect of sacrifice, $F(1,256) = 19.96$,

$p < .001$, $\eta^2_{partial} = .07$, such that high-sacrifice ($M = 57.02$, $SD = 11.19$) employees were

awarded higher salaries than low-sacrifice ($M = 51.37$, $SD = 8.59$) employees. The effect

of preference was only marginally significant, $F(1,256) = 2.99$, $p = .09$, $\eta^2_{partial} = .01$,

although the pattern of means mirrored those of evaluation scores (i.e., high-preference

---

[4] Unfortunately, Levene's test indicated that these data exhibited unequal variance across
conditions, $F(7,256) = 3.25$, $p < .05$. The use of various transformations (i.e., log, square
root, reciprocal) did not alleviate this problem (all $ps < .05$). Thus, the following results,
reported using the original scale, should be interpreted with caution.

employees awarded higher salaries than low-preference employees). Inconsistent with either of our hypotheses, none of the loyalty variables interacted with competition. Unlike mean evaluation scores, the effect of sacrifice and preference was not moderated by the presence or absence of intergroup competition.

Discussion

These results build on Study 1 by further demonstrating the importance of loyalty information when evaluating potential ingroup members. Specifically, these results also extend previous research and demonstrate that individuals have multiple construals of loyalty (i.e., preference, sacrifice), and these construals have different effects on ingroup evaluation depending on the level of intergroup competition. Employees hoping for a raise were evaluated more positively and allotted a higher salary when they demonstrated pride in their company's ability to outperform its competitors (preference), as well as willingness to sacrifice time to help the company (sacrifice). Importantly, however, the relative advantage afforded to high-sacrifice employees (i.e., compared to low-sacrifice employees) was larger without intergroup competition. This finding was inconsistent with our expectation that competition might lead to a greater reward when employees demonstrated that particular form of loyalty.

A possible explanation of this effect might be an increased standard imposed by participants when competition was present. Because the competition prime stressed the importance of the promotion task "to ensure that [the] company is able to effectively compete with its rivals," participants may have perceived high-sacrifice employees as not impressive enough to deserve as high a rating as high-sacrifice employees received in the no-competition condition. In other words, when competition is present, employees

wanting a raise may need to do more than just sacrifice nights and weekends for the company. Although this pattern was different from what predicted in Hypothesis 2, this data does provide evidence that loyalty concerns, specifically regarding a member's willingness to sacrifice time and resources for collective benefit, are sensitive to intergroup competition when evaluating ingroup members.

Study 3: Sacrifice, Conformity, and Status

The previous study showed that some types of loyalty information are sensitive to intergroup competition. Study 3 was an attempt to again examine the distinct effects of different aspects of loyalty; specifically, we focused on the loyalty construals of *sacrifice* and *conformity* (Packer & Ungson, 2015). However, instead of intergroup competition, we examined the effect of an important intragroup variable: status. We build on Hollander's (1958; 1960) idiosyncrasy credit theory, which proposed that status is bestowed on group members when they act in accordance with the group's expectations (see also Stone & Cooper, 2009). Idiosyncrasy credit refers to the degree to which a group member is able to deviate from behavioral expectations before being punished by the group. High-status members (i.e., individuals who have accrued a significant amount of idiosyncrasy credit) are able to engage in behaviors that would normally be sanctioned or punished if performed by low-status members. Take, for instance, a new employee at a company. At first, she may not have much status among her coworkers or superiors. After a period of acting in line with the group's expectations (e.g., by working hard and following the rules), she may gain status in her peers' eyes. Once she has accrued idiosyncrasy credit, she may be able to deviate from certain norms such as speaking out of turn during meetings – her newly-acquired status allows her to do so without fearing

34

rebuke or criticism from group members. Stone and Cooper (2009) recently refined the idiosyncrasy credit accrual process and argue that the two main ways to build credit are demonstrations of fidelity and competence. Study 3 attempted to address the fidelity component of credit-building, which Stone and Cooper equate to loyalty, solidarity, commitment, and trust – all concepts bearing striking similarity to our proposed loyalty construals (Packer & Ungson, 2015). In the current study, we focused on two avenues to demonstrating loyalty: sacrifice for the group and conformity to group norms.

A crucial aspect of Hollander's (1958) conceptualization of idiosyncrasy credit is that status emerges (i.e., credit is deposited) when behavior matches expectancies, and that these expectancies themselves change as a function of increased or decreased status. We argue that low-status and high-status group members are subject to different expectancies with regards to their loyalty-relevant behavior. For example, a new employee is expected not only to sacrifice for the company, but also to strictly conform to the rules. Not to demonstrate both would signal disloyalty and invite criticism. Conversely, the CEO of a company may be expected to forego a large signing bonus if the organization is suffering financially (i.e., sacrifice), but may not be expected to strictly conform to all group norms. These predictions are consistent with previous research showing that future leaders were granted more "innovation credit" when they acted non-normatively (Abrams, de Moura, Marques, & Hutchison, 2008).

In this online study, participants were placed in a hypothetical corporate hiring scenario similar to Study 2. All participants learned about and evaluated job applicants for either a low-status (e.g., entry level) or high-status (e.g., CEO) position. The fictitious employees varied orthogonally on their respective levels of sacrifice and

35

conformity (Packer & Ungson, 2015). Some employees were high in both sacrifice and conformity, whereas others were high in sacrifice but low in conformity, and so on.

Hypotheses

Hypothesis 1: Sacrifice matters equally, regardless of status. As outlined above, we argue that sacrifice will be important regardless of status; as such, we hypothesized that all employees will be equally rewarded for demonstrating sacrifice, regardless of status. That is, we expected a main effect of sacrifice, but no interaction between sacrifice and status.

Hypothesis 2: Conformity will be rewarded more for low-status targets. Because conformity is less important for potential ingroup leaders (e.g., Abrams et al., 2008), we hypothesized that high-status employees would be rewarded less than low-status employees for demonstrations of conformity. In other words, we expected an interaction between status and conformity, such that the relative increase in evaluation from low-conformity to high-conformity targets would be greater for low-status employees than for high-status employees.

Method

Participants. A total of 86 participants were recruited from the Lehigh University undergraduate participant pool in the spring of 2015. Ten of these individuals were removed from analyses because they failed either an attention check or manipulation check embedded in the study. In the final sample of 76 participants[5], there were 40 females and 36 males with a mean age of 18.83 years ($SD = 0.92$).

---

[5] The final sample of 76 participants was much less than desired. Unfortunately, the undergraduate participant pool during the spring 2015 semester, comprised of students enrolled in an introductory psychology class, had substantially less enrollment than in previous semesters.

Design. Study 3 utilized a 2 (status: high vs. low) x 2 (sacrifice: high vs. low) x 2 (conformity: high vs. low) between-subjects design. Each participant was randomly assigned to one level of all three variables. Similar to Study 2, dependent variables were target evaluation, as well as a proposed salary item (see Measures).

Experimental manipulations.

Intragroup status prime. Participants took part in a fictional corporate hiring scenario. To manipulate intragroup status of the target, the applicant was being evaluated for either an entry-level position (low-status) or for the position of CEO (high-status).

Loyalty behavioral descriptors. For each applicant, participants read statements which described how the employee "generally acts when working for a company." Just as in Study 2, three of the five randomly-ordered statements were present for every target, regardless of condition. However, the two critical behavioral descriptors varied by condition, such that participant saw one sacrifice-related behavior and one conformity-related behavior (depending on random assignment; see Appendix H).

Measures.

Target evaluation. After learning about the appropriate applicant, all participants answered five evaluation items on 7-point Likert-scales: for example. "How positive would you feel about this employee being hired?" (1 = *Extremely Negative*; 7 = *Extremely Positive*). All five items were based on evaluation items from Study 2 (see Appendix I). The five evaluation scores were averaged to calculate a mean evaluation score for each participant ($\alpha = .84$), with higher scores indicating more positive evaluations of the target.

Proposed salary. As another index of social evaluation, participants answered the following question: "Do you think this applicant deserves more or less than the industry average? Indicate how much above or below the industry average you think this applicant deserves." Participant responses ranged from -100 (100% less than industry average) to +100 (100% more than industry average), with larger, positive numbers indicating a higher proposed salary.

Procedure. Participants completed the study separately, at individual computer cubicles in the lab at Lehigh University. After providing written informed consent, they were directed to the Qualtrics survey, through which all instructions and stimuli were present. Participants were told that they were taking part in a fictional corporate hiring scenario in which they would learn about an applicant and give their opinions about that applicant. Participants evaluated applicants for either an entry-level position (low-status) or for CEO (high-status). Participants then read five randomly-ordered behavioral descriptors of that employee (according to loyalty condition). Participants were also told that they may have to recall information about the applicant later in the study; this was to ensure that participants paid adequate attention to each behavioral descriptor. After learning about the applicant, participants completed the five evaluation items and proposed salary items. They also completed a short demographics questionnaire before being debriefed.

Results

To test the following hypotheses, both target evaluation and proposed salary were submitted to a 2 (status: high vs. low) x 2 (sacrifice: high vs. low) x 2 (conformity: high

vs. low) factorial ANOVA. These results should be interpreted with some caution, as the sample size was quite low ($N = 76$).

Target evaluation. We expected a main effect of sacrifice, but no interaction between sacrifice and status (Hypothesis 1). There was a significant main effect of sacrifice on target evaluation, $F(1,68) = 27.99$, $p < .001$, $\eta^2_{partial} = .29$. Consistent with our hypothesis, applicants who demonstrated a willingness to sacrifice ($M = 5.56$, $SE = 0.15$) were evaluated more positively than those who were unwilling to sacrifice to help the group ($M = 4.42$, $SE = 0.15$).

We also expected an interaction between status and conformity, such that the relative increase in evaluation from low-conformity to high-conformity targets would be greater for low-status employees than for high-status employees (Hypothesis 2). Unfortunately, the interaction between status and conformity was non-significant, $F < 1$. There was, however, a significant main effect of conformity, $F(1,68) = 17.76$, $p < .001$, $\eta^2_{partial} = .21$, such that applicants were evaluated more positively when they demonstrated conformity ($M = 5.45$, $SE = 0.15$) than when they demonstrated non-conformity ($M = 4.54$, $SE = 0.15$). Status did not interact with sacrifice, $F < 1$, nor was there a significant three-way interaction, $F < 1$.

Proposed salary. Consistent with Hypothesis 1, there was a significant main effect of sacrifice on proposed salary, $F(1,58) = 17.39$, $p < .001$, $\eta^2_{partial} = .29$, such that high-sacrifice applicants ($M = 29.45$, $SE = 3.69$) were given higher salaries relative to the industry average than low-sacrifice applicants ($M = 7.04$, $SE = 3.90$). Interestingly, there was also a main effect of status, $F(1,58) = 6.56$, $p = .01$, $\eta^2_{partial} = .10$, such that entry-level applicants ($M = 25.12$, $SE = 3.68$) were given higher relative salaries than CEO

applicants ($M = 11.36$, $SE = 3.92$). Unlike evaluation, there was no main effect of conformity on proposed salary, $F < 1$.

There was no interaction between status and conformity, $F < 1$, which was inconsistent with Hypothesis 2. There was, however, a significant interaction between sacrifice and conformity, $F(1,58) = 4.82$, $p = .03$, $\eta^2_{partial} = .08$. Pairwise comparisons showed that when conformity was high, sacrifice did not matter, $p > .05$. When conformity was low, however, demonstrating sacrifice was enough to earn an increase in proposed salary, $p < .001$ ($M_{diff} = 34.20$, $SE = 7.66$; see Figure 10). Pairwise comparisons also showed this effect in the opposite direction[6]. Similar to target evaluation, the three-way interaction was not significant, $F < 1$.

Discussion

In the current study, we hoped to show that intragroup status modulates the importance of two important aspects of loyalty, sacrifice and conformity. Consistent with our hypotheses, the willingness to sacrifice to help the group was beneficial to applicants, regardless of status. Participants evaluated high-sacrifice applicants more positively and rewarded them with a higher starting salary. This finding builds on Study 2 and further demonstrates the importance of sacrifice when evaluating ingroup members on the basis of loyalty. In contrast to Study 2, which showed that concerns with sacrifice are sensitive to intergroup competition, the current results suggest that these concerns are relatively insensitive to the status of the group member. In other words, from the bottom of the

---

[6] When an applicant demonstrated sacrifice, the level of conformity did not matter, $p > .05$. However, when sacrifice was low, demonstrating conformity was enough to earn an increase in proposed salary, $p = .04$ ($M_{diff} = 16.37$, $SE = 7.80$).

organization to the top, participants prioritized sacrifice as a key feature in evaluating job

applicants and assigning their starting salary.

Based on the past literature, we expected conformity to be influenced by status;

specifically, we expected conformity to matter less for high-status applicants because

leaders are sometimes given the freedom to innovate and engage in counter-normative

behavior (Abrams et al., 2008; Hollander, 1958). The data did not support our hypothesis;

although high-conformity applicants were evaluated more positively than their low-

conformity counters, status did not modulate this relationship. CEOs were held to the

same conformity-expectations as entry-level applicants. We may have failed to find our

predicted effect due to the nature of the corporate hiring task. Unlike Study 2, in which

targets were already group members and were thus subject to intragroup concerns, job

applicants in the current study were not yet part of the ingroup when they were being

evaluated. Although Hollander (1958) and Abrams et al. (2008) provide evidence for the

non-conformist leeway provided to leaders, perhaps outgroup applicants were not

afforded that same luxury, even if they were applying to a high-status position.

Additionally, the restricted sample size of the current study may have limited our power

in finding the two-way interaction.

An interesting, but unexpected, interaction was found between sacrifice and

conformity when predicting proposed salary. The interaction suggests that when an

applicant demonstrates a high willingness to conform, level of sacrifice does not

significantly influence salary (see Figure 10). However, when an applicant is non-

conformist, the willingness to sacrifice for the group is enough to "earn" a boost in pay.

Although this effect was not hypothesized, it suggests that the aspects of loyalty may

have an additive properties. That is to say, demonstrating sacrifice is enough to compensate for failing to meet a conformity expectation. Put another way, failing to demonstrate only one aspect of loyalty did not doom the applicants – the most negative evaluations and lowest salaries were given to those applicants who demonstrated neither sacrifice nor conformity.

General Discussion

The present studies were an attempt to investigate the influence of loyalty information during impression formation processes, as well as to examine how situational contexts interacted with loyalty to affect intragroup evaluations. Study 1 provided evidence that trait-level loyalty may have affected how other, peripheral traits were perceived in ingroup members. When categorizing traits as either "Positive" or "Negative," participants displayed more uncertainty when categorizing positive traits in disloyal ingroup members. Consistent with Asch (1946) and Nauts et al. (2014), manipulation of a key or central trait (in this case, loyalty) may have resulted in a reorganization of peripheral traits such that positive traits like intelligence are not perceived as unambiguously positive when they belong to an ingroup member who is disloyal. Importantly, this effect was absent for outgroup members, suggesting that loyalty concerns are only relevant when learning about and evaluating ingroup members, those with whom we are most likely to cooperate. The effect of group was also absent when we manipulated warmth instead of loyalty, suggesting that loyalty may supplant warmth as a central evaluative trait in competitive intergroup contexts. Although we showed that loyalty information may have changed how other traits were perceived, more testing is needed to fully examine the extent to which loyalty information reorganizes

person perception. For example, although the current study provides evidence for subtle changes in valence of positive traits, the current data do not allow us to discriminate between two possible interpretations. It is unclear whether participants perceived positive traits as less positive overall (i.e., "intelligence itself is not as positive a trait, regardless who has it") or perceived the traits as less positive in the context of that target (i.e., "intelligence is not a positive trait for this disloyal group member to have").

Study 2 extended previous research (Packer & Ungson, 2015) by more closely examining specific aspects of loyalty, preference and sacrifice, as part of a corporate promotion scenario. Specifically, participants evaluated ingroup employees who varied on these loyalty dimensions, and under different levels of intergroup competition. We found that both preference and sacrifice were important to evaluation, regardless of competition. If an ingroup member was portrayed as feeling proud of the group and willing to sacrifice for the group, that member was evaluated more positively and was rewarded a higher salary. Interestingly, employees were rewarded relatively more for demonstrating sacrifice when intergroup competition was absent, compared to when intergroup competition was made salient. This effect may have occurred as a function of the increased standards to which employees were held in situations of competition; the amount of sacrifice that deserved high praise in the absence of competition was not impressive enough to warrant adulation when intergroup competition loomed. This possibility could be tested in future research by presenting participants with a similar corporate promotion scenario in which participants learn about an employee who engages in sacrifice-relevant behaviors, just as in Study 2. However, participants would then choose among a number of preference or sacrifice behaviors which could bolster their

case for a promotion; if the "increased standards" explanation is correct, we would expect

sacrifice behaviors to be chosen more when competition is present versus absent. In all,

these results are consistent with Study 1 in that they demonstrate the importance of

loyalty information during intragroup evaluation; however, they also build on those

results by showing how only concerns for sacrifice are sensitive to the level of intergroup

competition. This study did suffer from a failure to meet the statistical assumption of

homogeneity of variance, so this data should be interpreted with caution.

In Study 3, we looked to idiosyncrasy theory (Hollander, 1958, 1960) as a

framework for understanding how the loyalty aspects of sacrifice and conformity might

interact with intragroup status to influence evaluation. As part of a corporate hiring

scenario, participants evaluated individuals who varied on those loyalty dimensions and

who applied for either a low-status or high-status position. As we expected,

demonstrating the willingness to sacrifice for the group was important, regardless of

status – high-sacrifice individuals were evaluated more positively and rewarded higher

salaries. We reasoned, because high-status individuals may be expected to conform less

(Abrams et al., 2008), that conformity would only be rewarded for low-status members.

However, we found that status did not modulate the effect of conformity on evaluation or

proposed salary. The lack of our predicted interaction could have been due to the fact that

job applicants are, by definition, not part of the ingroup. Although they are clearly

demonstrating their desire to become part of the ingroup, even high-status applicants may

not yet have accrued enough idiosyncrasy credit to flout rules and deviate from group

norms. Importantly, however, results from Study 3 suggest that the separate aspects of

loyalty may be additive. Applicants who were only high on only one aspects of loyalty

were not derogated to the same extent as those who were deficient in both aspects. This interaction suggests that there may be multiple ways to accrue idiosyncrasy credits. Future research could investigate this effect in other components of loyalty, such as preference of dependability/integrity. Although Study 3 suggests that sacrifice and conformity may be additive in one context, this may not be the case for loyalty's other components; for example, if a target is portrayed as undependable, sacrifice may not be enough to "save" them. Additionally, because of the nature of status, future research should examine the effects of loyalty in group members to rule out the possibility that status accrual via loyalty may not be effective for those who are not yet part of the group.

Taken together, the present studies speak to the importance of loyalty information when perceiving and evaluating ingroup members across multiple intergroup and intragroup contexts. Of course, more research is needed in this area to further clarify how loyalty is conceptualized by individuals, and how distinct aspects of loyalty (preference, sacrifice, conformity, dependability/integrity) predict group-relevant behaviors. Although Study 2 showed that sacrifice (and not preference) was sensitive to intergroup competition, does conformity follow the same pattern? Additionally, to what extent might preference also contribute to accruing idiosyncrasy credit and status bestowal? These are questions to be addressed by future research, but the current studies have demonstrated that loyalty affects impression formation, all loyalty is not the same, and that it has substantial effects of intragroup evaluation.

References

Abrams, D., de Moura, G. R., Marques, J. M., & Hutchison, P. (2008). Innovation credit: When can leaders oppose their group's norms? *Journal of Personality and Social Psychology, 95*(3), 662–678.

Anderson, C. A., & Sedikides, C. (1991). Thinking about people: Contributions of a typological alternative to associationistic and dimensional models of person perception. *Journal of Personality and Social Psychology, 60*(2), 203–217.

Ariyanto, A., Hornsey, M. J., & Gallois, C. (2010). United we stand: Intergroup conflict moderates the intergroup sensitivity effect. *European Journal of Social Psychology, 177*, 169–177.

Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal Psychology, 41*, 258–90.

Avakian, S., & Roberts, J. (2011). Whistleblowers in organisations: Prophets at work? *Journal of Business Ethics, 110*(1), 71–84.

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*(4), 323–370.

Dickter, C., & Gyurovski, I. (2012). The effects of expectancy violations on early attention to race in an impression-formation paradigm. *Social Neuroscience, 7*(3), 240–251. http://doi.org/10.1080/17470919.2011.609906

Dovidio, J. F. (2013). Bridging intragroup processes and intergroup relations: Needing the twain to meet. *The British Journal of Social Psychology, 52*(1), 1–24.

Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences, 11*(2), 77–83.

Freeman, J. B., & Ambady, N. (2010). MouseTracker: Software for studying real-time mental processing using a computer mouse-tracking method. *Behavior Research Methods, 42*(1), 226–41.

Freeman, J. B., Ambady, N., Rule, N. O., & Johnson, K. L. (2008). Will a category cue attract you? Motor output reveals dynamic competition across person construal. *Journal of Experimental Psychology, 137*(4), 673–90.

Freeman, J. B., Dale, R., & Farmer, T. A. (2011). Hand in motion reveals mind in motion. *Frontiers in Psychology, 2*, 59.

Gilbert, D. T. (1998). Ordinary personology. In D. T. Gilbert, S. T. Fiske, & G. Lindzay (Eds.), *The handbook of social psychology* (4th ed., pp. 89–150). New York, NY: McGraw Hill.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96*(5), 1029–46.

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S. P., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology, 101*(2), 366–85.

Haidt, J. (2007). The new synthesis in moral psychology. *Science, 316*, 998–1002.

Haidt, J., & Joseph, C. (2007). The moral mind : How five sets of innate intuitions guide the development of many culture-specific virtues, and perhaps even modules. In P. Carruthers, S. Laurence, & S. Stich (Eds.), *The innate mind* (pp. 1–31). New York, NY: Oxford.

Hollander, E. P. (1958). Conformity, status, and idiosyncrasy credit. *Psychological Review, 65*(2), 117–27.

Hollander, E. P. (1960). Competence and conformity in the acceptance of influence. *Journal of Abnormal and Social Psychology, 61*(3), 365–9.

Hornsey, M. J., Grice, T., Jetten, J., Paulsen, N., & Callan, V. (2007). Group-directed criticisms and recommendations for change: Why newcomers arouse more resistance than old-timers. *Personality and Social Psychology Bulletin, 33*(7), 1036–48.

Hornsey, M. J., & Imani, A. (2004). Criticizing groups from the inside and the outside: An identity perspective on the intergroup sensitivity effect. *Personality and Social Psychology Bulletin, 30*(3), 365–83.

James, K., & Cropanzano, R. (1994). Dispositional group loyalty and individual action for the benefit of an ingroup: Experimental and correlational evidence. *Organizational Behavior and Human Decision Processes, 60,* 179–205.

Logan, G. D., & Gordon, R. D. (2001). Executive control of visual attention in dual-task situations. *Psychological Review, 108*(2), 393–434.

Marques, J., Abrams, D., & Serôdio, R. G. (2001). Being better by being right: Subjective group dynamics and derogation of in-group deviants when generic norms are undermined. *Journal of Personality and Social Psychology, 81*(3), 436–447.

Marques, J., Yzerbt, V. Y., & Leyens, J.-P. (1988). "The Black Sheep Effect": Extremity of judgments towards ingroup members as a function of ingroup identification. *European Journal of Social Psychology, 18*, 1–16.

Nauts, S., Langner, O., Huijsmans, I., Vonk, R., & Wigboldus, D. H. J. (2014). Forming

impressions of personality: A replication and review of Asch's (1946) evidence for a

primacy-of-warmth effect in impression formation. *Social Psychology, 45*(3), 153–

163. http://doi.org/10.1027/1864-9335/a000179

Packer, D. J., & Ungson, N. D. (2015). *For whom the whistle blows: The complexity of

group loyalty and the willingness to whistleblow.* Unpublished manuscript.

Pinto, I. R., Marques, J., Levine, J. M., & Abrams, D. (2010). Membership status and

subjective group dynamics: Who triggers the black sheep effect? *Journal of

Personality and Social Psychology, 99*(1), 107–19.

Rothgerber, H. (2014). Evaluation of ingroup disloyalty within a multigroup context.

Social Psychology, 1(1), 1–9.

Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Carolyn, W. (1961*). Intergroup

conflict and cooperation: The Robbers Cave experiment*. Norman, OK: University

Book Exchange.

Stone, T. H., & Cooper, W. H. (2009). Emerging credits. *The Leadership Quarterly,

20*(5), 785–798.

Tajfel, H. (1970). Experiments in intergroup discrimination. *Scientific American, 223*(5),

96–102.

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. G.

Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–

47). Monterey, CA: Brooks-Cole.

Tajfel, H., & Turner, J. (2004). Social identity theory of intergroup behavior. In J. T. Jost

    & J. Sidanius (Eds.), *Political psychology: Key readings* (pp. 276–293). New York:

    Psychology Press.

Travaglino, G. A., Abrams, D., de Moura, G. R., Marques, J. M., & Pinto, I. R. (2014).

    How groups react to disloyalty in the context of intergroup competition: Evaluations

    of group deserters and defectors. *Journal of Experimental Social Psychology, 54*,

    178–187.

Uleman, J. S., Adil Saribay, S., & Gonzalez, C. M. (2008). Spontaneous inferences,

    implicit impressions, and implicit theories. *Annual Review of Psychology, 59*, 329–

    360.

Uleman, J. S., & Moskowitz, G. B. (1994). Unintended effects of goals on unintended

    inferences. *Journal of Personality and Social Psychology, 66*(3), 490–501.

Van Vugt, M., & Hart, C. M. (2004). Social identity as social glue: The origins of group

    loyalty. *Journal of Personality and Social Psychology, 86*(4), 585–98.

Waytz, A., Dungan, J., & Young, L. (2013). The whistleblower's dilemma and the

    fairness–loyalty tradeoff. *Journal of Experimental Social Psychology, 49*(6), 1027–
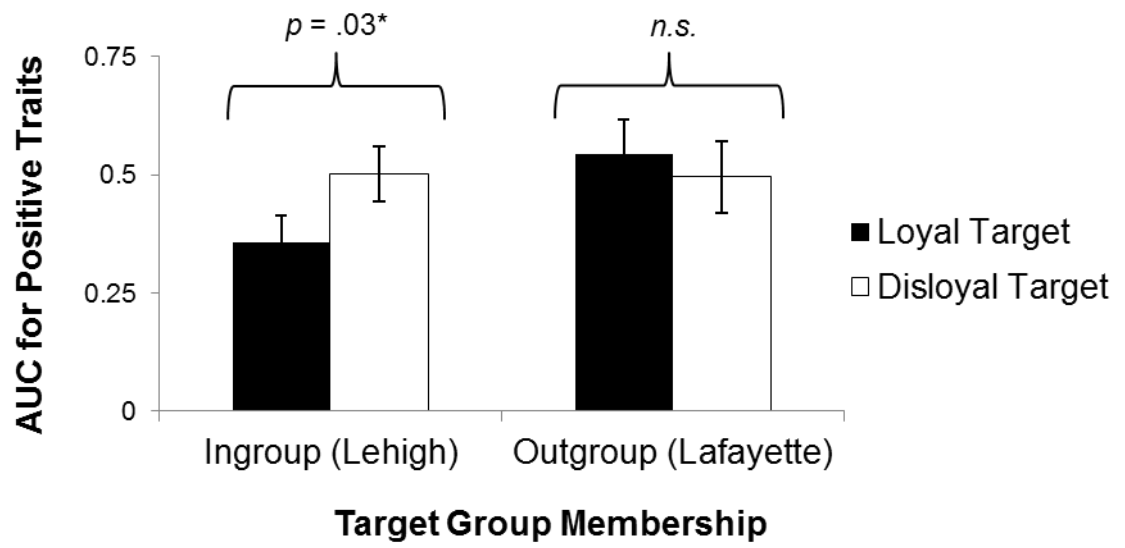
    1033.

Figure 1. Decisional ambivalence when categorizing positive traits across both group conditions for loyal and disloyal targets (*N* = 106). Includes significance results from pairwise comparisons of loyal vs. disloyal targets within both group conditions.
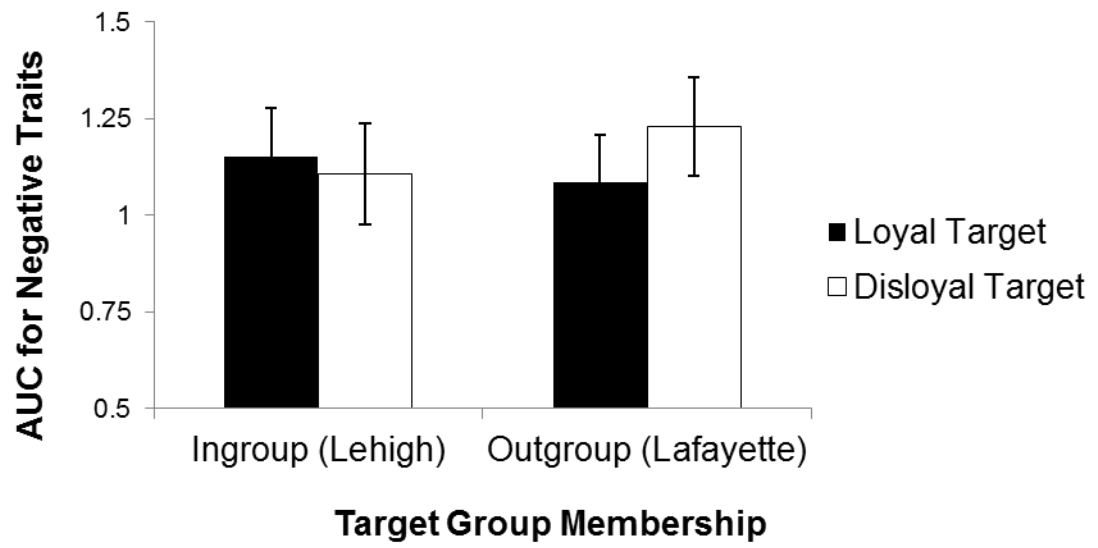
Figure 2. Decisional ambivalence when categorizing negative traits across both group

conditions for loyal and disloyal targets (*N* = 106). All pairwise comparisons were non-
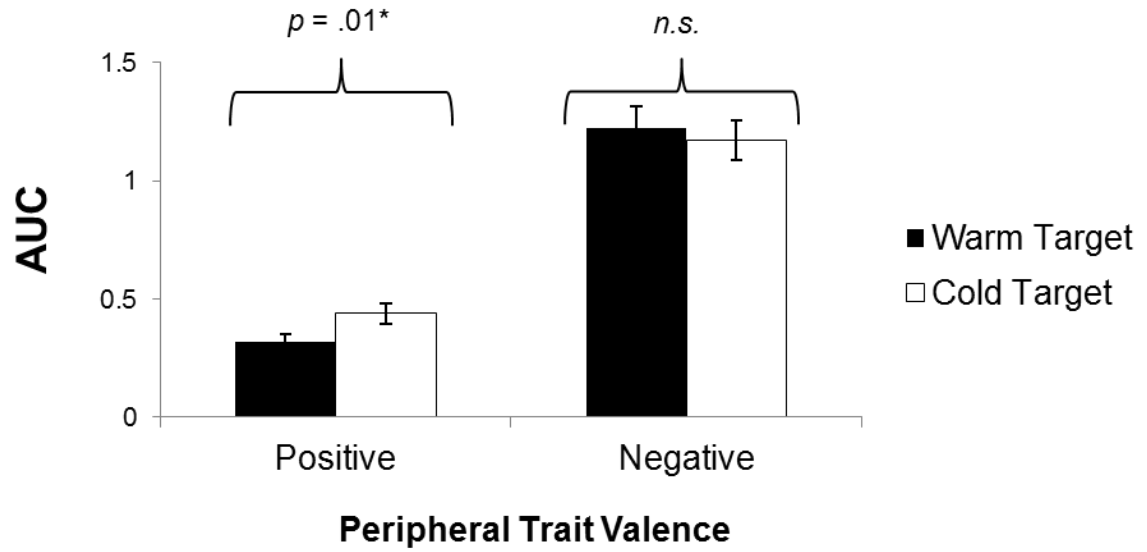
significant (all *p*s > .05).

Figure 3. Decisional ambivalence when categorizing positive and negative traits in warm

and cold targets (*N* = 106). Includes significance results from pairwise comparisons of

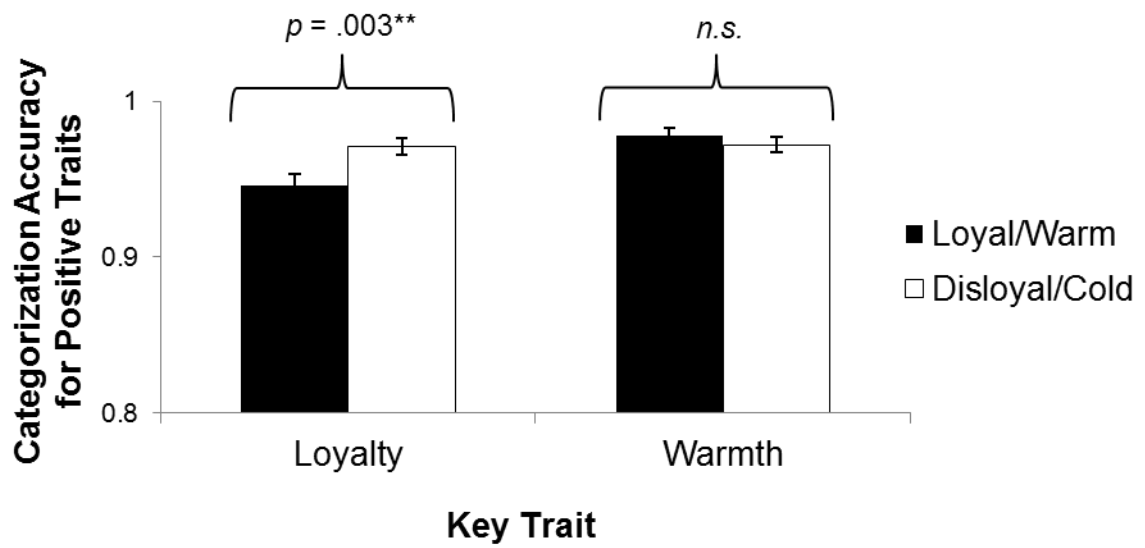warm vs. cold targets within both peripheral trait valence conditions.

Figure 4. Categorization accuracy of positive peripheral traits for targets differing in loyalty (i.e., loyal, disloyal) and warmth (i.e., warm, cold), collapsed across target group membership conditions ($N = 106$). Includes significance results from pairwise comparisons of loyal vs. disloyal and warm vs. cold targets collapsed across both group conditions.
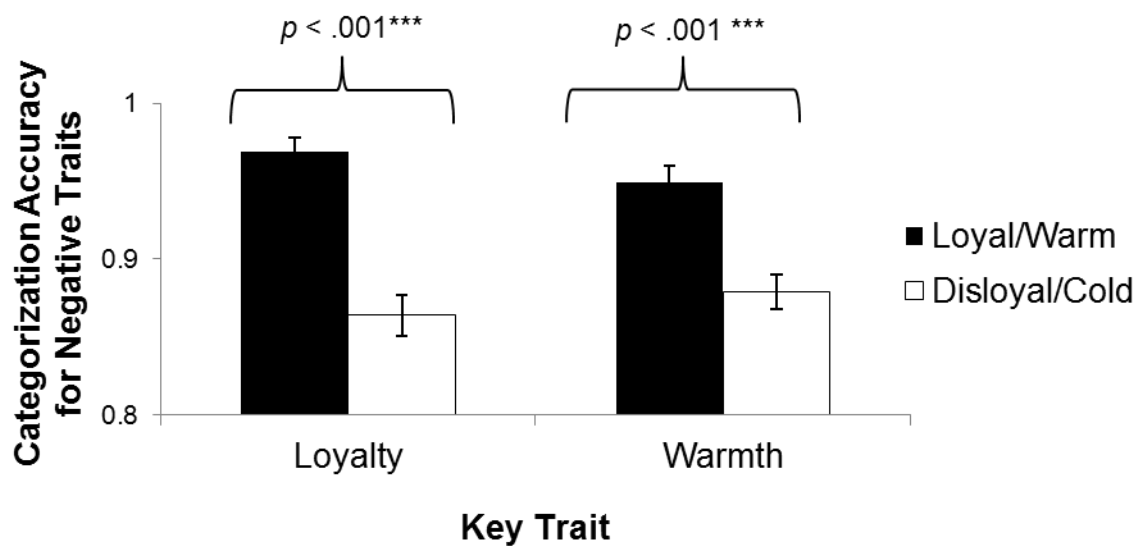
Figure 5. Categorization accuracy of negative peripheral traits for targets differing in

loyalty (i.e., loyal, disloyal) and warmth (i.e., warm, cold), collapsed across target group

membership conditions (*N* = 106). Includes significance results from pairwise

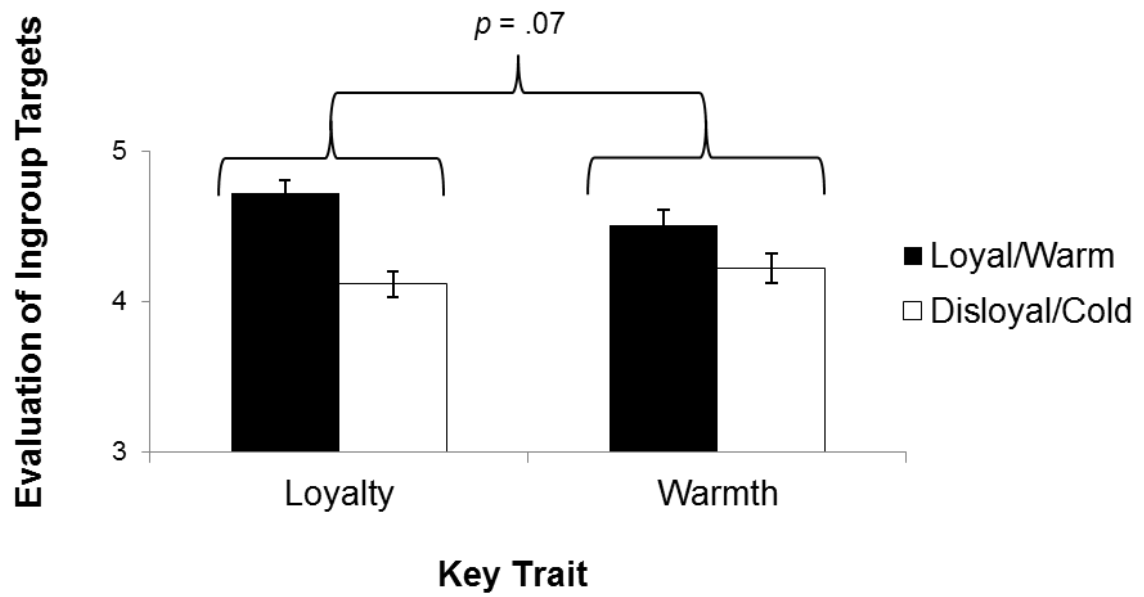comparisons of loyal vs. disloyal and warm vs. cold targets collapsed across both group

conditions.

Figure 6. Evaluation of ingroup targets differing in loyalty (i.e., loyal, disloyal) and warmth (i.e., warm, cold) ($N = 51$). Includes significance results from planned comparison between loyal/disloyal difference and warm/cold difference.
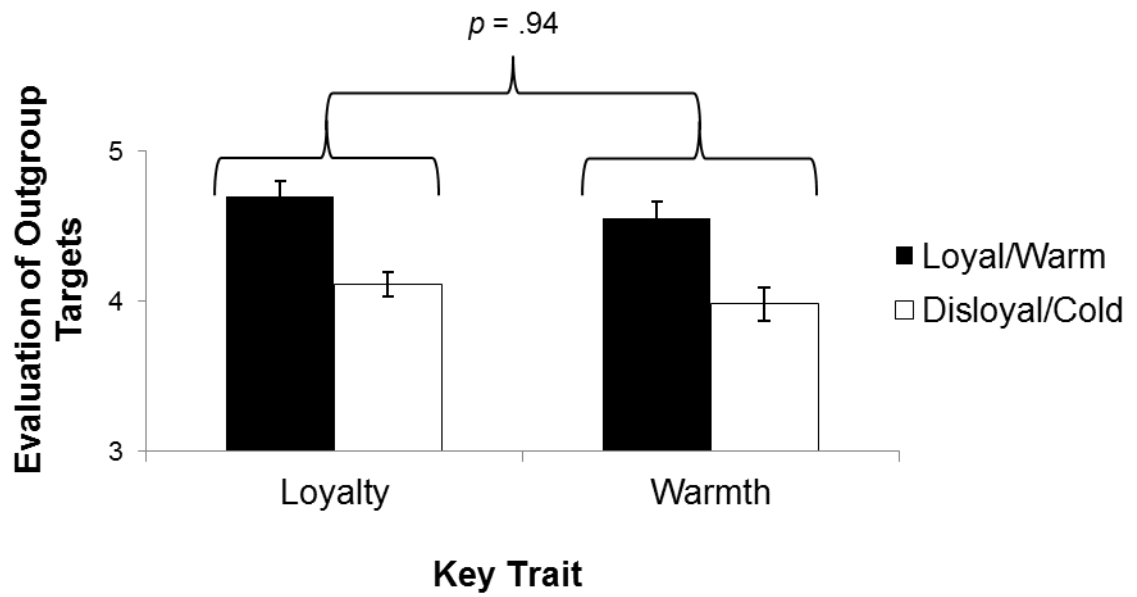
Figure 7. Evaluation of outgroup targets differing in loyalty (i.e., loyal, disloyal) and

warmth (i.e., warm, cold) ($N = 51$). Includes significance results from planned

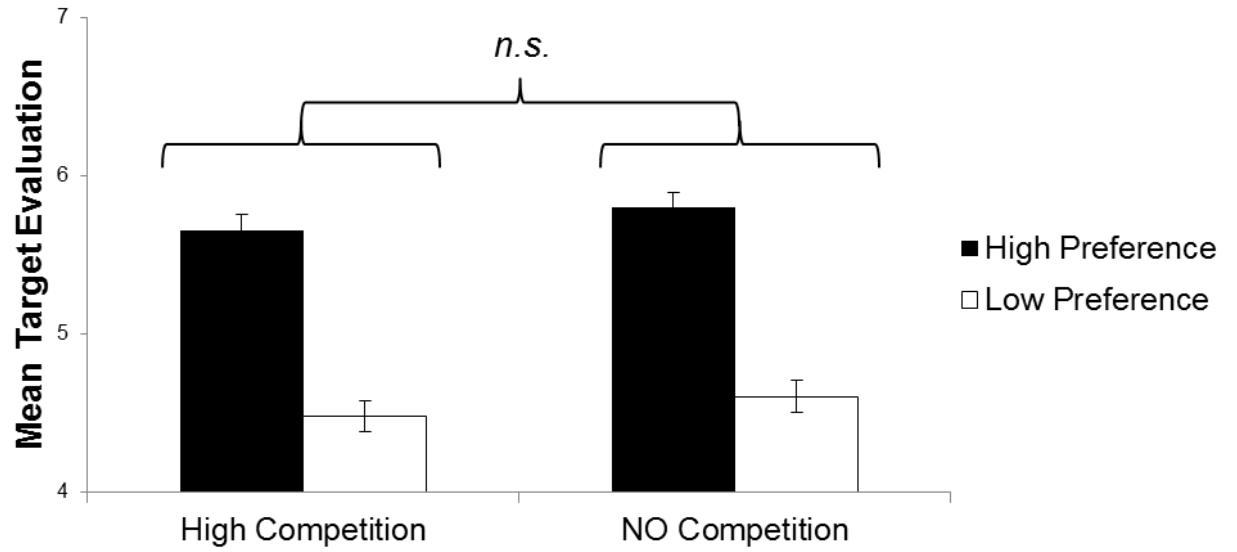comparison between loyal/disloyal difference and warm/cold difference.

Figure 8. Evaluation of employees differing in level of preference across both

competition conditions ($N = 264$). Includes significance results from interaction test in
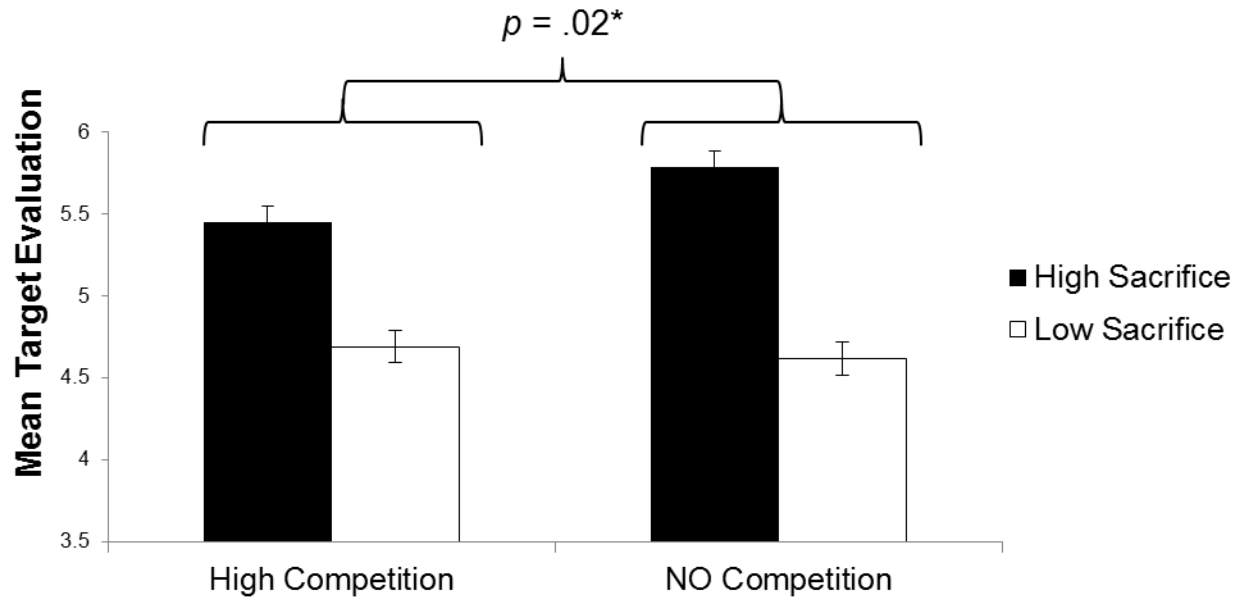
ANOVA.

Figure 9. Evaluation of employees differing in level of sacrifice across both competition

conditions (*N* = 264). Includes significance results from comparison sacrifice effect

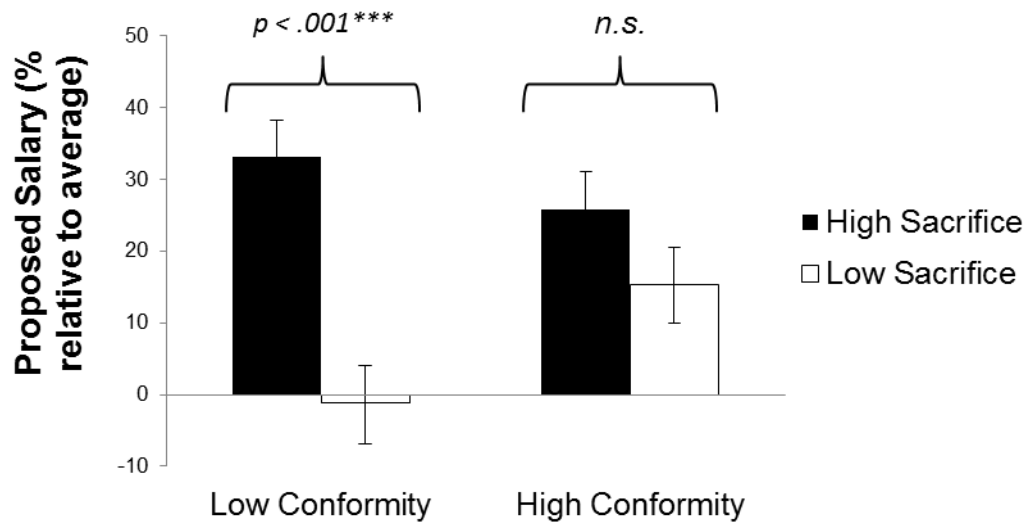between both competition conditions.

Figure 10. Proposed salary (% relative to average salary) for applicants at all levels of

conformity and sacrifice, averaging across status (*N* = 58). Includes significance test of

simple main effect of sacrifice at both levels of conformity.

Appendix A

Trait list (key trait: loyalty)

1	2	3	4
LOYAL	**LOYAL**	**DISLOYAL**	**DISLOYAL**
INTELLIGENT	INSIGHTFUL	SMART	CLEVER
SKILLFUL	PROFICIENT	COMPETENT	GIFTED
INDUSTRIOUS	INSISTENT	PRODUCTIVE	CONFIDENT
DETERMINED	SENSIBLE	BRAVE	PRACTICAL
PRACTICAL	CAREFUL	REALISTIC	VIGILANT
CAUTIOUS	CONFIDENT	ATTENTIVE	SENSIBLE
VULNERABLE	TIMID	BITTER	LAZY
VINDICTIVE	LAZY	IMPULSIVE	FORGETFUL
FORGETFUL	ABSENTMINDED	COCKY	SUPERFICIAL

Trait list (key trait: warmth)

| 5	6	7	8
WARM	**WARM**	**COLD**	**COLD**
SMART	INTUITIVE	INTELLIGENT	CLEVER
SKILLFUL	COMPETENT	PROFICIENT	PROFICIENT
DILIGENT	CONFIDENT	INDUSTRIOUS	HARDWORKING
HARDWORKING	SENSIBLE	BRAVE	PRACTICAL
PRACTICAL	REASONABLE	REALISTIC	CAREFUL
CAREFUL	WATCHFUL	VIGILANT	REASONABLE
VULNERABLE	UNAMBITIOUS	ABSENTMINDED	COCKY
SHALLOW	FORGETFUL	RESENTFUL	IMPULSIVE
ILL-TEMPERED	SHALLOW	SUPERFICIAL	SHALLOW

Appendix B

MouseTracker sample trial.

Start of trial.
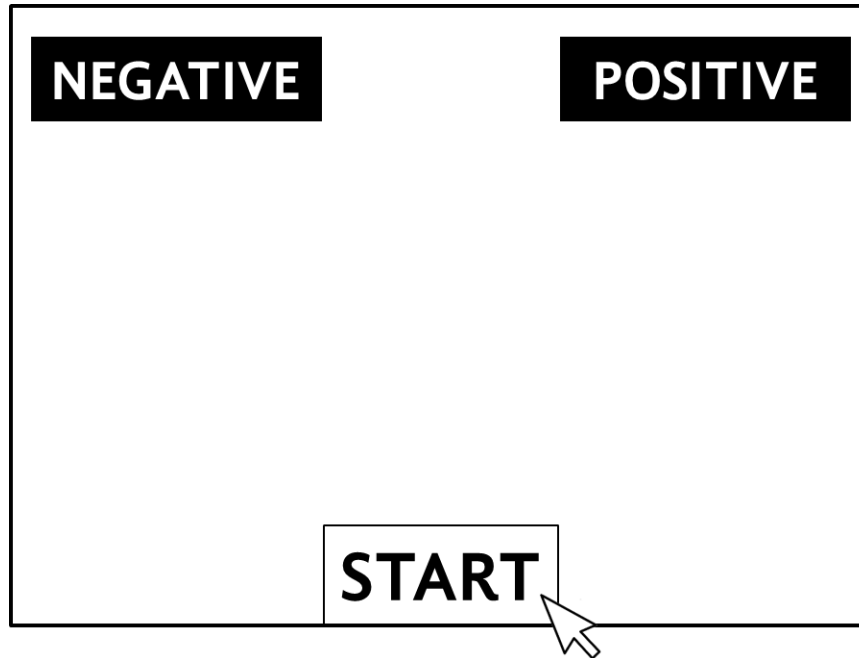
Schematic of AUC calculation.
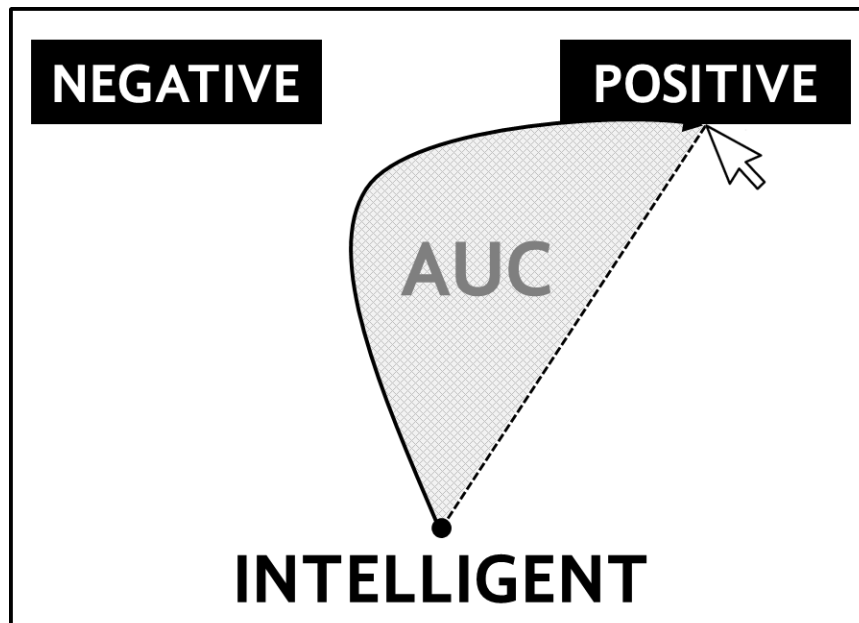
Appendix C

Intergroup competition article.

Lehigh-Lafayette football rivalry extends to college admissions competition

Although the universities compete every year on the football field, this storied rivalry has entered the classroom, where the two schools now contend for the brightest students.
(*THE MORNING CALL / August 13, 2014*)

Keith Groller
11:30 A.M. EDT, August 13, 2014

This year marks the 150th anniversary of the storied rivalry between Lehigh University and Lafayette College, the longest uninterrupted annual rivalry series and most-played football rivalry in the nation. This year's game will be played at Yankee Stadium in the Bronx on Nov. 22 and tickets are already sold out. However, the rivalry between these two schools does not end on the football field. Indeed, admissions officers from both Lehigh and Lafayette have declared that they compete each year for the brightest class of incoming students.

"Lafayette College is a great university, and we work extremely hard to ensure that we extend offers to the most intelligent, hard-working, and valuable students, especially if that means taking them away from schools like Lehigh," Lafayette Dean of Admissions Matt Hyde, said last week. This sentiment was strongly echoed by Lehigh Director of Admissions Bruce Bunnick. "We know that Lafayette is targeting the next class of brilliant students – and so are we. If promising young men and women are interested in getting their education in Eastern Pennsylvania, we want to make sure they decide to attend Lehigh and not Lafayette," he said.

These comments arrive two weeks after Forbes magazine released its seventh annual list of top colleges, in which Lafayette came in at #48 and Lehigh trailed at #77. Touchdowns may help settle The Rivalry on the football field, but its incoming students that decide it in the classroom.

Appendix D

Study 2 instructions and competition prime.

Participants in the low-competition condition read the non-bolded text, whereas

participants in the high-competition condition read both the non-bolded and bolded text.

"Imagine that you are working for a profitable company. You enjoy your

job and get along well with coworkers and superiors. You are currently

helping your company with the promotion of several employees. In a few

moments, you will be learning about one or more current employees who

are hoping to get a raise. You will read a series of sentences that describe

the employees. Afterwards, you will evaluate if each employee deserves a

promotion.

This assignment is especially important to your company because

there are many rival companies that are competing for the same

market share as your corporation. Therefore, it is crucial that you

provide good recommendations to ensure that your company is able to

effectively compete with its rivals. Please read the descriptions

carefully, as you may be asked to recall information about applicants

later on."

Appendix E

Study 2 behavioral descriptors.

The following three descriptors were present in every condition.

- Demonstrates intelligence on the job.

- Exhibits skillfulness when completing job-related tasks.

- Works hard and in an industrious fashion.

Critical loyalty descriptors: Preference.

- Feels a great deal of pride in the company's strong reputation and ability to do better than its competitors. (high-preference)

- Does not feel much pride in the company's reputation or ability to do better than its competitors. (low-preference)

Critical loyalty descriptors: Sacrifice.

- Willing to sacrifice nights and weekends to work for the company - especially for important deadlines. (high-sacrifice)

- Not willing to sacrifice nights and weekends to work for the company - even for important deadlines. (low-sacrifice)

Appendix F

Study 2 target evaluation and proposed salary items.

1. How valuable do you think this employee is to your organization?

    (1 = *not at all valuable; 7 = extremely valuable*)

2. How positive would you feel about this employee being given a raise?

    (1 = *not at all positive*; 7 = *extremely positive*)

3. How likely would you be to vouch for this employee to your superiors?

    (1 = *not at all likely*; 7 = *extremely likely*)

4. How disliked do you think this employee would be by your coworkers? [reverse-coded]

    (1 = *not at all disliked*; 7 = *extremely disliked*)

5. How loyal do you think this employee would be to your company?

    (1= *not at all loyal*; 7 = *extremely loyal*)

6. The average industry salary for the new position is $50,000 per year. What do you think would be an appropriate starting salary for this applicant?

Appendix G

Study 2 pilot test behaviors.

Preference:

- Treat coworkers better than employees of other companies.

- Standing up for coworkers, even when they are wrong.

- Treating everyone equally, regardless of where they work.

- Reporting a crime, even if the perpetrator was a coworker. [reverse-coded]

Sacrifice:

- Donating money to help the company.

- Helping the company, even if it is inconvenient.

- Prioritizing self-interest over helping the company.

- Being stingy when it comes to donating money or resources to the company. [reverse-coded]

Appendix H

Study 3 behavioral descriptors.

The following three descriptors were present in every condition.

- Demonstrates intelligence on the job.

- Exhibits skillfulness when completing job-related tasks.

- Works hard and in an industrious fashion.

Critical loyalty descriptors: Sacrifice.

- Willing to sacrifice nights and weekends to work for the company - especially for important deadlines. (high-sacrifice)

- Not willing to sacrifice nights and weekends to work for the company - even for important deadlines. (low-sacrifice)

Critical loyalty descriptors: Conformity.

- Complies with all existing company policies, regardless of whether or not they agree with them. (high-conformity)

- Does not always comply with existing company policies, especially if they do not agree with them. (low-conformity)

Appendix I

Study 3 target evaluation and proposed salary items.

1. How valuable do you think this applicant would be to your organization?

   (1 = *not at all valuable; 7 = extremely valuable*)

2. How positive would you feel about this applicant being hired?

   (1 = *not at all positive*; 7 = *extremely positive*)

3. How likely would you to vouch for this applicant to your superiors?

   (1 = *not at all likely*; 7 = *extremely likely*)

4. How disliked do you think this applicant would be by your coworkers?

   [reverse-coded]

   (1 = *not at all disliked*; 7 = *extremely disliked*)

5. How loyal do you think this applicant will be to your company?

   (1= *not at all loyal*; 7 = *extremely loyal*)

6. Do you think this applicant deserves more or less than the industry average? Click and drag the slider below to indicate how much above or below the industry average you think this applicant deserves. For example, indicate 25 if you think this applicant deserves 25% more than the industry average and -25 if you think this applicant deserves 25% less than the industry average.

NICK D'ANGELO UNGSON

EDUCATION

Lehigh University, Anticipated 2018: Doctor of Philosophy in Psychology
    Advisor: Dominic J. Packer

Lehigh University, 2015: Master of Science in Psychology
    Advisor: Dominic J. Packer
    Thesis: Loyal is as Loyal Does: The Importance of Loyalty Information during Intragroup Evaluation

New York University, 2014: Master of Arts in Psychology
    Advisor: Jay J. Van Bavel
    Thesis: Moral Motivation and the Perception of Moral Words: Does Belief in a Just World Lead to Vigilance for "Just" Words?

University of Florida, 2010: Bachelor of Science in Psychology; Bachelor of Arts in Religion

RESEARCH EXPERIENCE

Group Processes Lab – Graduate Researcher, Lehigh University
[Sept. 2013-Present]
- Supervisor: Dominic J. Packer, PhD
- Conducted studies investigating group processes, including:
  - Group loyalty and whistleblowing
  - Situational and motivational determinants of decisions to engage in dissent
- Managed development of stimuli, participant recruitment, RA training, data collection and analysis
- Helped prepare manuscripts for publication

Morality and Blame Lab – Graduate Researcher, Lehigh University
[Sept. 2013-Present]
- Supervisor: Michael J. Gill, PhD
- Conducted studies investigating variety of processes relating to morality, including:
  - Motivational components underlying blame and compassion
  - Effect of historicist narratives on blame reduction
  - Nature of implicit "negativity" towards stereotyped groups
- Managed development of stimuli, participant recruitment, RA training, data collection and analysis
- Helped prepare manuscripts for publication

Social Perception and Evaluation Lab – Research Assistant, New York University
[Sept. 2012-Aug. 2013]
- Supervisors: Ana Gantman (PhD candidate), and Jay Van Bavel, PhD
- Investigated the effects of implicit moral motivations on the perception of moral vs. non-moral stimuli
- Involved in preparation and programming of experimental stimuli using DirectRT
- Managed participant recruitment, RA training, and data collection

Cognition and Motivation Lab – Research Assistant, New York University
[Sept. 2011-Sept.2012]
- Supervisors: Irina Feygina, PhD, and Yaacov Trope, PhD
- Investigated the effect of group membership on mindset abstractness using Construal Level Theory
- Helped prepare grant proposals for submission

Evolutionary and Social Psychology Lab – Research Assistant, University of Florida
[Jan. 2010-May 2011]
- Supervisor: Gregory Webster, PhD
- Investigated the effect of stigmatized group presence on health-related behaviors

Stigma and Prejudice Lab – Research Assistant, University of Florida
[Jan. 2009-May 2011]
- Supervisor: Catherine Cottrell, PhD
- Investigation of prejudiced attitudes towards stigmatized groups and consequences of perceived health threats

PRESENTATIONS

Lehigh University Psychology Department Brown Bag – April 2015, Bethlehem, PA
Title: Loyal is as Loyal Does: Group Loyalty & Intragroup Evaluation
Authors: Nick Ungson; Dominic J. Packer, PhD

Eastern Psychological Association Annual Conference – March 2015, Philadelphia, PA
Title: Reducing Blame via Historicist Narratives: Ambivalence and Flexibility in Moral Judgments
Authors: Nick Ungson; Michael J. Gill, PhD

Society for Personality and Social Psychology Annual Conference – February 2015, Long Beach, CA
Title: How Thick Are Thieves? The Complexity of Group Loyalty and its Relevance to Whistleblowing
Authors: Nick Ungson; Dominic J. Packer, PhD

Lehigh University Psychology Department Brown Bag – April 2014, Bethlehem, PA
Title: How Thick Are Thieves? Group Loyalty and Whistleblowing
Authors: Nick Ungson; Dominic J. Packer, PhD

New York University MA Poster Conference – April 2013, New York, NY
Title: Is Morality Motivated? The Effect of Injustice Exposure on Perception of Moral Words
Authors: Nick Ungson; Ana Gantman; Jay J. Van Bavel, PhD

New York University MA Poster Conference – April 2012, New York, NY
Title: Mindset Abstractness and Relational-Collective Dimensions of Group Membership.
Authors: Nick Ungson; Irina Feygina, PhD; Yaacov Trope, PhD

TEACHING EXPERIENCE

Statistical Analysis of Behavioral Data: PSYC 110 [Spring 2014]
- Teaching Assistant for undergraduate course, Lehigh University
- Supervisor: Almut Hupbach, PhD

Introduction to Psychology: PSYC 001 [Spring 2014]
- Teaching Assistant for undergraduate course, Lehigh University
- Supervisor: Diane Hyland, PhD

Introduction to Psychology: PSYC 001 [Fall 2013]
- Teaching Assistant for undergraduate course, Lehigh University
- Supervisor: Jessecae Marsh, PhD

Research Experiences and Methods: PSYCH-UA.0999 [Fall 2012]
- Teaching Assistant for undergraduate course, New York University
- Supervisor: Marjorie McMeniman, PhD

Research Methods and Experiences: PSYCH-GA.2126 [Fall 2012]
- Teaching Assistant for graduate course, New York University
- Supervisor: Marjorie McMeniman, PhD

Communicating Psychological Sciences: PSY3220 [Fall 2009]
- Teaching Assistant for undergraduate course, University of Florida
- Supervisor: Shari Ellis, PhD

SERVICE

Symposium Moderator, 2015 LVAIC Undergraduate Psychology Conference, Lehigh University [April 2015]
Travel Grants Officer, Graduate Student Senate, Lehigh University [May 2015-present]
Representative to Graduate Student Senate, Psychology Department, Lehigh University [August 2014-present]
Communications Officer, Graduate Psychology Association, New York University [August 2012-August 2013]
Editor, University of Florida Journal of Psychological Science [May 2010-May 2011]
Newsletter Officer, Psi Chi, University of Florida [Sept. 2009-May 2010]

HONORS AND AWARDS

Strohl Graduate Summer Research Fellowship, Lehigh University [May-June 2014]
Chair's Award in Communicating Psychological Sciences, University of Florida [May 2009]
Psi Chi Essay Scholarship, University of Florida [May 2009]
President's Honor Roll, University of Florida [2008-2009]
Florida Bright Futures Scholarship [2006-2010]
Honors College, University of Florida [2006-2010]

PROFESSIONAL AFFILIATIONS

American Psychological Society
Society for Personality and Social Psychology
Eastern Psychological Association
Psi Chi International Honors Society in Psychology