

Basking In Reflected Glory and the Tactics of Self-Esteem Maintenance

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Abstract

“Basking in reflected glory” (BIRG) is the tendency to create, magnify or promote one’s association with successful or desirable others. This tendency has been linked to some of the more prominent motivational drives researched in social psychology over the 20th century, including the drive to maintain cognitive consistency, the drive to be viewed positively by others (i.e., impression management), and the drive to maintain positive self-esteem. This research represents the first attempt to systematically investigate the effects of basking in reflected glory on self-esteem. In doing so, this research will rely not only on self-report measures of self-esteem, but also on a research paradigm designed to document self-esteem involvement in the absence of self-report assessment. Study 1 is a conceptual replication of prior basking in reflected glory research that includes the self-reported self-esteem. The study replicates the basking in reflected glory effect, but does not document any effect on self-esteem. Studies 2 and 3 are an attempt to demonstrate that BIRG affects self-esteem by showing that other self-esteem palliatives reduce the tendency to bask in reflected glory (Study 2), and that basking in reflected glory reduces the tendency to use other self-esteem palliatives. Studies 2 and 3 did show this substitution of self-esteem palliatives, yet continue to show no self-reported effects on self-esteem. In short, mixed results leave the self-esteem role of BIRG uncertain. The implications of these findings for basking in reflected glory, and more broadly, the self-esteem motive, are discussed.

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Chapter 1: Literature Review & Theory Development

On October 3rd, 1951, the Brooklyn Dodgers met the underdog New York Giants in a game to decide the National League baseball championship. Entering the bottom of the 9th inning, the Giants were down by 3 runs. The Giants rallied, and won the game with a thrilling home run. This “shot heard ‘round the world” (as it came to be called), paired with announcer Russ Hodges’ ecstatic shouts of “. . . the Giants win the Pennant! The Giants win the Pennant!” has been called one of the most exciting moments in sports history (MacCambridge, 1999). This baseball game would seem to have little in common with a musical festival held eighteen years later, two hours north near the Catskill Mountains. The promoters of the three-day Woodstock music festival had a permit for a 50,000 person event, sold 186,000 tickets and were unable to keep out the hundreds of thousands of additional people who showed up. The festival, which featured performances by ‘60s icons such as Jimi Hendrix, Janis Joplin, and The Who, is considered a cultural touchstone of the 1960s counterculture movement.

Despite their dissimilarity, these two events have an odd fact in common: They are both subjects of an urban myth that a great deal more people claim to have attended the events than were actually at the events. It is not clear how these myths started; no records exist of attendees of these events, nor have extensive surveys been undertaken to record how many individuals claim to have attended. Underlying this myth seems to be a suspicion that some individuals seek to gain attention, favor and/or esteem for merely having supposedly attended these noteworthy events.

The suspicion of these boastful claims is not unwarranted. Political science research has noted that survey respondents systematically misreport voting for the winning candidate of elections (Atkeson, 1999; Wright, 1993). For example, in post-general election surveys, 69.4% of respondents reported voting for eventual victor Bill Clinton in the 1992 New York presidential primary (Atkeson, 1999). Clinton only received 51.8% of the vote in that primary, meaning nearly 1 in 5 respondents were either falsely or incorrectly claiming to have been an early supporter of the candidate who would go on to become the 42nd President of the United States. This systematic pattern could be evidence of what many have suspected to be true: Individuals sometimes claim a connection to noteworthy events or individuals.

The folk explanation for this pattern is that individuals accrue attention or other interpersonal benefit from these claims. Cialdini et al. (1976) tested this empirically with three field experiments examining the phenomenon they termed “basking in reflected glory” (BIRG). In their first study, they observed students’ dress as they attended class. It was found that after their school’s football team won, more students wore University-identifying apparel compared to after the team lost. In the second study, they tested a possible motivation for this behavior: impression management. Students were surveyed on campus the day after a college football game. Students were given a short campus knowledge quiz (either a very difficult or very easy one), told their score and then asked about the outcome of the most recent football game. Those who had done poorly on the difficult quiz were more likely to describe a successful football game outcome as “*we* won” (instead of the more literally correct “*they* won”). The third study was similar to the

second, except that students were not led to fail themselves, but rather asked to recall a specific game in which their school's football team lost. The same pattern was observed: Being reminded of group (University) failure led to more use of "we won" in describing another, successful outcome.

Cialdini et al. (1976) explained basking in reflected glory as an extension of Heider's (1958) balance theory. Heider explained that we are motivated to maintain "balance" in our cognitive knowledge structure. To put it simply, we tend to see positively associated items as being more alike and negatively associated items as being less alike to maintain cognitive harmony. Cialdini et al. (1976) suggested individuals were concerned about *others'* balance-influenced cognitions of them; that is, *my (positive) association with a positively or negatively perceived other may lead others to perceive me more positively or negatively, and I am on some level aware and vigilant of this fact.*

Cialdini and colleagues' follow-up research focused on other hypotheses that could be drawn from balance theory. Basking in reflected glory is just one response to one type of situation: the individuals' impression is directly threatened, and they draw upon the associated other to restore it. Sometimes our associated other is the source of the image threat, such as in Cialdini et al.'s (1976) third study in which the threat was the University's failure. In that case, another response is to attempt to manage the associated other's image to protect one's own. Cialdini and Finch (1989) found that when participants were led to believe they shared a birthday with a notorious historical figure (Rasputin), they tended to describe him more positively. By asserting a more positive

impression of Rasputin (i.e., “boosting” him), participants may have been trying to protect their own, balance-implicated, impression.

Basking in reflected glory and boosting both involved positive *relationships* (e.g., *I am connected to this other*). Balance theory also addressed *negative relationships* (e.g., *I am the opposite of this other*). Just as one might manage one’s positive relationship by making the relationship appear closer (basking), or bettering the other (boosting), we also might manage our negative relationships. Portraying our negatively associated others as worse should make us, the opposite, appear better by contrast. Cialdini and Richardson (1980) found evidence of this phenomenon. In response to an image threat, participants tended to “blast” (i.e., derogate) rival universities.

Cialdini and colleagues’ research on basking in reflected glory would inspire some later work. Some were conceptual replications, using political victory as the “glory” instead of athletic success (Boen et al., 2002; Boen & Vanbeselaere, 2002; C. B. Miller, 2006, 2009). Snyder, Lassegard, and Ford (1986) confirmed that individuals also decrease association with unsuccessful associated others, which they called “cutting off reflected failure” (CORF). Other research would define moderators and important qualifiers. Wann and Branscombe’s (1990) survey of basketball fans suggested highly identified fans (or “associates”) would be less likely to cut off reflected failure. Depending on the nature of the association, reducing the association may be undesirable. Even groups based on seemingly inconsequential factors, such as shared sports team fanship entail benefits, such as a sense of social belonging (Wann & Branscombe, 1991), and disloyalty or perceived betrayal of a group is harshly judged (Moreland & McMinn,

1999; Wann & Branscombe, 1992). Some group memberships, such as those based in less voluntary features (e.g., lineage, place of birth, biological sex) can be impossible or at least very difficult to leave (e.g., sex change operation), leaving these individuals reliant on alternate responses. However, Miller (2009) did not find identification moderating cutting off reflected failure in response to the 2008 U.S. Presidential election. However, trait self-esteem moderated the response; high self-esteem supporters of losing candidate John McCain did not cut off his reflected failure. It is not yet clear whether one of these findings was anomalous, or perhaps due to differences in the degree to which individuals identify with more short-term entities such as campaigning politicians (see Wann, Hamlet, Wilson, & Hodges, 1995). The roles of identification and trait self-esteem are an area of BIRG research that would benefit from further investigation.

In an interesting variation on the pattern of effects seen in basking in reflected glory studies, Tesser and Campbell (1980) demonstrated conditions under which individuals would distance from successful associations. If the associated other's success was in an important domain that you had failed on, you are more likely to distance than to bask. They explained that although many students may benefit from their association with their college's successful football team, members of the same school's perennially last-place basketball team may suffer from the comparison. Tesser and Smith (1980) went further, and found that individuals would even sabotage the efforts of close others (but not strangers) when their performance threatened to exceed one's own on an important domain. These findings show a surprisingly sophisticated set of social comparison calculations seem to underlie social relationship management.

As initially proposed by Cialdini et al. (1976), basking in reflected glory was an interesting usage of cognitive consistency in service of the impression management motivation. However, they also acknowledged that basking in reflected glory could also serve self-esteem needs. Cialdini and Finch's (1989) study of boosting (the previously described Rasputin study) focused on an association the participants had no reason to believe anyone else was aware of. Unbeknownst to them, the experimenters had looked up their birthdays, and informed them that Rasputin was born on that day. Thus, it is difficult to explain their behavior (i.e., boosting Rasputin) as a response to a public image threat. The drive to maintain self-esteem better explains that result, and other similar research. For example, Boen, Vanbeselaere, and Feys (2002) found that soccer fans visited their team's website (a private behavior) more after the team won than after they lost. Cialdini and De Nicholas (1989) concluded individuals treated information about associated others as if it were information about themselves. The need to maintain positive self-esteem is one of the most thoroughly researched topics in psychology; it has been called "a cornerstone of human psychology" (Sedikides & Gregg, 2008a, pg. 110). If associated others can affect self-esteem, it should come as no surprise that our arsenal of self-esteem-serving responses would be brought to bear.

The self-esteem hypothesis can also explain some inconsistent findings in the BIRG literature. Kimble and Cooper (1992) observed football fans, and failed to find supporters of a losing football team removing their team identifying buttons (public CORF). However, they did note that supporters of the losing team disproportionately dropped out of the study by skipping a scheduled post-game interview, which could be

seen as a form of cutting off reflected failure. Similarly, Spinda's (2011) self-report study found that sports fans claimed not to publicly distance from their team (e.g., not wearing apparel), but they did admit to disengaging from reminders of the game (e.g., news accounts, encounters with fellow or rival fans). This can be understood as an attempt to manage multiple motivations, such as situations in which impression management demands and self-esteem demands are at odds. Although publicly cutting off reflected failure *could* benefit self-esteem and/or impression management, it could also brand one as a "fair-weather fan" (perhaps even "disloyal," or "untrustworthy"), which could negatively affect one's public impression or self-esteem. Publicly maintaining support, but privately disengaging, can perhaps better support both goals.

The most direct test of the self-esteem hypothesis of BIRG came in a study of Israeli basketball fans. Bizman and Yinon (2002) surveyed the fans immediately after the game, and found higher self-esteem after the fan's team won than after they lost. They also asked a series of questions on fan's "willingness to associate" with the team (e.g., "Are you willing to be photographed with the team for the local paper?"), and found higher willingness to associate after their team won than after they lost. They experimentally manipulated whether the "willingness to associate" was asked before or after the assessment of self-esteem. Fans who had attended a game in which their team lost reported higher self-esteem when they were first asked their willingness to associate with the team. The researchers interpreted this to show that individuals first having had a chance to report their lower willingness to associate (essentially, to cut off reflected failure) had better self-esteem for having done so. Evidence for a self-esteem benefit of

BIRG (expressing greater willingness to associate) was much smaller, though still significant.

Although Bizman and Yinon's (2002) results support the self-esteem hypothesis, the experiment is conceptually confusing. Bizman and Yinon state that changes in fans' expressed "willingness to associate" reflect increasing or decreasing distance with their team. However, prior to the "willingness to associate" questions participants reported their "degree of fanship". Their self-reported fanship was *not* affected by the game's outcome. So participants do not deny that they are fans of the team, nor how big of fans they are of the team. They only express less willingness to engage in *hypothetical* public displays of fanship. It is clear why actually increasing or reducing association with the team could affect self-esteem. It is clear why being viewed by others as being associated with the team (e.g., the public displays of fanship) could affect self-esteem. It is *not* clear why expressing more or less willingness to be hypothetically publically identified with their team (even after they have just been *actually* identified with their team) affects self-esteem.

Further investigation of the connection between individuals and associated others has continued to see extensive work, but not as often as research on basking in reflected glory. Instead, another, similar line of research came to much greater prominence and largely defined the manner in which the topic would be investigated in the future. This area of research is social identity theory (Tajfel & Turner, 1979)

Social Identity Theory

Even with little direct evidence that basking in reflected glory benefits self-esteem, the theory is widely accepted and asserted in the literature. This is not surprising, for psychologists (and others) have long believed that our individual self-esteem is tied to those we are associated with, especially identifiable groups we belong to (see Cartwright, 1950; Gordon, 1954). Some of the earliest and most influential theorizing on the self-concept and self-esteem argued that our knowledge and opinion of our self is based on the evaluations of others (Cooley, 1902; Mead, 1934), thus groups generally held in low regard should exhibit lower self-esteem. This belief was at the heart of the first psychological research to be cited in a U.S. Supreme Court case, the landmark *Brown vs. the Board of Education*, which struck down racial segregation in public schools. It was demonstrated to the Court's satisfaction that segregation devalued racial groups, and thus harmed individuals.

This view of the psychological consequences of group membership formed the basis for a new and expansive area of research: social identity theory (Tajfel & Turner, 1979). Though basking in reflected glory research and social identity research arrived at approximately the same destination ("*we feel a sense of shared fate with our groups*"), they got there largely by separate theoretical routes. Although basking in reflected glory traces its genesis to Heider's (1958) balance theory, social identity theory builds from Sherif's (1966) theory of realistic group conflict and theories of social categorization and intergroup conflict (Allport, 1954). Seeking to explain patterns that did not fit the predictions of realistic group conflict, Tajfel (1974) proposed that the evaluative status of

social groups we belong to affects our self-esteem, and we are motivated to maintain positive social identity.

Tajfel and Turner (1979) defined two important strategies by which individuals may do so when their current group is negatively affecting their social identity: Leave the negatively evaluated group for a better one (individual mobility), or redefine the manner or criteria of the evaluation that has negatively evaluated one's group (social creativity). Despite the different terminology, these two strategies are equivalent to cutting off reflected failure (Cialdini et al., 1976; Snyder et al., 1986), and motivated self-serving cognitions, such as boosting (Cialdini & Finch, 1989). There would seem there was a strong case to be made for basking in reflected glory research to be considered a subtopic within the more expansive social identity theory research.

Social identity research, the core formulation of which invokes self-esteem, would seem a likely place to find further evidence that basking in reflected glory benefits self-esteem. However, social identity researchers have resisted the pull of many psychologists to utilize social identity theory as yet another theory about maintaining self-esteem. Turner argues frequently (e.g., Turner, 1999; Turner & Onorato, 1999) that social identity theory is about maintaining positive social identity (or collective self-esteem), and is at best indifferent as to how this relates to individual self-esteem. This position seems to have developed later, as Tajfel and Turner's (1979) initial work explicitly stated that the drive for positive social identity was in the service of the need for positive individual self-esteem.

Another possible reason that social identity research has not demonstrated the benefit of basking in reflected glory is that the core self-esteem component of social identity theory actually has rather mixed support (R. Brown, 2000; Crocker & Blanton, 1999; Rubin & Hewstone, 1998). As much as psychologists have liked to believe the one's group affects one's self-esteem, empirical support for this contention has been actually quite mixed. Many studies have failed to find racial minorities, or other lower status groups, reporting lower self-esteem (see Crocker & Blanton, 1999 for a review). In fact, many studies find disadvantaged African Americans report *higher* self-esteem (Porter & Washington, 1979). R. Brown (2000) contends that in the face of these mixed findings, social identity theory theorists are placing less emphasis on self-esteem, treating it more as a side-effect of social identity processes rather than the underlying reason for them. Turner (1999) and Crocker and Blanton (1999) argue the self-esteem hypothesis is valid, and that research that failed to find the hypothesized effect was deficient, either in its theorizing (e.g., drawing hypotheses not implied by social identity theory) or methodology.

Social identity theory emerged as an active topic of research for understanding intergroup relations, especially behaviors such as discrimination. The self-esteem component has not been the focus of research, more the hypothesized intra-psychic motivator. This is apparent by the development and extensive use of the minimal group paradigm (Tajfel, 1970). In minimal-group studies, individuals are assigned to laboratory groups based on seemingly minor (and actually fictional) differences (e.g., preference between abstract artists). Although the studies have informed the field greatly in some

areas, their utility for understanding self-esteem is more questionable. Much research and theorizing state that degree of identification is the critical component of the group/individual self-esteem relationship (Branscombe & Wann, 1994; Crocker & Blanton, 1999; Crocker & Wolfe, 2001; Wann et al., 1995; Young, Bernstein, & Claypool, 2009). By design, minimal groups do not encourage this identification. That minimal group research has ever found self-esteem effects tends to be driven by the fact that assignment to minimal groups itself negatively affects self-esteem (Lemyre, 1985).

Turner (1999) now states that social identity theory is focused on collective self-esteem, which is self-esteem *derived from a group membership* (no matter how trivial the group, and therefore the amount of self-esteem at stake may be). This may suit social identity researchers who profess no interest in personal self-esteem, but it renders much of the topic's research less informative to the question addressed in this dissertation:

Does basking in reflected glory benefit self-esteem?

Outside (or perhaps adjacent to) social identity research, researchers have found evidence consistent with the original self-esteem hypothesis of social identity theory. Multiple researchers has found that the self-esteem of sports fans is lower after their team loses (Bizman & Yinon, 2002; Hirt, Zillmann, Erickson, & Kennedy, 1992; C. B. Miller, 2012). Young, Bernstein and Claypool (2009) found voters of losing presidential candidates reported lower self-esteem. What remains to be demonstrated is that managing the association can moderate these effects, as the self-esteem hypothesis for basking in reflected glory asserts.

If social identity research has not provided the expected evidence that BIRG benefits self-esteem, it has at least provided some theorizing about BIRG and related forms of managing esteem via associated others. Wann (1993) considered research on BIRG and social identity theory and proposed a model to explain aggression among sports fans as an attempt to preserve self-esteem in the face of a threatening association. Highly identified fans have been found less likely to cut off reflected failure (Wann & Branscombe, 1990), and therefore must deal with the esteem threat in another manner. Ellemers, Spears, and Bertjan (2002) proposed a more expansive model of self and social identity that sought to explain how individuals tend to respond under different conditions of individual or group esteem threat. As did Wann (1993), they agreed that less identified individuals can benefit from leaving a group that is not benefitting their social identity. In cases of high identification, individuals benefit more from group-serving responses. These responses could include outgroup derogation (Branscombe & Wann, 1994; Wann, 1993), biased attributions (Lau & Russell, 1980) or group affirmation (Sherman, Kinias, Major, Kim, & Prenovost, 2007).

Sherman et al.'s (2007) work on group affirmation was especially informative, as they carefully considered the level of esteem threat (i.e., individual or group threat) and the level of response. They found that highly identified group members could only address group esteem threats with a group-level response (e.g., group affirmation); an individual response, self-affirmation, was not as effective for them as it was for less highly identified members in dealing with a group-level threat. This is interesting, as Cialdini et al. (1976) demonstrated group-level resources being utilized to respond to

individual level threats. Further research could lend greater understanding of the specifics of how different methods of threat response (e.g., BIRG, affirmation, etc.) work, or fail to, based on individual differences (e.g., identification).

All in all, social identity theory is certainly closely related to basking in reflected glory, and has the potential to provide insights into how individuals manage their esteem in a more complicated social context. However, the resistance of many of the field's researchers to individual perspectives and the predominance of methodologies such as the minimal group paradigm limits this potential. The intentional decision of some social identity researchers to disregard research not explicitly rooted in social identity theorizing (Turner, 1999) often means that their research is more duplicative than informative. Nearly twenty years after Cialdini et al.'s (1976) initial paper on basking in reflected glory appeared in the *Journal of Personality and Social Psychology*, the same journal published a social identity theory paper testing the "individual mobility" (i.e., cutting off reflected failure) response to group-level esteem threat (Jackson, Sullivan, Harnish, & Hodge, 1996). After "discovering" that individuals like to disassociate from groups that are not viewed positively, they discussed the need to "replicate" the research with real life groups that differ on critical features such as the importance of group. Cialdini et al. (1976) was not cited, nor were other BIRG studies that have already provided such replication (e.g., Wann & Branscombe, 1990; Wann et al., 1995). Greater integration of research on social identity and related social-psychological phenomena could reduce unproductive duplicity, and foster greater understanding of this critical, perhaps central, topic of social psychology.

Self-Esteem Maintenance

Social identity theory research is not unique in having certain norms, preferences and, perhaps, blind spots that provoke vigorous debate. Research on self-esteem, and more specifically self-esteem maintenance, has its warts, too. In their important review of the self-esteem hypothesis in social identity research, Rubin and Hewstone (1998) pay careful attention to *how* self-esteem is assessed. Unfortunately, many other researchers seem not to have given careful enough attention to this topic. They might be forgiven, for as much as “self-esteem” is a concept with great name recognition in and even outside of the social sciences; important details are often glossed over.

Self-esteem is a term frequently and confusingly applied to at least two related but distinct concepts. Self-esteem maintenance (or “ego-defense”) refers to what is most often called *state* self-esteem. J. D. Brown and Marshall (2006) define state self-esteem as self-evaluative emotional reactions, most often triggered by valenced events (e.g., failure) or feedback (e.g., praise). These reactions tend to be transitory (hence, the “state”). By comparison, *trait* self-esteem refers to the relatively static affective evaluation of one’s self. Trait self-esteem is largely treated as an individual difference variable (hence, the “trait”), and is theorized to be formed early in life (Bowlby, 1969; Sullivan, 1953). Neiss, Sedikides, and Stevenson's (2002) literature review of behavioral genetics research finds between 30% and 50% of differences in trait self-esteem can be explained by heritable factors related to temperament and neuroticism.

Others have defined state and trait self-esteem differently. The stability of trait self-esteem is questioned, as greater variation is observed in certain life stages (e.g.,

adolescence) and over longer periods of time (Trzesniewski, Donnellan, & Robins, 2003). Many define state self-esteem as the brief and/or occasional variations observed in trait self-esteem (e.g., Heatherton & Polivy, 1991). Meanwhile, Harter (2006) argues the trait/state dichotomy is incorrect altogether, but was invented to explain the complex effects of many moderating variables. The very nature of self-esteem is still a topic of active debate, and one not likely to be resolved anytime soon given the necessity of primarily correlational or qualitative research designs. For the purposes of this thesis, I assume that state self-esteem exists, is related but distinct from trait self-esteem, and endeavor to measure how it is affected by basking in reflected glory.

Rubin and Hewstone's (1998) review of self-esteem assessment in social identity research found many researchers (e.g., Crocker & Schwartz, 1985; Hogg, Turner, Nascimento Schulze, & Spriggs, 1986; Sidanius, Pratto, & Mitchell, 1994) using measures better suited to assessing trait self-esteem while trying to capture changes in state self-esteem. Their review found much more success in supporting the self-esteem hypothesis of social identity theory among researchers using more appropriate measures (e.g., Islam & Hewstone, 1993). Although the basic error made by a number of researchers is troublesome, it is worth noting that some researchers using more appropriate measures of self-esteem (e.g., Verkuyten, 1997) were also unable to demonstrate the expected self-esteem effect.

The continued debate of some of the most fundamental elements of self-esteem (e.g., What is it? How do we measure it?) has not prevented the "self-esteem motivation" from being one of the most prominent theories in psychology. Though most trace its

origins to William James' (1890) seminal *Principles of Psychology*, the crucial role sociologists played in advancing the topic cannot be understated. In contrast with James' individualistic theorizing, Cooley (1902) emphasized the interpersonal nature of self-esteem, greatly influencing the later impression-management perspective (Goffman, 1959; Schlenker, 1980). Psychology, in fact, would remain wary of self-esteem for some years, due in part to the once dominant behaviorist perspective, and the similarity to Freud's disfavored theories of ego-defense (Alicke & Sedikides, 2010).

Early social psychologists (e.g., Allport, 1954) were more receptive to the topics of the self and self-esteem, while humanist psychologists proposed self-esteem was a vital component of well-being. Maslow (1968) included it in his famous pyramid of basic human needs. In short order, the topics of the self and self-esteem came to take up a central role in many disciplines of psychology, especially social psychology (Baumeister, 1998; Epstein, 1973; Leary, Tambor, Terdal, & Downs, 1995; Markus & Wurf, 1987; Maslow, 1968).

The motivational nature of self-esteem (and more specifically, the claims of ever greater self-enhancement seeking) quickly became too stridently and unequivocally stated, such that later research on cognitive dissonance (Aronson, 1968), impression management (Schlenker, 1980; Tetlock, 1985) and self-verification (Swann, 1984) pushed back, noting that there were constraints on individuals' attempts to self-enhance (e.g., other's knowledge, Baumeister, 1982) and other motivations that could sometimes trump self-enhancement (e.g., cognitive consistency). Rather than conceptualizing the self-esteem motivation as one seeking ever and ever greater heights, many researchers

now consider the self-esteem motivation to be about maintaining a desired level (Gramzow, 2011; Heatherton & Polivy, 1991; Sedikides & Gregg, 2008; Tesser & Cornell, 1991). J.D. Brown theorizes that the desired level of state self-esteem is determined by one's trait self-esteem (J. D. Brown, Dutton, & Cook, 2001), explaining the strong correlation observed between the two.

Though basking in reflected glory began as a topic of impression management, later research would better place it more in the realm of self-esteem maintenance¹. It is not lacking for company. Self-esteem, especially the maintenance (i.e., self-protection, ego-defense) or enhancement of it, has been the topic of extensive research (a recent Psychinfo search for "self-esteem" returns over 18,000 results). Tesser, Crepaz, Collins, Cornell and Beach (2000) referred to this mass of research as the "self-zoo", in part because of the great variety, yet lack of integration, of research relating to self-esteem. Tesser et al.'s (2000) "top of the head" list include topics of extensive psychological research such as self-serving attributions, self-handicapping, self-presentation, self-affirmation, social comparison, and false uniqueness. To this list, I would add basking in reflected glory.

How do we establish that a psychological phenomenon benefits self-esteem? Curiously, little of the existing research actually measures self-esteem. A typical (if simplified) experiment to demonstrate the self-esteem motivation might have participants undergo a self-esteem threat (e.g., negative feedback on one's personality or intelligence), and then have an opportunity to engage in a behavior believed to be in the

¹ BIRG may also in some circumstances serve solely impression management purposes. However, because impression management is often in the service of self-esteem (Baumeister, 1982), it can be difficult and not necessarily productive to consider them as separate motivations (see Tetlock & Manstead, 1985).

service of self-esteem (e.g., biased attributions, downward social comparison). If individuals in the self-esteem threat condition engage in the behavior more than individuals who did not have their self-esteem threatened, then the behavior is considered to be in the service of self-esteem (e.g., Cialdini et al., 1976; Hakmiller, 1966; Lau & Russell, 1980). By this standard, the self-esteem hypothesis should be doing quite swimmingly in social identity research. Their studies consistently and repeatedly show individuals engaging in responses believed to help self-esteem following esteem threat (Abrams & Hogg, 1990; Brown, 2000; Jackson et al., 1996; Rubin & Hewstone, 1998; Turner & Onorato, 1999). However, the self-esteem hypothesis has seemingly been held to a higher standard of confirmation in the domain of social identity than elsewhere in psychology.

Tesser and colleagues' later studies of self-serving behaviors (e.g., Tesser & Cornell, 1991) are a step in the right direction. They decided that it was not enough to show that self-esteem threat led one to engage in a given behavior. To show that an underlying psychological need (i.e., self-esteem) had been met, one must also show that use of the behavior decreases the usage of other self-esteem serving behaviors. Tesser points to Steele and Liu (1983) as the originator of this approach. Steele and Liu's innovative work showed self-affirmation *taking the place of* the more usual cognitive dissonance reducing behaviors (e.g., attitude change). Participants put through a standard cognitive-dissonance-evoking manipulation (e.g., counterattitudinal advocacy) would not show the usual pattern of attitude change if they were first given a chance to engage in self-affirmation. This is evidence that self-affirmation itself addressed the underlying

psychological motivation. Tesser and Cornell (1991) expanded this approach to explore a wider array of psychological phenomena; they found that just as self-affirmation could replace dissonance-reducing attitude change, it could also replace the tendency to sabotage close others when their performance threatens our self-esteem (Tesser & Smith, 1980), and that this close-other sabotage could replace self-affirmation or attitude change in a standard cognitive dissonance paradigm. Tesser (2000) claims these results as evidence that self-affirmation, cognitive dissonance and the myriad self-serving behaviors are all addressing the same underlying psychological need.

Not to diminish Tesser's excellent work, but his research (and others) begs a simple question: Why not just measure participants' self-esteem to determine whether a psychological phenomenon benefits self-esteem? There are multiple well-used and validated measures of self-esteem (e.g., Heatherton & Polivy, 1991; McFarland & Ross, 1982; Rosenberg, 1965). Tesser, Millar and Moore (1988) claim the true underlying cognitive process mediating their studies, which they often called "self-evaluations", is likely automatic, unconscious, and thus unmeasurable. This claim might seem surprising given the frequent and unequivocal claims of self-esteem involvement in research. However, it is true that many studies have had difficulty documenting supposed self-esteem effects. Nisbett and Gordon (1967) utilized a common self-esteem manipulation, poor IQ test performance, and attempted to measure the self-esteem effects with three different self-esteem scales. They found no significant effects. They were quite surprised, as participants seemed quite visibly disturbed by the feedback, and relieved at the

revealing of the deception during debriefing. They also concluded that self-esteem changes cannot be measured with self-report measures.

Heatherton and Polivy (1991) reviewed prior research, and found few studies that reported successfully documenting self-esteem manipulation (e.g., Morse & Gergen, 1970). They theorized this was because most self-esteem scales were better at measuring the relatively stable trait self-esteem than the more dynamic state self-esteem. They created a scale, combining questions from previous self-esteem scales that focused on participants' academic performance (e.g., "I feel I have less scholastic ability than others right now"), physical appearance (e.g., "I am pleased with my appearance right now.") and social acceptance (e.g., "I am worried what other people think of me."). The scale's instructions and many of the questions repeat that the questions should be answered as participants feel "right now". They reported high internal consistency for this scale, yet specific effects based on the nature of the self-esteem manipulation. Naturally-occurring negative feedback (i.e., exams being returned) affected only the academic performance subscale; experimentally delivered negative task-performance feedback delivered face-to-face decreased both academic and social subscale scores; and body image interventions improved only the appearance subscale.

Though the scale tests well, and has been used successfully in much research, it is based in a very specific conceptualization of what state self-esteem is, specifically that state self-esteem is the brief variations observed in trait self-esteem. Further, the scale cannot even be said to test *general* state self-esteem, but rather tests three *specific* state self-esteems (academic, appearance and social acceptance). When summed, they might

provide an approximation of general state self-esteem, depending on the specific importance individuals place on those particular domains (Crocker & Wolfe, 2001). It has long been assumed that summing up one's feelings about elements of one's self-concept equals one's self-esteem, most studies have failed to find this (for a review, see J. D. Brown, 1993; Marsh, 1995). J.D. Brown (1993; 2010) finds that instead of evaluations of the self-concept leading to a certain level of self-esteem, the desired level of self-esteem leads individuals to revise and selectively prioritize the potential elements of the self-concept. For example, a student failing a course may decide that his or her social skills are much more important than their academic performance.

Others argue self-esteem is theoretically and empirically distinct from self-appraisals of one's qualities (Brown & Marshall, 2001; Crocker & Major, 1989; Wylie, 1979). Brown (1993, 2001) further argues what is most commonly called "state self-esteem" is conceptually distinct from trait self-esteem. Brown objects to the very term "state self-esteem", arguing that it perpetuates confusion as to their relationship with trait self-esteem. Brown prefers the term "feelings of self-worth", which he defines as self-evaluative emotional reactions (often referred to elsewhere as "self-feelings").

Heatherton and Polivy (1991) didn't explicitly address self-feelings when making the case for their State Self-Esteem Scale, but were largely dismissive of affective approaches to measuring self-esteem, describing them as merely measuring mood. Brown and Dutton (1995) draw a distinction between general affect (e.g., happy) and self-feelings (e.g., pride). The two are frequently correlated, but Brown and Dutton found distinct effects depending on an individual's trait self-esteem. While individuals low in

trait self-esteem have their mood and self-feelings affected in tandem by life's ups and downs, individuals high in trait self-esteem maintain their self-feelings, even if setbacks sour their mood. Brown and Dutton described individuals low in self-esteem as over-generalizing negative feedback -- "I'm bad at math" becomes "I am a worthless person." This is consistent with prior research that has found that individuals high in trait self-esteem are more resilient to esteem threats (Baumgardner et al., 1989; J. D. Brown, 2010; Greenberg et al., 1992; Leary, Nezlek, Kowalski, Blevins, & Holgate, 1997; C. B. Miller, 2009).

A resolution to these differing perspectives on self-esteem is beyond the scope of this thesis, but I tend to side with Brown's self-feelings perspective. It should be noted that both measurement approaches have been used successfully to document self-esteem threat in many classic research paradigms, such as receiving negative performance feedback (Heatherton & Polivy, 1991; Brown & Dutton, 1995; Crocker, Sommers, & Luhtanen, 2002; Vohs & Heatherton, 2001), social rejection (Leary, et al., 1995) or even associated failure, such as the loss of one's supported sports team (Hirt et al., 1992; Miller, 2012) or Presidential candidate (Young et al., 2009). The differences between the two are largely conceptual; in most instances, the two approaches to state self-esteem return similar results.

The fact that there are now and have been at least for twenty years empirically validated approaches to measuring state self-esteem (J. D. Brown & Dutton, 1995; Heatherton & Polivy, 1991; McFarland & Ross, 1982) makes it especially egregious that so little research of (supposedly) self-esteem-serving mechanisms actually test whether

self-esteem is affected. We can say individuals *engage* in them in response to self-esteem threat, *assume* they do so to bolster their self-esteem, but can say nothing of their *actual effectiveness*. Tesser and colleagues' (1991; 2000) research on the substitutability of self-esteem is a marked improvement. Though they did not measure self-esteem, the substitution research approach did allow him to make a more supported claim that certain behaviors (e.g., biased social comparison) were *actually* benefitting self-esteem, as they reduced the tendency to engage in later self-esteem serving behaviors.

However, in Tesser and colleagues' campaign to "integrate the self-zoo" (Tesser et al., 2000; Tesser, 2000), they have made claims that conflict with prior research and theorizing. Their studies on the substitutability of self-esteem regulating mechanisms have also included self-affirmation and cognitive dissonance responses. Tesser and Cornell (1991) first conducted a replication and extension of Tesser and Smith's (1980) research, which had found that individuals would sabotage the performance of close-others to benefit their own self-esteem. Tesser and Cornell (1991) found engaging in this close-other sabotage reduced the tendency to engage in the typically found (e.g., Festinger, 1957) attitude change after a dissonance manipulation. They concluded that dissonance manipulations were, in fact, a self-esteem threat. Though this perspective has some support in prior theorizing (e.g., Aronson, 1968; Greenwald & Ronis, 1978), this point is contested by some cognitive dissonance researchers (e.g., Harmon-Jones & Harmon-Jones, 2007). Similarly, by later showing close-other sabotage affects the tendency to engage in self-affirmation (Tesser et al., 2000), the claim is made that self-affirmation is also a self-esteem process. Self-affirmation theory has long maintained that

self-affirmation serves a higher order need for *self-integrity*, not necessarily self-esteem (Steele, 1988).

When trying to sort out these disagreements, a greater degree of evidence seems to be on the side of the classic theorists. Cognitive dissonance theory faced a long, fierce period of having its central premise, the motivational drive triggered by cognitive inconsistency, questioned (e.g., Tedeschi, Schlenker, & Bonoma, 1971; Bem, 1972). After extensive debate, and contested “resolutions” to the debate (e.g., Fazio & Cooper, 1984), Elliot and Devine, (1994) developed a self-report measure of dissonance, finally documenting the theorized psychological discomfort² and demonstrating that it is activated by classic dissonance manipulations, and resolved by classic dissonance responses. For self-affirmation, a recent systematic review of self-affirmation procedures reported little evidence³ that traditional research practices of self-affirmation (e.g., value affirmation) affected self-esteem (McQueen & Klein, 2006), much as a more recent study on a new technique for experimentally evoking self-affirmation found no self-esteem effect (Napper, Harris, & Epton, 2009). As much as Tesser and colleagues like to think the mediating mechanism of their substitutability studies cannot be measured, others whose work the model seeks to subsume credibly claim to have done so, and do not support the claims Tesser has made.

Uniting self-esteem, cognitive dissonance, and self-affirmation into one unitary, motivational intra-psychic force would be an incredible step forward in psychology,

² Zanna & Cooper’s (1974) misattribution of dissonance study was a very supportive yet indirect approach to the same goal, yet their findings of motivational arousal do not in themselves prove that this arousal was due to dissonance.

³ One study of the five that assessed some form of self-esteem found self-affirmation affected implicit self-esteem; the other four failed to find any explicit self-esteem effects.

which has tended towards smaller, sometimes overlapping if not outright derivative theories more than grand, unifying ones (see Aronson, 1992; Kruglanski, 2001). The three perspectives form a tangled web of competition and overlapping claims. Self-affirmation theory emerged from cognitive dissonance research (Steele & Liu, 1983), which by some accounts evolved into a theory of self-esteem (Greenwald & Ronis, 1978). It can almost be forgiven that many seem to prefer to think of them as separate areas of inquiry rather than try to sort out the competing claims from proponents of one or another.

For this reason, it is unfortunate that few (if any) have sought to extend Tesser's work thus far. That the results of Tesser and colleagues' research, which uses behavioral observation, conflict with the findings of research primarily relying on self-reports should be of greater concern, given the well-established risks of putting too much trust in self-report measures (Baumeister, Vohs, & Funder, 2007; Nisbett & Wilson, 1977). Harmon-Jones and Harmon-Jones (2002) conducted a test of a cognitive dissonance phenomenon, and using the self-report dissonance scale (Elliot & Devine, 1994), reported that dissonance mediated the process of a typical dissonance manipulation and response. However, they also found that an ad-hoc self-feelings measure mediated the same process. They glossed over this finding, seemingly preferring the dissonance explanation. That two conceptually distinct intra-psychic constructs can both be demonstrated to mediate a psychological process should be far more worrying for a researcher, especially a researcher trying to bolster the case for just one.

Psychology has long wrestled with preferences for and concerns over attempts to measure intra-psychic constructs. The view that intra-psychic constructs and self-report methods are not scientific has previously led to the embrace of supposedly superior approaches in the past (e.g., behavioral observation), and perhaps once again, with the rise of advanced brain imaging technology (e.g., fMRI). One reason this debate rages on is that failing to document critical intra-psychic constructs leaves theories vulnerable to alternate explanations. For example, the self-serving attributional bias is perhaps one of the most researched ways in which individuals (supposedly) protect their self-esteem. Yet D. T. Miller and Ross (1975) reviewed the literature and concluded that firm evidence was lacking for the role of self-esteem. They argued the patterns observed could still be explained by information-processing models. This challenge spurred further research, and 25 years later the self-esteem perspective claims vindication after a thorough meta-analysis found a great deal of evidence that biased attributions were caused by self-threat and that the degree of bias was even correlated with the degree of self-threat (W. K. Campbell & Sedikides, 1999). Surprisingly, the meta-analysis does not mention whether any of the studies tried to actually measure the self-esteem effect of self-serving attributions.

Given the power of the self-esteem motivation to parsimoniously explain a wide swath of psychological research, its convenient elasticity in adapting to disconfirming evidence, and the long history of it in the field, the self-esteem motivation is unlikely to be discarded for the lack of intra-psychic confirmation. However, lacking this evidence limits our understanding of the self-esteem motivation and the different phenomena

believed to serve it. Measuring the actual self-esteem effects can allow us to answer more advanced questions such as *how effective are various responses to self-esteem threat?* *What moderates the effectiveness of various self-esteem responses?* Failure to measure it should lead to some more earnest consideration of whether another intra-psychic construct can explain the same pattern of results (especially if attempts to document it are more successful).

Tesser and colleagues' studies on the substitutability of self-esteem responses (Tesser & Cornell, 1991; Tesser et al., 2000) are rare for combining multiple self-esteem correctives in a single study, and to some degree pitting them against one another. This, combined with their behavioral observation methodology, add credence to their claim of a unitary intra-psychic force motivating these behaviors. Further, testing multiple self-esteem correctives simultaneously raises intriguing new questions: When are particular self-esteem serving strategies chosen? Do certain responses work better for certain people?

Some answers to the first question can be found in existing literature. Tesser and Campbell (1980) found that individuals do not bask in the reflected glory of associated others when that glory draws an unfavorable comparison to their own performance or qualities. Some have found that individuals prefer more direct self-esteem responses (e.g., taking another opportunity to be evaluated on a task they failed at) when it's an important element of their self-concept that is threatened (Wicklund & Gollwitzer, 1982), and/or when they have high trait self-esteem (Vohs & Heatherton, 2001). On the other hand, they choose indirect routes (e.g., seeking out feedback on a different task) when

direct routes threaten to make them look inconsistent (Baumeister & Jones, 1978), and/or when they have low trait self-esteem (J. D. Brown, Collins, & Schmidt, 1988). However, the second question, the actual effectiveness of different self-esteem responses, cannot be answered by any of this research.

A good example of the benefits of measuring the intra-psychic variable can be found in the related field of cognitive dissonance. Glasford, Dovidio, and Pratto (2009) studied intragroup dissonance: the cognitive dissonance that is aroused when one's *group's* behaviors are inconsistent with one's *individual* attitudes. One can be forgiven for thinking this study sounds suspiciously like previous research on group-level esteem threats (e.g., Cialdini et al., 1976; Jackson et al., 1996; Snyder et al., 1986). However, the study utilized a self-report measure of the intra-psychic dissonance (Elliot & Devine, 1994), supporting their claim that they were invoking dissonance. Measuring dissonance not only allowed them to dispute accusations of producing "old wine in a new bottle", but it also allowed them to document the effectiveness of different methods of responding to the dissonance. They found that individuals who were highly identified with the group could not resolve dissonance caused by their group's behavior utilizing self-affirmation. Self-affirmation was not effective *enough*; only group affirmation seemed to resolve the dissonance. In the second study, it was found these highly identified individuals preferred more social-identity-enhancing modes of response (outgroup derogation) than individual-level responses.

Like previous research (e.g., Stone, Wiegand, Cooper, & Aronson, 1997), Glasford et al. (2009) found that individuals prefer to address dissonance threats directly,

and that identification is an important moderator of topics relating to the relationship between individuals and their higher order groups (Ellemers, Spears, & Doosje, 1997; Jackson et al., 1996; Sherman et al., 2007; Wann & Branscombe, 1990). It also confirmed what has often been assumed: Preferred strategies are more *effective* at addressing the underlying problem (in this case, dissonance). In just two studies, they concisely and convincingly answered a number of questions about cognitive dissonance and group identity.

Similar research on self-esteem maintenance would be beneficial; both for its ability to “integrate the self-zoo” and also to answer new questions about how effective different self-esteem maintenance strategies are, what moderates their effectiveness and what factors aside from effectiveness dictate the selection of different self-esteem maintenance strategies. By better understanding the details, we come closer to understanding the fascinating, complicated perhaps even quixotic quest to feel like a worthwhile person.

From the standpoint of our current state of understanding, it is difficult to even imagine having a model that would allow us to predict how any given individual would respond to different self-esteem threats. Yet good research on specific methods of self-esteem maintenance, such as basking in reflected glory, and smaller models built around these subtopics (e.g., self-evaluation maintenance, Tesser, 1988) can provide important building blocks towards explaining the larger, more complicated questions.

Basking in reflected glory is by no means the most common or essential method of managing self-esteem, but it has been the topic of my research for a number of years.

In pursuing a greater understanding of basking in reflected glory, I ultimately arrived at the larger topic of self-esteem maintenance. At the intersection of individual self-esteem and our thoughts and feelings about our social world, basking in reflected glory is perhaps a more *social*-psychological approach to the topic of self-esteem maintenance. More than simply a subset of social identity theory research, it could bridge the gap between the more individual self-esteem maintenance research and the group/collective level social identity research. United, these perspectives can provide a thorough but grounded real-world understanding of how individuals maintain their self-esteem.

Chapter 2: Three Experiments of BIRG and Self-esteem

As a vast amount of research demonstrates, esteem management is no simple business. Matters are complicated enough at the individual level, without even considering the implications of higher-order groups and associated others. Such is the added challenge of social psychology. Social connections may provide resources individuals can draw upon to support individual self-esteem (i.e., basking in reflected glory), and additional avenues from which individual's esteem can be threatened.

My goal is to better understand how basking in reflected glory is utilized to manage or maintain self-esteem. The research I propose here is a first step: to explicitly demonstrate the self-esteem benefit of basking in reflected glory, and to confirm its *substitutability* with other self-esteem correctives. While this has been long assumed, it can and should be demonstrated. Once it has been demonstrated, further questions can be explored: How effective is it at enhancing self-esteem? For whom?

Two potential moderators of the effectiveness of basking in reflected glory as a tactic of self-esteem can be readily gleaned from the existing literature. Greater identification is associated with an increase in basking in reflected glory and a decrease in cutting off reflected failure (Bizman & Yinon, 2002; Jackson et al., 1996; Wann & Branscombe, 1990). Most models (e.g., Ellemers et al., 2002; Wann, 1993) have suggested that highly identified individuals cannot or will not cut off reflected failure, but these models have not suggested that basking in reflected glory is any more beneficial for these individuals. Prior research has found group-level esteem threats have greater effect on the collective self-esteem of highly identified individuals (Branscombe & Wann,

1994). Similarly, Crocker et al. (2002) found that negative feedback on more important components of our self-concept had greater effects on state self-esteem. Identification is clearly a strong contender to moderate the self-esteem effect of BIRG.

Self-esteem research has suggested another variable that could be an important moderator: trait self-esteem. Individuals high in trait self-esteem are less affected by (state) self-esteem threats (J. D. Brown & Dutton, 1995), some have described high trait self-esteem as a buffer from life's misfortunes (J. D. Brown & Dutton, 1995; Greenberg et al., 1992; Taylor & Brown, 1988). Because individuals low in trait self-esteem are more affected by self-esteem threats, they may more readily call upon basking in reflected glory or cutting off reflected failure to address them, whereas individuals high in trait self-esteem may not even perceive an esteem threat. C.B. Miller (2009) found that only individuals low in trait self-esteem cut off the reflected failure of their candidate losing the 2008 U.S. Presidential election. However, Heimpel, Wood, Marshall, and Brown (2002) found that individuals low in trait self-esteem may not even be particularly motivated to correct lowered self-esteem, a finding that would be consistent with self-verification theory (Swann, 1984). This might suggest they are *less* likely to BIRG or CORF. This would be more consistent with research that has found that high trait self-esteem individuals are particularly concerned with actively maintaining or restoring their self-image (Baumeister, Smart, & Boden, 1996; Vohs & Heatherton, 2001). In short, prior literature produces contradictory hypotheses as to the effect of trait self-esteem on experiencing and responding to esteem threat. The inclusion of trait self-esteem in the experiments reported here could help clarify this muddy picture.

As for responding to self-esteem threat, prior research has shown that individuals low in trait self-esteem prefer indirect methods in responding to self-esteem threats (Brown, Collins, & Schmidt, 1988), whereas individuals high in trait self-esteem prefer to directly confront self-esteem threats (Heatherton & Vohs, 2000). This would suggest BIRG and CORF to be particularly attractive responses to individuals low in trait self-esteem. It could also imply that when the source of a self-esteem threat is the associated other, individuals high in trait self-esteem may be particularly inclined to CORF. However, Miller (2009) found just the opposite; high self-esteem supporters of losing Presidential candidate John McCain were *less* likely to CORF. This pattern may relate more to what threatens individuals high in trait self-esteem, than to how they choose to respond. Regardless, trait self-esteem certainly has an influence on esteem threat situations, and the response to esteem threat, and will be further investigated to better understand the seemingly complex relationship.

To summarize, in three studies I intend to show that basking in reflected glory benefits self-esteem, to compare its effectiveness in addressing self-esteem to other methods of repairing self-esteem and to better understand the role of likely moderators such as identification and trait self-esteem.

In the first experiment, I will conduct a conceptual replication of the classic basking in reflected glory effect (Cialdini et al., 1976): seeking “glory” from one’s group when one has suffered an esteem threat. In doing so, I will more carefully consider both public and private BIRG and explicitly measure state self-esteem.

In the second and third experiments, I will utilize the substitutability design of Tesser's studies on self-esteem maintenance (Tesser & Cornell, 1991; Tesser et al., 2000) to test whether basking in reflected glory can be replaced by other self-esteem serving responses (Experiment 2) and replace other self-esteem serving responses (Experiment 3). These studies will include explicit measurement of self-esteem after engaging in any self-esteem-serving response, or combination of responses.

The general hypotheses of the project are that basking in reflected glory benefits self-esteem. More specifically, I hypothesize that: 1) individuals given the chance bask in reflected glory after self-esteem threat will report higher self-esteem, 2) individuals first given the chance to engage in a self-esteem benefitting response (e.g., self-serving attribution) will be less likely to bask in reflected glory, and 3) individuals who bask in reflected glory will be less likely to engage in a later activity that benefits self-esteem (e.g., outgroup derogation). Additionally, I will consider the effect of level of identification and trait self-esteem on the activity of basking in reflected glory. I hypothesize that: 1) individuals higher in identification will show more self-esteem benefit from BIRG, 2) individuals lower in self-esteem will be more likely to BIRG.

Pilot Test

The first step in this project is to test materials related to the measurement state self-esteem, initiation of self-esteem threat and the response of basking in reflected glory. In order to ensure that critical components of these experiments work as intended, I first conducted a pilot test.

To measure state self-esteem, my preferred instrument is a scale used by Leary (Experiment 3, Leary et al., 1995), based on the self-feelings factor that emerged from McFarland and Ross's (1982) factor analysis of affective reactions to success and failure. The scale contains the same dimensions (e.g., pride, shame) tapped by related measures of self-feelings (e.g., Brown & Dutton, 1995), as well as some more general self-appraisals (e.g., good, competent, smart). I previously used this scale in the measurement of the effect of sports team success on fan's self-esteem (Miller, 2012), which is important evidence that this scale can detect self-esteem effects caused by associated others.

The alternative approach would be Heatherton and Polivy's (1991) State Self-Esteem Scale. As noted earlier, Brown et al. (2001) argues that this scale assesses self-appraisals, not state self-esteem. Additionally, the scale is awfully literal. Having students fail a test, and then be asked very direct questions such as "I feel I have less scholastic ability than others right now" can potentially evoke demand compliance, create a consistency threat or perhaps undermine the deception. Though this is not my preferred approach, I included it in the pilot test to consider its effectiveness.

To institute self-esteem threat, I will use the Remote Associates Test (McFarlin & Blascovich, 1984), which has been extensively utilized in prior self-esteem studies (J. D. Brown & Dutton, 1995; McFarlin & Blascovich, 1984; Vohs & Heatherton, 2001). The Remote Associates Test is a rigged test of intelligence, such that participants can be given relatively easy questions, or rather difficult ones.

To allow basking in reflected glory, I used information extolling the student's University's accomplishments in athletic or academic domains. Many studies of basking in reflected glory have focused on athletic achievement as the domain of success. This is likely a matter of convenience, as athletic programs and their accomplishments are common in university settings. Theoretically, BIRG should be possible with any relationship to any positive or negative outcome or accomplishment. Cialdini et al. (1976) pointed to the more distant and tangential behaviors that could reflect BIRG (e.g., towns that post signs bragging of historical figures who once slept there). Later BIRG research utilized election outcomes (Boen & Vanbeselaere, 2002; Boen, Vanbeselaere, Pandelaere, et al., 2002; C. B. Miller, 2009), which, like athletic outcomes, have clear indications of success or failure. The attempted use of academic achievement, in this case operationalized as a mention of the number Noble Laureates associated with the University, is unique in the BIRG literature.

The Pilot Test involved running most of the materials used in the later experiments, but in an order designed to ensure they did not affect one another as they normally would. The self-esteem threat is at the end of the study, instead of at the beginning.

Method

Participants

The pilot test combines several components, some effects of which are relatively well documented (e.g., the Remote Associates Test), and others that are new and untested (e.g., BIRG advertisements). The sample size was dictated by the new and untested

component, which is analyzed with a one-way ANOVA. Assuming a medium effect size, a sample size of 105 would achieve 80% power. This goal was not obtained in the required timeframe.

Eighty-seven participants were recruited from the Psychology program's Research Experience Program (REP), and took part in exchange for extra credit. The sample was 66% female, and 44% male. The sample was 76% Caucasian, 16% Asian, 4% Black and 4% other. The mean age was 19.7 (SD = 3.5).

Materials

To manipulate self-esteem, participants completed the Remote Associations Test (McFarlin & Blascovich, 1984). The Remote Associations Test (RAT) is presented as (and, in fact, originally designed to be) an intelligence test. Participants are presented with three words, and instructed to provide a fourth word that is associated with the original three. For example, participants are presented with the words "car-swimming-cue". A correct answer would be "pool" (carpool, swimming pool, pool cue). By presenting only the most difficult questions (desert-ice-spell; dry) which most participants miss, it serves as a form of negative feedback of one's intelligence. This test has been used previously in self-esteem-threat studies, and has been documented to affect state self-esteem (J. D. Brown & Dutton, 1995; Heatherton & Vohs, 2000). See Appendix A for all scales and measures.

Two advertisements were created to evoke BIRG, as well as one control advertisement. Each advertisement contained a University of Minnesota campus scene (e.g., the mall, the library) containing people. Each ad contained the logo of the University of Minnesota, and a similar amount of text. One ad was for the Gopher sports

program, touting the school's multiple national championships (Sports BIRG). One ad was for the University itself, touting the number of Nobel Laureates connected with the school (Academic BIRG). Finally, the control ad was for the University's bookstore, touting the products they sell (see Appendix B for ads).

All materials were presented to participants with the computer program MediaLab, which also recorded their answers and provided instructions unless otherwise noted.

Procedure

The pilot test was conducted in a computer lab. Multiple participants were seated at individual computers separated by privacy partitions.

Participants were told they were completing a pilot test of materials from various future social psychological experiments. Throughout the procedure, different fictional "future studies" are briefly explained, to justify the measures they completed.

Participants were first told they completing measures for a future study of attitudes towards the University. They completed ratings of the University on several dimensions: a global rating, as well as separate ratings for domains such as academics, sports programs, and so on. These questions were based on one's utilized in prior BIRG research (Cialdini & Richardson, 1980). Participants completed a measure of University identification (a modification of the Volunteer Identification Scale, Martino, Snyder, & Omoto, 1998). Participants then rated the Gopher sports program with the Sports Fan Identification Scale (Wann & Branscombe, 1993). Participants then completed a measure of Trait Self-Esteem, the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Participants were then told they were to complete measures for a future study on University advertising. Participants viewed the three “advertisements” (Sports BIRG, Academics BIRG, Control), and rated how much they liked the ads, how proud the ads made them feel, how attractive they were, and how believable they were.

Participants were then told they would complete measures from a future study of birth order and intelligence. First, they answered a series of cover story questions about their family (e.g., number of siblings, birth order). Then, they completed the purported intelligence measure (the Remote Associates Test). Participants read instructions that described the task as a test of *integrative orientation*, the ability to find novel solutions, which is not captured well by traditional tests of intelligence, but strongly predicts important life outcomes such as academic achievement and career success. The task involves identifying one word that links three words that are presented to them. Participants were told the average score on the test was 7 out of 10 correct. Participants were then given two example questions, to ensure they understand the task. Participants were randomly assigned to complete either an easy (success condition) or hard (failure condition) version of the test.

Upon completing the test, participants’ answers and the correct answers were displayed on the screen. Participants then had to summon the experimenter to grade the test. The experimenter would state their score aloud, record it, and then allow them to continue the experiment. The experimenter was instructed to behave in a neutral manner, and not to engage with the participants.

The participants next completed the measures of state self-esteem. They first completed a 12-item scale of self-feelings (e.g., pride, worthless, etc), based on scales used in prior self-esteem research (J. D. Brown & Dutton, 1995; Leary et al., 1995; McFarland & Ross, 1982). They then completed the State Self-Esteem Scale (Heatherton & Polivy, 1991).

Finally, participants completed a manipulation check asking them how difficult the RAT was, how well they did on it, and whether they felt they were being deceived in the course of the experiment. Finally, participants completed a self-affirmation exercise, in which they were prompted to select an area of their life that is important to them and makes them feel proud, and briefly write about it (Blanton, Pelham, DeHart, & Carvallo, 2001). This was to alleviate the negative effects of the self-esteem manipulation (see Sherman & Cohen, 2006 for a review).

Participants were then debriefed. This debriefing explained that the intelligence test they took was rigged, and that its true purpose was to deliver positive or negative feedback to them. Thus, they should not take the feedback they received in this study to be a true reflection of their intelligence. Participants were told the study was, in fact, a pilot test of materials for a future study on responses to positive and negative feedback. If the participants had any more questions about the experiment, they were encouraged to contact the lead experimenter.

Results

It was hypothesized that participants who completed the easy RAT (success condition) would report higher self-esteem than participants who completed the hard

RAT (failure condition). It was also hypothesized that participants would rate BIRG advertisements more highly than Control advertisements.

An independent samples t-test was conducted to evaluate the effect of the Remote Associates Test on the two state self-esteem scales: the self-feelings scale (Leary et al., 1995; McFarland & Ross, 1982), and the self-appraisals scale (Heatherton & Polivy, 1991). On the self-feelings scale, individuals who completed the easy test ($M = 49.8$, $SD = 15.5$) did not differ significantly from individuals who completed the hard test ($M = 45.0$, $SD = 14.54$), $t(85) = 1.5$, $p = .138$. Similarly, with the self-appraisals scale, individuals who completed the easy test ($M = 51.7$, $SD = 10.7$) did not differ significantly from individuals who completed the hard test ($M = 48.1$, $SD = 11.1$), $t(85) = 1.5$, $p = .136$ (see Table 2-1).

Additional analyses determined that a number of individuals in the easy RAT condition were scoring below the published mean (7 of 10) for the task (McFarlin & Blascovich, 1984), and even below the midpoint of the task's grading scale (5 of 10). The analysis was rerun with individuals who scored less than 5 out of 10 in the success condition excluded ($n = 18$). In this analysis, differences in self-feelings between the easy test ($M = 55.7$, $SD = 14.0$) and the hard test ($M = 45.0$, $SD = 14.5$) were significant, $t(67) = 2.93$, $p = .01$. Differences in self-appraisals between those in the easy ($M = 55.6$, $SD = 8.6$) and hard ($M = 48.1$, $SD = 11.1$) condition were also significant, $t(67) = 2.82$, $p = .01$. See Table 2-2 and Figure 2-1.

To analyze participants' evaluations of the intended basking in reflected glory advertisements, I first examined the relationship between the seven ad evaluation

questions. A Cronbach's test revealed $\alpha = .93$, so the questions were summed into a measure of Ad Evaluation. A separate analysis was also conducted on the single scale item, "this ad makes me feel proud," as this was considered a critical indicator of the "glory" one might bask in. Removal of pride from the Ad Evaluation composite did not change the results of the evaluation.

To examine evaluations of the advertisements, a one-way repeated measures ANOVA was conducted, and revealed significant differences in the evaluation of the Control Ad ($M = 47.9$, $SD = 11.3$), the BIRG Academics Ad ($M = 52.48$, $SD = 11.6$) and the BIRG Athletics Ad ($M = 51.9$, $SD = 13.7$), $F(2, 172) = 6.46$, $p = .02$. Repeated measures t -tests (employing a Bonferroni correction, $\alpha = .017$) showed that the Control Ad differed significantly from the BIRG Academics Ad ($t(87) = 3.4$, $p = .001$) and the BIRG Athletics Ad ($t(87) = 2.9$, $p = .005$), the two BIRG ads did not differ significantly from one another $t(87) = .09$, $p = .93$. See Table 2-3 and Figure 2-2.

Similarly, repeated measures t -tests of the Pride question (again, $\alpha = .017$) showed that the Control Ad ($M = 6.1$, $SD = 1.6$) evoked significantly less pride than the BIRG Academics Ad ($M = 7.2$, $SD = 1.7$), $t(86) = 5.42$, $p < .001$ and the BIRG Athletics Ad ($M = 7.0$, $SD = 1.7$), $t(86) = 4.53$, $p < .001$. The two BIRG ads did not differ significantly from one another $t(86) = .64$, $p = .52$.

Descriptive statistics on the scales of University Identification, Sport Spectator Identification and University ratings can be found in Table 2-4. Average scores on all the scales were above the midpoint. The University Identification scale correlated significantly with ratings of all the experimental advertisements (r 's = .24-.31, see Table

2.5), while the Sport Spectator Scale only correlated significantly with ratings of the Sports BIRG advertisement ($r=.36$).

Discussion

The primary purpose of the Pilot Test was to test certain materials and procedures for use in the later experiments. The findings were generally supportive of the materials and approaches attempted.

As in prior studies, the Remote Associates Test effectively manipulated self-esteem. However, as a test that does not rely on false feedback, it is possible for participants to not experience the independent variable as intended. In the Pilot Test, a number of individuals in the “Success” condition, in fact, scored very poorly and did not manifest the intended positive (or at least neutral) self-esteem effect. To address this, two changes are implemented in all of the experiments that follow: First, an “average score of 7” would no longer be reported to participants, and second, the studies would be limited to native English speakers.

Though the manipulation of self-esteem is critical to the studies of this thesis, the difficulty with the Remote Associates Test in the Pilot Test can be managed. The problem was in the “success” condition, yet in 2 of the 3 experiments that follow, only the failure condition is utilized. In the study that utilizes the success condition, participants are given a comparison score that adjusts to their performance, instead of the static comparison of “7”.

Another reason for the unusually low scores in the “success” condition may have been the verbal nature of the Remote Associates Task. Even the easier “success”

condition requires a larger vocabulary and a better understanding of the relationships between words than many who speak English as a second language may possess. ESL students as a proportion of the University's student body have more than tripled over the past 4 years (Jensen, 2012). As these individuals may have more difficulty succeeding in the "success" condition, and have a very plausible excuse on which to blame their poor performance in the "failure" condition, the rest of the experiments presented here will require participants to speak English as their native language.

The Pilot test was supportive of the approaches to basking in reflected glory to be pursued in this study. Information reporting the athletic successes and academic excellence of the University evoked more positive evaluations, especially on the self-esteem relevant dimension of "pride". These exact ads, or materials similar to them, were used in all the experiments that follow. The control ads are very similar, also containing images of and references to the University, so I can be sure it is in fact the "glory" that is driving the effect, not just reminders of group membership.

Experiment 1

The goal of Experiment 1 was to replicate the phenomenon of basking in reflected glory, and to measure its state self-esteem effects. This study is a conceptual replication of the initial BIRG study (Cialdini et al., 1976) and the initial CORF study (Snyder et al., 1986). In this experiment, participants had their self-esteem manipulated via poor test performance, and were given the chance to both publicly and privately BIRG of their University's athletic success. Immediately after, their self-esteem was measured. I

hypothesize that individuals who perform poorly on the test would be more likely to BIRG, and that individuals who BIRG will report higher self-esteem.

Participants

Examining the two studies of basking in reflected glory most similar in design to the study reported here in design (Cialdini et al., 1976; Snyder et al., 1986), I found a range of effect sizes depending on particular details of methodology. Using J. Cohen's (1988; 1992) categories of effect size, behavioral displays of basking in reflected glory (e.g., wearing identifying apparel or buttons) following success or failure were found with a large effect. Cialdini et al.'s (1976) more subtle Experiment 2, which recorded pronoun usage (e.g., "we" vs. "they won"), had much smaller effect size (between small and medium by Cohen's, 1992, criteria). Averaging the different designs and analyses suggest a medium effect size.

A power analysis for a 2 x 2 ANOVA shows a medium effect size would require 15 participants per cell for 80% power to detect at least one significant effect (of the three potential effects in a 2 x 2 ANOVA design). However, to more specifically detect the hypothesized interaction would require 30 participants per cell to achieve 80% power (Maxwell, 2004). Recruitment fell just short of this target.

One hundred participants were recruited from the Psychology program's Research Experience Program (REP), and took part in exchange for extra credit. The sample was 70% female, and 30% male. The sample was 79% Caucasian, 14% Asian, 4% black and 3% reporting other ethnic/racial descriptions. The mean age was 20.5 (SD = 3.5).

Materials

To manipulate self-esteem, the Remote Associates Task was utilized as described in the Pilot Study, with one change. The test's instructions no longer included the fictional "average score". A second intelligence test, comprised of abstract problem and puzzle questions from the Mensa Society's online practice test (Mensa, 2011), was included to support the cover story (see Appendix A).

In order to allow participants to *publicly bask in reflected glory*, pin-on buttons with the University logo were utilized. The buttons were 4.45cm in diameter.

To allow participants to *privately bask in reflected glory*, a bulletin board they would be sitting near was specifically decorated. For all conditions, the bulletin board displayed a title "Sports Psychology", and fliers for research studies involving sports (e.g., "sports fans and health"). The bulletin board also contained a flier promoting a school spirit student group, accompanying the University logo buttons (see Appendix B for photos).

In the *basking-in-reflected-glory condition*, the board also displayed a photo of the three NCAA championship trophies the University won in 2002 (and the coaches who won them), and newspaper articles about recent athletic successes (the basketball team winning a tournament, the football team upsetting a rival in a trophy game, the school's mascot winning a national mascot competition). In the *control condition*, a poster for a University book fair was displayed, as well as a newspaper article about a piece of software developed by a University professor.

Most of the experiment's questionnaires (and the self-esteem manipulating Remote Associates Task) were presented by the computer program MediaLab, with the exception of the state self-esteem and manipulation check questions.

Procedure

Participants were told they were taking part in a study of the relationship between birth order and intelligence. Participants arrived at a small computer lab, and a few minutes later a confederate pretending to be another participant arrived. Both individuals were seated at computers, and told to follow the instructions on the screen. They were told they were not allowed to talk to one another during the procedure. Finally, they were told that at the conclusion of the study they would meet with the professor running the study, so he could explain the results of their intelligence test. The deception of "meeting with the professor" (utilized in Snyder et al., 1986) was included to increase the threat of performing poorly on the intelligence test, and also as an "audience" for potential public BIRG.

Participants completed the computer questionnaire. They answered the Trait Self-Esteem scale (Rosenberg, 1968), then a series of filler questions related to the cover story (birth order) and then the measure of University Identification.

Next, participants completed the first "intelligence test" (the Mensa practice questions). Participants were told that scores on the test were based on accuracy and speed, so as to impair their ability to guess how well they had done. Participants received no immediate feedback on this task.

The second intelligence test was the self-esteem manipulating Remote Associates Test. Participants were randomly assigned to complete the easy version of the test (Control condition), or the hard version (Threat condition).

Upon completing the RAT, the participant's answers were displayed on the screen along with the correct answers. The participants summoned the experimenter who scored the participant's test first. After scoring the test, the experimenter would state their score aloud ("Okay, you got X correct . . .") as he or she recorded it. The comment was supposedly intended for the participant alone, but was loud enough to be heard by the other person (the confederate) in the room.

The experimenter then pretended to score the confederate's test. In fact, the confederate's score was determined by the participant's score. In the *Threat condition*, the confederate's score was 6 more than the participant's score. In the *Control condition*, the confederate's score was one less than the participant's score. The confederate's score was stated aloud in the same manner as the participant's had been.

The computer then displayed the score for the two intelligence tests (Mensa and RAT). In the *Control condition*, participants saw their real RAT scores and an "83rd percentile" score for the Mensa questions. In the *Threat condition*, participants saw their real RAT score and a "53rd percentile" score. The experimenter wrote the scores on a slip of paper with the participant's name. This slip of paper was given to the participant, and they were instructed to give it to the professor during their meeting. The experimenter then led the participant and the confederate to the professor's office. The confederate was

instructed to ensure they were closer to the experimenter than the participant as they walked.

The experimenter halted in the low-traffic hallway near an open door and a chair, and stated that the participants would meet with the Professor one at a time for privacy reasons. The confederate, who was nearer, was told to proceed down the hall to the professor's office, and did so. The participant was instructed to sit in the chair and wait for their turn. The experimenter entered the open door, saying they would enter the participant's extra credit into the on-line system.

The participant's seat was directly in front of the open door. The Professor's office was down the hall to their left. To their right, on the opposite side of the open door, was a bulletin board displaying either the athletic success materials (BIRG condition), or the control materials (control condition). Inside the office, directly in front of the participant, a hidden camera filmed the participant (see Figure 2-3 for a diagram).

After being left alone in the hallway for three minutes, the experimenter emerged from the office and asked whether the other participant (the confederate) had left the Professor's office yet. Informed that they had not, the experimenter stated the participant had a post-experiment survey still to complete, and although they were supposed to complete it after meeting with the professor, they might as well do it now, given that they were waiting. The participant was brought into the office to complete this survey, which contained the measure of state self-esteem (self-feelings: Leary et al., 1995; McFarland & Ross, 1982), manipulation check questions (including a self-rating of RAT performance) and demographic questions.

Participants were then probed for suspicion, and debriefed. Specifically, they were told the intelligence tests they took were rigged, and that they should not take them seriously as a measure of their intelligence. They were informed of the purpose of the bulletin board, and the buttons, and their relationship to the true purpose of the study: to examine individual's responses to failure feedback.

Participants were given a written debriefing form as well, and asked to affirm their consent to be in the study (having now learned the true purpose of the experiment). The written debriefing form contained contact information for the experiment, as well as the IRB, if the participant had any concerns. Participants were told they could withdraw from the study later as well, and have their data deleted. None chose to do so. Participants were thanked for their participation.

Later, two research assistants independently viewed the videos of participants waiting and used stopwatches to record the amount of time participants spent looking at the bulletin board. These research assistants were blind to the condition of the experiment the participants had undergone.

Results

Manipulation check questions show that 77% of participants accurately reported the confederate's score on the RAT, and 92% of participants could accurately describe the content of the bulletin board displayed outside the office. Self-reports of RAT performance found that 15 individuals reporting inconsistently with their assigned condition. Self-reports were considered inconsistent if they were above the midpoint in the failure condition, or below the midpoint in the control condition. Fourteen of the

excluded individuals were in the Control (RAT Easy) condition, and one was in the Failure condition (RAT hard). As in the Pilot test, a number of individuals struggled with the easy form of the RAT, and in fact felt as if they had done rather poorly on it. These individuals were dropped from the study, though it will be noted in footnote whether their exclusion altered the outcome of any statistical test⁴.

The “time spent looking at bulletin board” assessments made by two independent coders (per video, 10 coders in all were employed) were found to correlate between .9 and .99. The two time assessments were therefore averaged.

To examine the effects of Feedback (Control, Failure) and Board Content (BIRG, control) on taking the University identifying button (public BIRG), a logistic regression was conducted. Neither Feedback nor Board Content, nor the interaction between them, significantly predicted the taking of a button, $X^2(3) = .89$, $p = .83$ (see Table 2-6 for beta weights).

To examine the effects of Feedback (control, failure) and Board Content (BIRG, control) on time spent looking at the bulletin board (private BIRG), an ANOVA was conducted (see Table 2-7). There was not a significant effect of Feedback (Control Feedback: $M = .30$, $SD = .18$ or Failure Feedback: $M = .29$, $SD = .17$) on time spent looking at the bulletin board, $F(1, 82) = .07$, $p = .79$. There was not a significant effect of the Board content (Control Board: $M = .30$, $SD = .19$, or the BIRG Board: $M = .29$, $SD = .16$) on time spent looking at the bulletin board, $F(1, 82) = .28$, $p = .60$. There was a significant interaction between Feedback and Bulletin Board Content, $F(1, 82) = 3.4$, $p =$

⁴ Excluding data can be justified on valid methodological grounds, but still inadvertently bias analyses. For this reason, it is advised that the exclusion of data always be reported, especially if the exclusions affect the outcome of analyses (Simmons, Nelson, & Simonsohn, 2011).

.04, $\eta^2 = .05^5$. Individuals in the Failure Feedback condition spent more time looking at the BIRG bulletin board (see Figure 2-4).

To examine the effects of Feedback and Board Content on self-esteem, an ANOVA was conducted. There was a significant effect of Feedback on Self-esteem, $F(1, 82) = 14.367$, $p < .01$. Individuals receiving Success feedback ($M = 63.8$, $SD = 13.3$) reported higher self-esteem than those receiving Failure Feedback ($M = 52.7$, $SD = 11.7$), see Figure 2.5. There was not a significant effect of the Control Board ($M = 57.6$, $SD = 15.6$) or the BIRG Board ($M = 57.1$, $SD = 13.3$) on Self-esteem, $F(1, 82) = .136$, $p = .71$. There was not a significant interaction between Feedback and Bulletin Board Content, $F(1, 82) = 1.69$, $p = .2$ (see Table 2-8).

To examine predicted moderators of the tendency to bask in reflected glory, a standard multiple regression predicting time spent looking at the bulletin board was conducted on individuals in the Negative Feedback/BIRG Board condition ($n = 28$). Trait self-esteem, University Identification and the interaction between them were entered as predictors. None of the predictors were significant (see Table 2-9).

Discussion

The first hypothesis, that individuals performing poorly on the supposed test of intelligence would be more likely to bask in reflected glory was partially supported; individuals performing poorly on the test were more likely to engage in Private BIRG (looking at bulletin board), but not Public BIRG (taking or wearing the University logo button). The second hypothesis, that BIRG would boost self-esteem, was not supported.

⁵ The exclusion of the 15 individuals who failed the RAT performance manipulation check affects the outcome of this statistical test. With those 15 cases included, the Feedback x Bulletin Board interaction falls short of the .05 level of significance.

The absence of public BIRG in this study has a number of possible explanations.

First, it should be noted that the success of the identifying button procedure has been mixed in the literature. Snyder, Lassegard and Ford's (1986) laboratory study found the predicted effect, but Wann et al.'s (1995) quasi-experiment of voters in the 1992 Presidential election did not. Like this study, Wann et al (1995) found that a much larger number of individuals taking a button than wearing a button, and that the primary predictor of taking the button was not the potential for glory, but identification with the group. Wann et al. (1995) noted that their study involved real world group memberships (e.g., Democrats), whereas Snyder et al's (1986) group memberships were more akin to minimal groups (i.e., lab created, no real world significance). Miller's (2006) analysis of the National Election Study included the 1992 election, and also reported no BIRG effect, suggesting Wann's results were likely due to some feature of that election, not the experiment's dependent variable. However, unlike these two studies, the button did not represent a link to a specific and very recent successful outcome. The glory reminders presented on the bulletin board were all relatively recent, but perhaps not recent or important enough to bask in.

A second possibility is suggested by Cialdini et al.'s (1976) Experiment 3. They found the tendency to BIRG was greater when the "audience" could not claim the same "glory". In this study, the Professor/audience was also associated with the University, perhaps reducing the attractiveness of Public BIRG in this situation.

Finally, it might simply be that the participants do not wear buttons on their person. My personal observation is that students more often display buttons on their

backpacks than on their person. At the time of the observation, the participants did not have their backpacks.

More consistent with prior research was the finding that participants who received failure feedback on the IQ test spent more time looking at the basking in reflected glory bulletin board. This is an important conceptual replication of Boen et al. (2002), who found that the websites of winning soccer teams saw more visits after the team won than after the team lost. These private behaviors can be of no benefit to one's self-presentation, and have thus been theorized to benefit self-esteem. However, this interpretation is threatened by the measured results of self-esteem. Contrary to the hypothesis, basking in reflected glory did not produce any self-reported affect on self-esteem.

As in the pilot test, negative test feedback led to lower self-esteem scores. What was not found was the expected recovery of self-esteem from basking in reflected glory. There was no evidence that the failure to confirm this hypothesis was due to statistical power, which was lower than intended. The observed, insignificant differences in self-esteem were actually in the wrong direction; individuals reported slightly higher self-esteem if they were sitting in front of the *Control* bulletin board. Tesser and Campbell (1980) warned that glory associations could be counterproductive if they had the unfortunate effect of drawing attention to one's shortcomings. This is one reason the BIRG stimulus utilized athletic success after the participants received negative feedback about their intelligence.

One could argue that these findings are evidence that BIRG does not affect self-esteem; I found behavioral evidence of Private BIRG, which has long been assumed to serve self-esteem (e.g., Boen, Vanbeselaere, & Feys, 2002; Cialdini & Finch, 1989), yet no self-esteem effect. It would be rash to draw a conclusion based on a single study, especially a null result. Tesser (2001) has argued that the self-esteem motivation that is at the center of many self-related processes, is unconscious and automatic, and could not be reliably measured. Tesser and colleagues (1991:2000) instead relied on behavioral evidence that the underlying self-esteem threat had been addressed. This approach is attempted in Experiment 2.

Experiment 2

Although Experiment 1 succeeded in replicating a private basking-in-reflected-glory effect, it did not succeed in documenting a self-esteem benefit for doing so. Though individuals in the threatened self-esteem condition spent more time looking at the reflected glory bulletin board, their self-esteem was no better for it. Experiment 1 failed to explicitly show the expected self-esteem benefit to basking in reflected glory.

Experiment 2 explored the same question with a different approach. Although it still employed the explicit self-report of self-esteem, it also attempted to infer the self-esteem effect utilizing the principles dictated by Tesser's research on Self-Evaluation Maintenance (Tesser & Cornell, 1991; Tesser et al., 2000). Tesser and colleagues eschewed the explicit measurement of the assumed mediating construct (what they called self-evaluations, which they report are in the service of self-esteem), and instead focused

on their effect on later behavior. If a behavior reduced later behaviors believed to address self-esteem, then it can be inferred that self-esteem had been affected.

In Experiment 2, participants had their self-esteem threatened. They had the opportunity to bask in reflected glory. However, this time, they also had an opportunity to engage in another action believed to benefit self-esteem *prior* to the opportunity to bask in reflected glory. The alternative self-esteem serving behavior was self-serving attributions (Heider, 1958; see Campbell & Sedikides, 1999, for a review). After a self-esteem threat, participants were randomly assigned to either make attributions (presumably self-serving ones) for their poor test performance (e.g., my score was a reflection of a poorly designed test) or not, and then will be given an opportunity to bask in reflected glory.

I hypothesize that individuals who had an opportunity to engage in biased attributions (of negative performance) would be less likely to bask in reflected glory, and that individuals who were allowed to engage in at least one self-esteem serving behavior would report higher self-esteem than individuals who are not.

Participants

As described in Experiment 1, 120 participants would allow 80% power to detect a medium-sized effect in a 2 x 2 ANOVA. However, given the failure to find a self-esteem effect in Experiment 1, the sample size for Experiment 2 was increased. A sample size of 200 participants allows 95% power to detect a medium sized effect, and 60% power to detect a medium-to-small effect.

Two hundred and one participants were recruited from the Psychology program's Research Experience Program (REP), and took part in exchange for extra credit. The sample was 62% female, and 38% male. The sample was 75% Caucasian, 13% Asian, 6% Black and 6% reporting another race/ethnicity or declining to answer the question. The mean age was 19.8 (SD = 2.5).

Materials

Experiment 2 used many of the same materials as Experiment 1, including the Remote Associations Test to manipulate self-esteem and the birth order/intelligence cover story questions (e.g., number of siblings).

The potential to engage in self-serving attributions was provided by a series of four questions, used in prior research (Luginbuhl, Crowe, & Kahan, 1975). Two of the attributions focused on internal attributions (e.g., ability), and two on external attributions (e.g., luck). Participants responded to them on an eight-point scale (see Appendix A for all questionnaires and scales).

The potential to bask in reflected glory was provided by a recent newspaper article from the local *Star Tribune* on the University's 1960 national championship season in football. A control article, on 1970's University football coach Cal Stoll and his career before arriving at the University, was created and presented as a *Star Tribune* article (see Appendix B).

All scales and questions were presented and answers recorded with the computer program MediaLab.

Procedure

Experiment 2 was conducted in a computer lab. Multiple participants were seated at individual computers separated by privacy partitions.

Participants were told they were taking part in a study of birth order, intelligence and creativity. On the computer, they first filled out a measure of trait self-esteem (Rosenberg, 1968). Then, they answered a series of questions related to the cover story (e.g., birth order).

Participants then completed the first supposed test of creativity. This task was the “alternate uses task” (Guilford, 1967). Participants were asked to suggest alternate uses for common household items (e.g., clothes hanger). Participants received no feedback on the task, nor any indication of how it would be scored.

Next, participants completed the supposed intelligence test - the self-esteem manipulating Remote Associates Test. All participants completed the hard version of the RAT, thus receiving failure feedback. As in the previous studies, the test was graded in front of the participant by the experimenter, and their score was stated aloud to them.

Participants were then asked to rate the efficacy of the experiment’s tasks. They were given several possible factors that contributed to their score on the test, some internal (e.g., my ability) or external (e.g., the test-taking environment). Participants rated these factors on an eight-point scale. By random assignment, participants either rated the Alternate Uses Task (source of no feedback, thus a control attribution task), or the Remote Associates Task (source of the negative feedback).

After completing these ratings, participants were told their next intelligence test was a reading comprehension task. They were given the choice of two potential articles: one about the University's 1960 national championship football season (BIRG stimulus), and one about 1970's University football coach Cal Stoll (control stimulus). Participants were told that the two articles (and their accompanying questions) were equally difficult, but that the championship season article (BIRG stimuli) was nearly twice as long. Choosing the BIRG article was a voluntary decision to prolong their time in the lab for no additional compensation.

Participants were randomly assigned to read either the BIRG or control article. It was presented to them as a choice, though if they selected the article they were not randomly assigned to, they were told too many people had chosen that article today, and given the other article. Thus, I record the article they would choose to read, but the actual effect of reading the article is not affected by self-selection bias. After the article participants were asked a number of factual questions related to the article (e.g., "What is the name of the stadium the Gophers played in at the time of this article?"), maintaining the cover that it was a reading comprehension task.

Following this, participants completed the measure of state self-esteem, demographic questions, manipulation check questions and questions probing for suspicion. Finally, participants completed a self-affirmation task (Blanton, et al., 2001) to alleviate effects of the self-esteem manipulation.

Participants were then debriefed in the same manner as Experiment 1. In short, they were told the intelligence tests they took were rigged; they should not take them

seriously as a measure of their intelligence. They were given the option of retroactively withdrawing; none chose to do so. They were thanked for their participation.

Results

I hypothesized that individuals who had the opportunity to engage in biased attributions (of negative performance) would be less likely to bask in reflected glory, and that individuals who were allowed to engage in at least one self-esteem serving behavior would report higher self-esteem than individuals who were not.

Attributions on the negative feedback task ($M = 18.3$, $SD = 3.9$) were significantly more self-serving (i.e., used external attributions) than on the no-feedback task ($M = 16.6$, $SD = 3.9$), $t(199) = 3.1$, $p = .002$.

To test for the effects of Attribution (for either failure task, or no feedback task) on selection of article (Glory article, Control article), a chi-square test was conducted. Attribution opportunity had a significant effect on selection of article, $\chi^2(198) = 5.13$, $p = .02$. Individuals who made attributions for their negative test performance were less likely to choose the Glory newspaper article, 50%, compared to 66% (see Table 2-10).

To test for moderators of the use of BIRG as a self-esteem response, a logistic regression was conducted. Neither Trait Self-Esteem nor University Identification predicted selection of the BIRG article (see Table 2-11).

To test for the effects of Attributions and/or BIRG on self-esteem, an ANOVA was conducted (see Table 2-12). Also included as an independent variable was Choice: whether participants were allowed to read the article they selected (109 were, 92 were not). Prior research (see Thompson & Spacapan, 1991, for a review) has indicated that a

loss of power or control can affect self-esteem. As participants who were not allowed to read the article of their choice could feel a loss of control, this was included in the analyses.

There was not a significant effect of Choice on Self-esteem, $F(1,193) = 1.00, p = .32$. There were no significant differences in the self-esteem score of individuals who made attributions for their negative performance task compared to attributions for their no-feedback task, $F(1,193) = .40, p = .53$. There were no significant differences in the self-esteem scores of individuals who read the Glory article compared to the Control article, $F(1,193) = .002, p = .96$.

There was not a significant 3-way interaction (Article x Attribution x Choice) on self-esteem, $F(1,193) = .000, p = .98$. The 2-way interaction of BIRG and Attributions was also not significant, $F(1,193) = .393, p = .53$. The 2-way interaction of BIRG and Choice was not significant, $F(1,193) = .028, p = .87$. The 2-way interaction of Choice and Attributions was significant, $F(1,193) = 4.9, p = .03$, see Figure 2-6. Individuals in the Attribution control condition (i.e., made attributions for a task they received no feedback on) who did not have their Choice of article honored reported lower self-esteem.

Discussion

It was hypothesized that engaging in a self-serving attribution to explain a negative outcome would lead to a decrease in the tendency to bask in reflected glory. This hypothesis was supported. It was also hypothesized that use of either of the (presumed) self-esteem serving behaviors (BIRG, biased attribution) would benefit self-esteem. This hypothesis was not supported.

Experiment 2 successfully replicated Tesser et al. (1991), in that use of one self-esteem serving mechanism reduced use of another self-esteem mechanism. In this case, self-serving attributions reduced the tendency to bask in reflected glory. Tesser and colleagues would argue this is evidence that basking in reflected glory is a behavior that affects self-esteem, and could be incorporated into the “self-zoo”. However, like Experiment 1, Experiment 2 failed to document any explicit self-esteem benefit to basking in reflected glory, or for that matter, to making self-serving attributions.

Much like basking in reflected glory, there seems to be little doubt today that self-serving attributions are an esteem-serving response. Campbell and Sedikides (1999) conducted a meta-analysis of 70 self-serving attribution studies and concluded self-threat (e.g., failure) was the primary motivator. Yet that meta-analysis did not address the question of whether self-serving attribution *actually affected* self-esteem, but rather whether it was motivated by a self-esteem threat. Some research has looked at this. Weiner, Russell, and Lerman (1979) found attribution is critical to determining the affective consequences of achievement feedback, and McFarland and Ross (1982) more specifically found this true of self-esteem. That this study did not replicate their results is worrisome.

The critical difference would seem to be that McFarland and Ross (1982) did not so much *allow* participants to make attributions, but rather *directed* them to make either internal or external attributions; after receiving performance feedback, they were told the experimenter’s evidence supported that the task was either a very good (i.e., one should make internal attributions) or very poor measure (i.e., an external attribution was more

appropriate). When left to make this attribution on their own, as they were here in Experiment 2, self-esteem was not protected. It may be that the ability of self-serving cognitive biases to alleviate self-threat is limited; without some external, perhaps *social*, support for their biased attributions, they failed to restore their self-esteem. This hypothesis would be compatible with more interpersonal theories of self-esteem, such as the “looking-glass self” (Cooley, 1902) and the sociometer hypothesis (Leary et al., 1995)

That having one’s choice of article honored and the target of their attributions alone interacted significantly in affecting self-esteem is difficult to interpret. Research on both suggest that they should both, individually, affect self-esteem; it is more difficult to explain why it is only their interaction that was significant. The effect seemed to be driven by participants who were given failure feedback, then given a worthless attribution opportunity (control condition), then had their choice for newspaper article refused (choice ignored). This seems to have been demonstrably more detrimental to their self-esteem. Rather than demonstrate any recovery of self-esteem, it would seem individuals in this condition experienced an additional self-esteem threat (loss of control), and this was reflected in their self-esteem scores.

To summarize, Experiment 2 failed to demonstrate an explicit self-esteem benefit from basking in reflected glory or self-serving attributions. This replicates an important finding of the first study. That the substitution methodology pioneered by Tesser and colleagues (Tesser & Cornell, 1991; Tesser, 2000) for self-esteem research replicated, and did seem to indicate a self-esteem benefit is interesting. However, the implications of

these mixed results should first be confirmed by completing the matching “substitution study” before too deeply considering their implications. Having shown that self-serving attribution can take the place of BIRG, can I now show BIRG taking the place of another supposedly self-esteem serving activity? This question was addressed in Experiment 3.

Experiment 3

The purpose of Experiment 3 was to complete the model of substitutable self-esteem responses (Tesser & Cornell, 1991; Tesser, 2000). Experiment 2 showed another response successfully reduced the tendency to engage in basking in reflected glory. In Experiment 3, the goal was to show that basking in reflected glory reduces the tendency to engage in another supposedly self-esteem serving behavior.

In this experiment, the second self-esteem response was outgroup derogation (i.e., blasting). The tendency to explain prejudice towards outgroups as serving self-esteem needs has a long history in social psychology (Allport, 1954; Festinger, 1954; Tajfel & Turner, 1974), and elsewhere. For example, historians commonly (e.g., Silber, 2011) explain poor, white southerners’ support for slavery as essentially as a function of their need to maintain their esteem. In follow-up research on BIRG, Cialdini and Richardson (1980) found evidence that individuals would derogate rival schools after failure feedback, a response that he called “blasting”. Some research in social identity theory has found outgroup derogation can measurably benefit collective self-esteem (Branscombe & Wann, 1994).

In addition to basking in reflected glory, another behavior will be tested as reducing the tendency to derogate: self-affirmation. Tesser (2000) included self-

affirmation in his list of “self-zoo” phenomena, and has found it reduces the tendency to engage in later self-esteem-serving behaviors. However, despite this, there is debate about whether self-affirmation affects self-esteem. Though often pitched by pop psychology self-help books, a recent review of self-affirmation literature found more studies in which self-affirmation was not found to have an effect on self-esteem than benefit it (McQueen & Klein, 2006).

Self-affirmation theory (Steele & Liu, 1983; Steele, 1988) emerged from Aronson’s (1968) revision of cognitive dissonance. Steele and colleagues (1983; 1988) assert that the motivating psychological need is not to avoid cognitive dissonance, but rather to maintain *self-integrity*. Steele (1988, p. 386) defines self-integrity as : “ . . . a *phenomenal experience of the self – that is, self-concepts and images of the self, past, present and future – as having adaptive and moral adequacy, as being competent, good, stable, integrated, capable of choice and control and so forth.*” This definition is imprecise, perhaps more closely related to the more philosophical concept of an existential crisis than to a definition utilized in psychological research. However, close attention to that definition notes words and phrases (e.g., “moral adequacy”, “being competent, good”) that sound very similar to self-views that define self-esteem. Steele (1988) also describes self-affirmation as restoring “self-regard”, which he considers either a component of or a consequence of self-integrity. Thus, prior theorizing would suggest that self-affirmation can restore self-integrity, which could benefit self-esteem.

However, self-affirmation’s effect is in practice more paradoxical, supporting Steele’s conceptualization of self-integrity as something more than just a redefinition of

self-esteem. Self-affirmation has been shown to both decrease (e.g., Matz & Wood, 2005) and increase self-esteem (Koole, Smeets, Van Knippenberg, & Dijksterhuis, 1999). Trait self-esteem scales have even been used as a self-affirmation activity (Steele, Spencer, & Lynch, 1993), leading most researchers not to assess self-esteem for fear of interfering with the experimental design. Of the 69 studies reviewed in McQueen and Klein's (2006) recent review, only five tested for the effect.

Self-affirmation has been repeatedly demonstrated to curtail typical responses to self-esteem threat: downward social comparison (Spencer, Fein, & Lomore, 2001), biased attribution (Sherman et al., 2007), outgroup derogation (Fein & Spencer, 1997), defensive assertions of control (Liu & Steele, 1986), and behavioral handicapping (Siegel, Scillitoe, & Parks-Yancy, 2005). To Tesser and colleagues (1991;2000), this indicates that it is affecting self-esteem, but to Steele this same pattern of evidence indicates that the higher order need for self-integrity is sometimes served in ways that do not benefit self-esteem. Steele and Liu's (1983) initial self-affirmation task, value affirmation, was likely chosen because it is not as clearly a self-esteem boost as are many other self-affirmations, especially those popular in self-help literature (e.g., self-praise). The ambiguity of many self-affirmation manipulations and research findings has led some to call for greater understanding of what self-integrity really is, and how best it is affected (McQueen & Klein, 2006).

In the course of attempting to incorporate basking in reflected glory into the "self-zoo", it is productive to compare its effects against a more established (perhaps, founding) member of the self-zoo. Examining the ability of both to reduce the usage of

self-esteem serving responses, and the effects of both on explicitly reported self-esteem can provide better insight as to whether they both serve the same underlying intra-psychic construct and if that construct is self-esteem.

In addition to comparing BIRG and self-affirmation's effects on self-esteem and self-esteem-seeking behaviors, I examined their effects on a later cognitive task (a series of anagrams). Prior research has shown that lowered self-esteem depresses performance on cognitive tasks (Hirt et al., 1992), and that self-affirmation can alleviate such effects (Cohen, Garcia, Apfel, & Master, 2006). By comparing BIRG and self-affirmation's effects on this other domain, I can further consider whether they are affecting the same intra-psychic construct.

To summarize, in this experiment participants will have their self-esteem threatened, then will have a chance to either bask in reflected glory, self-affirm, or be given no task that is believed to benefit their self-esteem (i.e., control condition). Participants were then given a chance to derogate rival Universities (or control Universities). After, self-esteem will be assessed and a final anagram task will be completed. I hypothesize that participants who BIRG or self-affirm will engage in less blasting, and that use of any of available responses (i.e., BIRG, self-affirmation or blasting) will lead to higher self-esteem. I further hypothesize that use of any of the available responses will lead to better anagram test performance.

Method

Participants

For a 2 x 3 MANOVA with three dependant variables, a sample size of 300 would provide 80% power to detect a medium size effect (J. Cohen, 1992; Maxwell, 2004; Guilford & Frunchter, 1978).

Two hundred eighty-seven participants were recruited from the Psychology program's Research Experience Program (REP), and took part in exchange for extra credit. The sample was 72% female, and 28% male. The sample was 74% Caucasian, 17% Asian, 5% Black and 5% reporting another race/ethnicity or declining to answer the question. The mean age was 19.6 (SD = 1.9).

Materials

Most of the materials from Experiment 2 are repeated here, such as the birth order/intelligence cover story questions and the Remote Associates Test (McFarlin & Blascovich, 1984) as the self-esteem manipulation.

Basking in reflected glory was manipulated by using two of the advertisements utilized in the pilot test: the ad boasting of the University's Noble Laureates (BIRG ad), and the ad for the University's book store (Control ad).

The self-affirmation manipulation was a short essay task, previously used by Blanton et al. (2001). They were asked to describe something about themselves that is both important to them, and makes them proud, such as an achievement, an important value, etc. Compared to value affirmation, this task would seem more likely affect to self-esteem with its explicit direction to feel proud.

All scales and questions were presented, and answers recorded, by the computer program Medialab.

Procedure

The experiment was conducted in a computer lab. Multiple participants were seated at individual computers separated by privacy partitions.

Participants were told they were taking part in a study of birth order, intelligence and creativity. They were directed to a computer, and told to follow the instructions on the screen. The initial display screen of the computers was a message that the computer lab was sponsored by either the University of Minnesota (echoing the tagline of a current University advertising campaign, “Driven to Discover), or the University bookstore, matching whatever advertisement they would see later in the experiment. Participants in the Self-affirmation condition saw the same screen, but with no sponsorship message. Participants began the program, and first completed a measure of trait self-esteem (Rosenberg, 1968). Then, they answered a series of questions related to the cover story (birth order).

Participants then completed the hard (i.e., failure feedback) Remote Associates Test. As in the previous studies, the test was graded in front of the participant by the experimenter, and their score was stated aloud to them.

Participants in the Self-affirmation conditions were then told their next assessment was a writing task. They were asked to describe something about themselves that makes them proud, such as an achievement, an important value, etc. This was the self-affirmation task (Blanton et al., 2001).

Meanwhile, Participants in the ad conditions (BIRG, Control) saw a fake loading screen (i.e., a display indicating the computer needed a moment to query a remote server, and load their next task). During this loading delay, participants either saw the Control ad (Bookstore) or the BIRG ad (Noble Laureates) displayed on the screen. After thirty seconds, the computer “finished” loading the next task, and participants were able to advance. They then completed a filler writing task asking them to describe their morning routine. This filler writing task was an attempt to minimize differences between the self-affirmation condition and the BIRG condition, especially with regards to the amount of time that elapsed between the threat manipulation and the later experimental components.

All participants were then told the research project was being run collaboratively at multiple universities, and that it was helpful for us to know common perceptions of these other institutions. Participants were asked to rate these universities on different dimensions (e.g., academics, athletics, campus life). Depending on the condition, participants were asked to rate two rival schools (University of Wisconsin, University of North Dakota) or two unrelated schools (Arizona State University, University of Florida). Rating of rival schools is an opportunity to “blast” (Cialdini & Richardson, 1980), whereas the rating of unrelated schools was a control condition.

Following this task, participants were told they would now complete the exit procedure for the study. First, they completed the measure of state self-esteem. Then, participants were asked to complete a series of anagrams that they were told were being pilot tested for future versions of the study (Gailliot & Baumeister, 2007). Performance

on these anagrams was a secondary measure of participants' recovery after self-esteem threats.

Finally, participants completed the demographic questions, manipulation check questions, and questions probing for suspicion. Participants not in the self-affirmation condition also completed a measure of self-affirmation at this point to alleviate any continued effects of the self-esteem manipulation.

Participants were then debriefed in the same manner as the prior experiments. They were informed of the deception, and told the study did not give them any accurate feedback on their intelligence. They were given the option of retroactively withdrawing; one chose to do so and was excluded from analysis. Participants were thanked for their participation, and dismissed.

Results

It was hypothesized that participants who had the opportunity to bask in reflected glory, or self-affirm, would be less likely to blast rival universities and more likely to perform well on the anagram task.

The Blasting Score variable was calculated by summing the ratings of all the Universities rated (i.e., two rival schools, or two unrelated schools). The anagram task (i.e., 2nd performance measure) was scored by counting the number of correct answers.

Seventy-five percent of participants in the advertisement conditions reported seeing the advertisements. No participants reported any suspicion or surprise that they might be advertised to during a psychological experiment. The number reporting not seeing an advertisement was larger in the BIRG condition (32%) than in the Control

condition (17%)⁶. These individuals were dropped from analysis. Two participants who failed to follow task instructions were dropped from the self-affirmation condition. It is noted in footnote whether their absence changes the significance of any of the analysis.

To examine the amount of pride the different self-esteem correctives (BIRG, self-affirmation or control) evoked, a one-way ANOVA was conducted on the manipulation check question and found significant differences, $F(2,236) = 51.84, p < .001$. Post-hoc analysis determined the Self-Affirmation ($M = 8.19, SD = 1.39$), BIRG Ad ($M = 6.81, SD = 1.67$) and Control Ad ($M = 5.92, SD = 1.40$) each significantly differed from one another (see Table 2-13).

To examine the effects of Self-Esteem Corrective (Self-affirm, BIRG, Control) and Blasting Target (Rival Schools, Control Schools) on dependent variables Blasting, State Self-Esteem, and Anagram performance, a 2x3 MANOVA was conducted.

The multivariate statistic for the independent variable Palliative was significant, Pillai's Trace = .063, $F(6, 456) = 2.465, p = .02$. The multivariate statistic for Blasting Target was not significant, Pillai's Trace = .015, $F(3, 227) = 1.135, p = .34$. The multivariate statistic for the Palliative x Blasting Target interaction was not significant, Pillai's Trace = .018, $F(6, 456) = .678, p = .67$.

For the dependent variable Blasting, there was not a significant effect of Self-Esteem Corrective, $F(2, 229) = .02, p = .98$. There was not a significant effect of Blasting

⁶ Participants were not systematically asked about their report of not seeing the advertisements. Some were, and one common response was that they tend to tune out advertising. This would not explain the higher rate of not seeing the BIRG ad compared to the Control ad. I would hypothesize that it was less clear that the Nobel Laureates BIRG ad was an advertisement to the participants, and they may have misunderstood the question.

Target, $F(1, 229) = 2.28, p = .132^7$. There was not a significant interaction between Corrective and Blasting Target, $F(2, 229) = .826, p = .44$ (see Table 2-14).

For the dependent variable Self-Esteem, there was not a significant effect of Self-Esteem Corrective on Self-Esteem, $F(2, 229) = 1.28, p = .28$. There was not a significant effect of Blasting Target on Self-Esteem, $F(1, 229) = .79, p = .38$. There was not a significant interaction between Corrective and Blasting Target, $F(2, 229) = .37, p = .69$ (see Table 2-15).

For the dependent variable Anagram Performance, there was a significant effect of Self-Esteem, $F(2, 229)=6.42, p=.002$. Post-hoc analysis (Tukey HSD) showed that Self-Affirmation ($M=5.24, SD=2.04$) significantly improved Anagram performance, compared to BIRG ($M=4.27, SD=1.81$) or Control Ad ($M=4.45, SD=1.77$), see Figure 2-7. There was not a significant effect of Blasting Target on Anagram Performance, $F(1, 229)=.70, p=.40$. There was not a significant interaction between Self-Esteem Corrective and Blasting Target, $F(2, 229)=.98, p=.38$ (see Table 2-16).

Post-hoc Analysis

One of the hypotheses of Experiment 3 was that participants would blast rival universities to restore their self-esteem. This was not observed; in fact, participants rated rival universities higher than control universities regardless of the condition they were in. Potential reasons for this are considered in the discussion section, but as this potential failure of the experimental design presents a hindrance to testing the substitution model (Tesser & Cornell, 1991; Tesser et al., 2000), a post-hoc analysis was devised to examine

⁷ This test was significant with the excluded cases included. However, the significant effect was contrary to the hypothesis; it was found that unrelated schools were blasted significantly more than rival schools.

whether basking in reflected glory reduced the need to engage in other self-esteem bolstering behaviors. Participants not in the Self-Affirmation condition also completed a self-affirmation exercise at the end of the experiment before they were debriefed. The amount of time participants spent on this exercise was recorded by the computer software. An additional analysis was conducted utilizing this time measurement. If participants' esteem needs had not been resolved, they might be expected to spend more time writing a self-affirmation. A similar design has been used in related work on threats to the need to belong, which according to Leary et al.'s (1995) sociometer theory manifests as lowered state self-esteem. Derrick, Gabriel, and Tippin (2008) found individuals whose need to belong was threatened spent longer writing belongingness essays, and reported better state self-esteem for it.

To test whether Self-Esteem Corrective (BIRG Ad, Control Ad) or Blasting Target (Rival, Control) affected time (measured in milliseconds, but converted to seconds here) spent on the end of the experiment self-affirmation task, a 2 x 2 ANOVA was conducted. For Self-Esteem Corrective, participants in the Control Ad condition ($M = 155.8$, $SD = 136.0$) spent significantly more time on the self-affirmation task than individuals in the BIRG Ad condition ($M = 120.9$, $SD = 61.8$), $F(1, 138) = 4.37$, $p = .039$. For Blasting Target, individuals in the Control condition ($M = 161.8$, $SD = 124.0$) spent significantly more time than the Rival condition ($M = 121.7$, $SD = 93.7$), $F(1,138) = 4.48$, $p = .036^8$. The interaction between Corrective and Blasting Target was not significant, $F(1,138) = 2.19$, $p = .142$.

⁸ This effect was only marginally significant ($p=.077$) before the exclusion of the previously described cases.

Discussion

I hypothesized that both self-affirmation and basking in reflected glory would reduce blasting of rival colleges. This hypothesis was not upheld. I hypothesized that self-affirmation, BIRG or blasting rivals would benefit self-esteem. This hypothesis was not upheld. Finally, I hypothesized that self-affirmation, BIRG or blasting rivals would benefit later test performance. This was only true of self-affirmation.

One important result of Experiment 3 was, like Experiments 1 and 2, no evidence that any of the potential self-esteem correctives (including BIRG) actually had an effect on self-reported self-esteem. This is consistent with some work on self-affirmation (see McQueen & Klein, 2006), but inconsistent with theory and prior research on BIRG and blasting (i.e., outgroup derogation). The continued difficulty to document the recovery of self-esteem is an important issue, and will be discussed at greater length in the General Discussion.

A second, important result is that unlike Experiment 2, Experiment 3 did not initially find evidence of the substitution of self-esteem responses. In this study, neither BIRG nor self-affirmation reduced the tendency to blast rival Universities. This is inconsistent with prior work on substitution of self-esteem responses (Tesser & Cornell, 1991; Tesser et al., 2000) and self-affirmation (Fein & Spencer, 1997; Sherman & Cohen, 2006; Steele & Liu, 1983). This is also inconsistent with the findings of Experiment 2, which did demonstrate substitution involving basking in reflected glory.

This second inconsistency seems readily explainable. It appears that blasting was a tactic that our sample would not engage in. Participants, in fact, largely rated the rival

schools more highly. This seems to have been driven primarily by the ratings of the University's primary rival, the University of Wisconsin. According to the *U.S. News and World Report* College Rankings (2012), the University of Wisconsin was the highest ranked of the four colleges included in the study (and higher than the University of Minnesota). In one sense, it seems that the participants maintained their objectivity in ranking the rival university.

Cialdini and Richardson (1980) derived biasing from Heider's (1958) Balance Theory. Rivalry would seem to assume a *negative relationship*, such that a decrease in the rival can be seen as an increase in one's own association. This does not seem to be a mindset held by this sample of University of Minnesota students. Looking back at the scale of Sports Spectator Identification (Wann & Branscombe, 1993) collected in the Pilot Study, one question is of particular relevance in supporting this hypothesis. The question read: "How much do you dislike the greatest rivals of the University of Minnesota?" Though the overall aggregate score indicated students identified with the University (both on this sports-focused scale, and on another general identification scale), the average answer to this question was below the midpoint (thus indicating disagreement with the statement). In fact, the modal score was "1", expressing the highest possible disagreement. In Experiment 3, ratings of the rival schools did not even correlate with university identification. A significant number of students seem not to adopt, or to reject outright, a negative relationship with rival schools. This is the probable reason for the failure to find any effects on this dependent variable.

To try and understand what might have been found with an alternative and perhaps more effective dependent variable, it is instructive to consider the post-hoc analysis. The final self-affirmation task was not intended to be a dependent variable, but rather a component of the debriefing/recovery process. However, how long they spent on the task was recorded. Participants who basked in reflected glory, or blasted the rival, spent less time on the final self-affirmation task. This could be an indication that their self-esteem needs had been addressed⁹. This is some indication that the Tesser model of one self-esteem process (in this case, BIRG) reducing another would have been successful with a different dependent variable (such as a self-affirmation task). As this was a post-hoc analysis, this conclusion is speculative.

Further, the conclusion creates a contradiction. Neither basking in reflected glory nor self-affirmation altered ratings of rival universities, which I suggest is due to the fact that students largely don't see themselves as having a negative relationship with the rival universities. Yet both basking in reflected glory AND rating rival Universities led to less time spent on the final self-affirmation task. If no changes were observed in the patterns of rival university ratings, why did doing so affect time spent on the self-affirmation task? Tesser and Cornell's (1991) study of substitutable self-esteem responses used self-affirmation as a dependent variable, but utilized judges' ratings of self-affirming essays rather than the amount of time spent on the essay. Given the observed pattern of results, it is difficult to determine whether the post-hoc self-affirmation dependent variable is more accurate or informative than the originally intended blasting dependent variable.

⁹ As far as I can determine, amount of time spent on a self-affirmation task has not been used as a dependent variable before; self-affirmation is most often used as an independent variable.

Finally, I did find the expected effect of self-affirmation helping threat-impaired test performance (G. Cohen, Garcia, Apfel, & Master, 2006; Martens, Johns, Greenberg, & Schimel, 2006; Siegel et al., 2005). Neither basking in reflected glory nor blasting showed similar benefit. Previous work had indicated lowered self-esteem affected test performance (Hirt et al., 1992), so this result could be taken as an indication that BIRG did not benefit self-esteem. However, it should be noted that Hirt et al. (1992) did not investigate whether restoring self-esteem benefitted test performance. The relationship between self-esteem and test performance could be complicated; for example, perhaps even after the recovery of self-esteem, individuals engage in behavioral handicapping on later, similar tests to protect against further damage to their self-esteem. The results of the self-affirmation task here indicate that self-affirmation has effects that differ from other potentially self-esteem serving responses, which could mean self-affirmation is having other intra-psychic effects. This would support the theorizing among self-affirmation researchers (Sherman & Cohen, 2006; Steele, 1988).

In considering the effects observed after basking in reflected glory or self-affirmation, it is worth noting that participants' self-reports indicate that self-affirmation was the more powerful palliative. Participants rated their self-affirmations as significantly more pride-inducing than the BIRG ad. Both basking in reflected glory and self-affirmation are considered indirect responses to threat; they do not directly confront the source or topic of threat (e.g., negative intellectual feedback). However, self-affirmation does directly engage the self in response to threat (i.e., calling upon other positive aspects) rather than calling upon connections to other, separate positive entities. It may

simply be that whatever benefits that came from the University's reflected glory are simply not sufficient to fully address the threat induced from direct failure feedback.

To summarize, Experiment 3 was the most ambitious but least successful of the experiments reported in this thesis. Intended to complete Tesser's model of substitution, the study instead provided both positive indications and irresolvable contradictions. Post-hoc analysis of an alternate dependent variable suggests a similar pattern as Experiment 2, with the substitution pattern observed yet explicit self-report self-esteem effects not detected.

Chapter 3: General Discussion

The primary goal of this project was to conclusively demonstrate that basking in reflected glory benefitted self-esteem. On that point, the project cannot be considered a success. Instead of any conclusive evidence, the results were an intriguing and infuriating mix of suggestion and refutation. Looking across the results of this study, it is questionable as to whether I am any better equipped to answer what seems like a relatively simple question: Does basking in reflected glory benefit self-esteem?

In three studies, basking in reflected glory had no effect on self-esteem as assessed by explicit self-report measures. This is contrary to the hypotheses of this thesis, and the long history in the literature of assuming that basking in reflected glory benefitted self-esteem (Bizman & Yinon, 2002; Boen, Vanbeselaere, & Feys, 2002; Cialdini & Finch, 1989; Cialdini et al., 1976).

However, consistent with Tesser and colleagues' (Tesser & Cornell, 1991; Tesser et al., 2000) studies on the substitutability of self-esteem serving behaviors, a prior self-esteem serving behavior (biased attributions) was shown to reduce basking in reflected glory (Experiment 2), and there were suggestions that basking in reflected glory would reduce use of a later self-esteem serving behavior (Experiment 3). Unfortunately, a somewhat inconsistent pattern of results in Experiment 3, perhaps due to a problematic dependent variable, preclude me from drawing a more firm statement of self-esteem involvement according to Tesser and Cornell's (1991) substitutability model.

The failure to find the expected self-esteem effect is troublesome. Before fully addressing this question, due diligence requires that I consider the possibility that the

methodology of the study was flawed. Did the studies successfully evoke basking in reflected glory? The answer would seem to be a resounding “yes.” In two of the three studies, there was behavioral evidence of basking in reflected glory. In Experiment 1, participants who had performed poorly spent more time looking at a glory-filled bulletin board. In Experiment 2, participants were more likely to choose to read the longer, glory-filled reading option. Experiment 3 did not have a behavioral measure of BIRG, but participants did rate the glory advertisement as making them feel more proud than an otherwise very similar control advertisement, and the BIRG ad (but not the Control ad) reduced time spent on a self-affirmation essay. These private forms of BIRG are consistent with prior research (Boen, Vanbeselaere, & Feys, 2002; Spinda, 2011).

If fault lies with the creation of basking in reflected glory in this study, it could be that the “glory” was not glorious *enough*. In the usual realm of basking in reflected glory, athletics, the University of Minnesota has not had much noteworthy success in recent years. In the most popular college sports of men’s football and basketball, Minnesota has not won a national championship in over 50 years (90 for basketball), nor have they even been in contention for at least 15 years (40 years for football). With the possible exception of men’s hockey and women’s basketball, national championships won or even credibly competed for over the past ten years have been in less popular sports such as golf, wrestling and women’s hockey. The studies that utilized athletic success (Experiments 1 and 2) attempted to pick recent and/or noteworthy achievements: recent upsets over football rivals (in otherwise dismal seasons), recent invitational tournament victories (in otherwise dismal seasons), the three national championships won in 2002 (in

less popular sports), and the 50th anniversary of the school's last football national championship. Most studies of basking in reflected glory utilized more recent success (e.g., Cialdini et al., 1976; C. B. Miller, 2009), not reminders of relatively successful instances in relatively recent times. However, Cialdini et al. (1976) also used a less recent instance of associated failure as an esteem threat.

The alternative approach of highlighting academic and scholarly successes seemed promising, but was used in the problematic Experiment 3. Pilot test participants found these advertisements equally as pride-inducing as a similar sports themed advertisement. Tesser and Campbell (1980) found that potential sources of associated glory that drew attention to one's own weaknesses were actually avoided. Highlighting the Nobel Laureates associated with the University may skirt close to the negative intellectual feedback they received in the study. However, the post-experiment ratings of the advertisement revealed no hint of this; participants rated the ad as making them feel proud. When asked to describe the ad in their own words, one participant was particularly effusive: "I remember liking it and being inspired by the people . . .". None of the free responses betrayed any negativity.

It should be noted that although these approaches (i.e., sports and academic success) were pilot tested and found to have been more pride-inducing than control stimuli, they may not have more pride-inducing *enough*. The average pride rating for the Control condition Bookstore Ad was above the midpoint for the scale; the BIRG materials were only 10% more pride-inducing. In designing control condition materials, special emphasis was put on ensuring it was *glory* driving the effects of the materials, not

merely reminders of affiliation and group identity, which have also been shown to have beneficial psychological effects by themselves (Wann & Branscombe, 1991; Wann, 2006). That this conservative approach found no significant effects could be some indication that some of the assumed benefits of basking in reflected glory may actually be benefits of the affiliative component of belonging. Baumeister and Leary (1995) summarized a wealth of social science literature to make the case that social belonging was a basic human need. Leary et al. (1995) would go on to argue that the very purpose of self-esteem was to alert individuals that their social belonging was in danger. Heatherton and Vohs (2000) found that individuals, especially individuals low in trait self-esteem (Vohs & Heatherton, 2001), desire confirmation of their social acceptance after negative intellectual feedback. It may be that control materials that merely reminded them of the University of Minnesota (e.g., University bookstore ad) gave them enough sense of belonging to mask the unique self-esteem benefit of reflected glory. Some research has found even parasocial relationships, such as with favorite fictional television characters, can provide comfort after self-esteem threat (Derrick et al., 2008).

Regardless of whether effects are driven by affiliation or actual glory, no effects can be found if self-esteem is not correctly assessed. A full methodological consideration requires me to consider this question, but despite the failure of the well-supported hypothesis, the evidence does not cast doubt on the measurement of self-esteem. In both the Pilot Test and Experiment 1, individuals who received the failure feedback reported lower self-esteem than individuals who received success feedback. This replicates previous success with the Remote Associates Test as a self-esteem threat (McFarlin &

Blascovich, 1984; Brown & Dutton, 1995; Brown & Dutton, 2001; Vohs & Heatherton, 2001; Brown, 2010), and the use of the particular self-feelings measure (Baumgardner et al., 1989; Leary et al., 1995; McFarland & Ross, 1982) to assess it. It was only in the expected recovery of self-esteem in which the expected pattern of results was not observed.

These results could be interpreted as a vindication for Tesser et al. (1988) and their claims that the true mediating mechanism of self-esteem processes is too fast and automatic to measure. This may be true if one were truly trying to measure mediation, but this study was more about measuring the after-effects of BIRG and other self-esteem responses. Tesser et al. (1988) acknowledged that the underlying mediating mechanism should have a measurable effect on processes downstream, such as affect and arousal. In their study, they found mixed support for the affect component. Their “indirect” affect measure, rating a series of words on pleasantness, yielded support for the hypothesized effect; participants rated words as more pleasant when their self-esteem had not been threatened. The indirect affect measure was collected immediately after the self-esteem threat; a more explicit self-feelings measure collected several minutes later found no significant effects.

As Tesser et al. (1988) hypothesized to explain their similar lack of results with an explicit self-feelings measure, my failure to find an effect with an explicit self-feelings measure could mean that the gap between the self-esteem threat and the assessment of self-esteem was too long. Despite the best experimental designs, individuals still have a large number of cognitive responses at their disposal. They can make biased attributions

about the test (“that test was so arbitrary, it couldn’t assess intelligence”) or about their effort (“well, I’m just here for extra credit; I wasn’t really trying,”); they could focus on other qualities (“Maybe I’m not the smartest person, but I’m honest, reliable and hardworking,”). The inability to prevent these potential alternate responses may have prevented me from demonstrating the expected effect.

However, that explanation would seem to suggest that the active recovery of self-esteem is so prompt and unstoppable we should hardly ever expect to document its decline. That has not been the case in much published research (e.g., J. D. Brown, 2010; Leary et al., 1995; Vohs & Heatherton, 2001), nor the studies reported here; the Pilot test and Experiment 1 both documented declines in self-esteem. It is therefore worth considering a competing and contradictory hypothesis: Perhaps the gap between the self-esteem corrective and the self-esteem assessment was *too short*. Self-esteem is defined as being *affective* (J. D. Brown & Marshall, 2001; James, 1890; Leary et al., 1995), and affect is noted for being quickly activated, but slow to recede. For example, a recent study found that emotional experiences decline rapidly, yet still are measurably above baseline, between 20 and 60 minutes on average (Verduyn, Delvaux, Van Coillie, Tuerlinckx, & Van Mechelen, 2009). Within that range, negative emotions were found to linger longer than positive emotions. Similarly, a study on ostracism (which is known to affect self-esteem) found significant effects forty-five minutes later, especially when the participant was high in social anxiety (Zadro, Boland, & Richardson, 2006). Though self-esteem correctives may shorten these emotional experiences, they may not be able to do so significantly in the short time period of a laboratory experiment.

Looking solely at the pattern of results reported in these studies, it is difficult to determine whether one of these interpretations has more merit. Because Experiments 2 and 3 did not have a non-failure condition, I do not have a baseline self-esteem level for comparison purposes. The Pilot Test and Experiment 1 did have state self-esteem scores of participants in success conditions. However, the average scores of those two studies themselves differ significantly, with participants in the Pilot Test reporting the lowest self-esteem. The state self-esteem scores observed in Experiments 2 and 3 (approximately 55) match the Success condition scores of participants in the Pilot Test, and are close to the Failure score of participants in Experiment 1 (52). Looking to previous uses of the self-esteem scale, Leary et al. (1995) found that individuals who were socially rejected had an average self-esteem score of 57, whereas individuals who were included or whose status was chosen by random (i.e., determined by luck, not interpersonal rejection) had an average score of 66. Looking at my other results using the scale on the same population, I found that individuals whose favored sports team won averaged a self-esteem score of around 68; even supporters of losing teams averaged a score of 63 (Miller, 2012). More evidence seems to support that self-esteem scores below 60 are lower than baseline. That the individuals in the Pilot Test success condition reported an average self-esteem score of 55 is probably further indication of the problem of individuals underperforming in the success conditions (78% of participants scored lower than the fictional “average score” reported to participants). This would suggest that my participants in these experiments were not demonstrating any recovery of self-esteem, not that they had immediately recovered their self-esteem regardless of their condition in the study.

Thus far, the results reported here seem to tell a consistent story: Basking in reflected glory does not benefit self-esteem. However, in contrast to the findings of the self-report measures, the behavioral measures found that basking in reflected glory affected and was affected by other self-esteem seeking behaviors. Tesser and Cornell (1991) conclude the experimental demonstration that engaging in one self-esteem serving behavior decreases engaging in other self-esteem serving behaviors provides evidence that the initial behavior benefits the same underlying need. By this standard, participants who basked in reflected glory in Experiment 2 and Experiment 3 would seem to have addressed their self-esteem threat.

This disconnect between self-report results and behavioral evidence raises a number of intriguing questions. The first is that the emotional reaction of threatened self-esteem is, in fact, not the mediating mechanism in the self-threat response. Participants behaved as if they realized that the course to recovery from threatened self-esteem was already underway, and that they no longer needed to address it. This is not consistent with one model of the mediational mechanism in self-esteem-threat situations. The model (though not often explicitly discussed) is essentially the classic drive model (Hull, 1943). Self-esteem is a basic need, and threats to self-esteem trigger behaviors dedicated to restoring it.

Leary's sociometer model (Leary et al., 1995), which was designed to better explain the purpose of self-esteem, would seem to nicely fit that model. The sociometer model theorizes that it is social belonging, and not self-esteem, that is a fundamental need. Self-esteem is the drive that motivates the restoration of this need. However, Leary

explicitly rejected this idea of an “active self-esteem”. Self-esteem is a meter, one he compares to the gas gauge of a car. Self-esteem may report a status, but it is not necessarily directing a response, as a gas gauge does not drive a car to find the nearest gas station. In this model, the actual recovery of self-esteem would not be necessary for the cessation of self-serving behaviors. Independent of the recovery of self-esteem, whatever system or process that had been alerted by the drop in self-esteem can decide the threat has been sufficiently addressed. This would be consistent with my findings here, and my hypothesis that the failure to find self-esteem recovery is because self-esteem recovery is a slow process of affective recovery.

The nature of the “self-system,” with its well-noted defensive tendency has been a topic of extensive debate and controversy (Allport, 1968; Greenwald, 1980; James, 1890; Markus & Wurf, 1987; Steele, 1988; Tesser, 2000). The concept has been historically criticized for being unscientific, essentially a homunculus or worse, a scientific Trojan horse for the soul. Unconscious regulatory systems can tend to sound inappropriately agentic (e.g., Bargh and Chartrand's, 1999, “mental butler”), but it is important not to mistake helpful metaphors for a failure of scientific reasoning. My conceptualization of state self-esteem as a direct mediator might have helped avoid this controversy, if supported, but this was likely too optimistic for a system that has already been the topic of so much debate, and far more impressive consideration.

Blaming the relatively slow-receding emotional system, and assigning what I cannot measure to the perpetually mysterious self-system conveniently explains my findings, but it must also be reconciled with prior published research. This returns me to a

question raised in Chapter One: Why do so few studies record supposedly self-esteem correcting responses actually helping self-esteem? My initial survey of the literature could find very few studies that reported doing so. Some of this is merely that locating ones that do is very tricky, as the self-esteem literature is very large and current electronic search agents (e.g., Psychinfo) cannot reliably locate studies that differ only by this methodological detail.

In my more recent efforts¹⁰, I have managed to locate five studies that show either the recovery of self-esteem or the prevention of the loss of self-esteem. Only one of these studies demonstrated the full process: an initial measure of state self-esteem, then a measure showing decreased self-esteem, and finally a measure showing the recovery of self-esteem (Nussbaum & Dweck, 2008). Two utilize accepted self-esteem manipulations (e.g., negative intellectual feedback, recalling social distress), followed by potentially self-esteem serving responses (Baumgardner et al., 1989; Derrick et al., 2008). The final two concern the effects of biased attribution on self-esteem (Rhode & Hill, 1995; Rhodewalt, Morf, Hazlett, & Fairfield, 1991). Both of their designs include elements that take place *before* the self-esteem manipulation, such as the preemptive providing of an externally attributing cause for their test performance (Rhodewalt et al., 1991). Because it is less clear whether self-esteem was restored, or whether its decrease was prevented entirely, I will focus my discussion on the other three studies. None of these studies support my hypothesis that the recovery of self-esteem is slow, and therefore difficult to document within a short, laboratory based psychological study.

¹⁰ The most effective technique for locating these articles was to perform a reverse citation search on the McFarland & Ross (1982) self-feelings scale, and the Heatherton & Polivy (1991), then manually review the abstracts of the 1200+ papers citing them.

Nussbaum and Dweck (2008) explored the use of direct and indirect responses to self-esteem threat, and found that downward social comparisons benefitted self-esteem. Also, in a more novel finding, individuals led to believe that intelligence was more malleable benefitted from upward social comparisons. Using the Academic self-appraisals subscale of the Heatherton and Polivy (1991) State Self-Esteem scale, they found that greater self-esteem decline led to greater usage of downward social comparisons, and that usage of downward social comparison benefitted self-esteem. Full mediation was also documented for the upward social comparison finding.

Nussbaum and Dweck's (2008) studies are perhaps most impressive for documenting the full mediation by self-esteem of a proposed self-esteem serving mechanism (social comparison). Nevertheless, the study's methodology troubles me. First, it used only the academic subscale of the State Self-Esteem Scale (Heatherton & Polivy, 1991) as a measure of state self-esteem. In the Chapter One, I detailed that I did not like that measure because it measured specific self-appraisals as a measure of state self-esteem. This study goes a step further and only uses academic self-appraisals as a measure of state self-esteem. If only a subscale of a measure is used, can one say that the construct measured by the entire scale is mediating an effect? Even when it is documented that that subscale can be uniquely affected by precisely that sort of manipulation (i.e., negative intellectual feedback)?

Additionally, they used the academic self-appraisals scale in a particularly unsubtle way. Their participants completed the scale three times in a short period of time: at the beginning of the study, after the participants just received negative academic

feedback, and then again after the opportunity for social comparison. This design seems to assume participants can blithely complete the same scale three times in a short period of time under rather transparent circumstances and still give accurate, non-reactive self-reports. I would be concerned about consistency pressure. Participants receive negative test feedback, then are immediately asked questions such as: “Do you feel smarter than other people?” Prior research has found that individuals tend to accurately report recently received negative feedback when their audience is already aware of it (Baumeister & Jones, 1978). J. D. Brown, Dutton, and Cook (2001) found that individuals will claim as more important traits or qualities they have, and downplay ones they do not. This tendency was magnified under esteem threat. It is these well-documented tendencies to bend reality to one’s ego (see J. D. Brown, 1993; Greenwald, 1980) that make the self-appraisals method of measuring state self-esteem worrisome. However, despite my reservations about the method of assessing self-esteem, this study does demonstrate the recovery of self-esteem in a manner consistent with prior theorizing and using accepted practices within the field of experimental psychology.

The final two studies (Baumgardner et al., 1989; Derrick, Gabriel, & Hugenberg, 2009) use methodologies and measurements with which I find no fault. Derrick et al. (2009) had participants write about a fight with a close friend or partner (a social belonging esteem threat). Then participants wrote about their favorite television program, or a control television program. Participants reported higher self-esteem on both the self-appraisals self-esteem scale (Heatherton & Polivy, 1991), and the self-feelings scale (McFarland & Ross, 1982) when they wrote about their favorite television program,

supporting the researcher's theory that favorite television programs can include parasocial relationships that serve a belongingness function.

Finally, Baumgardner et al. (1989) found that low self-esteem individuals who publicly derogated the source of negative personality feedback, or praised the source of positive feedback, showed higher self-esteem. Privately doing so had no effect on self-esteem. The authors interpreted this as evidence that low trait-self-esteem individuals rely more on public evaluations for their state self-esteem. The study utilized McFarland and Ross's (1982) self-feelings measure of state self-esteem.

The findings of Derrick et al. (2009) and Baumgardner et al. (1989) are most relevant to this discussion, as they utilized a design (down to the measure of self-esteem) more similar to my own. They showed what I did not: recovery of self-feelings in a comparatively short period of time. This would seem to undercut my theory that the self-esteem benefit of basking in reflected glory was not able to be captured in the timeframe of my experiment. However, Baumgardner et al.'s (1989) results might suggest a different explanation: My experimental design was not well-suited to take advantage of the self-esteem seeking behaviors of high and low trait self-esteem individuals.

Ample research has shown that individuals high in trait self-esteem are less affected by self-esteem threat, perhaps because of their stronger self-serving biases and greater usage of supposedly self-esteem serving correctives (Bosson, Brown, Zeigler-Hill, & Swann, 2003; J. D. Brown et al., 2001; Heimpel et al., 2002). Self-affirmation research has suggested individuals higher in trait self-esteem benefit more from self-affirmation (Steele et al., 1993), a cognitive process they can engage in privately at any

time. They are also more likely to address self-esteem threats directly (Vohs & Heatherton, 2001). Basking in reflected glory, being an indirect response and perhaps not the most powerful one,¹¹ may not be an approach pursued by high trait self-esteem individuals.

This might explain why participants high in trait self-esteem did not show any benefit, but why didn't participants low in trait self-esteem? Baumgardner et al.'s (1989) study found that low self-esteem individuals did not benefit from the intra-psychic response of privately derogating the source of the negative feedback. Research has found when their self-esteem is threatened, low self-esteem individuals are most concerned about assessing their social inclusion (Vohs & Heatherton, 2001). Taken together, these results suggest that low self-esteem individuals benefit most (or even solely) from interpersonal responses. Privately basking in reflected glory may not be beneficial for these individuals.

Of course, this argument seems to suggest that privately basking in reflected glory doesn't benefit *anybody*. This would leave us in search of a new explanation for why other researchers and I have documented it. Perhaps a more plausible explanation can be drawn by comparing the scenario of Baumgardner et al.'s experiment and my own. In their study, participants received negative feedback from another person, were then induced to either praise or derogate that person (publicly or privately), and then had their self-esteem measured. High trait-self-esteem individuals were not affected by any of the

¹¹ In my own Experiment 3, it should be noted that individuals rated their self-created self-affirmation writings as significantly more pride-inducing than the BIRG materials. Even though the BIRG materials were more significantly more pride-inducing than the control materials, the magnitude of the difference between the BIRG and self-affirmations was nearly three times as large as the difference between the BIRG and the Control.

experimental variables, and reported higher state self-esteem. Low self-esteem individuals only benefitted from derogating the source of their feedback when it was done publicly. Perhaps instead of my earlier suggestion that low self-esteem individuals do not benefit from Private BIRG, it is that a *public threat* is only effectively counteracted in a *public manner*.

Negative feedback on a domain such as intelligence, in which college students have been tested, constantly evaluated, and given feedback for their entire lives may be more of a self-esteem threat *by way of self-presentation*. One short procedure cannot actually drastically change their self-appraisals in this valued domain. These individuals have made it to a good college; they know they're not dumb. But they can be embarrassed when feedback viewed by another is not consistent with their prior self-appraisals. This audience, having no other information about them, will not know this negative score is an anomaly. Privately reflecting on positive associations may simply not be an effective response to this public esteem threat, especially for individuals low in trait self-esteem.

The previous studies cited to support the self-esteem function of basking in reflected glory (Boen, Vanbeselaere, & Feys, 2002; Cialdini & Finch, 1989) involved private self-esteem threats. My studies were closer in design to the original BIRG studies (Cialdini et al., 1976), in which the esteem threat was delivered interpersonally. In those studies, the BIRG was also public. Participants in the studies reported here basked in reflected glory privately, but this is a rather indirect response in that it does not dispute the negative information they received nor does it do anything to restore the participant in

the eyes of the witness to their negative feedback. Given the nature of the esteem threat, privately basking in reflected glory may have been too ineffectual to have any measurable effect.

This explanation is more consistent with most relevant prior findings (Baumgardner et al., 1989; Derrick et al., 2009). This explanation might also explain why alternative responses utilized in the experiments reported here, self-affirmation and biased attribution, also failed to show an effect. These responses were both also engaged in privately, perhaps rendering them less able to address a more public esteem threat. For explaining the results of my studies and prior research, this is a more promising explanation than the temporal persistence of affect.

As promising as the public threat/private response is, it must be reconciled with the more prominent result I did find: Basking in reflected glory (and, for that matter, self-serving attributions) reduced the tendency to engage in further supposedly self-esteem serving behaviors. If basking in reflected glory is not helping self-esteem, why does it curtail further response?

Two Masters?

One explanation is that basking in reflected glory, as operationalized in the studies reported here, may have been serving a different need. The intent of the studies reported here was to investigate the self-regulatory system related to state self-esteem (i.e., self-esteem maintenance, the self-esteem motive). Ample evidence has demonstrated that individuals are motivated to maintain a desired level of self-esteem (J. D. Brown, 1993; Gramzow, 2011; Heatherton & Polivy, 1991; Sedikides & Gregg, 2008;

Tesser & Cornell, 1991). Leary et al. (1995) argue the function of state self-esteem is actually to monitor social inclusion, which includes alerting us that failing to demonstrate adequate socially desired traits or abilities endangers our inclusion. Indeed, ample evidence finds social threats to be especially deleterious to self-esteem (Baumeister & Leary, 1995; Cooley, 1902; Harvey, Kelley, & Shapiro, 1957; Knowles, Lucas, Molden, Gardner, & Dean, 2010; Williams, 2007). Declines in self-esteem tend to trigger a search for social support¹² (Gardner, Pickett, Jefferis, & Knowles, 2005; Heatherton & Vohs, 2000; Knowles et al., 2010; Maner, DeWall, Baumeister, & Schaller, 2007; Pickett, Gardner, & Knowles, 2004; Vohs & Heatherton, 2001), even among those who outwardly claim to not care what others think (Leary et al., 2003). Individuals high in trait self-esteem are something of an exception to this, a finding that has been variously explained as a sign that they have a history of social acceptance, such that minor laboratory manipulations tend not to trigger their regulatory system due to their history of social acceptance (Leary et al., 1997), or as evidence that well-intentioned campaigns to raise self-esteem have actually created a generation of dangerous narcissists immune to social feedback (Baumeister, Campbell, Krueger, & Vohs, 2003; Twenge & Campbell, 2003). In short, Leary (2004; 2005) has argued that self-esteem is part of a class of emotions sometimes called the *self-conscious emotions* (e.g., pride, shame, embarrassment). These emotions help regulate behavior to facilitate social functioning and inclusion.

¹² Significant evidence has also been found of notably anti-social response to social rejection (Twenge & Campbell, 2003). Maner et al. (2007) provide evidence that although individuals may respond this way towards individuals associated with their rejection, they are more receptive to and ingratiating towards individuals considered likely to accept them.

However, though the intent of this research was to study this social regulatory system (i.e., state self-esteem), it is possible that the significant results implicate another self-regulatory system. The other self-regulatory system is a little more difficult to identify, in part because so many prominent theorists have made insightful, but not congruent, attempts to label it. James' (1890) empirical self (i.e., the knower) was an early attempt, and J. D. Campbell, Trapnell, Heine, Lavalley, and Lehman's (1996) self-concept clarity is a related, but more recent, one, but it was with the emergence of consistency theories (Festinger, 1957; Heider, 1958) that the concept took on the motivational features of a self-regulatory system. This self-regulatory system can be described as a biased information manager, attempting to maintain a stable and (usually) positive self-image.¹³ Aronson's (1968) self-focused revision of dissonance theory, Greenwald's (1980) totalitarian ego, Steele's concept of self-integrity (Steele & Liu, 1983; Steele, 1988) and Swann's (1984) theory of self-verification are all related formulations of this self-system, which I will call "self-stability"; I use a different term not because my goal is to lay out a distinctly different conceptualization of this system, but rather to avoid committing to any of the prior ones. A full consideration of the differences between those theories, and their relation to the pattern of results reported in this thesis, is beyond the scope of the current analysis. However, the similarity of these different models has not escaped prior comment (Aronson, 1992).

¹³ It is likely more accurate to say this system seeks to maintain self-knowledge consistent with the more chronic affective state of the individual (J. D. Brown & Marshall, 2006). For individuals lower in trait self-esteem and/or more dispositionally prone to depression, this may not be positive (see Swann, 1984). However, this is rare, as even individuals described as "low" in trait self-esteem are actually mildly positive (Baumeister, Tice, & Hutton, 1989).

One difficulty in defining this system, which has contributed to the multiple, competing attempts, is its boundary with the state self-esteem system. Steele's definition of self-integrity, which includes not only views of the self as stable, but also as good, competent and morally adequate, conflates self-esteem and self-stability. Similarly, many cognitive dissonance experiments (e.g., counter-attitudinal advocacy) can be viewed as threatening views of the self as known, accurate and consistent (i.e., self-stable), but also threatening views of the self as good and likely to be accepted by others (Aronson, 1968; Schlenker, 1980; Tedeschi et al., 1971), thus simultaneously triggering the state self-esteem system.

This is not to accuse researchers of failing to design their manipulations more precisely. The two systems are undoubtedly intertwined; J. D. Campbell et al. (1996) found scores on the Self-Concept Clarity scale correlated very highly with trait self-esteem (which correlates very highly with state self-esteem). Threats to the view of the self as known, accurate and consistent *can* also trigger the state self-esteem system to the degree that individuals worry that the lack of self-stability threatens their social inclusion. Cialdini, Trost, and Newsom (1995) developed a self-report scale for preference for personal consistency, and found it not only correlated with scales of cognitive rigidity, but also, to a lesser degree, with more social inclusion related personality traits such as self-consciousness and social desirability. This is consistent with the impression management perspective of dissonance phenomena (Schlenker, 1980; Tedeschi et al., 1971), which contends that individuals' supposedly cognitive-dissonance-reducing behaviors are, in fact, motivated by the desire to communicate the impression of

consistency for fear of negative social consequences. Thus, a lot of the confusion and debate over the theories of cognitive consistency (e.g., cognitive dissonance), self-consistency (e.g., self-verification, self-concept clarity) and self-esteem are because these self-regulatory systems sometimes overlap, individual differences can affect how much they overlap and different experimental paradigms and measurement strategies may capture more or less of this overlap.

Though many distinguished theorists have spent a great deal of time on one of these two self-regulatory systems, few consider them in tandem. This leaves an unusual gap in the literature. We have extensive research on self-esteem maintenance, and extensive research on cognitive dissonance and related consistency theories, but much less research exploring, rather than debating, the overlap between the two.¹⁴ Higgins' (1987) self-discrepancy theory, which attempts to bridge self-esteem and cognitive dissonance, is one commendable exception. While description of the emotional and motivational consequences of a discrepancy between the “actual self” and the “ideal self” closely mirrors descriptions of the state self-esteem system, the second system he proposed does not correspond well with the concept of self-stability. Instead, he describes a system based more in Freud’s views of neurosis, and the drive to live according to societal or religious proscriptions. However, Higgins never attempts to claim the two motivations he identified, social inclusion and moral adequacy, are the only two self-systems.

¹⁴ Researchers of cognitive dissonance theory have extensively engaged with trait self-esteem, as evidenced by Aronson’s (1968) early self-concept revision and Stone and Cooper’s (2001) more recent self-standards model of dissonance. They have not, as far as I can find, much engaged with state self-esteem. This may be due to the continued debate as to whether state self-esteem is conceptually distinct from trait self-esteem (J. D. Brown & Marshall, 2006).

Even if grand theorizing has not often addressed the dual, overlapping drives for state self-esteem and self-stability, some research has. Cooper and Duncan (1971) conducted a study in which they put participants through both a self-esteem threat and a cognitive dissonance procedure to demonstrate that level of self-esteem does not affect cognitive dissonance responses. Bernichon, Cook, and Brown (2003) considered the conflicting goals of thinking of one's self as good and socially acceptable (i.e., maintaining state self-esteem), and thinking of one's self accurately and consistently (i.e., maintaining self-stability). Following research paradigms used in self-verification research, they found that individuals low in trait self-esteem preferred receiving positive but inaccurate feedback, whereas individuals high in trait self-esteem preferred receiving accurate, even if negative, feedback. To put it another way, low trait self-esteem individuals are especially concerned with their state self-esteem, whereas high trait self-esteem individuals are especially concerned with their self-stability.

If the concept of a drive to maintain consistent self-knowledge (i.e., self-stability) is not new, and it certainly isn't (Aronson, 1968, 1992; Greenwald, 1980; Swann, 1984), the recognition that some well-documented behaviors believed to benefit self-esteem (e.g., self-serving attribution) may additionally, or even alternatively, benefit self-stability may be. At the very least, it may be an interesting topic for future research.

Self-Stability and Private Basking in Reflected Glory

Returning to the pattern of results observed in the experiments reported in this thesis, I found private basking in reflected glory had no effect on state self-esteem. Yet it did curtail engaging in further, private responses often believed to benefit self-esteem.

This is a pattern that Tesser and colleagues have often documented (Tesser & Cornell, 1991; Tesser et al., 2000), but have waivered whether to call it a self-esteem process. Tesser and colleagues first called it self-esteem maintenance (Tesser & Campbell, 1980; Tesser & Smith, 1980), then switched to the term self-evaluation maintenance (Tesser & Campbell, 1982) and then even later again declared self-evaluation maintenance a self-esteem serving process (Tesser et al., 2000; Tesser, 2000). However, Tesser, Millar, and Moore (1988) had difficulty documenting the role of self-esteem, and did not again pursue it through any explicit measurement. It should be noted that in Tesser and colleagues' studies, the "self-esteem" responses are always private (e.g., self-affirmation, social comparison processes).

Tesser and Campbell's (1982) definition of self-evaluation maintenance as the drive to maintain positive self-evaluations somewhat straddles the line between self-esteem and self-stability, much like self-affirmation. In this regard, it resembles Heatherton and Polivy's (1991) conceptualization of state self-esteem, which was based in the positivity of specific self-appraisals. Private responses, such as self-affirming, biased attribution, or private BIRG, may address self-stability, but are poorly suited for addressing a conceptualization of state self-esteem as a sociometer (Leary et al., 1995), and best measured via self-feelings. It is only when supposedly self-esteem serving responses contain a public or interpersonal component that they can benefit from this conceptualization of state self-esteem.

Looking back on prior research, the examples of state self-esteem being recovered (as measured by the self-feelings approach) consistently involve interpersonal feedback.

Consider Baumgardner et al.'s (1989) study of derogating the source of negative feedback. Doing so was only found to benefit self-esteem when it was done *publically*. Similarly, self-serving attributions have been shown to benefit self-esteem when they are provided by (Rhodewalt et al., 1991) or supported by (McFarland & Ross, 1982) the experimenters (i.e., others). Finally, Knowles et al. (2010) found that when the source of the esteem threat was social belonging (e.g., interpersonal conflict), instead of the more indirect social threat of intellectual feedback (i.e., the information is threatening because it negatively affects what others think of me), they found self-affirmation would *not* reduce the use of a later supposedly self-esteem serving response, as Tesser (2001) would predict. Individuals recover state self-esteem when *others* witness the self-esteem threat being defused, or individuals otherwise address their social inclusion needs. This evidence is all consistent with the view that state self-esteem is fundamentally about social belonging, and that many behaviors believed to be in the service of state self-esteem may actually in the service of a different need, such as self-stability.

This could mean that, in retrospect, the primary mistake of the research reported in this thesis was to combine the more self-feelings state self-esteem measurement scale (Leary et al., 1995; McFarland & Ross, 1982), which I argue is more purely state self-esteem, with responses that better address a self-stability threat (e.g., private BIRG, self-affirmation, biased attribution). These responses did, in fact, reduce the tendency to engage in other private, self-stability responses. They did not affect state self-esteem, because they did nothing to address the public threat of the negative test feedback, and the implications this feedback could have for one's social belonging. Heatherton and

Polivy's (1991) state self-esteem scale may have been better suited to detect the benefits of private responses, as I would argue the scale is more rooted in the overlap of self-stability and state self-esteem.

Conclusion

The research presented here was motivated by the goal of demonstrating that basking in reflected glory benefitted self-esteem. In that goal, I cannot claim success. It is still possible, even likely, that publically basking in reflected glory benefits self-esteem. Cialdini et al.'s (1976) initial work suggested two mechanisms by which this benefit could occur: cognitive balance or impression management. The cognitive balance route is undermined by the experiments reported here; if having a positive relationship (i.e., association) with a glorious other means you are more likely to view yourself as glorious, private BIRG should have shown an effect. However, the studies reported here do not rule out that others viewing you as having a positive relationship with a glorious other may increase their estimation of you, and your desirability for social inclusion, and therefore your state self-esteem. Further studies of publicly basking in reflected glory will have to examine this.

As Spinda (2011) noted in his self-report study of football fans, a wide range of behaviors has been lumped together under the increasingly catch-all term of basking in reflected glory. Even if one does not accept my contention that private BIRG and public BIRG may serve different intra-psychic needs, it is nevertheless possible to agree with Spinda that it is time to more carefully define basking in reflected glory, and the related but distinct behaviors involved in managing associations and relationships with others

(e.g., blasting, boosting). In this goal, it would be beneficial to consider and meaningfully integrate research on social identity. Ellemers et al.'s (2002) framework for social identity threats and responses, which carefully classified research by nature of threat (individual, group) and potential responses (as influenced by the identification of the individual with the group), is an excellent place to start. Ellemers et al. (2002) do not discuss differences between public and private threats, and public and private responses. They might do well to not overlook this component of truly social psychology.

The second goal of the research presented here was to incorporate basking in reflected glory into Tesser's (2000) "self-zoo" by utilizing his substitutability methodology (Tesser & Cornell, 1991; Tesser et al., 2000). In this goal I can claim more success, as I demonstrated private BIRG can be reduced by other self-zoo responses (Experiment 2, biased attributions), and can reduce the need to self-affirm (Experiment 3). Where Tesser and I part ways now is in his contention that these behaviors are in the service of self-esteem (Tesser, 2000; 2001). Tesser, Millar and Moore (1988) attempted to measure this self-esteem benefit, and failed. They wrote this off as a methodological problem, but I have replicated it despite my methodological improvements. Given others' success documenting self-esteem effects (Baumgardner et al., 1989; Derrick et al., 2008; McFarland & Ross, 1982), I propose that Tesser's studies have been documenting the substitutability of self-stability responses, not self-esteem responses.

Further testing would be necessary to adjudicate between these different competing explanations of self-esteem and self-evaluation maintenance. In the studies reported in this dissertation, I utilized negative intellectual feedback as the self-esteem

threat. This is a self-esteem threat that both conflicts with participants' existing self-knowledge (thus, threatening self-stability), and one that can be socially embarrassing and arouse belonging concerns (thus, threatening state self-esteem). The effects can be difficult to disentangle, because they depend on the individuals' initial perceptions of their own intelligence, whether or not the feedback is delivered interpersonally and on how much they feel others' acceptance is contingent on intelligence. I found that negative intellectual feedback led to increases in private BIRG, but would a direct belongingness threat? Derrick et al. (2008) found that belongingness threats lead to increases in behaviors more specific to social acceptance. Self-affirmation, another response I would say serves more self-stability than state self-esteem, did not benefit individuals after that manipulation. A future experiment could include both more specific self-stability threats (e.g., a private counter-attitudinal advocacy activity) and state self-esteem threats (e.g., interpersonal rejection), and equally specific responses. Does private BIRG help after interpersonal rejection? Does public BIRG help after counter-attitudinal threat? Further experiments could better adjudicate which are critical factors, and what are mere experimental quirks.

Finally, in assessing the value of the experiments reported here, consider the goal and the approach pursued. The stated goal was to determine whether basking in reflected in glory affected self-esteem. Thus, in Experiment 1 I conducted a conceptual replication of the classic basking in reflected glory studies (Cialdini et al., 1976; Snyder et al., 1986), and included an accepted measure of self-esteem (McFarland & Ross, 1982). By some research approaches, that may have been a sufficient test of the research question.

However, Baumeister et al. (2007) have criticized the dearth of behavioral measurement in psychological research. One reason for their criticism is that self-report measures are not always the best or most reliable approach to every research question, a lesson social psychology seemingly relearns every generation or so (e.g., Nisbett & Wilson, 1977), and these studies support that concern. Had I solely utilized self-report measures of self-esteem, and not included the behavioral observations and two-step process of the Tesser substitutability model, I would have reached a very different conclusion about basking in reflected glory. Instead of merely ruling out BIRG as a self-esteem behavior, I am left with a more complicated (and hopefully more accurate) picture of basking in reflected glory's relation to self-esteem. Although my results may indicate private BIRG may not benefit state self-esteem, it may benefit alternative intra-psychic needs (my interpretation) or may benefit state self-esteem in a way that eludes immediate measurement. Had I pursued a self-report strategy only, this deeper picture may have been missed, and the most appropriate follow-up studies would not be clear. The research here contains a cautionary lesson to other psychologists concerning the peril of both overlooking the distinction between public/interpersonal and private research elements, as well as the distinction between what individuals are willing or able to self-report, and what they might actually do.

Basking in reflected glory began as an interesting intersection between two greatly researched but often contradictory topics in social psychology, cognitive consistency and impression management. Though these topics have waned as intensely researched topics, basking in reflected glory remains relevant because of its connections

to both newer topics of research (social identity theory), and some of the most ubiquitous (self-esteem maintenance). The question basking in reflected glory research is ultimately addressing: “*How do we manage the sometimes competing interests of regulating our emotional experience, protecting our self-esteem, managing our public image and maintaining our relationships with others?*” is still one of the more fascinating and difficult in social psychology.

Exploring questions such as these is difficult; social psychology is defined by its attempts to step back, and consider a larger array of factors. It is not always possible to engage in the most direct test, to truly control a situation and rule out all competing explanations. But through patience, persistence and rigor we can advance our understanding of humankind’s complex social existence, if only one small piece at a time.

Table 2-1: State Self-Esteem by Feedback Condition and SSE Scale

Condition	Average Task Score	SSE Measure	SSE Avg.	SD	T Value	DF
Failure	1.7	Self- feelings	45.0	14.5	1.5	85
		Self- appraisal	48.1	11.1	1.5	85
Control	5.0	Self- feelings	49.8	15.50	**	**
		Self- appraisal	51.7	10.7	**	**

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

**Table 2-2: State Self-Esteem by Feedback Condition and SSE Scale – Minus
18 Excluded Cases**

Condition	Average Task Score	SSE Measure	SSE Avg.	SD	T Value (Failure vs. Control)	DF
Failure	1.7	Self- feelings	45.0	14.5	2.93*	67
		Self- appraisal	48.1	11.1	2.82*	67
Control	6.2	Self- feelings	55.7	14.0	**	**
		Self- appraisal	55.6	8.6	**	**

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

Table 2-3: One Way Repeated Measures ANOVA of Ad Evaluation

Ad	Mean	SD
Athletic BIRG	51.86	13.7
Academic BIRG	52.48	11.6
Control	47.90	11.3

Variable	Sums of Squares	df	Mean Square	F
Ad	1094	2	547.2	6.46**
Error	14560	172	84.7	

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

Table 2-4: Descriptive Statistics of University Identification Related Scales

Scale	Range	Median Score	Median as Percent of Range	Standard Deviation
University Identification	5-35	25	83%	5.09
Sports Spectator Identification	7-56	35	71%	12.48
University Ratings	9-63	48	89%	5.79

Table 2-5: Correlations of University Identification Related Scales and Ad

	Ratings				
	1	2	3	4	5
1. University Identification					
2. Sports Spectator Identification	.58**				
3. University Ratings	.43**	.24*			
4. BIRG Athletics Ad Evaluation	.24**	.36**	.16		
5. BIRG Academics AD Evaluation	.31**	.13	.19	.42**	
6. Control Bookstore Ad Evaluation	.30**	.17	.19	.42**	.49**

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

Table 2-6: Logistic Regression Predicting Taking a BIRG Button

Variable	β	S. E.	Wald	Exp(β)
Outcome	-.377	.650	.337	.686
Board Content	.377	.650	.337	1.458
Outcome x Board Content	.850	.916	.860	2.339
Constant	-1.677	.796	4.433	
R² (Nagelkerke)	.009			
R² (Cox & Snell)	.013			
-2 LL	13.71			
X²	X ² =.89 (p=.828) d.f. = 3			

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

Table 2-7: ANOVA of Time Looking at Board

Feedback	Bulletin Board	N	Percent of Time Looking at Bulletin Board	SD
Failure	Control	22	.25	.19
	BIRG	28	.31	.16
	Total	50	.29	.17
Control	Control	20	.33	.19
	BIRG	17	.24	.16
	Total	37	.30	.18
Total	Control	42	.29	.19
	BIRG	45	.29	.16
	Total	87	.29	.18

Variable	Sums of Squares	df	Mean Square	F
Feedback	.000047	1	000047	.07
Board	.003	1	.003	.28
Feedback x Board	.103	1	.103	3.4*
Error	2.547	83	.031	

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

Table 2-8: ANOVA of Self-Esteem

Feedback	Bulletin Board	N	State Self-Esteem Mean	SD
Failure	BIRG	28	51.50	15.2
	Control	22	54.23	11.8
	Total	50	52.17	11.7
Control	BIRG	17	66.41	16.4
	Control	19	61.53	10.2
	Total	36	63.80	13.3
Total	BIRG	45	57.13	15.6
	Control	41	57.61	13.3
	Total	87	57.09	14.5

Variable	Sums of Squares	df	Mean Square	F
Feedback	2561.052	1	2561.052	14.36**
Board	24.180	1	24.180	.36
Feedback x Board	300.864	1	300.864	1.68
Error	15337.53	82		

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

Table 2-9: Exploratory Analysis of Moderators of Basking in Reflected Glory

Variable	β	S.E.	t
University	196.592	158.878	1.237
Identification			
Trait Self-Esteem	4.446	121.654	.037
UI x TSE	6.253	21.088	.297
Constant	15977.185	7786.245	2.052

$F(3, 27) = .583, p = .632$

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

Table 2-10: Effects of Attribution Target on BIRG Article Choice

Attribution Target	Article Choice		X^2	Sig.
	Neutral	BIRG		
Control/No Feedback	31	61	5.13*	.02*
Negative Feedback	54	55		

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

Table 2-11: Logistic Regression of Predictors of BIRG

Predictor	β	Std. Error	Wald	Exp(β)
TSE score	.025	.030	.665	1.025
University Identification	-.021	.040	.277	.979
Constant	-1.384	1.680	.679	.251
R² (Nagelkerke)	.013			
R² (Cox & Snell)	.010			
-2 LL	116.684			
X²	$X^2 = .89, (p = .64), d.f. = 3$			

Table 2-12: ANOVA of Self-Esteem

Attribution	Article	Choice (N)	State Self-Esteem Mean	SD
For Negative Feedback	BIRG	Honored (30)	54.67	16.85
		Not (31)	56.74	13.96
		Total (61)	55.72	15.36
	Control	Honored (23)	55.65	12.85
		Not (25)	58.48	10.48
		Total (48)	57.12	11.64
	Total	Honored (53)	55.09	15.12
		Not (56)	57.52	12.45
		Total (109)	56.34	13.80
For No Feedback	BIRG	Honored (35)	59.09	16.26
		Not (10)	52.30	9.01
		Total (45)	57.58	15.14
	Control	Honored (21)	57.62	9.61
		Not (26)	51.42	10.42
		Total (47)	54.19	10.43
	Total	Honored (56)	58.54	14.05
		Not (36)	51.67	9.92
		Total (92)	55.85	12.99
Total	BIRG	Honored (65)	57.05	16.56
		Not (41)	55.66	12.97
		Total (106)	56.51	15.22
	Control	Honored (44)	56.59	11.33
		Not (51)	54.88	10.94
		Total (95)	55.67	11.10
	Total	Honored (109)	56.86	14.62
		Not (92)	55.23	11.82
		Total (201)	56.11	13.40
Variable	Sums of Squares	df	Mean Square	F
Attribution	71.874	1	71.874	.401
Article	.397	1	.397	.002
Control	179.433	1	179.433	1.00
Attributions x Article	70.593	1	70.593	.393
Attributions x Control	879.423	1	879.423	4.901*
Article x Control	4.954	1	4.954	.028
Attributions x Article x Control	.073	1	.073	.000
Error	34632.201	193	179.441	

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

Table 2-13: One Way ANOVA of Rating of First Self-Esteem Corrective,

Corrective	Number	Pride Mean	Pride SD
BIRG	64	6.81	1.67
Self-Affirmation	95	8.19	1.39
Control	78	5.92	1.40

Variable	Sums of Squares	df	Mean Square	F
Corrective	225.903	2	112.951	51.837**
Error	735.781	236		

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

Table 2-14: MANOVA of Blasting Scores

Corrective	Blasting Target	Blasting Mean	SD
BIRG	Rivals	64.53	11.31
	Control	64.57	9.83
	Total	64.55	10.56
Self-Affirm	Rivals	65.07	9.29
	Control	63.37	10.92
	Total	64.19	10.15
Control	Rivals	66.48	7.64
	Control	62.35	8.17
	Total	64.63	8.09
Total	Rivals	65.40	9.35
	Control	63.38	9.82
	Total	64.43	9.61

Variable	Sums of Squares	df	Mean Square	F
Corrective	4.412	2	2.206	.024
Blasting Target	211.576	1	211.576	2.283
Corrective x Blasting Target	153.018	2	76.509	.826
Error	21218.270	2	92.656	

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

Table 2-15: MANOVA of Self-Esteem Scores

Corrective	Blasting Target	Self-Esteem Mean	SD
BIRG	Rivals	54.15	11.20
	Control	54.13	19.09
	Total	54.14	15.28
Self-Affirm	Rivals	56.67	12.96
	Control	55.67	12.95
	Total	56.16	12.89
Control	Rivals	54.76	11.34
	Control	50.97	14.43
	Total	53.07	12.86
Total	Rivals	55.31	11.89
	Control	53.85	15.22
	Total	54.61	13.58

Variable	Sums of Squares	df	Mean Square	F
Corrective	473.978	2	236.989	1.279
Blasting Target	146.051	1	146.051	.788
Corrective x Blasting Target	138.809	2	69.404	.374
Error	42445.205	229	3.589	

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

Table 2-16: MANOVA of Anagram Scores

Corrective	Blasting Target	Anagram Mean	SD
BIRG	Rivals	4.38	1.83
	Control	4.13	1.81
	Total	4.27	1.81
Self-Affirm	Rivals	5.13	2.19
	Control	5.35	1.90
	Total	5.24	2.04
Control	Rivals	4.71	1.60
	Control	4.12	1.94
	Total	4.45	1.77
Total	Rivals	4.78	1.91
	Control	4.65	1.97
	Total	4.72	1.93

Variable	Sums of Squares	df	Mean Square	F
Corrective	46.056	2	23.028	6.416**
Blasting Target	2.503	1	2.503	.698
Corrective x Blasting Target	7.064	2	3.532	.984
Error	821.916	229	3.589	

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

Table 2-17: Post-Hoc ANOVA of Time Spent on Self-Affirmation Task

Corrective	Blasting Target	Self-Affirmation Mean (seconds)	SD
BIRG	Rivals	115.5	59.7
	Control	127.0	64.5
	Total	120.9	61.8
Control	Rivals	126.6	114.1
	Control	191.7	152.9
	Total	155.8	136.0
Total	Rivals	121.7	93.7
	Control	161.8	124.0
	Total	140.1	110.0

Variable	Sums of Squares	df	Mean Square	F
Corrective	4.99 x 10 ¹⁰	1	4.99 x 10 ¹⁰	4.365*
Blasting Target	5.12 x 10 ¹⁰	1	5.12 x 10 ¹⁰	4.476*
Corrective x Blasting Target	2.50 x 10 ¹⁰	1	2.50 x 10 ¹⁰	2.186
Error	158.1 x 10 ¹⁰	138	3.589	

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

Figure 2-1: Self-Esteem Effects of Remote Associates Task (minus 18 exclusions)

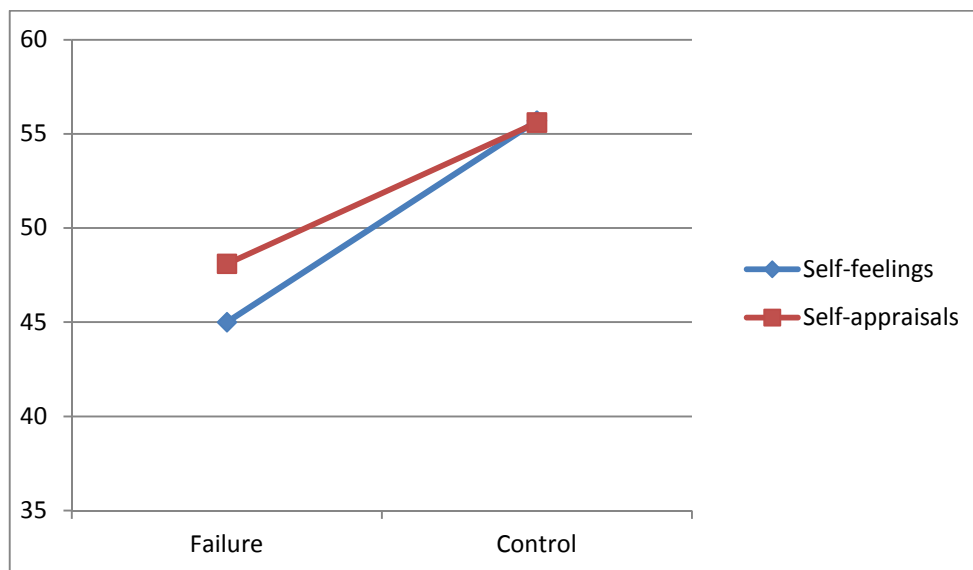


Figure 2-1. After excluding 18 individuals who scored very low on the RAT Easy task, the RAT manipulation significantly affected state self-esteem whether measured by the self-feelings measure ($t(67)=2.93, p=.01$) or the self-appraisals measure ($t(67)=2.82, p=.01$).

Figure 2-2: Evaluations of Advertisements

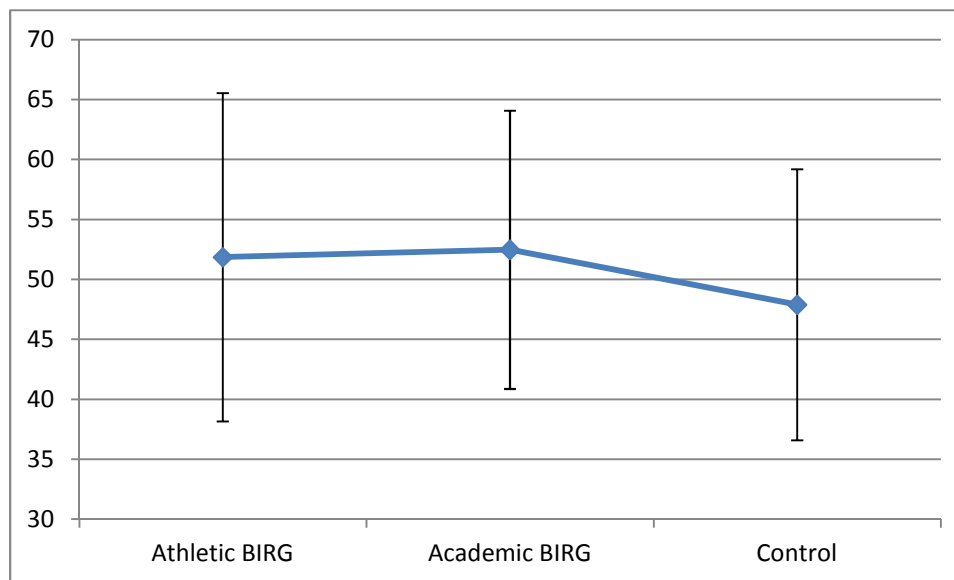


Figure 2-2. Basking in Reflected Glory (both Athletic and Academic) ads were evaluated significantly more positively than a similar Control ad (*One Way Repeated Measures ANOVA: $F(2, 172) = 6.46, p=.02$*).

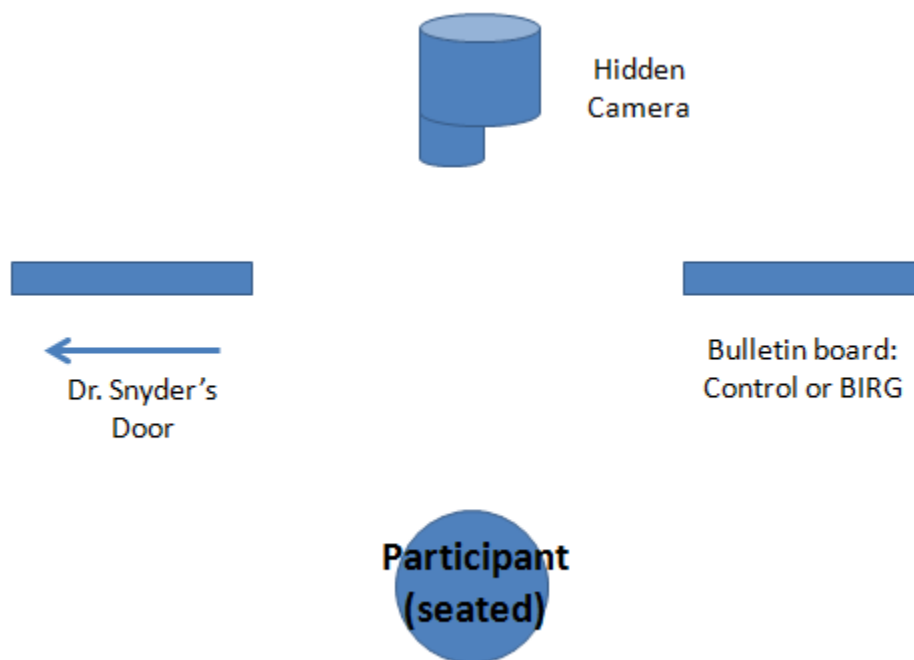
Figure 2-3: Illustration of Bulletin Board and Video Recording Arrangement

Figure 2-3. In Experiment 1, participants were seated in a hallway facing an open office door. A hidden camera observed them as they waited for three minutes. To their left of the open door they were seated in front of was the door to the office they were waiting to enter. To the immediate right of the open door was the experimental content bulletin board.

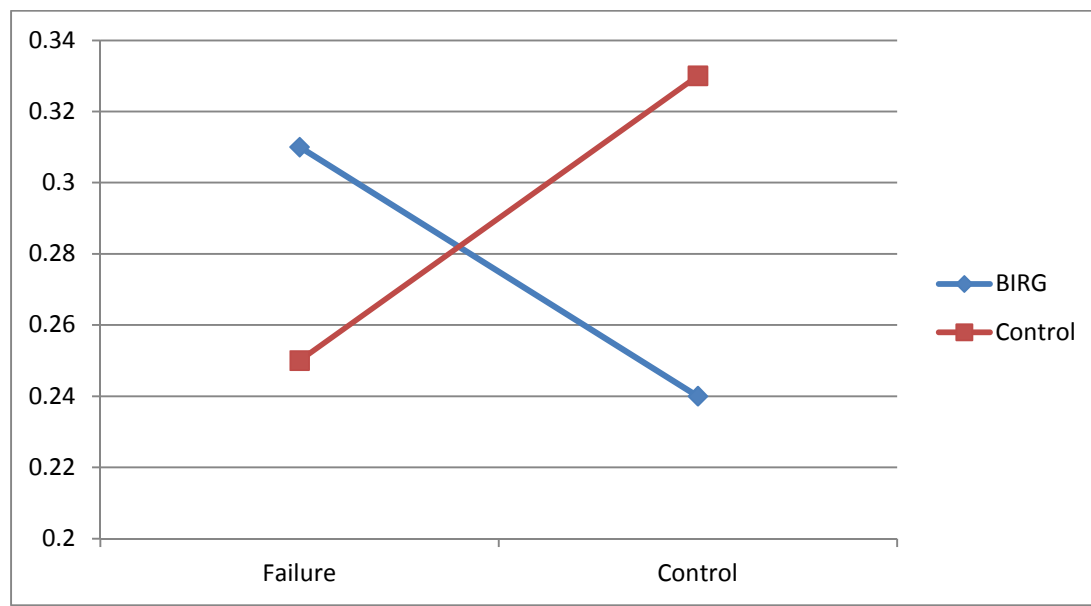
Figure 2-4: Percent of Waiting Time Spent Looking At Bulletin Board

Figure 2-4. Time spent looking at the bulletin board was affected by the interaction of RAT feedback and bulletin board content ($F(1, 82)=3.4, p=.04$).

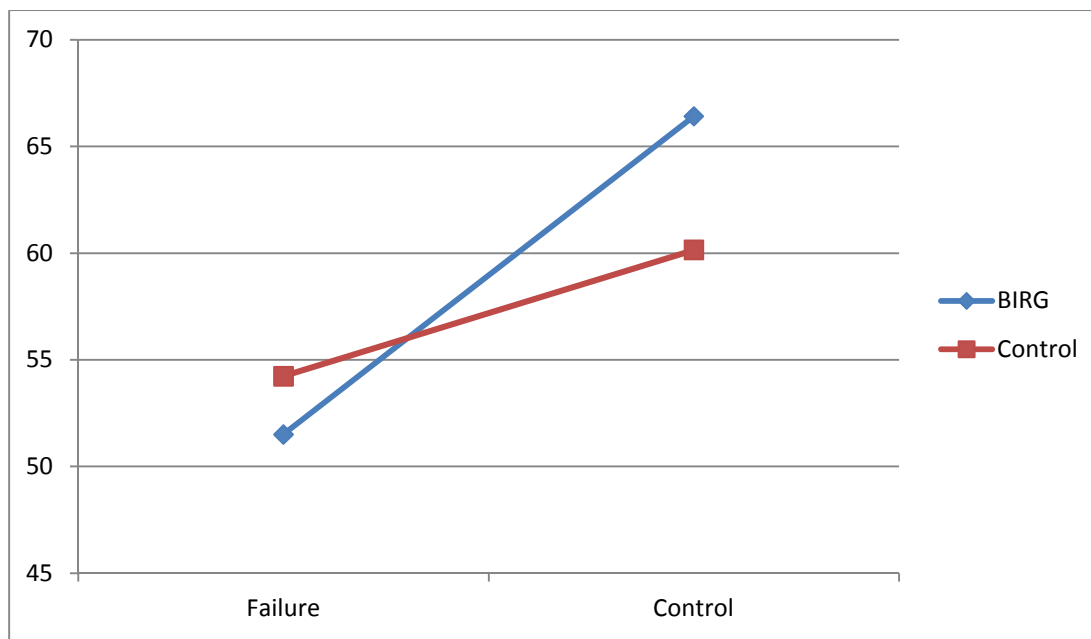
Figure 2-5: State Self-Esteem Effects By Condition

Figure 2-5. RAT feedback significantly affects state self-esteem, regardless of bulletin board content ($F(1, 82)=14.367, p < .01$).

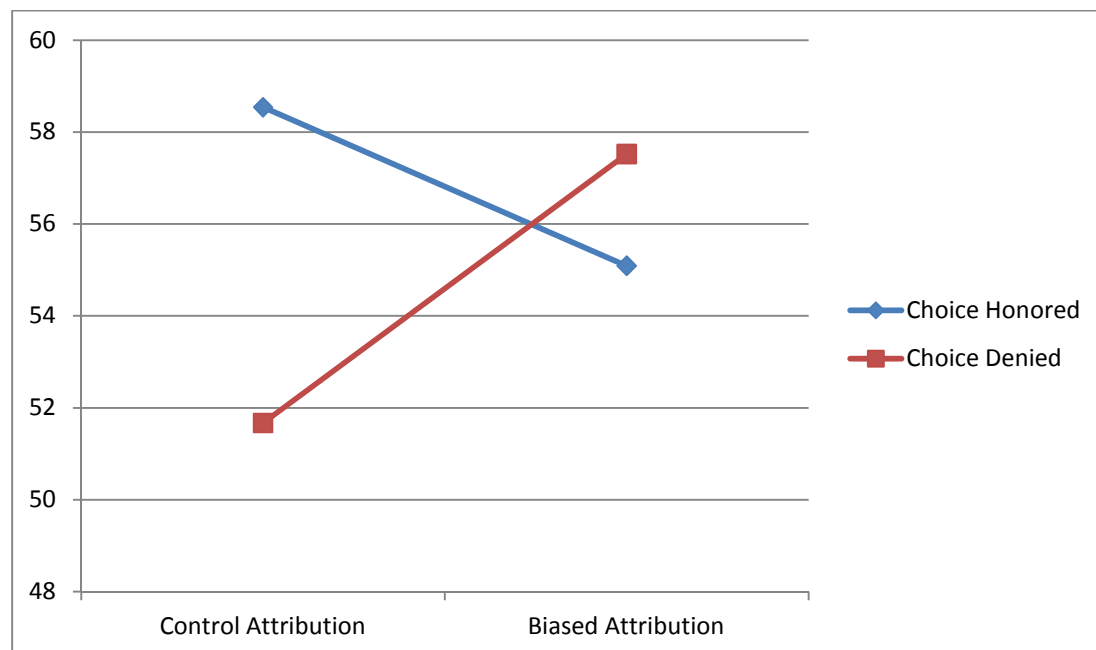
Figure 2-6: Self-Esteem Effects of Choice & Biased Attribution

Figure 2-6. Self-esteem is affected by the interaction of reporting an attribution for a performance task and having one's choice of reading article honored, ($F(1,193) = 4.9$, $p=.03$).

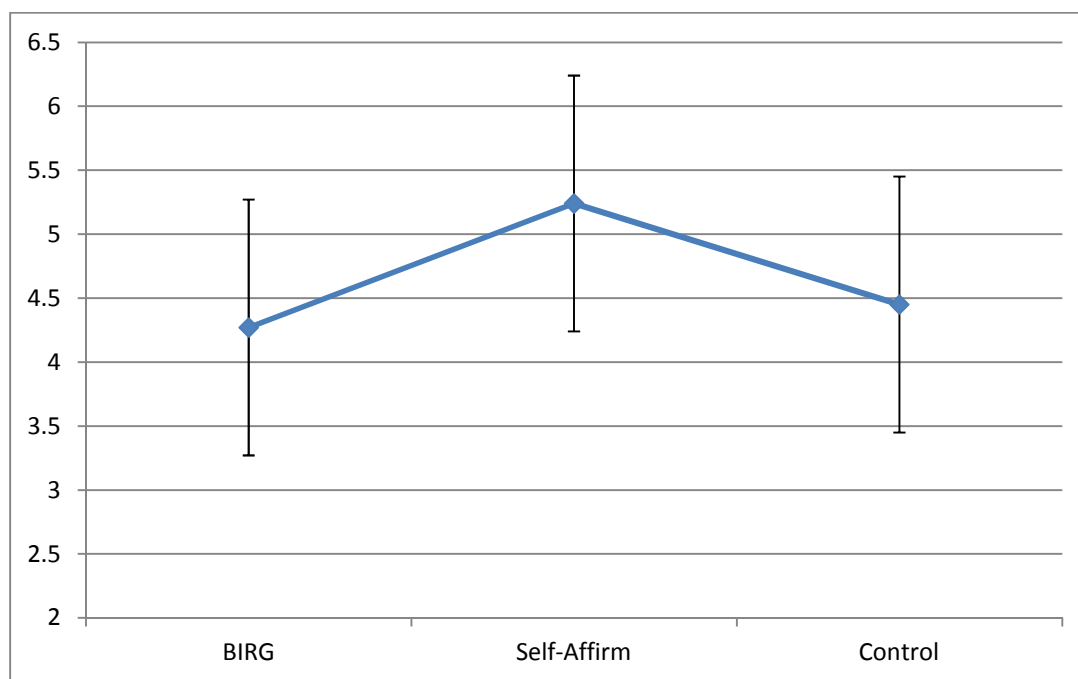
Figure 2-7: Anagram Performance by Self-Esteem Corrective

Figure 2-7. Self-affirmation significantly improved performance on the Anagram solving task, ($F(2,229) = 6.42, p=.03$).

Figure 2-8: Effects of Self-Esteem Correctives on Time Spent on Self-Affirmation Task

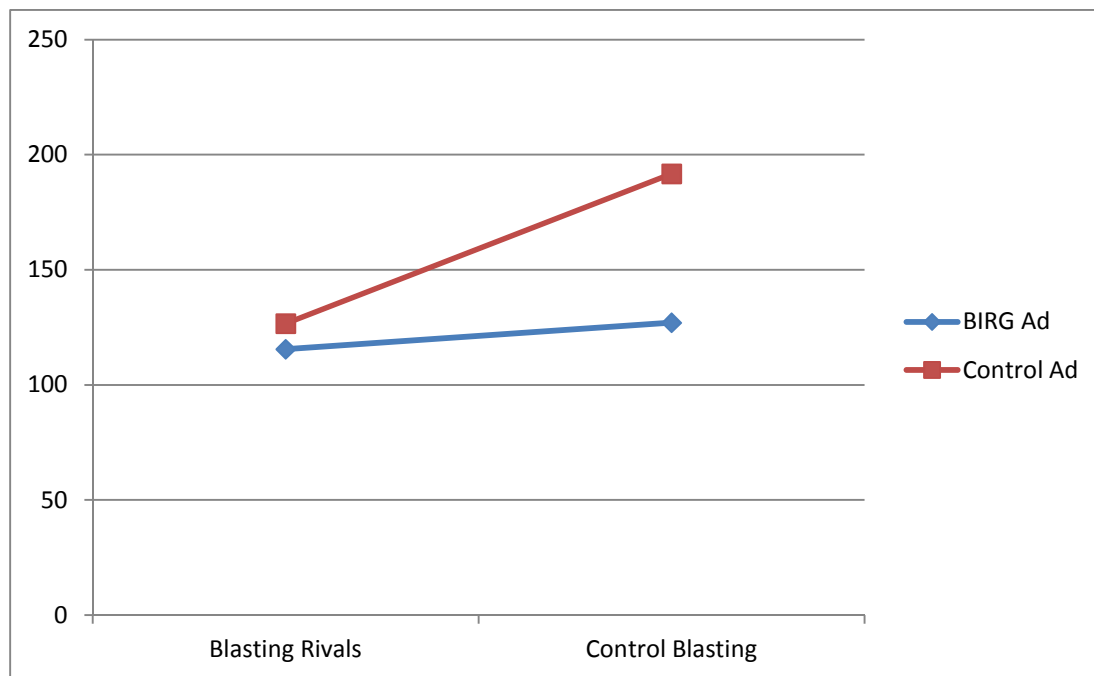


Figure 2-8. Both the BIRG Ad ($F(1, 138) = 4.37, p=.04$) and Blasting Unrelated Universities ($F(1, 138) = 4.48, p=.04$) reduced time spent on Self-Affirmation Task.

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Appendix A

Scales and Questionnaires

Remote Associates Task (self-esteem threat manipulation) (McFarlin & Blascovich, 1984)

Introduction: The following is a test of *Integrative Orientation*. Integrative orientation is a component of creativity, specifically the ability to find creative and unusual solutions to problems. Integrative orientation is not captured well by conventional tests of intelligence, but recent research has shown integrative orientation is correlated with greater academic achievement, and increased future earning potential.

Instructions: You will now complete a measure of integrative orientation. Integrative orientation is the ability to find novel solutions to problems, which involves both intelligence and creativity. Integrative orientation has previously been found to linked with higher academic achievement, as well as future earning potential.

This test of integrative orientation will present you with three words, and ask you to generate a fourth word that is related to ALL three words.

For example, the words "head - street - dark".

The answer is "light". "Light" is the opposite of "dark", and "light" can be combined with "head" and "street" to form the words "headlight" and "streetlight".

Before beginning the test, you will complete a couple practice problems to ensure you understand the task.

Success/Control Condition		Failure Condition	
Word Sets	Answer	Word Sets	Answer
Athletes-Web-Rabbit	Foot	Bass-Complex-Sleep	Deep
Shelf-Read-End	Book	Chamber-Staff-Box	Music
Sea-Home-Stomach	Sick	Desert-Ice-Spell	Dry
Car-Swimming-Cue	Pool	Base-Show-Dance	Ball
Board-Magic-Death	Black	Inch-Deal-Peg	Square
Walker-Main-Sweeper	Street	Soap-Shoe-Tissue	Box
Cookies-Sixteen-Heart	Sweet	Blood-Music-Cheese	Blue
Chocolate-Fortune-Tin	Cookie	Skunk-Kings-Boiled	Cabbage
Lounge-Hour-Drink	Cocktail	Jump-Kill-Bliss	Joy
Keel-Show-Row	Boat	Shopping-Washing-Picture	Window

University Rankings (Cialdini & Richardson, 1980)

These questions ask you to rate the <Target University> on a number of different dimensions. For each of the following dimensions, please use the following scale to rate how strong the University is in this area:

1	2	3	4	5	6	7
Very weak						Very strong

1. Academics & Scholarship
2. Athletics
3. Campus Life & Activities
4. Faculty & Teaching
5. The Arts
6. Facilities, Campus & Surroundings
7. Community Engagement
8. Student Involvement & Participation
9. Research & Technology

University Identification Scale (Adapted from Martino, Snyder, & Omoto, 1998)

These questions ask about what being a University of Minnesota student means to you. Please use the following scale to indicate your agreement with the following items.

Answers closer to the “strongly disagree” end of the scale indicate you tend to disagree more with the statement, answers closer to the “strongly agree” end of the scale indicate you tend to agree more with the statement.

1	2	3	4	5	6	7
Very weak						Very strong

1. Being a University of Minnesota student brings meaning to my life.
2. I have difficulty thinking of myself not being University of Minnesota student.
3. Being a University of Minnesota student is something I rarely think about.
4. I have no clear feelings about being a University of Minnesota student.
5. Being a University of Minnesota student is an important part of who I am.

Sports Spectator Identification Scale (Wann & Branscombe, 1993)

Please answer the following questions based on your feelings for the team. There are no "right" or "wrong" answers, simply be honest in your responses.

1. How important to YOU is it that the Minnesota Gophers wins?

Not important 1 2 3 4 5 6 7 8 Very important

2. How strongly do YOU see YOURSELF as a fan of the Minnesota Gophers?

Not at all a fan 1 2 3 4 5 6 7 8 Very much a fan

3. How strongly do your FRIENDS see YOU as a fan of the Minnesota Gophers?

Not at all a fan 1 2 3 4 5 6 7 8 Very much a fan

4. During the season, how closely do you follow the Minnesota Gophers via ANY of the following: a) in person or on television, b) on the radio, c) television news or a newspaper, or d) the Internet?

Never 1 2 3 4 5 6 7 8 Almost everyday

5. How important is being a fan of the Minnesota Gophers to YOU?

Not important 1 2 3 4 5 6 7 8 Very important

6. How much do you dislike the greatest rivals of the Minnesota Gophers?

Do not dislike 1 2 3 4 5 6 7 8 Dislike very much

7. How often do YOU display the Minnesota Gophers's name or insignia at your place of work, where you live, or on your clothing?

Never 1 2 3 4 5 6 7 8 Always

Trait Self Esteem (Rosenberg, 1965)

Below is a list of statements dealing with your general feelings about yourself.

1	2	3	4	5	6
Strongly Agree					Strongly Disagree

1. On the whole, I am satisfied with myself.
2. At times, I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Birth Order Cover Story Questions (not analyzed)

How many siblings (same mother and father) do you have?

If more than one, how many siblings were born before you and how many were born after?

Do you have any half-siblings (one parent in common) or step siblings?

Were you raised in the same household as these siblings?

Yes, all the time

Yes, some of the time

No, not at all

How many of these siblings are younger than you, and how many are older?

Which statement best applies to you?

I am an only child

I am the first born.

I am a middle child

I was the “baby” of the family

I’ve never thought of myself in these terms

My family and I are very close.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
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I don’t speak with my family very often.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

I know I can count on my family for anything.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

I can only spend so much time with my family.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
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State Self Esteem (i.e., self-feelings) (Based on Leary, Tambor, Terdal, & Downs, 1995; McFarland & Ross, 1982)

How do currently you feel about yourself?

Good	1	2	3	4	5	6	7	Bad
Competent	1	2	3	4	5	6	7	Incompetent
Proud	1	2	3	4	5	6	7	Ashamed
Adequate	1	2	3	4	5	6	7	Inadequate
Useful	1	2	3	4	5	6	7	Useless
Superior	1	2	3	4	5	6	7	Inferior
Dumb	1	2	3	4	5	6	7	Smart
Insecure	1	2	3	4	5	6	7	Confident
Worthless	1	2	3	4	5	6	7	Valuable
Unimportant	1	2	3	4	5	6	7	Important
Ineffective	1	2	3	4	5	6	7	Effective
Unsatisfied	1	2	3	4	5	6	7	Satisfied

State Self-Esteem (i.e., self-appraisals) (Heatherton & Polivy, 1991)

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you **RIGHT NOW**.

1. I feel confident about my abilities.
2. I am worried about whether I am regarded as a success or failure. (R)
3. I feel frustrated or rattled about my performance (R).
4. I feel that I am having trouble understanding things that I read. (R)
5. I feel self-conscious. (R)
6. I feel as smart as others.
7. I feel displeased with myself. (R)
8. I am worried about what other people think of me. (R)
9. I feel inferior to others at this moment. (R)
10. I feel unattractive. (R)
11. I feel concerned about the impression I am making. (R)
12. I feel that I have less scholastic ability right now than others. (R)
13. I feel like I'm not doing well. (R)
14. I am worried about looking foolish. (R)

Attributions for negative feedback task (self-serving bias) (Luginbuhl et al., 1975)

The following questions will ask you about your performance on the measure of Integrative Orientation, the Remotes Associates Task.

How much was your performance determined by: luck

1	2	3	4	5	6	7	8
Very Little So							Very Much So

How much was your performance determined by: the difficulty of the test

How much was your performance determined by: your intelligence (R)

How much was your performance determined by: your effort (R)

Attributions for no feedback task (control)

The following questions will ask you about your performance on the measure of Creativity, the Alternate Uses Task. This was the task in which you were asked to provide alternate uses for common household items.

How much was your performance determined by: creativity (R)

1	2	3	4	5	6	7	8
Very Little So							Very Much So

How much was your performance determined by: your language skills (R)

How much was your performance determined by: the computer interface

How much was your performance determined by: your typing speed

Manipulation Check Questions

Experiment 1

1. Did anything about this study make you uncomfortable? (Free Response)
2. Did you find anything weird or unusual about any part of the experiment? (FR)
3. How did you do on the puzzles and intelligence tasks in this study?

Very Poorly	1	2	3	4	5	6	7	Very Well
----------------	---	---	---	---	---	---	---	--------------

4. Did you feel you were being deceived at any point during this study? If so, please explain. (FR)
5. Did you notice the bulletin board outside the office you are currently in? If so, briefly describe what was on it. (FR)
6. Did you notice the free buttons on the bulletin board outside the office, and if so did you take a button? (FR)

Experiment 2

People often assume psychology research always utilizes deception. This may change the mindset with which they approach the study. For this reason, the following questions will ask you about your mindset in the course of this experiment.

1. Did you feel you were being deceived during the course of this study? (FR)
2. What makes you think you were being deceived in this study? (FR)
3. What specific parts of the study struck you as being deceptive? (FR)
4. What do you think the study is about, if not what you were told? (FR)
5. How many answers did you get correct on the test of Integrative Orientation?
6. How would you describe your performance on the test of Integrative Orientation?
7. How well do you think you performed on the Alternate Uses Task?
8. Which essay did you read for the reading comprehension task?
9. Please rate your attitude toward the article you read on the following dimension:
good/bad
10. Please rate your attitude toward the article you read on the following dimension:
like/dislike

The article I read made me feel: (free response)

Experiment 3

For self-affirmation conditions

1. What is the purpose of this study? (free response)
2. Did you feel you were being deceived during the course of this study? (yes, maybe, no)
3. What makes you think you were being deceived in this study? (fr)
4. What specific parts of the study struck you as being deceptive? (fr)
5. What do you think the study is about, if not what you were told? (fr)
6. How many answers did you get correct on the test of Integrative Orientation? (1-10)
7. How would you describe your performance on the test of Integrative Orientation? (1-8)
8. In the course of this experiment, you were asked to write about something that made you feel proud. In one sentence, can you summarize what you wrote about? (fr)
9. What I wrote about is an important part of who I am. (1-9)
10. What I wrote about is something I like other people to know about me. (1-9)
11. What I wrote makes me feel: embarrassed/proud (1-9)

For basking in reflected glory condition (Academic BIRG Ad)

1. What is the purpose of this study?
2. Did you feel you were being deceived during the course of this study?
3. What makes you think you were being deceived in this study?
4. What specific parts of the study struck you as being deceptive?
5. What do you think the study is about, if not what you were told?
6. How many answers did you get correct on the test of Integrative Orientation?
7. How would you describe your performance on the test of Integrative Orientation? (1-8)
8. In the course of this experiment, you were shown an advertisement. Please summarize what the ad contained. (fr)
9. Please rate your attitude toward this ad on the following dimension: good/bad (1-9)
10. Please rate your attitude toward this ad on the following dimension: like/dislike (1-9)
11. This ad makes me feel: embarrassed/proud (1-9)

For control condition (Bookstore Ad)

1. What is the purpose of this study? (fr)
2. Did you feel you were being deceived during the course of this study?
3. What makes you think you were being deceived in this study? (fr)
4. What specific parts of the study struck you as being deceptive? (fr)
5. What do you think the study is about, if not what you were told? (fr)
6. How many answers did you get correct on the test of Integrative Orientation? (1-10)
7. How would you describe your performance on the test of Integrative Orientation? (1-8)
8. In the course of this experiment, you were shown an advertisement. Please summarize what the ad contained. (fr)
9. Please rate your attitude toward this ad on the following dimension: good/bad (1-9)
10. Please rate your attitude toward this ad on the following dimension: like/dislike (1-9)
11. This ad makes me feel: embarrassed/proud (1-9)

Appendix B

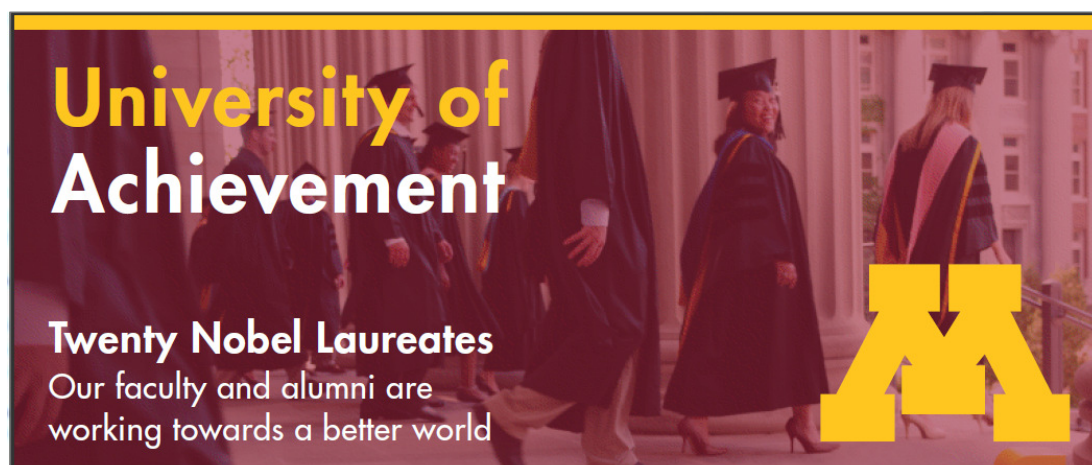
BIRG Materials

Pilot Test

Basking in reflected glory ad (athletics)



Basking in reflected glory (academics)



Control ad



Experiment 1



Control



Sports Psychology



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THE ART OF PERSONALITY, TRAINING, PROFESSIONALISM, AND PERSONAL LIFE
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TELLING TO LIVE: LORNA REMAR'S TESTIMONY
 by Lorna Remar, Ph.D.

FIELD NOTES FROM A PROPERLY TRAINED AND CLIMATE CHANGE
 by Robert M. Vealey, Ph.D.

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[List of names]

Experiment 2

Basking in reflected glory article

startribune.com
MAROON & BOLD
**Seeing the possibilities when others
couldn't, the 1960 Gophers football
team set out for a special season.**

KENT YOUNGBLOOD. Star Tribune.

Maybe 50 years have added a rose (bowl)-colored tint to their sepia-toned memories. But they believed -- when there appeared little reason to believe.

A half-century ago, University of Minnesota football -- still the most important game in a town that had yet to witness the arrival of the Twins and Vikings -- was preparing for its seventh season under head coach Murray Warmath. His first six had produced two winning seasons. In 1959 the Gophers won two games and finished at the bottom of the Big Ten. They were nearly two decades removed from their fifth national title, no longer on the big-time college football map.

But the players believed.

"We, as a team, knew we could win," said Judge Dickson, a junior halfback in 1960. "We knew we had a team."

Fifty years later the memories have grown only sweeter. In 1960 a team that was uncommonly tight to start the season ended it as national champions; the vote at the time for national champion was conducted after the final regular-season game, rendering the Gophers' Rose Bowl loss to Washington irrelevant in that regard. Playing both to prove themselves and to protect their beleaguered coach, the Gophers went from off the map to atop the world, winning the program's sixth and most recent national title.

In only a few months, fans went from hanging Warmath in effigy to wearing buttons promoting him for president. The team went from worst to first, from nowhere to Pasadena and the Rose Bowl, leading the way toward integration of college football along the way. Dickson said Sandy Stephens, who would become the first black quarterback to win All-America honors, put a picture of the Rose Bowl on the wall at the team's dorm on the first day of practice.

"All of us bought into that vision," Dickson said. "And then we just went out and played."

Pressure cooking

Late in the 1959 season, after a loss to Michigan, fans hung Warmath in effigy at Territorial Hall, where the players lived. Tom King, a running back on that team whose father, Ray, had been a part of two Gophers championship teams, saw it on the walk to practice. It angered the players, he said, "and it only made us tighter."

Warmath was feeling the heat. Some wanted the last two seasons of his contract bought out. Some still were angry the school hadn't hired former Gophers great Bud Wilkinson to replace Wes Fesler in 1953.

"You have to remember, the Vikings weren't in town then yet," backup quarterback Joe Salem said. "Minnesota football was the show. When it didn't go well there was hell to pay."

And it wasn't only the losing. Some fans didn't like the idea of recruiting black players from around the country, or starting Stephens at quarterback.

Warmath was one of the first coaches in major college football to sign multiple black players in a single recruiting class, doing it at a time when most major southern schools were segregated. The 1959 Gophers had three black players -- Stephens, Dickson and lineman Bob McNeil. In 1960 two sophomores, defensive tackle Bobby Bell and halfback Bill Munsey, joined the varsity, leading the way for a number of high-profile black players to come to Minnesota in the next 10 years, including Carl Eller, Aaron Brown, John Williams, Ezell Jones, Charlie Sanders and McKinley Boston.

The team's black players were very aware that they were groundbreakers.

"We weren't playing just for ourselves," said Bell, from rural Shelby, N.C. "When I left Shelby, you have to understand, everybody was watching."

Said Dickson: "You don't know what it was like to pick up a paper and get dumped on every day. The papers dumped on us, the public dumped on us, and they were dumping on our coach. We said, 'To hell with those guys.' We knew we had a team."

Warmath might have felt the pressure, but he didn't show it. End Tom Hall, who went on to play for the Vikings, was amazed how Warmath handled it. "They were throwing garbage on his lawn, they wanted him out, gone. But he never showed that frustration with us. He showed us confidence, and we picked up on that."

"We told Warmath, 'Don't give up on us,'" Dickson said. "And he said, 'I'm never going to quit.'"

Chemistry set

Despite the program's downward turn, a solid group of veterans arrived at training camp for the 1960 season. Tom Brown, older than most because of Navy service, would go on to win

the Outland Trophy as the nation's best lineman. He was so athletic that he could do standing somersaults, in full uniform, both backward and forward, and strong enough that he used to go up to a ladder bolted against the wall, grab hold, and lift his body horizontally just to impress.

Center Greg Larson would go on to play 13 years with the Giants in the NFL. Frank Brixius was the tackle beside Bell on a defense that continually stuffed opponents' rushing game.

Stephens was coming into his own as a player and a leader, and Bell's speed would redefine line play. In the Gophers' season-opening, 26-14 victory over Nebraska, tackle Steve Kereakos remembers Bell running down speedy quarterback Pat Fischer from the back side for a 5-yard loss and thinking, "How could somebody do that?"

The Gophers had depth on both sides of the ball. Eleven players ran the ball 25 times or more, led by fullback Roger Hagberg. The defense was marked by speed, which translated into Munsey getting five interceptions and Stephens four.

And there were intangibles. Larson recalls the uncanny chemistry the team had from the start, before a game was played. "Usually that happens after you've won some games, but this started early," he said.

The players had learned from '59, when all but two losses were by eight points or fewer. "We would run all over the county, but we couldn't find the county seat," Kereakos recalled.

That was about to change.

The showdown

Warmath, famous for his discipline and hard work, had his team ready. The Gophers clearly were the better-conditioned team on opening day at 12th-ranked Nebraska, winning going away; the Cornhuskers were supposed to be too fast for the Gophers.

That was followed by a 42-0 walloping of Indiana, a 7-0 victory over Northwestern and a come-from-behind, 21-10 victory over Illinois, which had started the season ranked No. 5.

"That put us on the map," Salem said.

A week later the Gophers went to Michigan, won 10-0 and came back with the Little Brown Jug. After whipping Kansas State 48-7 in a nonconference game, they were 6-0 and ranked No. 3, ready to host a showdown against undefeated, top-ranked Iowa, which beat the Gophers 33-0 in Iowa City the year before.

Historic? Imagine the hype if that game were today. Two unbeaten, rivalry game, Floyd of Rosedale, and perhaps a national title at stake. It was 1960 and both teams started black quarterbacks in Stephens and Wilburn Hollis.

Bell and Munsey tried all week to convince each other that it was just another game. Right. King recalls walking onto the Memorial Stadium turf feeling as if he was going to throw up as the record crowd of 65,610 roared in anticipation. What happened over the next four quarters encapsulated the season -- domination from the defensive line, a big contribution from the reserves, the stars shining. Iowa was supposed to have too much outside speed. But, as Bell said, "Somebody forgot to tell us that."

Most remember Brown making Iowa center Bill Van Buren's day miserable. "Brown ate his lunch," Salem said. Watch the film of that game, Dickson said, and you'll know why he used to call him Mr. Brown.

Minnesota went up 7-0 shortly after Brown induced Van Buren to hike the ball over the punter's head. Later in the half, Iowa drove inside the 10 but settled for a field goal after Brown picked up a pulling guard and threw him at Wilburn, knocking him down for a 5-yard loss.

Still, after opening the second half with its only sustained drive of the day, Iowa took a 10-7 lead.

On the ensuing drive, Salem made the biggest play of his college career.

"Warmath was pacing the sidelines," Salem said. "Finally he came up to me and said, 'You're going in.'"

On third-and-6 from their 36 Salem took the snap, dropped back and was immediately under pressure. Just before getting hit he jumped and sent an end-over-end duck of a pass to Hagberg, who took it for 28 yards. On his back, Salem never saw the completion.

"That's my whole career right there," Salem joked.

Stephens re-entered the game and completed the TD drive that put the Gophers up for good late in the third. Hagberg, who ran for 103 yards, added a 42-yard touchdown run and Salem a 1-yard sneak for a 27-10 victory that put the Gophers atop the college football polls.

Ultimately champs

A week later the Gophers tripped, losing 23-14 to a Purdue team led by quarterback Bernie Allen, who later would play second base for the Twins.

But in the final regular-season game at Wisconsin, Stephens ran for two scores in a 26-7 victory that gave the Gophers a tie for the Big Ten title with Iowa. Kansas' upset of top-ranked Missouri put the Gophers back at No. 1, and the final Associated Press poll released Nov. 29 confirmed Minnesota as national champion.

The Rose Bowl loss to Washington did not alter the Gophers' status as national champs, but it did light a fire under the 1961 team to atone for that loss. The Gophers repeated their 8-2 overall record in '61, which included a Rose Bowl victory over UCLA.

"We won [the national title], under the rules that we played under, and we deserved it," Dickson said.

Said Bell: "We were national champs. I'm sitting here, right now, in my family room looking at a picture of that team. It says, 'National champs, Big Ten champs.'"

That's a memory nobody can take away. In an era when most players played both ways, eight Gophers starters went on to play pro football, either in the United States (NFL and AFL) or in the Canadian Football League.

"Personally, this is so important to me," King said. "To win when everybody thought we were losers. To win a national championship, that's something I will remember all my life."

Who wouldn't? "It was awesome," said Bell, who went on to win a Super Bowl with the Kansas City Chiefs. "It was just a joy to be there."

Credit: KENT YOUNGBLOOD; STAFF WRITER

Control Article

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Home at Last

After years away, Cal Stoll is with the Gophers again. Will victory follow?

KENT YOUNGBLOOD. Star Tribune.

Ask any Gopher fan, and they'd tell you Cal Stoll was maroon & gold to the core. He played under legendary Gopher head coach Bernie Bierman. To listen to Stoll, that sort of football field glory is just around the corner once again. He's made believers of many; game attendance is rising and many are hoping Minnesota is about to become a power in college football again.

But Cal Stoll was not always Mr. Minnesota. Growing up in a small town in Ohio, he had set his sights on the hometown heroes: the Ohio State Buckeyes. Fate had a different plan. The end of World War II and the GI Bill led a generation of young Americans to college. So many that Stoll was not accepted to his first choice Ohio State. Instead, in 1947, he arrived in Minneapolis.

"As a kid, Columbus [OH] was the biggest city I'd ever been to," Stoll laughs. "Boy, was I surprised when I got here. The University of Minnesota didn't seem like a back-up choice anymore."

Stoll was not recruited to play football at Minnesota, but he knew he wanted to. His freshmen year, he tried out but didn't make the cut. Sophomore year, he made the reserve squad, but was never called up. Finally, in his Junior year he got his chance.

"That first time you put on the maroon & gold, and step out on to Memorial Field, that stays with you."

Head Coach Bernie Bierman was already a legend at Minnesota. He'd captured five National Championships, and 7 Big 10 Championships. However, he was prickly and press shy. By 1949, after several mediocre seasons, fans were openly questioning if Bierman was past his prime.

"My first year on campus, Coach Bierman and his players were treated like gods on campus. By the time I started playing, the skepticism had set in. You could tell some people were just waiting for us to fail."

Those wishing the worst were disappointed in 1949. Bierman's Gophers showed a spark not seen for a while. The team started the season with a three game winning streak, bowling over Nebraska

and Northwestern with ease. Their next opponent would be no pushover; they were playing top ranked Ohio State on their home turf.

For Stoll, it was a bit of an irony to finally set foot in Ohio Stadium, but be wearing maroon & gold.

“I’d been to Buckeye games before, but it was quite a change to have all that noise directed against you. That was one passionate, home town crowd, and I was there as an enemy.”

The Gophers weren’t phased by the passionate Buckeye fans. Play by play, they dominated the Buckeyes. As the Gophers ran the score up, the stadium got quieter and quieter. When the final whistle blew, the Gophers had won 27 to 0.

“I had a few relatives who didn’t speak to me for a while,” Stoll jokes now.

Perhaps that rout of perennial Big 10 powerhouse Ohio State went to the teams’ head, because they faltered against a strong Michigan team the following week. More embarrassingly, they lost to an unranked Purdue the week after, ending their shot at a Big 10 conference title.

Stoll graduated in 1950, but football was still in his blood. He was hired by the Michigan State Athletic Department, and slowly worked his way up through the ranks. He was there, when Murray Warmath led the Gophers to the Rose Bowl and their sixth National Championship. Stoll received his first head coaching position at Wake Forest. In two seasons, he whipped the team into shape and took them from the bottom of the Atlantic Central Conference to the top.

This success caught the eye of Minnesota officials. Murray Warmath’s fortunes had waned, and many thought Minnesota needed someone who could give them a similar revival. In 1972, Cal Stoll put on the maroon & gold once more.

A lot had changed since he had been on Memorial Field as a player. Back then, Minnesota was a perennial Big 10 powerhouse. Warmath had a few excellent seasons, but the program had been in decline for a long time. Stoll not only had to rebuild the football team, he had to awaken the Gopher pride that a strong football team needed to support them.

Stoll’s first season was a mixed bag. The five game losing streak that began his tenure did little to appease fans, however crowd pleasing victories over rivals such as Iowa and Wisconsin helped ease the sting.

Stoll hopes to build on this success, but right now he has a big obstacle in his way: Ohio State. Under Coach Woody Hayes, they’ve won the National Championship five of the six last years. On their home turf, they handed Minnesota a 56-7 shellacking to open the season.

Stoll chuckles and shakes his head, “All these years later, and I’m right back into the maelstrom between Minnesota and Ohio State.” He pauses to look out his window, and across Memorial Field. “They’re sitting atop the Big 10 like King Kong on the Empire State Building. I want to

bring them down. When we can do that, we'll be Big 10 Champions, maybe National Champions again."

It's an ambitious goal; his detractors, and even some of his supporters, wonder if he's promising too much. But If Cal Stoll can do it, take Minnesota back to the top again, surely he'll be forgiven for the minor mistake of having been born in Ohio.

Credit: KENT YOUNGBLOOD; STAFF WRITER

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