# THE ROLE OF GROUP STATUS AND PERSONAL REPUTE IN INFORMATION USE IN SELF-EVALUATION

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Many individuals often believe that they are better off than their fellow man in numerous domains such as intelligence. Three studies investigate the role that two factors - one's ingroup's status and one's personal status within that group - play in self-evaluation. It was hypothesized that individuals who learned their ingroup was of low status would continue to hold elevated self-views even when their own status within the group was low. This hypothesis was supported in part. Participants overall overestimated their abilities. However, students who reported the lowest GPAs overestimated their abilities when asked to estimate their potential GPA if they were to attend a school better than their own, but underestimated their abilities when asked to project to a school worse than their own. Meanwhile, students reporting the highest GPAs underestimated their abilities at both schools. Differing attributional style was investigated as a potential explanation for this surprising reversal.

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## Overview

The tendency to self-aggrandize has been the subject of much research in many different areas of social psychology (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Heine & Lehman, 1997; Kruger & Dunning, 1999; Larwood, 1978; Messick, Bloom, Boldizar, & Samuelson, 1985; Weinstein, 1980). Some people may attempt to make themselves look good and feel as though they are better off than other individuals on many different domains such as intelligence, attractiveness, sociability, likeableness, agreeableness, risk for disaster or disease, and many other such areas of everyday life.

Indeed, many individuals ensure that they are able to maintain these skewed views of themselves by using several different cognitive and motivational tools. People may play up positive attributes of themselves in order to overshadow other areas that are lacking. They may also derogate a person who has fared better in the area, or they may actually derogate the task or trait itself (Tesser & Campbell, 1983; Tesser, 1986, 1991). These mechanisms may be brought about by the desire to maintain or bolster self-esteem.

Individuals are also able to bolster their self-view by belonging to groups, which carry with them positive images. By belonging to such a group, the individual can hope that the positive attributes may assimilate to themselves. Certainly, people do acquire much of their self-concept through their group identities. It is believed that an individual's self-concept is a combination of

personal and social identities (Tajfel, 1978; Yee & Brown, 1992). By ensuring that one belongs to a positive group, one is able to bolster the self-view by association.

In using an ingroup to make oneself look and feel better, people may develop the motivation to keep their ingroup looking good. This leads to the ingroup bias, in which individuals tend to paint very rosy pictures of others in their group and overall tend to favor their group, above all others (Lindeman, 1997).

However, there has been some research that has shown the tendency for individuals to feel that they are better off than even their ingroup members (Duck, Hogg, and Terry, 1995; Hodson & Esses, 2002). Most of this research has occurred in the area of prejudice and discrimination where individuals tend to report more discrimination at the group level than the personal level (e.g., Crosby, 1982; Ruggiero, 1999; Taylor, Wright, Moghaddam, & Lalonde, 1990). This research demonstrates that individuals, while having a positively skewed image of their ingroup in many cases, still desire to see themselves as the best of all. Individuals may actually only incorporate their group's information when it is positive and advantageous, leading them to actually ignore group information when negative and rely solely on aggrandized self-views in such cases.

However, the tendency for individuals to actually ignore direct negative information about their ingroup in favor of self-aggrandizement has not been fully explored. Three studies give us some initial evidence that this tendency may exist, however, further research in this area is needed. The studies also give us

some evidence that students who are of low standing at their own university generally are not able to accurately assess their capabilities and reasons for this inability were investigated.

The following studies attempted to answer the question of whether, in the face of negative ingroup information, individuals may ignore this information in relation to the self and exaggerate their potential at other universities, even when given negative normative feedback about the self. It is believed that a discrepancy exists between group and personal identification in the face of negative group information that does not exist in the presence of positive group information and that individuals will only incorporate group information in their self-concept if the information is positive. The desire for a positive self-view may be so strong that it overpowers the desire for ingroup identification, leading one to self-aggrandize, while derogating the ingroup. This research also seeks to find the source of such aggrandizement if it does exist. It is believed that research in this area will greatly add to current social comparison literature, self and social identity research, as well as to the group literature.

The literature review begins by providing evidence for social comparison and the Self-Evaluation Model. This literature is the important first step in the line of reasoning for the proposed research. It demonstrates the tendency for individuals to compare themselves to others they come in contact with, whether they are a stranger on the street, or their best friend. Also discussed is the effect of outperformance on an individual's self-perception.

The review then moves to literature in the area of social identity and ingroup bias. This section discusses the Social Identity Theory and the fact that we gain some of our personal identity through our association with our groups. A discussion of ingroup bias is also included in this section to demonstrate that people generally attempt to maintain their own positive personal identity by viewing their ingroup positively.

Next discussed in the literature review is research on positive illusions of the self and groups and the various mechanisms by which we enable ourselves to keep them.

"If most of us remain ignorant of ourselves, it is because self-knowledge is painful and we prefer the pleasures of illusion."

-- Aldous Huxley, *The Perennial Philosophy*

## Introduction

It has been well documented that people aspire to maintain a positive view of the self. We do just about everything in our power to ensure that we can look upon ourselves as moral, intelligent, attractive, and athletic (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Heine & Lehman, 1997; Kruger & Dunning, 1999; Larwood, 1978; Messick, Bloom, Boldizar, & Samuelson, 1985; Weinstein, 1980). Even if reality is somewhat skewed from this picture, we use various cognitive tools to enable us to keep our positive self-view (Alicke, 1985; Dunning, Meyerowitz, & Holzberg, 1989).

Our positive views of the self often embrace our groups as well. Much of our own identity comes from the groups that we are a part of (Brewer, 1979; Tajfel, 1982; Turner, 1981; Yee & Brown, 1992). Our group identities can range from very large, broad groups such as "women" or "African-American" to very small and distinct groups such as the local card club or a sorority or fraternity. We normally identify ourselves by our ingroup and gain favor through that group. It is here that we find others who are "like us". We can share our similar stories and experiences, and if none exist, we can create such bonding material by spending time together and acting as one. We often make lifelong friends within our ingroups. Perhaps because of this, we begin to favor our ingroup.

Much research has shown that individuals do, indeed, favor their ingroup by allocating more resources to them, attributing more positive features to group members, and generally having a more positive view of the group and its members compared to those who are not in the group (Abrams & Hogg, 1990; Castano, Yzerbyt, Paladino, & Sacchi, 2002; Messick & Mackie, 1989; Terry, Carey, Callan, 2001; Wilder, 1986).

However, our desire for a positive self-view may overpower this desire for closeness and identification with an ingroup when the ingroup has negative attributes that we view as potentially damaging to our self-view. There may come a point in time when we are confronted with information about our group that counters this view that our ingroup can do no wrong. What happens when this occurs? Do we stick it out with our group and hope for the best, or do we leave our ingroup in the dust when they can bring us down? How are our evaluations of self and ingroup affected by self-standing within the ingroup as well as group status? The following studies hope to provide some answers to these important questions.

*Social Comparison and the Self-Evaluation Model*

The following studies ask participants to evaluate themselves and their group in a social comparison context. Participants were asked to make upward and downward social comparisons using themselves and their group as references. Since social comparison and self-evaluation are important bases for the studies, the following section will discuss these concepts.

Social comparisons may have differing effects on one, depending on the circumstances that surround the comparison. An outstanding performance by another can sometimes make one feel incompetent by comparison. When a sibling outperforms you at school, when a friend is much better than you at baseball, or when your coworker is promoted to the job you wanted, you may question your own abilities and worthiness and feel deflated and discouraged. And yet, on other occasions, an outstanding performance by another can make you feel good about yourself. You may be very proud of your sibling's great musical talent, or be very delighted when your friend makes the school sports team, and you may even be inspired by your coworker's achievements and become determined to follow in his footsteps. The question that has been the focus of much research in recent years, is when will a superior performance by another make you feel good about yourself, and when will it make you feel terrible (Lewis & Sherman, 2003; Tesser & Campbell, 1983; Tesser, 1986, 1991)?

Tesser and his colleagues have developed a model attempting to account for people's reactions to superior performances by others (Tesser & Campbell, 1983; Tesser, 1986, 1991). The Self-evaluation Maintenance Model (SEM) makes several assumptions. First, to have any impact on the self, the superior other must seem psychologically close. Closeness increases with similarity, family ties, shared place of origin, or anything else that leads one to see a bond between the self and the other or to see the two as belonging to the same psychological unit. In the following studies, participants attended the same university and were all students in introductory psychology or statistics courses at

that school. This served to make the comparison others psychologically close to the participants. The closer the superior other seems, the greater the potential impact of this person on the self.

The direction, whether positive or negative, of the outperformance impact on the self is determined by the relevance of the domain in which the outperformance occurred. The SEM says that a superior performance by a close other can make you feel good about yourself if you don't really care about the performance domain. The impact will be positive if the domain is irrelevant to your own self-definition. In these cases, you do not feel personally threatened by the other's superior performance and can take enjoyment in the person's success or bask in the reflected glory of the other's achievement (Cialdini, Borden, Thorne, Walker, Freeman, & Sloan, 1976). For example, if you define yourself in terms of scholastic success and have no interest in musical abilities, you may take great pride in your friend's extraordinary talent in playing the piano without being threatened by his skill and achievement. In contrast, if the domain in which you have been outperformed by a close other is relevant to your self-definition, you will feel threatened by the close other's superior performance and may question your own abilities and self-worth. You feel compelled to compare yourself to such a relevant close other and find yourself lacking by comparison. More simply put, the impact of a close superior other on the self depends on the self-relevance of the performance domain: The superior other exerts a positive impact when the domain is irrelevant (because one basks in the reflected glory) but exerts a negative impact when the domain is relevant (due to an unpleasant comparison of

the self with the other) (Tesser, 1991). The performance domain in the following studies was intelligence and grade point average and thus should have been highly significant and relevant to the participants.

The SEM assumes that people are motivated to maintain a positive view of the self. Therefore, when they are threatened by a superior performance by a close and relevant other, they actively attempt to dispel the threat. They may reduce the self-relevance of the domain or they may minimize the other's performance. If they are able to say that the dimension is not important to them or that the other's performance was not really that good, it becomes possible to feel that the outperformance does not matter and one is thus able to protect his or her self-view. In short, people may engage in motivated reasoning so as to make the other's superior performance seem less threatening by minimizing their relevance, magnitude, or importance. People may also take action to minimize the threat posed by a close other's superior performance. They may, for example, attempt to undermine this person's future performance.

In one study designed to test these ideas, two pairs of male friends were recruited for each experimental session (Tesser & Cornell, 1991). On arrival, the four were seated in separate booths where they completed a verbal skills task. To manipulate the self-relevance of this task, half were told that performance was strongly related to intelligence; these participants were expected to view the task as highly self-relevant. The other half were told that the task was merely a game and that no one knew what it measured; these participants were expected to view the task as low in self-relevance. After completing the task, participants were

shown the scores of all four participants in their session. Each participant was led to believe that he had ranked third, and had been outperformed by his friend and by one of the strangers. Participants were then told that each would perform another such task, but this time with clues provided by their fellow participants. Each participant then had an opportunity to choose clues for each of the others. The clues varied in how helpful they were. The question the experimenters were looking to answer was, of the two people who had outperformed him, who would the participant want to help more, his friend or the stranger?

It seems that the answer depended on how self-relevant the task was. When it was not self-relevant, participants gave more helpful clues to their friend than to the stranger. Seemingly, when they did not feel threatened by their friend's superior performance, participants expected to take pleasure in his success and so were motivated to help him. However, when the task was highly self-relevant, participants gave less helpful clues to their friend than to the stranger. Being outperformed by a close friend on a task that one cares deeply about can be more threatening than being outperformed by a stranger. This may be why participants were especially reluctant to help their friend maintain his superior performance. People's eagerness to help a friend excel at an irrelevant task and their reluctance to help a friend excel at a relevant task may both have stemmed from a desire to boost and maintain their own self-worth. Indeed, both tendencies were eliminated when participants were given an opportunity to boost their self-worth through an alternative route. This suggests that when the need for self-affirmation is satisfied, people feel less pressure to seek opportunities to bask

in their friend's reflected glory or to avoid undesirable social comparisons to their friend.

Overall, the research on SEM suggests that close superior others may boost one's self-views when they outperform one on dimensions that one does not truly care about, but may threaten one's self-views when they outperform one on dimensions that one also wishes to excel at.

*Social Identity and Ingroup Bias*

Tajfel's (1978) Social Identity Theory (SIT) defined social identity as "that part of an individual's self-concept which derives from his knowledge of his membership in a social group together with the value and emotional significance attached to that membership" (Tajfel, 1978, p. 255). In line with Festinger's (1954) social comparison notion of an upward drive, Tajfel theorized that individuals would seek a positive identity through their social groups (Yee & Brown, 1992). However, a group fosters a positive identity only if it compares favorably relative to other groups. Individuals will be motivated to see their ingroups in the most favorable light possible in order to maintain a positive social identity. Positive social identity thus impacts positively on self-esteem (Lewis & Sherman, 2003). SIT argues that this motivation to maintain a positive social identity and high self-esteem leads to a bias in favor of the ingroup (Yee & Brown, 1992). Numerous studies have documented the readiness of group members to engage in such intergroup comparisons and to display ingroup favoring biases in their evaluations of groups or group products (Brewer, 1979; Castano, Yzerbyt, Paladino, & Sacchi, 2002; Guimond, Diff, & Aupy, 2002;

Lewis & Sherman, 2003; Lindeman, 1997; Tajfel, 1982; Turner, 1981). We tend to evaluate our ingroup members more positively and explain their behavior in a more flattering way than we do our outgroup members (reviews: Abrams & Hogg, 1990; Messick & Mackie, 1989; Wilder, 1986).

In intergroup settings, individuals adopt comparison strategies that enhance differences between groups in ways that favor the ingroups. The desire to maintain positive social identity leads to evaluations that bolster ingroups, presumably to enhance or maintain self-esteem. The desire for positive self-concept is believed to drive the need to evaluate one's group positively in relation to other groups. This tendency toward positive ingroup evaluation is termed *ingroup bias* (Lindeman, 1997).

Ingroup favoritism has been a well-documented and well-studied phenomenon. It has been demonstrated in a wide variety of situations, from naturalistic settings using existing groups such as gender or ethnic background (Brewer, 1979; Messick & Mackie, 1989) to extremely artificial settings used in Tajfel's minimal group paradigm (Billig & Tajfel, 1973; Tajfel, Billig, Bundy, & Flament, 1971). It is also found in a wide range of measures, from behavioral measures to trait, liking, or attribution judgments (Brewer, & Brown, 1998; Pettigrew, 1979). In organizational settings, ingroup bias has been shown on allocation of rewards to team members (Ng, 1981) and appointment of new directors in Fortune 500 companies (Westphal & Zajac, 1995). Ingroup favoritism is also argued to account for differential mentoring activities (Brewer, 1996) and attributions for negative actions (Hewstone, 1990; Pettigrew, 1979,

Weber, 1994). It has also been demonstrated, and argued to be a potential cause of failure, in response to planned company mergers (Terry & Callan, 1998; Terry, Caray, & Callan, 2001).

One study that demonstrated ingroup bias (Tajfel & Turner, 1979) studied the effects of reward magnitude and comparability of the outgroup on minimal intergroup discrimination where self-interest was related to ingroup profit. Sixty-two 14-15 year old male and female students were randomly assigned to a high or low reward condition in which they distributed monetary rewards to the ingroup and a relevant comparison outgroup or to the ingroup and an irrelevant comparison outgroup. Monetary self-interest was directly linked to ingroup's absolute profit. Participants were willing to sacrifice group and personal gain to achieve intergroup differences in monetary outcomes favoring the ingroup and were less fair and more discriminatory toward the relevant than irrelevant outgroups, especially with high rewards. Participants preferred to give themselves only $2 if it meant giving the outgroup $1, over giving themselves $3 if that meant that the outgroup would receive $4. Participants were willing to take a loss in order to accentuate the differences between their in- and out-group and in order to provide a leg up to their group.

Even when the reasons for differentiation are minimal, being in the ingroup makes participants want to win against members of the outgroup and leads them to treat the outgroup unfairly, because such tactics serve to build their self-esteem. When your group does win, it strengthens your feelings of pride and identification with that group. For example, in 1976, Cialdini and his colleagues

performed a study that outlined this effect. The tendency to "bask in reflected glory" (BIRG) by publicly announcing one's associations with successful others was investigated in 3 field experiments with more than 300 university students. All 3 studies showed this effect to occur even though the person striving to bask in the glory of a successful source was not involved in the cause of the source's success. Experiment 1 demonstrated the BIRG phenomenon by showing a greater tendency for university students to wear school-identifying apparel after their school's football team had been victorious than nonvictorious. Experiments 2 and 3 replicated this effect by showing that students used the pronoun “we” more when describing victory than a nonvictory of their school's football team. A model was developed asserting that the BIRG response represents an attempt to enhance one's public image. Experiments 2 and 3 indicated, in support of this assertion, that the tendency to proclaim a connection with a positive source was strongest when one's public image was threatened.

While aggrandizing our ingroups and using their successes to feel good about ourselves, we may still tend to evaluate ourselves as better than the ingroup as a whole. Even though we identify greatly with our ingroup and see them as very much like ourselves, we may use this information to further aggrandize our self-concepts. In 1995, Duck, Hogg, and Terry showed that participants who identified strongly with their ingroup not only demonstrated an ingroup bias, but they also presented themselves more favorably than other ingroup members. In this study, the researchers polled 54 Australian undergraduates (aged 18-51 years) who identified with 1 of 2 political parties regarding their perceptions of media

campaign impact on the self and others. Surveys were taken 3 days prior to the 1993 Australian federal election. The results showed that participants judged others as more influenced by the election campaign than themselves. Consistent with predictions derived from social identity theory and self-categorization theory, political in-group members were also judged as less influenced by campaign content than political out-group members. Participants who identified strongly with their preferred party judged self and in-group members as less influenced by campaign content than did other participants and showed more evidence of positive intergroup differentiation. Judgments of media impact on self and others depended on the direction of the campaign message. This study demonstrates that participants not only aggrandize their judgments of their ingroup by feeling that they are better able to resist messages presented to them, but they also aggrandize themselves above this judgment. Participants may have used their positive view of their ingroup to further boost themselves.

The ingroup bias has been shown to occur even when participants are not placed into groups. Perdue, Dividio, Gurtman, and Tyler (1990) devised a study in which just the pairing of group status words with nonsense syllables elicited the ingroup bias. Three studies were performed that tested the hypothesis that the use of words referring to in-group or out-group status (such as “us” or “them”) may unconsciously perpetuate intergroup biases. In Experiment 1, nonsense syllables unobtrusively paired with in-group designating pronouns (e.g., “we”) were rated as more pleasant than syllables paired with out-group designators (e.g., “they”). In Experiment 2, in-group and out-group designators presented briefly to participants

as masked primes were found to influence the time required for participants to evaluate subsequently presented trait adjectives, even though they were unaware of the group-designating primes. In Experiment 3, the masked prime “we” facilitated participants’ reaction times to positive person descriptors, as compared to the effects of the masked prime “they” and the masked control prime “xxx”. So it seems even when not actually placed in a group, just the mere reminder of in- and out-groups is sufficient to elicit the bias.

The following studies investigated ingroup bias in that the ingroup status was manipulated and participants may have demonstrated bias by elevating themselves and their ingroup even when the group was of low status. This could occur because elevating the group rating helped an individual in that group maintain a positive personal as well as group identification.

It is believed that a person’s self-concept is the sum of both personal and social identity. Social Identity Theory is a large proponent of this idea. This theory believes that an individual’s personal identity is salient and that interactions with others add to their identity. The individual’s identification with different social groups is important to the self in adding to his or her personal identity and making it more salient. People internalize their group membership as an aspect of their self-concept (Tajfel & Turner, 1979). This makes it possible that a positive social identity may promote a positive view of the individual self. Positive self-evaluations might thus stem from a positive ingroup evaluation in some cases (Lindeman, 1997).

In a 1992 study by Hirt, Zillmann, Erickson, and Kennedy, group success or failure was examined in relation to participant's expectation of both personal and group future success. Two studies examined the effect of game outcome on sports fans' estimates of the team's, as well as their own, future performance. Consistent with Social Identity Theory, it was expected that participants for whom being a fan was an important identity would respond to team success and failure as personal success and failure. Participants watched a live basketball game; then, in the context of a second, unrelated experiment, they estimated their own performance at several different tasks. Results indicated that fans' mood and self-esteem were affected by game outcome. More important, fans' estimates of both the team's and their own future performance were significantly better in the win than in the loss condition. Furthermore, path analyses revealed that changes in self-esteem but not mood played a mediational role in fans' estimates of both team and their own future performance.

Comparisons with conditions of personal success and failure indicated that team outcome and personal outcome had similar effects on fans' estimates. In a similar way, the following studies linked personal and social identities by giving personal feedback about one's standing at the school along with feedback about the group's standing. The research hoped to demonstrate that personal and social identities are linked in the self-concept but potentially only when the ingroup is positive.

In a study by Lewis and Sherman (2003), the researchers proposed that individuals strategically evaluate ingroup targets in order to maximize their own

self-esteem and to avoid costly errors. This strategic evaluation typically results in ingroup favoritism toward an ingroup target member. However, Lewis and Sherman found that when a positive evaluation of a target posed a significant self-esteem threat, denigration of the target resulted. Participants were asked to select an applicant for a job based on the applicant's personality type. The applicant was either a member of the participant's ingroup or the outgroup, and was either the correct personality type for the job (qualified) or the incorrect personality type (unqualified). The results demonstrated that participants showed ingroup favoritism only toward qualified (and thus not a risk for failure which could cause a blow to the participant's self-esteem) applicants. In a second study, it was demonstrated that when a marginally qualified ingroup applicant had the potential to confirm a negative stereotype of the group, bias against the ingroup was observed. Thus, when an individual was potentially harmful to one's self-esteem, participants actually displayed a tendency to denigrate the individual and the group.

The Lewis and Sherman study is just one demonstration that ingroup bias is a pervasive but not necessarily universal feature of ingroup relations (Hewstone & Ward, 1985; Jetten, Spears, & Manstead, 1996; Mullen, Brown, & Smith, 1992; Sidanius & Pratto, 1999; Tajfel & Turner, 1979; Turner, 1999). Research indicates that high-status group members often favor their own group and sometimes derogate outgroups, but low-status group members often display exactly the opposite bias; a bias in favor of the high-status outgroup (Bettencourt,

Door, Charlton, & Hume, 2001; Hinkle & Brown, 1990, Jost, & Banaji, 1994; Sachdev & Bourhis, 1987; Stangor & Jost, 1997).

For example, a study by Guimond, Dif, and Aupy (2002) examined the effects of favorable outcomes at the individual and group levels on the relations between members of high (non learning-disabled) and low (learning-disabled) status groups. Participants were told they were taking part in a creativity test and were given feedback on their performance. One group was told that they were personally high on creativity (without receiving group feedback), another group was told that their group was high on creativity (without receiving individual feedback), while a control group was given no feedback concerning group or personal creativity. Participants were then given a list of positive and negative personality traits and asked to rate their ingroup and their outgroup on how well each particular trait could be used to describe them. Overall, the results demonstrated that high-status group members were more likely to display the ingroup bias. This group tended to feel that their group possessed more positive qualities than the outgroup. A favorable group outcome led high-status group members to derogate the low status outgroup, while a favorable individual outcome led low-status group members to display an evaluative bias in favor of, and to identify with, the high-status outgroup.

Although there is ample evidence of ingroup favoritism, there are significant documented reversals (Jost, 2001; Linville & Jones, 1980; Marques, Yzerbyt, & Leyens, 1988). These reversals of ingroup favoritism raise the

question of when and why individuals might be biased against, rather than toward, members of their ingroup.

As previously stated, individuals make decisions about ingroup targets in a manner to maximize their own self-esteem. There is substantial evidence that decision makers alter their decision process to avoid costly errors associated with unfavorable outcomes (Kardes, 1994; Tetlock, 1985; Tetlock & Kim, 1987). These errors can be avoided by changing decision criteria or shifting to more cautious judgments (Trope & Liberman, 1996). If an ingroup member's potential failure can reflect badly on the group as a whole and thus the individual making the judgment, the individual may decide to avoid making an error by evaluating the target negatively and distance themselves from the questionable target. This may also occur when the group as a whole has the potential to reflect badly on the individual. It may be the case that, when a group has this potential, the individual may avoid an error by evaluating the group more negatively than one would under different circumstances. The following studies incorporated group status as well as personal standing within the group in order to investigate their roles in self-evaluation. It was expected that individuals in high status groups would display ingroup bias but that individuals in low status groups would not. This cognitive adjustment may be driven by the motivation to maintain or boost self-esteem and to maintain positive illusions in relation to the self.

*Positive Illusions and the Mechanisms for Keeping Them*

Taylor and Brown (1988) have argued that motivated reasoning and the optimistic illusions that it can create can be highly adaptive. These researchers

reviewed a series of positive illusions that many of us entertain. Our self-perceptions are overly flattering, we exaggerate the extent to which we can control events in our lives, and our expectations about the future are unrealistically rosy. Taylor and Brown propose that these unrealistically positive beliefs contribute to our general happiness and well-being; without them, the threats and difficulties of daily life could leave us inclined to misery and depression. Moreover, our glowing views of ourselves, our prospects and our exaggerated sense of control may do more than make us feel good. They may also increase our motivation and effort, and lead us to persist at difficult tasks even in the face of initial failure. As a result, these positive expectations may become self-fulfilling. If you believe in yourself, you will often do what it takes to make these beliefs come true (Armor & Taylor, 1998).

Positive illusions about others may be adaptive as well. In one study of intimate relationships, partners in 180 married and dating couples each rated themselves and their partner on a series of positive and negative attributes, and also rated their satisfaction with their relationship (Murray, Holmes, & Griffen, 1996). Overall, participants tended to idealize their relationship partners. They saw their partners even more positively than the partners saw themselves. Such idealization appeared to promote satisfaction in that individuals were happier in their relationship the more they idealized their partner. Individuals were also happier the more their partner idealized them. In such a study, it is difficult to determine which way the illusion operates; it is possible that people's self-views reflect reality, and their partners display the positive illusion. It is also possible

that people are overly modest in their self-ratings, and it is the partners who see them realistically. Nevertheless, this study demonstrates that the more positively you view your partner in a relationship, the more satisfied you are with your relationship. Ultimately, positive illusions may help us to overlook negative daily occurrences and view ourselves, the people around us, and our relationships more positively, leading us to be happier and more secure.

Despite these advantages, it is important to note that motivated illusions can sometimes create problems. This is especially true when motivated reasoning and positive illusions can cause one to overlook signs of danger or serious illness. Also, if unrealistically positive views of oneself can cause a person to pursue unattainable goals, a person may have to deal with failure that can be especially crushing if one is not prepared for it. Most research, however, has dealt with identifying positive illusions, rather than documenting the consequences (Armor & Taylor, 1998; Colvin, Block, & Funder, 1994; 1995; Ottingen, 1995).

Positive illusions may be especially beneficial when they concern global judgments that do not serve as the basis for immediate action. There may be little harm in holding an exaggerated view of one's likeability and kindness, or in believing that your marriage is more loving and stable than most people's. But motivated reasoning can be costly and dangerous when it is used to guide important behaviors and decisions, especially in situations where more objective reasoning could elicit more appropriate behavior. People may already have some idea about this. They seem most likely to engage in positive illusions in situations where their unrealistically positive expectations are unlikely to be put to the test

of reality because they concern global rather than specific outcomes, because they pertain to ambiguous or subjective outcomes, because they pertain to outcomes in the distant future, or for any other reason that makes immediate, clear-cut disconfirmations unlikely (Armor & Taylor, 1998).

Along these lines, most of us appear to believe that we are more athletic, intelligent, organized, ethical, logical, interesting, fair-minded, and healthy than the average person (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Heine & Lehman, 1997; Hodges, Bruininks, & Ivy, 2002; Klein & Buckingham, 2002; Kruger & Dunning, 1999; Larwood, 1978; Messick, Bloom, Boldizar, & Samuelson, 1985; Weinstein, 1980). These judgments are unlikely to be put to the test, thus they may be less potentially harmful to the individual. These ideas may actually be somewhat beneficial to the person responsible for them. In short, people exaggerate their skills, traits, and abilities in the service of important psychological needs such as bolstering and elevating self-esteem (Alicke, 1985; Brown, 1990; Campbell, 1986; Gilovich, 1991; Hodges, Bruininks, & Ivy, 2002; Klein & Buckingham, 2002; Kunda, 1990; Kunda & Sanitioso, 1989; Taylor & Brown, 1988).

*The Better than Average Effect.* People often feel that they are better than the average individual on many tasks, behaviors, and the like. The *better-than-average effect* or BTAE has been demonstrated on trait ratings (Alicke, 1985; Dunning, Meyerowitz, & Holzberg, 1989) and behavior ratings (Allison, Messick, & Goethals, 1989; Messick, Bloom, Boldizar, & Samuelson, 1985), as well as on depression related items (Tabachnik, Crocker, & Alloy, 1983), perceptions of risk

(Perloff & Fetzer, 1986), and on judgments about the likelihood of conforming to desirable social norms (Codol, 1975).

The BTAE was demonstrated to be a pervasive and reliable effect in Alicke et al.'s 1995 paper. Seven studies were conducted that demonstrated that the magnitude of the BTAE depends on the level of abstraction of the target the self is compared to. It was shown that individuals displayed the most bias when compared to a nonindividuated target, specifically, an average college student. Individuals were able to think about the average college student and then compare themselves to this ambiguous other. This comparison enabled the participants to feel comfortable in employing an oft-used tactic in order to bolster their positive self-view.

*The Better than Myself Effect*. Building on the BTAE, Alicke, Vredenburg, Hiatt, and Govorun (2001) demonstrated that the desire to see oneself as better than the average is so strong that individuals will rate themselves as such, even when the demonstrative average is based on their own, previous ratings of themselves. This effect was denoted as the *better-than-myself effect* (BTME). Three studies were performed in which participants provided judgments about themselves on trait dimensions. Then, weeks later, the participants were provided with behavior estimates that purportedly represented the average estimates of their peers and were asked to evaluate the average person's standing on the trait dimension. Even though the behavioral estimates on which they base their second rating of the average person is identical to the estimates they provided for themselves, participants still rated themselves as

being better than the average. This occurred even when participants were told that the average rating was the same as that which they provided for themselves.

*The Everybody is Better than Average Effect*. This BTAE can be extended to the group domain. In 1997, Klar and Giladi found an "everybody is better than their group's average" (EBTA) effect in favor of almost all specific ingroup members when compared to the average ingroup member. In this study, members of small groups were seated in a circle facing their entire group. Each participant was randomly assigned one other group member and asked to rate that person relative to the average group member. The manner of assignment ensured that only the rater knew who his or her randomly assigned peer was. In every group tested, a robust EBTA effect in favor of the randomly assigned peer was found. Even more interesting is the fact that when participants were asked to rate each of their group members, one by one, relative to the average group member, the EBTA effect was retained and did not weaken with successive ratings. It seems that not only do people feel that they are above average, but that all of their group members are also above their own group's average. Perhaps in an effort to maintain their own positive self-view, participants extend their positive self-view to include members of a group that they are a part of. Participants may feel that since they are good, the members of their group must be good too.

*The Genius Effect*. Another way in which individuals are able to maintain positive self-views is through what Alicke and his colleagues (1997) have termed "the Genius Effect." In this phenomenon, individuals who have been unambiguously outperformed in some domain tend to exaggerate the abilities of

those competing with them. If one is outperformed by someone who they view as exceptional on the task, one is better able to maintain a positive self-view, however irrational and unfounded as it may be.

To demonstrate this effect, participants were set up to be outperformed by a confederate on a perceptual intelligence task, which, in reality, consisted of Raven's progressive matrices. After being informed that they had been outperformed, the participant was asked to rate himself and the confederate on perceptual intelligence.

The participants' ratings were compared with ratings provided by an observer who had witnessed the task from behind a one-way mirror. It was found that participants rated their partners' perceptual intelligence significantly higher than the observers who had witnessed the interaction.

The effect has also been demonstrated for those whom we, ourselves, outperform. The fourth study included in Alicke et al.'s (1997) paper used similar methodology to the first three studies to demonstrate that the genius effect also exists when we are the outperformers. In this study, participants were set up to outperform the confederate on the perceptual intelligence task and then asked to rate themselves and the confederate on the domain. It was discovered that participants rated their partners whom they had outperformed as significantly better than the observers who had witnessed the task. This finding suggests that not only do we feel that those individuals whom outperform us are geniuses, but also that those who do not perform as well as we are geniuses. This enables us to

maintain our positive self-view by boosting our competitors in ways that will help us.

These self-enhancing effects provide good evidence that people attempt to maintain unrealistically positive self-images relative to others. There is a self-serving bias in which people evaluate their characteristics more favorably than those of others or in ways in which will enable them to evaluate themselves favorably. This idea falls along the same lines as Festinger's (1954) social comparison theory, which hypothesized that other people who are similar to an individual are especially useful to the individual in generating evaluations of his or her abilities and opinions (Suls, Martin, & Wheeler, 2002). The BTAE involves a comparison with the average college student on a trait or behavioral likelihood dimension while the Genius Effect involves a direct performance comparison with an unambiguous other. The motivation reflected in the comparisons is self-enhancement, which is achieved by viewing one's traits and prospects, or those of our ingroup members, more favorably than those of others or in evaluating our competitors in ways that are beneficial to our self-concept. The BTAE and the Genius Effect provide further support for the belief that social comparisons can help people maintain relatively high levels of self-esteem (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Alicke, LaSchiavo, Zerbst, & Zhang, 1997; Heine & Lehman, 1997; Hodges, Bruininks, & Ivy, 2002; Klein & Buckingham, 2002; Kruger & Dunning, 1999).

## Purpose of the Present Research

The present investigation examines the role of group status and personal status within the group when evaluating the group and the self. Based on previous research, it is believed that since group identity is an important part of personal identity, when one is presented with negative normative ingroup information, one will attempt to protect oneself from potential damage to the self-view by ignoring the group information. It is believed that individuals will use group information when such information is positive and thus helpful towards the goal of self-enhancement, but ignore group information when it is negative and potentially damaging to the self. Results from these studies would extend to many areas of social psychological research such as social comparison, group/personal identification, and self literature. It is the hope of this research to provide evidence for the notion that the need for positive self-perception may take priority over the need for ingroup belonging and identification when the ingroup can potentially blemish that view. Demonstrating that individuals will self-aggrandize even in the face of negative normative group information, while not aggrandizing the group, can provide this evidence.

## Study 1

An important goal of the proposed research is to determine how an individual's ingroup standing and the individual's own status within the group affects subsequent normative information use, or the lack thereof. What processes determine what information we use in self-evaluation, whether

personal, group, or a combination of the two and when do we incorporate these types of information. The following studies, attempt to answer these questions. In the first study, participants reported their GPA and then made several ratings of themselves compared to the average college student at another school that was reported to be either better or worse than their own school. Observers were then yoked to a participant and asked to rate the individual, based on the reported GPA, on the same domains. It was expected that participants rating themselves would overrate themselves compared to observers. It was also expected that participants would overestimate even when rating themselves compared to a student from a better school, thus possibly ignoring their own school status.

## Method

### *Participants*

Two hundred and forty-one undergraduate students from statistics and introductory psychology courses participated either on a voluntary basis or in return for credit toward partial fulfillment of a course requirement. The participants included 148 females and 93 males (mean age = 20.37).

### *Design and Procedure*

A 2 (Actor/Observer) X 2 (High/Low status comparison school) yoked design was used for this study. Participants were randomly split into actors and observers and then these groups were split into High and Low status comparison school groups. Some actors were asked to compare themselves and their ingroup to a school that was reported to be better than their own (high status school comparison), while the other half were asked to rate themselves and their ingroup

to a school reported to be worse than their own (low status school comparison). Observers were given an actor to rate based on his or her reported GPA and asked to compare them to the same school, whether high or low status, as the actor rated themselves. Each actor was matched with his/her own observer.

Two versions of a questionnaire (one for actors and one for observers) were used. The actors' questionnaire asked participants to give their current GPA at Ohio University. It asked the participants to rate themselves on several domains such as general intelligence and happiness with GPA using an 11-point rating scale weighted by "Lowest percentile" and "Highest percentile." Actors were then asked to state in what percentile they felt they would rank compared to the "average" Ohio University student. Actors were told that Ohio University ranks in the 70$^{th}$ percentile among other colleges and universities based on test scores obtained from undergraduates and the average GPA of the undergraduates. They were then asked to state how they feel they rank compared to other Ohio University students and how they rank among other college students in general.

After giving these ratings, actors were given another university with which to compare themselves. Some actors were asked to rate themselves compared to Brown University, which they were told ranks in the 97$^{th}$ percentile among other colleges and universities (a high status school). The remaining half of active students were to compare themselves to Georgia State University, which they were told ranks in the 31$^{st}$ percentile (a low status school). After being given the school and told its ranking, actors were asked to state how they felt they would

rank at this school, what they felt their GPA would be at this school, how intelligent they were compared to the average student from this school, how they would do in an academic competition against an average student from this school, and how they would perform if they were to attend this school.

Observers were given similar questionnaires, except that they were not asked to rate themselves on the given domains. They were, instead, given the subject identification number and stated GPA of one of the actors who had previously completed a questionnaire. They were then asked to compare this student on the same domains as the actor compared himself. The comparison school was matched to the observer so that the actor and the observer were rating the actor at the same school.

## Results

### *GPA groupings*

For analysis purposes, reported GPAs were grouped into their corresponding letter grades. Actors who reported that their GPA fell between 3.5 and 4.0 were designated as an "A" letter grade, those who were between 3.0 and 3.49 were designated a "B" letter grade, and those who were between 2.0 and 2.99 were designated a "C" letter grade. No participants reported a GPA below 2.0.

### *Overestimation of abilities*

No gender differences were noted within this study and thus will not be discussed further. Similarly, regardless of their GPA groupings, participants stated that academic achievement was equally important to them and thus this potential group difference will not the discussed in further studies.

A 2 (actor vs. observer) X 2 (High vs. Low status comparison school) X 3 ("A", "B", or "C" GPA) between-subjects Analysis of Variance (ANOVA) was used to investigate any differences in actor and observer ratings of expected actor rank at another university.

Results revealed a significant main effect for actor/observer differences, $F(1, 228) = 9.02$, $p=.003$. Actors overestimated their rank at another university ($M = 6.40$) compared to the observers who also rated them ($M = 5.58$), collapsed across GPA and High or Low status comparison school. Actors may have demonstrated a self-serving bias in which they overestimated their abilities.

A main effect was also observed for differences between rankings at High and Low status comparison schools, $F(1, 228) = 85.98$, $p = .000$. As would be anticipated, rankings at a High status school were lower ($M = 5.30$) than rankings at a Low status school ($M = 7.03$), collapsed across GPA and actor vs. observer status. Participants were overall able to recognize that they would probably rank higher at a low status school than a high status school.

Results also revealed a significant three-way interaction, $F(2, 228) = 13.98$, $p=.014$. For means and standard deviations, see Table 1. Upon closer inspection, independent t-tests revealed that the participants who maintained a grade point average equal to a "C" believed that they would do significantly better at another university than observers who were rating them. This effect was evident both for those participants rating themselves at a High status school ($t(43) = 9.011$, $p=.000$) and for those rating themselves at a Low status university ($t(48) = 6.702$, $p=.000$). Also, those participants with a GPA equal to an "A"

significantly underestimated what their rank would be at a Low status university ($M$ = 8.63) compared to the observers who rated them ($M$ = 9.33, $t(32) = -2.393$, $p$=.023). There were no significant differences between observers and actors obtained for those participants who had an "A" GPA rating themselves at a High status school or for either groups of "B" students.

## Discussion

This study found that overall, there was a discrepancy found between actor's ratings of themselves and observer's ratings. "C" students overestimated their own abilities and felt that they would do well at another university, despite their own GPA at Ohio University and the comparison school's status. They felt they would perform better at another university even when that university was reported to be much superior to their own. It may be realistic that "C" students may indeed do well at a less challenging school, however, it is somewhat unlikely that such a student would perform well at a university that is ranked far above the participant's own school. It seems as though participants may have disregarded the fact that their school, as well as their own abilities, are sub par and that, realistically, they would not be likely to perform well at this university.

According to Kruger and Dunning (1999), these participants may lack the skills necessary to recognize their incompetence, leading to their overestimation. These researchers noted that low-scoring individuals on numerous differing tasks would often judge their performance optimistically due to a lack of the metacognitive skills that would be necessary to accurately judge their performance and abilities.

It is also interesting to note that "A" students actually underestimated their rank when projecting their skills to a university reported to be of Low status. A similar effect has been noted in Kruger and Dunning's research (1999). In each of the four studies included in this paper, participants who were rated in the top quartile among participants somewhat underestimated their percentile ranks and raw scores on various tasks such as grammar tests and ability to recognize humor. The authors believe that this phenomenon occurs because of a *false consensus effect*. In other words, the participants believe that since they performed well on the tasks, their peers must have performed well also. This situation could be somewhat analogous to the current study's finding that "A" students underestimated their prospective rank at another university; they may feel that because they are good students, their peers must be good students and thus their rank will not be much higher than others'.

This study provided us with some interesting information, as well as some further questions. Limitations to the study will be discussed, followed by the questions that have emerged. Overall, the study provided supporting evidence for the notion that some people may disregard information about their ingroup when projecting performance to another situation. Specifically, "C" students exhibited this effect; they did not seem to take into account their own performance and their own school's relative standing when making their performance estimates.

Despite their average performance at a comparatively poor school, when these participants estimated their performance at a school much better than their

own, they grossly overrated themselves compared to their more realistic observers.

However, there are some limitations to using this study as direct evidence for this notion. The first of these limitations being that the study was not truly experimental. In order to obtain accurate evidence for subjects disregarding performance (GPA) information and ingroup status information, manipulations in these areas should take place. For instance, in the previous study, participants were not given any feedback about their own performance or standing on GPA. They were merely asked to report their GPA and then rate themselves based on this self-report information. Participants may have very different ideas about what constitutes a "good" or a "bad" GPA, thus they should have direct feedback about their own "performance." To remedy this in the second study, participants were given percentile ranks of their GPA as a way of giving them direct performance feedback. Using this, they were able to discern the relative quality of their academic performance.

Also, in the first study, the information that participants were given regarding their ingroup was not manipulated. All participants were told that their group was in the $70^{th}$ percentile among other colleges and universities. Since we are ultimately interested in whether participants will disregard or utilize negative ingroup information, this variable should be manipulated. In Study 2, participants were told that their home university is either a relatively good school or a relatively poor school. If participants still overestimated their abilities after learning that their home school is a relatively poor university (when it is

somewhat illogical), this would better demonstrate that negative ingroup information was being overlooked.

Another limitation is that it may be possible to obtain the same results if participants are told nothing about their ingroup – that is, participants may not have actually taken in the normative information about their university. In order to know if this is the case, a manipulation check was included in the follow-up. Specifically, participants were asked to report Ohio University's reported rank among other universities. If participants were able to accurately report the rank, it is likely that the participants did, indeed, take in the ingroup information. Some questions that have been raised by this study and its limitations are discussed below. First of all, when in the face of an experimental study where students are given actual performance feedback (GPA percentiles), will "C" students again overestimate their prospective standing at other universities?

Based on previous research (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Heine & Lehman, 1997; Kruger & Dunning, 1999; Larwood, 1978; Messick, Bloom, Boldizar, & Samuelson, 1985; Weinstein, 1980), it is expected that "C" students will exaggerate their abilities, perhaps from a desire to retain a positive self-view or perhaps from a lack of sufficient skill to judge their abilities.

Secondly, will a student reject his ingroup in the face of information that states that his school is a relatively poor university and continue to report that he will perform well at another university, or will he face the facts and accept the negative standing of his ingroup by adjusting his self-ratings to reflect low

ingroup status? It is expected "C" students, specifically, will disregard the low ingroup standing, leading to exaggerated self-ratings.

How will the participants' own standing within the ingroup and the group's status interact with one another in the face of self-evaluation? It is expected that participants will use information about their group when it has the potential to help them (when the ingroup is a good school and GPA is low), but disregard it when it can be of no use or can actually serve to harm the individual (when the ingroup is a poor school and GPA is low).

The second study attempts to answer these questions. It builds off of the first study and past research in an attempt to demonstrate that, in the face of negative and potentially damaging ingroup information, subjects may be motivated to disregard this information and embellish their abilities when projecting them to other universities, especially when that university is better than one's own. The study also attempts to demonstrate that the opposite reaction occurs in the face of positive and potentially bolstering ingroup information; people will use their ingroup identity and exaggerate their own projected rank at other universities.

## Study 2

For the second study, participants were again split into actors and observers and then asked to make several judgment ratings within a questionnaire. Actor participants were asked to provide their current GPA at Ohio University and then they were given feedback about the percentile their GPA fell into compared to other students at their school (performance feedback).

For this study, ingroup information was manipulated. This was described as a limitation to Study 1. In order to determine if ingroup status is utilized or disregarded when making self-judgments, it is necessary to manipulate this factor. Also, rather than using a percentile system (which may be confusing for participants to understand when relating it to groups such as universities), participants were given specific rankings of their university and the comparison schools at which they were to rate themselves. Participants were told that their university was either a relatively good school, ranking 51st out of 200 other colleges and universities, or a relatively poor school, ranking 122nd out of 200 others.

Actors were asked to rate themselves on several domains compared to their ingroup as well as to a superior and an inferior outgroup. Participants were to project how they would perform at two other universities, an upward and a downward comparison. In contrast to the Study 1, all participants made upward and downward projections, rather than one or the other.

Observers were asked to make similar judgments and comparisons. However, they were basing their judgments, not on themselves, but on the actor's GPA and percentile rank. Actor and observer ratings were then compared.

## Method

### *Participants*

Three hundred and twenty undergraduate students from statistics and introductory psychology courses participated in this study either on a voluntary

basis or in return for credit toward partial fulfillment of a course requirement. The participants included 216 females and 104 males (mean age = 20.07).

*Design and Procedure*

A 2 (Actor/Observer) X 2 (Good/Bad ingroup school) yoked design was used for this study. Participants were randomly split into actors and observers and then these groups were split into Good and Bad ingroup ranks. Some actors were told that their ingroup university (Ohio University) is a relatively good school ranked 51$^{st}$ out of 200 other universities, while the other half were told that Ohio University is a relatively bad school ranked 122$^{nd}$ out of 200 other universities.

Observers were given an actor to rate based on his or her reported GPA and the given rank of Ohio University, whether 51$^{st}$ or 122$^{nd}$. Each actor was matched with their own observer. Actors and observers rated their respective targets (either themselves or an actor) at a university that was reported to be in the top 10 of the 200 universities ranked (an upward comparison) and at a university reported to be in the bottom 25 of the 200 ranked universities (a downward comparison). Targets were rated on expected rank among other students at the universities, expected performance at the other universities, expected GPA, and general intelligence compared to students at the other universities.

Two versions of a questionnaire (one for actors and one for observers) were used. The actors' questionnaire asked participants to report their current GPA at Ohio University. The actors were then asked to find their GPA within a scale of percentile ranks of GPAs at Ohio University and report what percentile their GPA fell into. For example, a participant who reported their GPA was a

3.12 was told that his GPA was in the 70-74$^{th}$ percentile among other students at Ohio University. This was done in order to give the participant some feedback on the relative quality of their GPA. Participants were then asked to rate themselves on several domains such as general intelligence and how they would rank compared to the average college student using a 21-point rating scale weighted by "Lowest percentile" and "Highest percentile."

After giving such ratings, actors rated themselves at the comparison universities. The order with which these schools were presented to the participant for ranking was counterbalanced, thus, some participants rated themselves at a better school first and some rated themselves at a worse school first. Actors were asked to state how they felt they would rank at each school, what they felt their GPA would be at this school, how intelligent they were compared to the average student from this school, and how they would perform if they were to attend this school compared to their performance at Ohio University. Participants were given manipulation check questions to ensure they understood the ranking system and that the participants noted the Good/Bad ingroup manipulation.

Observers were given similar questionnaires, in which they were given the subject identification number and stated GPA of one of the actors who had previously completed a questionnaire. They were also given the same information regarding the percentile of the actor's GPA and the rank of Ohio University. They were then asked to rate this student on the same domains as the actor rated himself. The Good/Bad ingroup school was matched to the observer

so that the actor and the observer were rating the actor on the same information. The observers also rated the top 10 and bottom 25 schools in the same order as the actors.

## Results

### *GPA groupings*

For analysis purposes, reported GPAs were grouped into their corresponding letter grades. Actors who reported that their GPA fell between 3.5 and 4.0 were designated as an "A" letter grade, those who were between 3.0 and 3.49 were designated a "B" letter grade, and those who were between 2.0 and 2.99 were designated a "C" letter grade. No participants reported a GPA below 2.0.

### *Upward projection*

A 3(grade point average) X 2 (good/bad home school) X 2 (actor/observer) between-subjects factorial ANOVA was calculated comparing the actors and observers expected rank (the main DV) of the actor at a top 10 university. A significant main effect for grade point average was found ($F(2,306) = 12.73$, $p = .000$). The expected rank of students who had a grade point average equal to an "A" was significantly higher ($M = 12.37$) than students who had either GPA's equal to "B" ($M = 10.93$) or "C" ($M = 9.40$). Participants were able to accurately assess overall that "A" students would rank the highest and "C" students would rank the lowest.

A significant main effect for good/bad home university was found ($F(1,306) = 5.63$, $p = .018$). Participants who learned that their university was a relatively good school ranked themselves higher ($M = 11.42$) than students who

learned that their university was a bad school (*M* =10.38). Participants correctly reported overall that if their home school was a good school, they would likely perform better than students from a poor home university.

A significant actor/observer main effect was also found ($F(1,306) = 4.47$, $p = .035$). Actors rated themselves significantly higher overall ($M = 11.37$) than the observers rated them ($M = 10.43$). This finding, as in the first study, demonstrates a possible self-serving bias in which actors felt that they would perform much better than observers felt they would perform.

The interaction of good/bad home university and GPA was significant ($F(2,306)=3.18$, $p = .04$). Post-tests revealed that participants who have a GPA of "A" were rated higher when their university was reported to be a good school ($M = 13.71$) than when their university was reported to be a bad school ($M = 11.03$; $t(76) = 3.170$, $p = .002$). However, when a participant's GPA equaled a "B" or a "C" average, participants did not differ between in their ratings when their school was a good school ($M = 11.27$ for "B" students; $M = 9.29$ for "C" students) and when the school was a bad school ($M = 10.59$ for "B" students; $M = 9.52$ for "C" students).

A significant interaction was found for GPA and actor/observer ($F(2,306)=23.21$, $p = .000$). Independent *t* tests revealed that there were no significant differences between the ratings of actors and observers for participants with GPA's equal to either "A" ($M = 11.57$ for actors; $M = 13.17$ for observers) or "B" ($M = 10.48$ for actors; $M = 11.38$ for observers). Instead, the differences lie

within the “C” group. The actors in this group rated themselves much higher ($M$ = 12.05) than the observers rated them ($M$ =6.76; $t$(86) = 5.937, $p$ = .000).

Finally, a significant three-way interaction was found for good/bad home school, actor/observer, and GPA ($F$(2,306) = 5.09, $p$ = .007). See Table 2 for means. Further investigation by independent $t$ tests comparing actor and observer differences revealed that students who reported a GPA equal to a “C” overestimated their abilities at the top 10 university both when their own school was reported to be a good school ($t$ (*48*) = 2.53, $p$ = .015) and when it was reported to be a bad school ($t$ (*36*) = 6.96, $p$ = .000). There were no significant differences found between actors and observers for either the “A” students or the “B” students.

Actor and observer differences for the other 2 dependent variables were also calculated. A significant main effect for actor/observer differences was found for the dependent variable of actor intelligence compared to students at the target school ($F$(1,306) = 14.99, $p$ = .000). Actors overestimated their intelligence compared to students at the top 10 university ($M$ = 11.73) when their estimates were compared to the observers who rated them ($M$ = 10.11). This actor and observer difference once again demonstrated a potential self-serving bias in which actors overall believe that they are better than other students, more so than is necessarily warranted.

A significant GPA X actor/observer interaction was found for intelligence ($F$(2,306) = 12.72, $p$ = .000). Independent $t$ tests revealed that “C” students rated themselves higher on the intelligence dimension ($M$ = 12.43) than the observers

who rated them ($M$ =7.85; $t(86) = 6.429$, $p = .000$). No other significant differences for the groups were observed.

When examining the third dependent variable of expected actor performance compared to students at the target school, a significant main effect was found for actor/observer differences ($F(1,308) = 17.42$, $p = .000$). Actors again said that they would perform significantly better ($M = 11.36$) than the observers who rated them ($M = 9.64$).

A significant GPA X actor/observer interaction was observed ($F(2,308) = 19.03$, $p = .000$). Upon further inspection, it was revealed that "C" students rated their expected performance significantly higher ($M = 13.59$) than observers ($M = 8.17$; $t(86) = 7.108$, $p = .000$). No differences were present for the other groups.

*Downward projection*

A second 3(grade point average) X 2 (good/bad home school) X 2 (actor/observer) between-subjects factorial ANOVA was calculated comparing the actors and observers expected rank of the actor at a bottom 25 university. A significant main effect for grade point average was found ($F(2,304) = 6.46$, $p = .002$). The expected rank of students who had a grade point average equal to an "A" was significantly higher ($M = 16.85$) than students who had either GPA's equal to "B" ($M = 15.45$) or "C" ($M = 14.56$). As in the upward projection, participants were able to accurately judge that "A" students would rank highest of the groups and that "C" students would rank the lowest.

A significant main effect for good/bad home university was found ($F(1,304) = 8.93$, $p = .003$). Participants who learned that their university was a

relatively good school ranked themselves higher ($M$ =16.33) than students who learned that their university was a bad school ($M$ =14.90).

The main effect for actor/observer was not significant ($F(1,304) = .921$, $p > .05$). This demonstrates that overall, actors and observers did not differ in their rankings of the actor at a bottom 25 school. However, a three-way interaction demonstrates that there are some differences between actor and observer ranks for some of the groups when grade point average and the student's home school status are taken into account.

A significant three-way interaction was found for good/bad home school, actor/observer, and GPA ($F(2,304) = 7.04$, $p = .001$). See Table 3 for means. Independent $t$ tests comparing actor and observer differences revealed that students who reported a GPA equal to a "C" underestimated their abilities at the bottom 25 university only when their own school was reported to be a bad school ($t$ (*36*) = -2.66, $p = .011$). "A" students also underestimated their rank compared to observers when their home school was reported to be a good school ($t$ (42) = -3.03, $p = .004$). There were no significant differences found between actors and observers for either the "A" students when their school was reported to be a bad school or for "C" students when their school was reported to be good. Also, no significant differences were found for either group of the "B" students.

When examining the dependent variable of level of intelligence compared to students at the bottom 25 school, a main effect of actor/observer rating was found ($F(1,304) = 8.23$, $p = .004$). Actors overall underestimated their

intelligence (*M* =13.77) when compared to the observers who rated them (*M* =15.09).

A significant interaction was found between GPA and actor/observer ($F(2,304) = 3.58$, $p = .029$). *T* tests revealed that actors who had a GPA equal to an "A" underestimated their intelligence (*M* =14.41) compared to the observers (*M* = 17.23; $t(74) = -4.33$, $p = .000$) rating them. No other significant differences between groups were observed for this interaction.

For the third dependent variable of performance compared to students at the bottom 25 school, no significant main effects or interactions were observed.

## Discussion

This investigation began with the hypothesis that participants who learned that their university was a good school would use this information to aggrandize their ratings of themselves at other universities when compared to the observers who rated them. While a significant main effect was present for good/bad school, the interaction between actor or observer ratings and good/bad school was not significant regardless of the projected school quality (either a top 10 university or a bottom 25 university). Thus, actors and observers seem to have rated the actors similarly based on the good/bad school manipulation.

The three-way interaction between good/bad school, actor/observer, and GPA of actor was significant. Upon closer inspection it becomes evident that the "C" students account for the majority of the differences between groups. With the exception of "A" students being rated at a bottom 25 university when OU was considered to be a good school (when actors actually underestimate themselves),

all significant differences are contained within the actor and observer ratings of the "C" students. It seems as though the "C" student actors tend to use self-aggrandizing measures, particularly when rating themselves at a top 10 university (when it is most illogical to do so).

These findings follow closely with Kruger and Dunning's (1999) assertion that those who are unskilled in a domain are often unaware of it and may overestimate their abilities in the domain. It is believed that unskilled persons lack the metacognitive skills to accurately evaluate their abilities and thus may think better of themselves than is warranted. The authors demonstrated in four studies that participants scoring in the lower quartile in performance domains of humor, grammar, and logic largely overestimated their percentile ranking. By improving their metacognitive skills in the domains, their ability to recognize incompetence vastly increased.

Krueger and Mueller (2002), have criticized this interpretation. They have offered an alternate interpretation of the findings. They posit that the errors are not a result of a lack of metacognitive skills, but a simple regression and better-than-average effect. But the results of Study 2 of the present paper do not support this interpretation. The presence of differences between actors and observers seem to put this explanation to rest. Because the observers provide possibly a more realistic and detached judgment of the actors' abilities, regression cannot be the explanation for the findings.

In their research, Kruger and Dunning have also noted the tendency for high achieving individuals to underestimate their skill levels because of an

assumption that everyone else must be skilled also. This effect was witnessed to a small extent in the current study. "A" students significantly underestimated their skills relative to observers when rating themselves at a bottom 25 school and OU was reported to be a good school, and also to a marginal degree when rating themselves at a top 10 school and OU was reported to be a bad school. However, Kruger and Dunning's work focuses on cases in which participants are clearly unskilled at the task. In the above study, "C" students showed effects just like the "unskilled". Statistically speaking however, "C" students are considered average among their peers, not necessarily unskilled academically. There may be other reasons why this group is demonstrating such self-aggrandizing effects.

Also, Kruger and Dunning's research focuses on short-lived performance domains such as tests of skills in deciphering humorous jokes. However, GPAs are long-term performance criteria; a domain that students have dealt with their entire academic career. There may be something fundamentally different about the ways in which people rationalize their "failures" in long-term versus short-term performance domains.

*Possible Attributional Explanations*

Much has been written much about the notion of an entity versus an incremental theory (e.g., Dweck, Chiu, & Hong, 1995; Gibb, Zhu, Alloy, & Abramson, 2002; Hong, Chiu, Dweck, Lin, & Wan, 1999). In this literature, it is believed that individuals may differ in their general theory towards their personal attributes, including their intellectual abilities. Some individuals may endorse an entity theory in which they feel that a highly valued personal attribute such as

intelligence or morality, is a fixed, nonmalleable trait-like entity. Individuals who subscribe to this theory believe that although people can learn new things, their underlying intelligence remains the same. Other individuals may believe that the attribute is a malleable quality that can be changed and developed. These individuals conceive of intelligence as cultivatable (i.e., individuals may become more intelligent through their efforts). Given the finding in this study that "C" students felt they would perform better at a better school but worse at a worse school (compared to observers) it is possible that these students may be more likely to endorse an incremental theory, feeling that their intelligence is malleable and perhaps would be amplified in a more difficult environment but would be quashed in a poorer environment.

It is also possible that "C" students are more likely to make external attributions for their academic status, enabling them to blame outside factors, such as the difficulty of their courses or the quality of the school they attend, for their mediocre academic performance. If this were the case, it would be logical that they would feel that a good school would cultivate their intelligence, leading to a better performance, while a bad school would weaken their performance. Over time, people may learn ways in which to excuse their shortcomings, enabling them to hold an exaggerated self-view. In the present case, those who are "C" students may learn to make external attributions for their lack of academic success rather than take personal blame for it. If this is the case, a never-ending cycle begins in which people blame their lack of success on outside sources, never realizing that they themselves have the power to change their track.

If no change occurs, success will not occur, leading to more external attributions for the additional failures. Whether or not these students tend to be incremental theorists, or tend to make external attributions for negative outcomes, should be investigated as a possible reason why these students overestimated their skill when projecting their performance to a top 10 university but then underestimated their skill when projecting to a bottom 25 university.

## Study 3

The third study attempted to demonstrate whether or not attributional style can account for the findings of the previous two studies. Specifically, do students who have lower GPAs tend to make external attributions for their lack of academic success and do they tend to endorse a specific cognitive theory, namely an incremental theory where they feel that their intelligence is malleable? The findings of Study 2 would suggest that participants may have been able to exaggerate their abilities and project that they would perform much better at a top 10 university because of a tendency to attribute their lack of success to outside factors such as the quality of their school. These participants may have felt that they are only "C" students because their university is a poor excuse for a college, whereas if they were to attend a much better school, they themselves would be much better students. Also, "C" students felt they would do worse at a worse school when Ohio University was said to be a bad school. It could be interpreted that "C" students are assimilating to whatever target is being rated. Perhaps these students blame their GPA on their university (an external attribution).

Attributional measures will be obtained in this study in order to answer this question.

The following study hopes to replicate the findings of the previous two studies in order to demonstrate the "unskilled and unaware of it" phenomenon. If the results do indeed replicate, this may provide even more evidence for this effect while continuing to disprove the regression explanation for the trend. If no attributional style differences are found for the "C" students, this may indicate that the effect is simply a lack of metacognitive skills necessary to accurately assess one's abilities. Attributional measures were added to the third study in order to determine if attributional style can serve as an explanation for the previous findings.

## Method

### *Participants*

Two hundred eighty-four undergraduate students from statistics and introductory psychology courses participated in this study either on a voluntary basis or in return for credit toward partial fulfillment of a course requirement.

### *Design and Procedure*

A 2 (Actor/Observer) X 2 (Good/Bad home school) yoked design was again used for this study. Participants were randomly split into actors and observers. The actors were told that their ingroup university (Ohio University) was a relatively good school ranked 51$^{st}$ out of 200 other universities or a relatively bad school ranked 122nd. Observers were given an actor to rate based on his or her reported GPA and the given rank of Ohio University. Each actor

was matched with his own observer. Actors and observers rated their respective targets (either themselves or an actor) at a university that was reported to be in the top 10 of the 200 universities ranked (better than Ohio University) and at a university reported to be in the bottom 25 of the 200 ranked universities (worse than Ohio University). Targets were rated on expected rank among other students at the universities, expected performance at the other universities, expected GPA, and general intelligence compared to students at the other universities.

Two versions of a questionnaire (one for actors and one for observers) were used in this study to gather data. The actors' questionnaire asked participants to report their current GPA at Ohio University. The actors were then given a scale that gave percentiles of GPAs at Ohio University in order to give them some type of feedback about the relative quality of their own GPA. Participants were then asked to rate themselves on several domains such as general intelligence and how the participant would rank compared to the average college student using a 21-point rating scale weighted by "Lowest percentile" and "Highest percentile."

After giving such ratings, actors were asked to rate themselves at a university in the top 10 of the 200 ranked universities and at a university in the bottom 25 of those ranked. The order with which these schools were presented to the participant for ranking was counterbalanced. Actors were asked to state how they felt they would rank at each school, what they felt their GPA would be at this school, how intelligent they were compared to the average student from this

school, and how he would perform if he were to attend this school compared to his performance at Ohio University.

Participants were also given manipulation check questions in order to determine if they understood the ranking system.

Observers were given similar questionnaires, except that they were not asked to rate themselves on the given domains. They were, instead, given the subject identification number and stated GPA of one of the actors who had previously completed a questionnaire. They were also given the same information regarding the percentile of the actor's GPA and the rank of Ohio University. They were then asked to compare this student on the same domains as the actor compared himself. The observers rated the top 10 and bottom 25 schools in the same order as the actors.

All participants completed the following attributional measures in order to determine those participants who were entity or incremental theorists and to identify those who tended to make internal versus external attributions for their academic standing. These measures were included on the last page of each participant's questionnaire.

*Measures*

To answer the questions concerning the "C" students' attributional tendencies, participants were asked to complete the Implicit Theory of Intelligence measure (Dweck & Henderson, 1988). The measure consisted of three questions, (a) "You have a certain amount of intelligence and you really can't do much to change it."; (b) "Your intelligence is something about you that

you can't change very much."; and (c) "You can learn new things, but you can't really change your basic intelligence." Respondents indicated their agreement with these statements on a 6-point scale from 1 *(strongly agree)* to 6 *(strongly disagree).* To score this questionnaire, scores on the three items were averaged to form an overall implicit theory score (ranging from 1 to 6), with a higher score indicating a stronger incremental theory.

In order to assess participants' entity versus incremental theory of the person as a whole, participants completed the Implicit Person Theory measure (Dweck, Chiu, and Hong, 1995). This measure had the same format and scoring criteria as the Implicit Theory of Intelligence measure outlined above. Questions included in this measure were, (a) "The kind of person someone is something very basic about them and it can't be changed very much."; (b) "People can do things differently, but the important parts of who they are can't really be changed."; and (c) "Everyone is a certain kind of person and there is not much that can be done to really change that."

A Confidence in Intelligence scale was also completed (Dweck & Henderson, 1988). For each of these three items, a statement depicting high confidence in one's own intelligence was pitted against a statement depicting low confidence. The items were, (a) "I usually think I'm intelligent." versus "I wonder if I'm intelligent."; (b) "When I get new material, I'm usually sure I will be able to learn it." versus "When I get new material, I often think I may not be able to learn it."; and (c) "I feel pretty confident about my intellectual ability." versus "I'm not very confident about my intellectual ability." Respondents were

asked to choose the alternative that was truer for them and then to indicate how true it was for them on a scale ranging from 1 *(very true)* to 3 *(sort of true).* Responses to this measure were recorded as a 6-point scale, ranging from low to high confidence.

Participants were also asked to state how much of their current GPA they attributed to several different domains. They assigned percentages to each factor to indicate how much of their current GPA was attributed to the factor. Internal domains included personal effort, study habits, and academic abilities. External domains included quality of school attended, quality of teachers, difficulty of courses, other students, and living environment. Percentage totals for internal and external attributions made were obtained.

## Results

Data from eighteen participants were removed from analysis because of missing and incomplete data leaving a total of 266 participants.

### *GPA groupings*

As in the previous studies, reported GPAs were grouped into their corresponding letter grades. Actors who reported that their GPA fell between 3.5 and 4.0 were designated as an “A” letter grade, those who were between 3.0 and 3.49 were designated a “B” letter grade, and those who were between 2.0 and 2.99 were designated a “C” letter grade. No participants reported a GPA below 2.0.

### *Upward projection*

The first prediction of this study was that “C” students overall would overestimate their potential standing at a better university compared to observers.

This finding would replicate results from the previous studies. To find out if this was the case, a 3(grade point average) X 2 (good/bad home school) X 2 (actor/observer) between-subjects factorial ANOVA was calculated comparing the actors and observers expected rank (the main DV) of the actor at a top 10 university. As Table 4 shows, "C" students grossly overestimated their ability relative to their peers who rated them.

A significant main effect for grade point average was found ($F$ (2,254) = 26.77, $p$ = .000). The expected rank of students who had a grade point average equal to an "A" was significantly higher ($M$ = 12.42) than students who had either GPA's equal to "B" ($M$ = 10.15) or "C" ($M$ = 7.70). Given this finding, we can see that the students were able to estimate the correct pecking order in their potential ranking at the top 10 university (i.e., "A" students ranked themselves highest, then "B" students, then "C" students ranked themselves lowest among the three grade categories).

A significant main effect for good/bad home university was found ($F$ (1,254) = 5.32, $p$ = .022). Participants who learned that their university was a relatively good school ranked themselves higher ($M$ = 10.42) than students who learned that their university was a bad school ($M$ =8.75). Again, we can see that students were able to correctly estimate their potential ranking based on the status of their home school.

A significant actor/observer main effect was also found ($F$ (1,254) = 4.38, $p$ = .037). Actors rated themselves significantly higher ($M$ = 10.20) than the observers rated them ($M$ =9.01). In this case, actors were not able to properly

rank themselves. In their penchant for overestimating their abilities compared to the observers rating them, these students seem to have demonstrated a self-serving bias.

When these actor and observer differences were further investigated, a significant GPA X actor vs. observer ratings interaction was found, $F(2,254)=6.48$, $p = .002$. Independent *t*- tests revealed that there were no significant differences between the ratings of actors and observers for participants with GPA's equal to either "A" ($M$ =12.00 for actors; $M$ = 12.91 for observers) or "B" ($M$ = 10.20 for actors; $M$ = 10.10 for observers). Instead, the differences lie within the "C" group. The actors in this group rated themselves much higher ($M$ = 9.25) than the observers rated them, $M$ = 6.29; $t(107) = 5.609$, $p = .000$. The three-way interaction for this dependant variable was not significant.

Actor and observer differences for the dependent variable of expected GPA at the top 10 university were also calculated. A 3(grade point average) X 2 (good/bad home school) X 2 (actor/observer) between-subjects factorial ANOVA was calculated comparing the actors' and observers' expected GPA of the actor at a top 10 university. Patterns for this variable parallel patterns noted for the dependant variable of expected rank. Again, actors differed in their judgments from the observers rating them and the "C" students accounted for the great majority these differences. See Table 6.

A significant main effect for GPA was found ($F(2,252) = 98.00$, $p = .000$). The expected rank of students who had a grade point average equal to an "A" was significantly higher ($M$ = 3.25) than students who had either GPA's

equal to "B" ($M$ = 2.82) or "C" ($M$ = 2.28). Participants were again able to correctly estimate the hierarchy so that "A" students estimated their GPA would be the highest and "C" students estimates were lowest.

A significant actor/observer main effect was also obtained ($F$ (1,252) = 6.37, $p$ = .012). Actors rated themselves significantly higher ($M$ = 2.75) than the observers rated them ($M$ =2.62). For a second time, actors were not able to accurately estimate their standing whereas their observer peers may have been better able to do so.

The main effect for good/bad home university was not significant ($F$ (1,252) = 1.30, $p$ > .10). Participants were not able to accurately assess that students hailing from a good home university would probably have a higher GPA at a top 10 university than students coming from a university of low status.

A significant 3-way interaction was found for GPA, high vs. low home school status, and actor vs. observer ratings, $F$ (2, 252) = 2.935, $p$ = .05. "C" students from a good home school who were rating themselves provided higher GPA estimates compared to observers. Also, "C" student actors who were told that OU was a low status university overestimated their GPA at a top 10 university compared to their observers. "B" student actors who learned that their university was a bad school also overestimated their GPA when compared to observers. See Table 6 for means and standard deviations.

*Downward projection*

A 3(grade point average) X 2 (good/bad home school) X 2 (actor/observer) between-subjects factorial ANOVA was calculated comparing

the actors and observers expected rank (the main DV) of the actor at a bottom 25 university. See Table 5 for means and standard deviations.

A significant main effect for grade point average was found ($F$ (2,254) = 12.35, $p$ = .000). The expected rank of students who had a grade point average equal to an "A" was significantly higher ($M$ = 16.42) than students who had a GPA equal to "C", $M$ = 13.81. "B" students also reported a higher expected rank ($M$ = 15.26) than students with a GPA equal to a "C", $p$'s < .05. There was not a significant difference between "A" students' expected rank and that of their "B" average peers, p = .12. As in the upward projection, participants were relatively able to accurately judge where they should rank based on their GPA. "A" students rated themselves highest and "C" students rated themselves lowest of the three GPA groups.

A marginally significant actor/observer main effect was also found ($F$ (1,254) = 3.10, $p$ = .07). In this case, actors rated themselves lower ($M$ = 14.49) than the observers rated them ($M$ =15.27). In contrast to the upward projection case, actors now somewhat underestimated their ranking compared to observers when ranking themselves at a university reported to be worse than their own school.

This finding was further qualified by a significant GPA X high vs. low home school status X actor vs. observer ratings interaction, $F$ (2, 254) = 4.96, $p$ = .008. This interaction demonstrated that while "C" student actors who learned that their school was a relatively good school overestimated their prospective rank at the top 10 university compared to observers, three other groups actually

underestimated themselves. "C" students who were told that their school was a relatively bad school significantly underestimated their rank compared to observers, as did "A" students who were told OU was a good school. Also, "A" students told their university was a bad school, moderately underestimated their rank compared to observers. See Table 5 for means and standard deviations.

A second 3(grade point average) X 2 (good/bad home school) X 2 (actor/observer) between-subjects factorial ANOVA was calculated comparing the actors and observers expected GPA of the actor at a bottom 25 university. Again, patterns for this variable closely mirrored patterns noted for the dependant variable of expected rank. See Table 7.

A significant main effect for GPA was found, $F(2,252) = 87.37$, $p = .000$. The expected GPA of students who had a grade point average equal to an "A" was significantly higher ($M = 3.61$) than students who had GPA's equal to "C" ($M = 2.89$) and "C" students felt their GPA would be significantly lower than "B" students ($M = 3.53$), *p's* = .000. "A" and "B" students did not differ in their expected GPA at the bottom 25 school.

A significant actor/observer main effect was also obtained ($F(1,252) = 13.08$, $p = .000$). Actors rated themselves significantly lower overall ($M = 3.20$) than the observers rated them ($M = 3.37$). Like with the expected rank variable, actors underestimated themselves when rating themselves at a university reported to be worse than their own.

The main effect for good/bad home university was not significant ($F(1,252) = 1.21$, $p > .10$).

A significant 3-way interaction was found for GPA, high vs. low home school status, and actor vs. observer ratings, $F$ (2, 252) = 5.60, $p$ = .004. "A" students again underestimated their abilities compared to observers, both when they were told their home school was a relatively good and a relatively bad school. Again, "C" students who were told their home university was a bad school underestimated their prospective status at the bottom 25 school. See Table 7 for means and standard deviations.

*Attributional Analyses*

*Implicit Theory of Intelligence.* The first measure to be analyzed was Dweck's Implicit Theory of Intelligence scale. This scale consists of three questions as previously described. The scale was scored according to Dweck's procedures. To score this questionnaire, scores on the three items were averaged to form an overall implicit theory score (ranging from 1 to 6), with a higher score indicating a stronger incremental theory. To ensure that only participants with clear theories were included, participants were classified as entity theorists if their overall implicit theory score is 3.0 or below and classified as incremental theories if their overall score is 4.0 or above. Using this criterion, about 15% of the participants were typically excluded, and the remaining 85% tend to be evenly distributed between the two implicit theory groups. However, in the current sample, about 30% of the participants fell in between 3.0 and 4.0 on the scale and therefore were excluded from the attributional analysis. Also, the remaining participants tended to be identified as incremental theorists ($n$ = 122) rather than entity theorists ($n$ = 69).

When performing analysis on the attributional measures, observer participants' own GPA's were used, rather than the actor's GPA whom they were rating. Each participant's own GPA was used when investigating any attributional differences. As before, the participants were separated into groups according to their corresponding letter grade. Using this coding system, 42 "A" students, 63 "B" students, and 86 "C" students were included.

An ANOVA was performed to probe for differences between the three GPA groups and their scores on the implicit theory of intelligence scale. Participants did differ based on their GPA, $F(2, 179) = 8.68$, $p = .000$. "C" students were significantly more incremental ($M = 4.11$, $sd = 1.01$) than their "A" student counterparts ($M = 3.45$, $sd = 1.06$, $p = .002$). "B" students were also marginally more incremental ($M = 3.88$, $sd = 1.04$) than "A" students, $p = .08$. "C" students were most likely to feel that their intelligence was changeable and "A" students were most likely to endorse an entity theory where they felt their intelligence was a fixed trait.

*Implicit Person Theory*. The second attributional scale to be analyzed was Dweck's Implicit Person Theory measure. This scale also consists of 3 questions as described before and was scored in the same manner as the Implicit Theory of Intelligence measure. For this scale, about 35% of the participants fell between 3.0 and 4.0 and were excluded from the analysis. Out of the remaining participants, 63 were classified as entity theorists and 111 were classified as incremental theorists. An ANOVA revealed no significant differences between the three GPA groups for this measure, $F(2, 168) = .420$, $p > .10$.

*Confidence in Intelligence.* The third attributional scale to be analyzed was Dweck and Henderson's (1988) Confidence in Intelligence scale. This scale pitted a statement depicting high confidence against a statement depicting low confidence in one's intelligence and asked the participant to choose which statement described them more. They were then to indicate how true the chosen statement was of them. An ANOVA revealed no significant differences between groups for this scale, $F(2, 245) = 1.53$, $p > .10$.

*Current GPA Attributions*. Participants were asked to speculate how much of the actor's current GPA could be attributed to several factors, both internal and external. They assigned percentages to each factor and these percentages were added to obtain an external and an internal attribution score for their current GPA. This score was analyzed for differences among the groups. An ANOVA was performed and a significant main effect was found for GPA, $F(2, 252) = 6.509$, $p = .002$. "C" students made significantly more internal attributions for the actor's current GPA ($M = 59.91\%$) when compared to "A"

students, $M$ = 52.16%, $p$ = .015. "C" students also made more internal attributions for the GPA than "B" students to a marginal degree, $M$ = 55.11%, $p$ = .07. "A" and "B" students did not differ in the amount of internal attributions made.

When investigating specific attributes endorsed by the students, it was also found that "C" students endorsed "personal effort" significantly more ($M$ = 32.38%) than "A" ($M$ = 24.64%) or "B" students ($M$ = 25.33%) in explaining their current GPA, $F(2, 261) = 7.18$, $p$ = .001. Thus, "C" students felt that their current GPA was the result of a larger percent of their own effort put forth relative to their peers.

In contrast, "A" students endorsed "academic ability" ($M$ = 13.23%) significantly more than their "C" student ($M$ = 9.83%) counterparts. "C" students also felt that their academic ability was significantly less to blame for their current GPA than the "B" students ($M$ = 12.94%), $F(2, 261) = 6.11$, $p$ = .003. "C" students were much less likely to blame their current GPA on their academic abilities. They instead felt that their academic standing was more the result of their personal effort.

*Other University Attributions.* Participants were asked to speculate how they would rank at another university (a top 10 university and then a bottom 25 university) and then were asked an open-ended question in which they were to elaborate on why they felt they would receive that particular ranking. Two independent judges who were blind to the purpose of the study rated participants' written responses. The responses were coded for internal or external attributions

among the speculated reasons for the participant's rank. Agreement between the judges on this coding was 91% and the experimenter settled disagreements.

When these attributions were analyzed for differences among the GPA groups, ANOVA demonstrated that "C" students tended to make more internal attributions ($M$ = 3.88) than "A" students ($M$ = 3.03) for their expected rank at the top 10 school ($F$ (2, 254) = 2.56, $p$ = .08) but no differences were noted between the groups for the bottom 25 school ($F$ (2, 252) = 1.17, $p$ >.10).

*Identification with home school*

As an additional measure, participants were asked to rate how much they felt connected to Ohio University. They were asked to give a rating once before learning of their home school's status as either a relatively good or a relatively bad school and once after learning this information. It was believed that participants who learned their school was a bad comparison school would change their identification level based on their school's reputed status and their own standing at the university. A change score was obtained for each participant based on how much their reported identification level changed after learning of their school's status. ANOVA revealed no significant difference between those who heard their school was a relatively good school and those who heard the school was relatively bad, $F$ (1, 254) = 2.25, $p$ >.10). However, it was found that "C" students felt significantly less identified with Ohio University overall ($M$ = 10.61) compared to their "A" ($M$ = 13.14) student peers, $F$ (2, 254) = 3.01, $p$ = .05.

## Discussion

In most cases, it was evident that participants did have some idea of their own status and their home school's effect on their potential standing at another university. This can be determined from the significant main effects found for GPA and for the differences noted between those who were told their university was a relatively good school versus a relatively bad school. Participants were usually able to accurately judge their standing compared to students with higher or lower GPA's. In other words, "A" students ranked themselves higher than "B" students who then ranked themselves higher than "C" students. Also, in many cases, participants who learned that OU was a good school ranked themselves higher than students who learned that OU was not such a good university compared to other schools.

However, it seems that participants who rated themselves were sometimes unable to see themselves as others did. Time and time again, actors exaggerated their abilities and reported that their GPA and rank at a top 10 university would be significantly better than the observers who were rating them. When rating themselves at a bottom 25 school, participants again had trouble accurately representing themselves, but this time, actors tended to underestimate their abilities and report their GPA and rank would be lower than observers believed.

This phenomenon is further complicated by the fact that the majority of the significant differences were encompassed by "A" and "C" students. As in the previous study, "C" students were especially unable to accurately see themselves as others did. These students often rated themselves much higher than observers,

particularly when rating themselves at a top 10 university, when it was most unreasonable to do so. Logically, "C" students should not have expected that their GPA would be very high at a school that was much better than their own. Observers seemed to take this into account, while the actors took little notice of this fact.

As in the second study, these findings follow closely with Kruger and Dunning's (1999) assertion that those who are unskilled in a domain are often unaware of it and may overestimate their abilities in the domain. It is believed that in this case, "C" students lacked the metacognitive abilities necessary to accurately assess their prospective standing at another university. They were unable to draw the conclusion that since they were not at the top of the game at their current university, they would be very unlikely to succeed in a more difficult environment.

Kruger and Dunning's research is further supported given the finding that "A" students repeatedly underestimated their GPA and rank at other universities. As noted before, high achieving individuals often have a tendency to underestimate their skill levels because of an assumption that all other students must be skilled also. This was witnessed in the second study and also in the current study's findings. "A" students significantly evaluated themselves lower than observers, particularly when rating themselves at a bottom 25 school.

*Attributional Explanations*

The one anomaly within both this and the last study is the finding that "C" students who learned that their home school was a relatively poor university

reported that their GPA and rank would be significantly lower at a bottom 25 school than observers rated them. This demonstrated a reversal of all other findings for "C" students. In an effort to explain this phenomenon after the second study, attributional measures were added to the current study. It was believed that "C" students may perhaps make more external attributions for their academic success, thus enabling them to feel that if they were to attend a better university, their performance would increase but if they were to attend a worse university, their performance would suffer as a result of some facet of the environment in which they were placed. It was also believed that "C" students may be more likely to be incremental theorists, trusting that their intelligence is relatively malleable rather than fixed and unchangeable.

This notion was supported in part by the findings of this study. "C" students did endorse incremental thinking more than their peers. They felt that their intelligence was a changeable entity and that either through personal effort or external factors they could increase or decrease their aptitude. However, instead of attributing their current GPA to external factors such as the quality of the school they attend or the difficulty of their courses, these students actually made more internal attributions such as their personal effort and their study habits. These findings suggest that "C" students felt that they would be able to increase or decrease their intelligence level and it is within their control to do so. Also, participants were asked to assign percentages to several factors to which they could attribute their current GPA. Contained within the attributional choices were both "personal effort" and "academic ability". These two choices were both

considered internal attributions when the percentages were added to obtain an internal and an external attribution total for the participants. However, previous research (Dweck, Chiu, & Hong, 1995) has found that entity theorists were more likely than incremental theorists to attribute failure (in this case, poor grades) to their intellectual ability, whereas incremental theorists were more likely to attribute them to a lack of effort (something changeable). In the current study, "C" students were likely to endorse an incremental theory and they also were more likely to attribute their GPA to their personal effort rather than their ability. Meanwhile, "A" students who were more likely to be entity theorists attributed their GPA to their abilities rather than their efforts. This seems to provide support for Dweck et al.'s previous research.

Additional research on attributional styles has found that incremental theorists tend to orient more toward learning goals than performance goals. These individuals have a goal of increasing their ability and doing better. That is, when an important personal attribute is seen as a potential that can be cultivated, there is less emphasis on showing it off and more emphasis on cultivating it through effort (Hong, Chiu, Dweck, Lin, & Wan, 1999). "C" students may have felt that they would put forth more effort at a better school and less effort at a worse school, explaining why they rated themselves significantly higher at good school and significantly worse at bad school compared to observers. On further investigation into this explanation, it was found that "C" students did endorse effort significantly more than "A" or "B" students in explaining their current GPA. Also, it was noted during the coding of the open-ended questions asking

participants to explain their rating choice at the two other universities that actors often responded that they would have a particular rating at the comparison school because “a person can achieve if they put forth effort” and they would “work harder.” (both responses made by “C” students). These types of assertions were made numerous times and were most often made by “C” students. Effort was a common theme among these student’s responses.

## General Discussion

Previous research has demonstrated that individuals often gain a portion of their self-concept from their group identities (Tajfel, 1978; Yee & Brown, 1992). Individuals also often demonstrate an ingroup bias in which they prefer their group to any other and feel that their group is better than others (Lindeman, 1997). However, there has been insufficient research investigating the effects of a negative ingroup on an individual’s self-assessment. This paper attempted to demonstrate the tendency for individuals to overlook their group identity when they were given direct information about the low status of their group. It was believed that individuals who were told their ingroup was of low status would not use this information in their own personal evaluation of themselves. Combining this notion with research in the area of self-serving biases, which says that people tend to feel they are more intelligent, more athletic, etc. than others, it was believed that when one learns that their ingroup has the potential to bring them down, they will not utilize their ingroup information in their evaluation of themselves, thus continuing to self-aggrandize (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995).

Participants in Study 1 were given the percentile rank of their home university and then asked to make either an upward or a downward comparison; they stated what their own personal rank would be at either a university ranked much higher or much lower than their own university. This study found that there was a bias observed for those rating themselves; they rated themselves much higher than did observers. The phenomenon was most prevalent among students who had a GPA equal to a "C", the lowest of students studied. These students elevated their ratings even when evaluating themselves at a university much better than their own. Study 2 attempted to replicate this exaggeration but it manipulated the status of the participants' own school and then asked them to make both upward and downward comparisons.

Study 2 found that, again, "C" students demonstrated a bias particularly when rating themselves a better university. Research in the area of self-serving biases has demonstrated that unskilled individuals are often unable to accurately assess their own, as well as others', abilities in a given domain, leading to a tendency to aggrandize their estimates of their own scores and ability level compared to outside observers (Kruger & Dunning, 1999). Results from the three studies presented here closely follow this notion. "C" students (unskilled academically) often overestimated themselves relative to observers, while "A" students often underestimated themselves. Both phenomena have been observed in Kruger et. al.'s research. However, an interesting result occurred. In one case when making a downward comparison, actors actually underestimated their rank compared to observers. It looked as though they may have been assimilating to

whichever environment they were rating themselves; when rating themselves at a better school, they felt they would do better, but when rating themselves to a worse school, they felt they would do worse. This reversal cannot be explained by Dunning and colleague's line of research. This finding was examined further in the third study.

Study 3 attempted to examine for assimilation effects due to attributional style. It was believed that "C" students may be more likely to endorse an incremental theory of intelligence and make more external attributions for their academic standing, leading them to blame their current standing on outside factors such as the quality of the school attended. This could explain why the second study found some assimilation effects for this group. This idea was partially supported by the results of Study 3. "C" students were more likely to be incremental theorists, believing that their intelligence is changeable and thus could get better or worse. However, rather than making more external attributions for their GPA, this group made more internal attributions. Further investigation found that "C" students placed more weight on effort than "A" students, who placed more weight on ability. This finding supports research by Hong, Chiu, Dweck, Lin, & Wan (1999) which says that incremental theorists ("C" students in this study) are more likely to be concerned with performance and effort while entity theorists ("A" students) are more concerned with showing off their current intelligence. It is possible that "C" students felt that their intelligence is changeable and they can do it themselves using their own effort. Thus at a better

university, they may be more motivated and work harder, while at a worse university, they may not work as much as they currently do.

*Limitations*

One limitation of the current research is that it cannot conclusively determine which of the theories, whether the "unskilled and unaware of it" theory or the attributional style theory, is a better explanation for the underlying cause of the observed effects. Some findings are better explained by the unskilled explanation, while others are better explained by the attributional style of the participants. For example, the repeated findings concerning "A" students' propensity for underestimating themselves cannot be fully explained by the attributional measures. These students were more likely to endorse an entity theory of intelligence, thus believing that their intelligence is a fixed entity and they placed more weight on ability than effort when explaining their current GPA. It is possible that "A" students felt that if they were to attend a low status school, they must be low in intelligence and therefore would perform poorly. In making this judgment, they could still feel that their intelligence is fixed but feel that since they would be attending a low status school, they themselves must not be intelligent. However, this cannot be determined from the current studies.

Also, the reversal for "C" students when rating themselves at a low status school (when they underestimated themselves) cannot be explained by the "unskilled and unaware of it" theory. This theory would say that when rating themselves at a low status school, participants should have still demonstrated a self-serving bias and overestimated their prospective rank. This study cannot

demonstrate which of the theories, if either, can best explain the findings of the three studies in this paper. In the future, this question should be further investigated to unearth the true underlying cause of the observed phenomena.

References

Abrams, D. & Hogg, M.A. (Eds.) (1990). *Social identity theory. Constructive and critical advances.* New York: Harvester Wheatsheaf.

Alicke, M.D. (1985). Global self-evaluation as determined by the desirability and controllability of trait adjectives. *Journal of Personality and Social Psychology,* 49, 1621-1630.

Alicke, M.D., Klotz, M.L., Breitenbecher, D.L., Yurak, T.J., & Vredenburg, D.S. (1995). Personal contact, individuation, and the better-than-average effect. *Journal of Personality and Social Psychology,* 68(5), 804-825.

Alicke, M.D., LaSchiavo, F.M., Zerbst, J., & Zhang, S.B. (1997). The person who outperforms me is a genius: Maintaining perceived competence in upward social comparison. *Journal of Personality and Social Psychology, 73* (4), 781-789.

Alicke, M.D., Vredenburg, D.S., Hiatt, M., & Govorun, O. (2001). The better than myself effect. *Motivation and Emotion, 25* (1), 7-22.

Allison, S.T., Messick, D.M., & Goethals, G.R. (1989). On being better but not smarter than others: The Muhammad Ali effect. *Social Cognition,* 7, 275-296.

Armor, D.A. & Taylor, S.E. (1998). Situated optimism: Specific outcome expectancies and self-regulation. In M. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 30, pp. 309-379). San Diego: Academic Press.

Baumeister, R. (Ed.) (1993). *Self-esteem. The puzzle of low self-regard.* New York: Plenum Press.

Bettencourt, B.A., Door, N., Charlton, K., & Hume, D.L. (2001). Status differences and in-group bias: A meta-analysis examination of the effects of status stability, status legitimacy, and group permeability. *Psychological Bulletin, 127,* 520-542.

Billig, M. & Tajfel, H. (1973). Social categorization and similarity in intergroup behavior. *European Journal of Social Psychology, 3,* 27-52.

Brewer, M.B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin, 86,* 307-324.

Brewer, M.B. (1996). In-group favoritism: The subtle side of intergroup discrimination. In D.M. Messick & A.E. Tenbrunsel (Eds.), *Codes of Conduct* (pp. 160-170). New York: Sage.

Brewer, M.B., Brown, R.J. (1998). Intergroup relations. In D.T. Gilbert & S.T. Fiske (Eds.), *The handbook of social psychology* (Vol. 2, (4th ed., pp. 554-594). Boston: McGraw-Hill.

Brown, J.D. (1990). Evaluating one's abilities: Shortcuts and stumbling blocks on the road to self-knowledge. *Journal of Experimental Social Psychology, 26,* 149-167.

Campbell, J.D. (1986). Similarity and uniqueness: The effects of attribute type, relevance, and individual differences in self-esteem and depression. *Journal of Personality and Social Psychology, 50,* 281-294.

Castano, E., Yzerbry, V., Paladino, M.P., & Sacchi, S. (2002). I belong, therefore, I exist: Ingroup identification, ingroup entitativity, and ingroup bias. *Personality and Social Psychology Bulletin, 28*(2), 135-143.

Cialdini, R.B., Borden, R.J., Thorne, A., Walker, M.R., Freeman, S., & Sloan, L.R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology, 34,* 366-375.

Codol, J.P. (1975). On the so-called "superior conformity of the self" behavior: Twenty experimental investigations. *European Journal of Social Psychology*, 5, 457-501.

Collins, R.L. (2000). Among the better ones: Upward assimilation in social comparison: Either direction has its ups and downs. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison* (pp. 159-172). New York: Kluwer Academic/Plenum.

Colvin, C.R., Block, J., & Funder, D.C. (1994). Do positive illusions foster mental health?: An examination of Taylor and Brown formulation. *Psychological Bulletin, 116,* 3-20.

Colvin, C.R., Block, J., & Funder, D.C. (1995). Overly positive self-evaluation and personality: Negative implications for mental health, *Journal of Personality and Social Psychology, 68,* 1152-1162.

Crosby, F. (1982). *Relative deprivation and working women.* New York: Oxford University Press.

De Cremer, D. (2001). Perceptions of group homogeneity as a function of social comparison: The mediating role of group identity. *Current Psychology: Developmental – Learning – Personality – Social,* 20, 138-146.

Duck, J.M., Hogg, M.A., & Terry, D.J. (1995). Me, us and them: Political identification and the third person effect in the 1993 Australian federal elections. *European Journal of Social Psychology,* 25, 195-216.

Dunning, D., Meyerowitz, J.A., & Holzberg, A.D. (1989). Ambiguity and self-evaluation: The role of idiosyncratic trait definitions in self-serving assessments of ability. *Journal of Personality and Social Psychology,* 57, 1082-1090.

Dweck, C.S., Chiu, C., & Hong, Y. (1995). Implicit theories and their role in judgments and reactions: A world from two perspectives. *Psychological Inquiry,* 6(4), 267-285.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations,* 7, 117-140.

Gibb, B.E., Zhu, L., Alloy, L.B., & Abramson, L.Y. (2002). Attributional styles and academic achievement in university students: A longitudinal investigation. *Cognitive Therapy and Research,* 26(3), 309-315.

Gilovich, T. (1991). *How we know what isn't so: The fallibility of human reason in everyday life.* New York: Free Press.

Guimond, S., Dif, S., & Aupy, A. (2002). Social identity, relative group status and intergroup attitudes: When favorable outcomes change intergroup relations…for the worse. *European Journal of Social Psychology, 32,* 739-760.

Heine, S.J., & Lehman, D.R. (1997). The cultural construction of self-enhancement: An examination of group-serving biases. *Journal of Personality and Social Psychology, 72,* 1268-1283.

Hewstone, M. (1990). The "ultimate attribution error"? A review of the literature on intergroup causal attribution. *European Journal of Social Psychology, 20,* 311-335.

Hewstone, M., Ward, C. (1985). Ethnocentrism and causal attribution in Southeast Asia. *Journal of Personality and Social Psychology, 48,* 614-623.

Hinkle, S., & Brown, R.J. (1990). Intergroup comparisons and social identity: Some links and lacunae. In D. Abrams, & M.A. Hogg (Eds.), *Social identity theory: Constructive and critical advances* (pp. 4-70). New York: Harvester Wheatsheaf.

Hirt, E.R., Zillmann, D., Erickson, G.A., & Kennedy, C. (1992). Costs and benefits of allegiance: Changes in fans' self-ascribed competencies after team victory versus defeat. *Journal of Personality and Social Psychology, 63*(5), 724-738.

Hodges, S.D., Bruininks, P., & Ivy, L. (2002). It's different when I do it: Feature matching in self-other comparisons. *Personality and Social Psychology Bulletin, 28* (1), 40-53.

Hodson, G. & Esses, V.M. (2002). Distancing oneself from negative attributes and the personal/group discrimination discrepancy. *Journal of Experimental and Social Psychology, 38,* 500-507.

Hong, Y., Chiu, C., Dweck, C.S., Lin, D.M., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology,* 77(3), 588-599.

Hoorens, V. (1993). Self-enhancement and superiority biases in social comparison. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology.* (Vol. 4, pp. 113-139). New York: John Wiley.

Jetten, J., Spears, R., & Manstead, A.S.R. (1996). Intergroup norms and intergroup discrimination: Distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology, 71,* 1222-1233.

Jost, J.T. (2001). Outgroup favoritism and the theory of system justification: An experimental paradigm for investigating the effects of socio-economic success on stereotype content. In G. Moskowitz (Ed.), *Cognitive social psychology: The Princeton symposium on the legacy and future in social cognition* (pp. 89-102). Mahwah, NJ: Erlbaum.

Jost, J.T., Banaji, M.R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology, 33,* 1-127.

Kardes, F.R. (1994). Consumer judgment and decision processes. In R.S. Wyer, Jr., & T.K. Srull, (Eds.) *Handbook of social cognition, Vol. 1: Basic processes; Vol. 2: Applications (2nd ed.).* Hillsdale, NJ: Lawrence Erlbaum Associates, INC.

Klar, Y. & Giladi, E.E. (1997). No one in my group can be below the group's average: A robust positivity bias in favor of anonymous peers. *Journal of Personality and Social Psychology, 73* (5), 885-901.

Klein, W.M.P., Buckingham, J.T. (2002). Self-other biases in judgments of ambiguous performance and corresponding ability. *Psychologica Belgica, 42* (1-2), 43-64.

Krueger, J. & Mueller, R.A. (2002). Unskilled, unaware, or both? The better-than-average heuristic and statistical regression predict errors in estimates of own performance. *Journal of Personality and Social Psychology, 82*(2), 180-188.

Kruger, J. & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*(6), 1121-1134.

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin, 108,* 480-498.

Kunda, Z. & Sanitioso, R. (1989). Motivated changes in the self-concept. *Journal of Experimental Social Psychology, 25,* 272-285.

Larwood, L. (1978). Swine flu: A field study of self-serving biases. *Journal of Applied Psychology, 18,* 283-289.

Lewis, A.C. & Sherman, S.J. (2003). Hiring you makes me look bad: Social-identity based reversals of the ingroup favoritism effect. *Organizational Behavior and Human Decision Processes, 90,* 262-276.

Lindeman, M. (1997). Ingroup bias, self-enhancement and group identification. *European Journal of Social Psychology,* 27, 337-355.

Linville, P.W., & Jones, E.E. (1980). Polarized appraisals of outgroup members. *Journal of Personality and Social Psychology, 38,* 689-703.

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

Martinot, D., Redersdorff, S., Guimond, S., & Dif, S. (2002). Ingroup versus outgroup comparisons and self-esteem: The role of group status and ingroup identification. *Personality and Social Psychology Bulletin,* 28(11), 1586-1600.

Messick, D.M., Bloom, S., Boldizar, J.P., & Samuelson, C.D. (1985). Why we are fairer than others. *Journal of Experimental Social Psychology,* 21, 480-500.

Messick, D.M. & Mackie, D.M. (1989). Intergroup relations. *Annual Review of Psychology,* 40, 45-81.

Mullen, B., Brown, R.J., & Smith, C. (1992). In-group bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology, 22,* 103-122.

Murray, S.L., Holmes, J.G., Griffen, D.W. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology, 70,* 79-98.

Ng, S.H. (1981). Equity theory and the allocation of rewards between groups. *European Journal of Social Psychology, 11,* 439-443.

Ottingen, G. (1995). Positive fantasy and motivation. In P.M. Gullwitzer and J.A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 236-259). New York: Guilford.

Perdue, C.W., Dividio, J.F., Gurtman, M.B., & Tyler, R.B. (1990). Us and them: Social categorization and the process of intergroup bias. *Journal of Personality and Social Psychology, 59*(3), 475-486.

Perloff, L.S., & Fetzer, B.K. (1986). Self-other judgments and perceived vulnerability to victimization. *Journal of Personality and Social Psychology*, 50, 502-510.

Pickett, C. (2001). The effect of entitativity beliefs on implicit comparisons between group members. *Personality and Social Psychology Bulletin,* 27(5), 515-525.

Pettigrew, T.F. (1979). The ultimate attribution error: Extending Allport's cognitive analysis of prejudice. *Personality and Social Psychology Bulletin, 5,* 461-476.

Ruggiero, K.M. (1999). The personal/group discrimination discrepancy: Extending Allport's analysis of targets. *Journal of Social Issues, 55,* 519-536.

Sachdev, I., & Bourhis, R. (1987). Status differentials and intergroup behavior. *European Journal of Social Psychology, 17,* 277-293.

Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression.* New York: Cambridge University Press.

Stangor, C. & Jost, J.T. (1997). Commentary: Individual, group, and system levels of analysis and their relevance for stereotyping and intergroup relations. In R. Spears, P.J. Oakes, N. Ellemers, & S.A. Haslam (Eds.), *The social psychology of stereotyping and group life* (pp. 336-358). Oxford: Blackwell.

Suls, J., Martin, R., & Wheeler, L. (2002). Social comparison: Why, with whom, and with what effect? *Current Directions in Psychological Science,* 11, 159-163.

Tabachnik, N., Crocker, J., & Alloy, L.B. (1983). Depression, social comparison and the false-consensus effect. *Journal of Personality and Social Psychology,* 45, 688-699.

Tajfel, H. (Ed.). (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations.* London: Academic Press.

Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology,* 33, 1-39.

Tajfel, H. & Billig, M. (1974). Familiarity and categorization in intergroup behavior. *Journal of Experimental Social Psychology, 10,* 159-170.

Tajfel, H., Billig, M., Bundy, R.P., & Flament, C. (1971). Social categorization and intergroup behavior. *European Journal of Social Psychology, 1,* 149-178.

Tajfel, H. & Turner, J. (1979). An integrative theory of intergroup conflict. In W.G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.

Taylor, D.M., Wright, S.C., Moghaddam, F.M., & Lalonde, R.N. (1990). The personal/group discrimination discrepancy. *Personality and Social Psychology Bulletin, 16,* 254-262.

Taylor, S.E. & Brown, J.D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin,* 103, 193-210.

Terry, D.J., & Callan, V.J. (1998). In-group bias in response to an organizational merger. *Group Dynamics, 2,* 67-81.

Terry, D.J., Carey, C.J., & Callan, V.J. (2001). Employee adjustment to an organizational merger: An intergroup perspective. *Personality and Social Psychology Bulletin, 27,* 267-280.

Tesser, A. (1986). Some effects of self-evaluation maintenance on cognition and action. In R.M. Sorrentino and E.T. Higgins, (Eds.), *The handbook of motivation and cognition: Foundations of social behavior* (pp. 435-464). New York: Guilford Press.

Tesser, A. (1991). Emotion in social comparison and reflection processes. In J. Suls and T.A. Wills (Eds.), *Social Comparison: Contemporary theory and research* (pp. 115-145). Hillsdale, NJ: Erlbaum.

Tesser, A. & Campbell, J. (1983). Self-definition and self-evaluation maintenance. In J. Suls and A. Greenwald (Eds.), *Social psychological perspectives on the self* (pp. 1-31). Hillsdale, NJ: Erlbaum.

Tesser, A. & Cornell, D.P. (1991). On the confluence of self processes. *Journal of Experimental Social Psychology, 27,* 501-526.

Tetlock, P.E. (1985). Accountability: The neglected social context of judgment and choice. *Research in Organizational Behavior, vol. 71985,* 297-332.

Tetlock, P.E., & Kim, J.I. (1987). Accountability and judgment processes in a personality prediction task. *Journal of Personality and Social Psychology, 52(*4), 700-709.

Trope, Y., & Liberman, A. (1996). Social hypothesis testing: Cognitive and motivational mechanisms. In E.T. Higgins and A.W. Kruglanski, (Eds.) *Social psychology: Handbook of basic principles.* NY: Guilford Press.

Turner, J.C. (1981). The experimental social psychology of intergroup behavior. In J.C. Turner & H. Giles (Eds.), *Intergroup behavior* (pp. 66-101). Oxford: Blackwell.

Turner, J.C. (1999). Some current issues in research on social identity and self-categorization theories. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social Identity* (pp. 6-34). Oxford: Blackwell.

Turner, J.C., Hogg, M.A., Oakes, P.J., Reicher, S.J., & Wetherell, M.S. (1987). *Rediscovering the social group: A self-categorization theory.* New York: Blackwell.

Weber, J.G. (1994). The nature of ethnocentric attribution bias: Ingroup protection or enhancement? *Journal of Experimental Social Psychology, 30, 453-458.*

Weinstein, N.D. (1980). Unrealistic optimism about future events. *Journal of Personality and Social Psychology, 39,* 806-820.

Westphal, J.D., & Zajac, E.J. (1995). Who shall govern? CEP/board power, demographic similarity, and new director selection. *Administrative Science Quarterly, 40*, 60-83.

Wilder, D.A. (1986). Social categorization: Implications for creation and reduction of intergroup bias. *Advances in Experimental Social Psychology*, 19, 291-355.

Yee, M.D. & Brown, R. (1992). Self-evaluations and intergroup attitudes in children aged three to nine. *Child Development, 63*, 619-629.

Table 1.

*Actor and Observer ratings of expected Actor **RANK** at High and Low status school for Study 1 (Means and Standard Deviations)*

| | **High Status School** | | | | **Low Status School** | | | |
|---|---|---|---|---|---|---|---|---|
| | **Actor** (n=45) | | **Observer** (n=45) | | **Actor** (n=42) | | **Observer** (n=42) | |
| **Grade** | Mean(n) | sd | Mean(n) | sd | Mean(n) | sd | Mean(n) | sd |
| "A" students | 6.53 (15) | 1.35 | 6.86 (15) | 1.76 | 8.62 (8) | 0.74 | 9.33 (8) | 2.64 |
| "B" students | 5.08 (12) | 2.02 | 4.83 (12) | 2.58 | 7.66 (21) | 1.39 | 7.33 (21) | 2.05 |
| "C" students | 3.50 (18) | 2.30 | 2.61 (18) | 1.46 | 7.38 (13) | 1.32 | 5.76 (13) | 2.45 |

Table 2.
*Actor and Observer ratings of expected Actor **RANK** at Top 10 school for Study 2 (Means and Standard Deviations)*

| | **Top 10 School** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Good OU** | | | | | | **Bad OU** | | | | | |
| | **Actor** | | | **Observer** | | | **Actor** | | | **Observer** | | |
| **Grade** | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* |
| "A" students | 13.52 | 2.64 | 23 | 13.90 | 3.03 | 21 | 9.62* | 4.37 | 16 | 12.44* | 4.03 | 18 |
| "B" students | 10.94 | 4.35 | 36 | 11.60 | 3.34 | 38 | 10.02 | 3.93 | 39 | 11.15 | 3.58 | 39 |
| "C" students | 10.78** | 3.37 | 23 | 7.81** | 4.67 | 27 | 13.33*** | 3.59 | 21 | 5.70*** | 3.03 | 17 |

NOTE:
* indicates $p<.10$
** indicates $p<.05$
*** indicates $p<.01$

Table 3.
*Actor and Observer ratings of expected Actor **RANK** at Bottom 25 school for Study 2 (Means and Standard Deviations)*

| | **Bottom 25 School** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Good OU** | | | | | | **Bad OU** | | | | | |
| | **Actor** | | | **Observer** | | | **Actor** | | | **Observer** | | |
| **Grade** | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* |
| "A" students | 17.26*** | 3.09 | 23 | 19.38*** | .864 | 21 | 16.43 | 3.17 | 14 | 14.33 | 5.31 | 18 |
| "B" students | 15.55 | 4.77 | 38 | 16.21 | 3.36 | 38 | 14.84 | 3.71 | 39 | 15.20 | 4.92 | 39 |
| "C" students | 15.69* | 2.70 | 23 | 13.92* | 5.02 | 25 | 12.57** | 5.04 | 21 | 16.05** | 2.07 | 17 |

NOTE:
* indicates $p<.10$
** indicates $p<.05$
*** indicates $p<.01$

Table 4.

*Actor and Observer ratings of expected Actor **RANK** at Top 10 school for Study 3 (Means and Standard Deviations)*

**Top 10 School**

| | **Good OU** | | | | | | **Bad OU** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Actor** | | | **Observer** | | | **Actor** | | | **Observer** | | |
| **Grade** | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* |
| "A" students | 12.10 | 2.53 | 20 | 13.55 | 3.69 | 18 | 11.75 | 2.86 | 8 | 11.00 | 4.47 | 6 |
| "B" students | 10.36 | 3.98 | 22 | 11.06 | 3.81 | 30 | 10.07 | 2.73 | 27 | 9.00 | 4.88 | 26 |
| "C" students | 10.05*** | 2.37 | 20 | 6.25*** | 3.56 | 24 | 8.75*** | 1.56 | 32 | 6.33*** | 3.10 | 33 |

NOTE:
* indicates $p<.10$
** indicates $p<.05$
*** indicates $p<.01$

Table 5.
*Actor and Observer ratings of expected Actor **RANK** at Bottom 25 school for Study 3 (Means and Standard Deviations)*

**Bottom 25 school**

| | Good OU | | | | | | Bad OU | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Actor** | | | **Observer** | | | **Actor** | | | **Observer** | | |
| **Grade** | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* |
| "A" students | 14.40** | 5.62 | 20 | 17.77** | 1.80 | 18 | 17.25* | .886 | 8 | 18.00* | .000 | 6 |
| "B" students | 15.18 | 4.55 | 22 | 14.73 | 4.67 | 30 | 15.59 | 3.10 | 27 | 15.61 | 2.60 | 26 |
| "C" students | 15.00** | 2.55 | 20 | 13.33** | 2.54 | 24 | 12.15*** | 1.50 | 32 | 15.06*** | 3.25 | 33 |

NOTE:
* indicates $p<.10$
** indicates $p<.05$
*** indicates $p<.01$

Table 6.
*Actor and Observer ratings of expected Actor **GPA** at Top 10 school for Study 3 (Means and Standard Deviations)*

**Top 10 School**

| | **Good OU** | | | | | | **Bad OU** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Actor** | | | **Observer** | | | **Actor** | | | **Observer** | | |
| **Grade** | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* |
| "A" students | 3.26 | .249 | 20 | 3.31 | .364 | 18 | 3.33 | .365 | 8 | 2.90 | .709 | 6 |
| "B" students | 2.84 | .307 | 22 | 2.83 | .347 | 30 | 2.92** | .356 | 27 | 2.69** | .426 | 26 |
| "C" students | 3.18*** | .453 | 18 | 2.20*** | .564 | 24 | 3.03*** | .354 | 32 | 2.28*** | .326 | 33 |

NOTE:
* indicates $p<.10$
** indicates $p<.05$
*** indicates $p<.01$

Table 7.
*Actor and Observer ratings of expected Actor **GPA** at Bottom 25 school for Study 3 (Means and Standard Deviations)*

**Bottom 25 school**

| | **Good OU** | | | | | | **Bad OU** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Actor** | | | **Observer** | | | **Actor** | | | **Observer** | | |
| **Grade** | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* | Mean | sd | *n* |
| "A" students | 3.44** | .672 | 20 | 3.80** | .116 | 18 | 3.41*** | .355 | 8 | 3.88*** | .112 | 6 |
| "B" students | 3.57 | .238 | 22 | 3.55 | .249 | 30 | 3.50 | .338 | 27 | 3.53 | .378 | 26 |
| "C" students | 3.10 | .447 | 18 | 2.89 | .474 | 24 | 2.57*** | .348 | 32 | 3.10*** | .390 | 33 |

NOTE:
* indicates $p<.10$
** indicates $p<.05$
*** indicates $p<.01$