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Reacting to negative self-relevant information in an interpersonal context

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ABSTRACT

Using a newly developed perspective provided by cross-cultural research, the concept of face, I conducted three experiments to examine the impact self-construal, feedback source and interpersonal contexts have on one's reactions to negative self-relevant information. In these experiments, characteristics of contexts including audience's status, audience's standard, audience's performance and publicness of the situation were manipulated to examine participants' reactions to feedback pertaining to an ostensibly important ability. These experiments revealed that compared to the interdependent self-construal, the independent self-construal was associated with higher levels of self-serving responses. These self-serving responses include attributing failure to external factors and attributing success to internal ones, derogating a failed test, and expressing less interest in taking a failed rather than a succeeded test again. These self-serving responses would be helpful for the independent self-construal individuals to maintain a positive self-view. Inhibited self-serving behaviors, on the other hand, were observed in the interdependent self-construal participants in some conditions such as when the audience held a high standard and when the audience failed a test the participants succeeded in. I argue that these inhibited self-serving responses were effective for the interdependent self-construal individuals to restore social harmony and repair the face of the affected others. Divergent routes individuals with different self-construals take to achieve social well-being, self-esteem versus face, were discussed.

Keywords: Feedback; Face; Self-serving; Self-construal; Interpersonal context

REACTING TO NEGATIVE SELF-RELEVANT INFORMATION IN AN

INTERPERSONAL CONTEXT

by

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DISSERTATION

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Introduction

It is that time of year again. The time in the company where employees face, often with

anxiety, year-end performance appraisals handed down from the Human Resources. Walking

into the office located in a small town in Northeastern America in the morning, Tim and his

manager, Greg, were not all that excited when seeing the envelopes with the work evaluations

lying on their desks. "How did it go?" Greg asked Tim. It went really well. There were a lot

more checks than crosses on the long list of work-related items on Tim's evaluation, and a lot

more checks than the last year. "I am awesome! And efforts do pay off!" Tim thought to himself.

Tim tried hard to hide his excitement, though. "I got 12 out of 20."

Greg, Tim's manager, was up for some self-disclosure. "I only got 7 checks out of 20," he

revealed，"It sucks." Tim was appalled at the fact that Greg's evaluation was so low, and way

lower than his. "These evaluations are ambiguous—they do not reflect my ability at all," Greg

thought to himself. Later that day, they went to the cafeteria area for a coffee break where people

were all chatting about their work evaluations. Quite casually, Greg asked Tim, "How did you

like our work evaluation system?" Tim was fully immersed in the self-esteem boost brought

about by his positive work evaluation. Besides, this could be the perfect time for him to impress

his manager. Without much thinking, he responded, "Oh I like our work evaluation system. I

worked really hard this year and I think I deserve my score." Tim felt so good after taking credit

for his victory that he did not notice that Greg's face became gloomier than it had been this

morning.

Replace the names Tim and Greg with Zhe and Wang, and imagine the situation taking place in an office located in a small city of the southwestern China. What might happen if the underperforming manager, Wang, asked Zhe about his opinions on the work evaluation system? Even though Zhe privately thought the work evaluations might to some extent make sense (primarily because he got a good score), he was well aware that speaking his mind would not only make Wang feel worse, but also make him look bad in front of a subordinate. And he knew how important it was to save his manager's face. So Zhe responded, "I don't know about you, but I do not think our work evaluation system is all that solid. It does not say a whole lot about a person's ability. I got lucky this year." Zhe felt good after seeing Wang feel soothed and comforted.

Why did Tim and Zhe respond to the same work feedback situation so differently? It may have to do with their different cultural backgrounds, contexts, and their way of seeing themselves and interacting with others. The current research was conducted to examine these phenomena and the psychological principles behind them.

Negative feedback is an inevitable threat to one's sense of wellbeing that everyone has to confront throughout their lives. A large body of research has shown that people tend to respond to negative feedback in a self-enhancing way to maintain a positive self-view (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Greenwald, 1980; Sedikides & Strube, 1997; Shrauger, 1975; Taylor, 1991; Tesser, 2000). Negative feedback can also simultaneously threaten other

important aspects of a person's social world, including one's public image, communication

smoothness, and relationship dynamics (Brown, 1968; Brown & Garland, 1971; Modigliani,

1971; Schlenker & Leary, 1982; Leary & Kowalski, 1990). The past five decades of false

feedback research has primarily focused on the impact of negative feedback on one's self-view

(e.g., self-concept, self-esteem). Little research has been devoted to how negative feedback poses

threats of other kinds—threats that depend on who the interactants are and the relationship

between interactants.

The false feedback literature suggests that in general, a person tends to resort to self-serving

strategies to restore the affected self-view, such as ignoring, avoiding, or discounting negative

feedback (see vanDellen, Campbell, Hoyle, & Bradfield, 2011, for a review). Some pioneering

explorations involving situational variations (e.g. manipulating the extent to which negative

feedback is public, Arkin, Appelman, & Burger, 1980; Baumeister & Cairns, 1992; Brown &

Gallagher, 1992; Frey, 1978; Greenberg, Pyszczynski, & Solomon, 1982; Leary, Barnes, &

Gribel, 1986; Schlenker, Weigold, & Hallam, 1990; Weary, 1980) have shown that self-serving

tendencies vary with factors related to the social context.

This work examined the impact social interaction contexts have on one's reactions to

negative self-relevant information using newly developed perspectives provided by

cross-cultural research. While it is widely accepted that negative feedback threatens one's

self-esteem, I argue that social contexts put important constraints on one's self-serving responses

to negative feedback. How a person reacts to negative feedback involves not only the person

him/herself, but also the social contexts, and the interaction between the person and the social

contexts. In addition, people's way of construing their selves has an impact on how they interact

with their immediate social situations regarding negative feedback. Although past false feedback

research largely ignored the interaction dynamics between person and social context, I argue that

this interaction is important for understanding the influence of social situations on how people

with different self conceptions respond to negative feedback.

Recent findings in cross-cultural research (Brocker & Chen, 1996; Heine, Kitayama, &

Lehman, 2001a; Heine et al., 2001b; Oishi & Diener, 2003; Takata, 1987; 2003) have suggested

new distinctions and factors associated with interpersonal contexts that moderate the relationship

between false feedback and one's responses. Just as cross-cultural research has provided new

concepts, theories, and methods for understanding a wide range of psychological phenomena

(Heine & Buchtel, 2009), it has provided new opportunities to shed light on the basic general

principles—relevant in *any* culture—that govern the process of responding to negative feedback.

The principles that determine one's responses to false feedback could and should be informed by

the effects of contextual variations revealed by cross-cultural research. I seek to clarify the

principles that not only encompass past findings in false feedback research, but also

accommodate the effects of novel situational variations.

What I have learned from cross-cultural research (including cross-cultural false feedback

research) is that the reactions people show as their preferred responses to false feedback likely

depends on who the feedback recipient is, whether there is an audience when one responds to the

feedback, and who the audience is. These factors constitute various interpersonal contexts that can elicit differential reactions to negative feedback.

Responding to False feedback: A brief review

False feedback research has a history of over 50 years in the field of social psychology (see Greenwald, 1980; Leary, Terry, Allen, & Tate, 2009; vanDellen et al., 2011, for reviews). While specific manipulations used to elicit one's natural response to negative feedback abounds, a false feedback study paradigm usually involves placing participants in a situation in which they receive negative information about themselves or their performance that challenges their sense of wellbeing. Negative information is usually presented in the form of bogus results of what participants believe is a test of intelligence (Brown & Dutton, 1995; Baumeister & Tice, 1985; Greenberg et al., 1982; Millimet & Gardner, 1972), personality (Baumeister, 1982; Baumgardner, Kaufman, & Levy, 1989; Ditto & Boardman, 1995), or some other valued aspects of the self (Arkin et al., 1980; Brown, Collins, & Schmidt, 1988; Dodgson & Wood, 1998; Holmes, 1971; Kernis, Brockner & Frankel, 1989). Bogus results usually take the form of being below the average, being at the bottom of the percentile rankings, or being at the lower end of the score distribution etc. Those tasks are considered ego-involving, and the results are assumed to have an impact on self-esteem.

Many false feedback studies have focused on the impact of false feedback on one's feelings of self-esteem (see Hepper, Gramzow, & Sedikides, 2010, Leary et al., 2009, for reviews). Negative feedback is intended to challenge one's positive self-view and elicit responses to

counteract that challenge. Such studies have found that people have a general tendency to defend

their self-esteem against negative feedback—by, for example, attributing failure to external

factors (Millimet & Gardner, 1972; Schlenker et al., 1990; Shrauger & Lund, 1975), inflating

self-evaluation (Baumeister, 1982; Brown & Dutton, 1995; Dodgson & Wood, 1998), ignoring

and dismissing the feedback (Brown et al., 1988), and discrediting the feedback source

(Baumgardner et al., 1989; Ditto & Boardman, 1995; Holmes, 1971).

False feedback research put in context: Who doesn't self-enhance, when and why?

Although a specific self-serving mechanism, self-enhancement, has been established in the

Western social psychology literature as a general tendency when reacting to negative

self-relevant feedback, some researchers have shown that not all people respond to negative

information in a self-enhancing manner. Similarly, people do not self-enhance in all situations.

Self-esteem, for instance, has been found to affect whether a person self-enhances or not.

Individuals who possess low self-esteem have been found to evince more negative self-relevant

thoughts than positive ones in the face of negative feedback (Dogson & Wood, 1998), more

readily accept negative feedback as valid (Shrauger, 1975), show less compensatory

self-enhancement (Baumeister, 1982; Brown & Gallagher, 1992), have lower confidence about

performing well in a subsequent task (McFarlin & Blascovich, 1981) and engage in fewer

self-serving biases (Baumeister & Tice, 1985; Taylor & Brown, 1988) than do people with high

self-esteem. This finding is also supported by self-verification research (see Swann,

Stein-Seroussi, & Giesler, 1992 for a review) which suggests that people with negative

self-perceptions (e.g., low self-esteem) are more inclined to accept unfavorable evaluations than are people with positive self-perceptions (e.g., high self-esteem; but see Baumgardner et al., 1989 for an opposite pattern).

Some false feedback studies have been conducted with complete privacy for the recipient of the feedback (see Baumgardner et al., 1989; Brown et al., 1988; Kernis et al., 1989; Millimet & Gardner, 1972; Moreland & Sweeney, 1984 for examples), supposedly to rule out the potential confounding effect of self-presentational concerns and to examine private self-enhancement in isolation. In an effort to demonstrate the impact of negative feedback on one's public self (i.e., one's perceived public image), some other researchers have manipulated how public negative feedback is (Arkin et al., 1980; Baumeister & Jones, 1978; Brown & Gallagher, 1992; Dodgson & Wood, 1998; Frey, 1978; Greenberg & Pyszczynski,1985; Greenberg, et al., 1982; Schlenker et al., 1990; Shrauger & Lund, 1975; Tetlock, 1981; Weary, 1980). In those studies, participants were led to believe that the feedback would be revealed to an audience. It has generally been found that self-presentational concerns play a role in moderating one's responses to negative feedback, which is associated with an increased tendency to self-enhance, dismiss the feedback and/or attribute it to external factors in the public situation (e.g. Schlenker et al., 1990; Tetlock, 1981). Some research has revealed an increased tendency to self-enhance in domains *unrelated* to the feedback (i.e., compensatory self-enhancement; Baumeister & Jones, 1978; Greenberg & Pyszczynski, 1985). A number of other studies, on contrary, found a decreased tendency in individuals to self-enhance in response to failure in public. For instance, Smith and Whitehead

(1993) found that people who expect to interact with an informed audience show a decreased tendency to self-enhance following negative feedback, presumably because information objectivity rather than self-positivity was given priority (also see Arkin et al., 1980; Brown & Gallagher, 1992; Greenberg et al., 1982; Ross, Biebrauer, & Polly, 1974; Weary, 1980).

Thus, although not completely absent, self-serving responses (e.g., self-enhancement, public-image enhancement, etc.) have been found to be attenuated among certain groups of people or in response to certain experimental manipulations. There has not been a systematic examination of exactly who does not self-enhance, or when and why. Self-enhancement has been considered a universal motivation and people's default reaction to negative feedback (Greenwald, 1980; Taylor & Brown, 1988; Alicke & Sedikides, 2009)—that is, before counterevidence was introduced from the cross-cultural research area in the last two decades.

Cross-cultural differences in responses to negative feedback

Expanding the scope to other cultures (e.g., the East Asian culture), some research suggests that self-enhancement is largely absent. Using the research paradigms developed by Western researchers, a body of research that includes examination of self-enhancement motivation in other cultures has failed to find a consistent self-enhancement pattern (Brocker & Chen, 1996; Brown & Kobayashi, 2002; Cai et al., 2011; Heine, Kitayama, & Lehman, 2001a; Heine et al., 2001b; Kurman, 2001; Takata, 1987, 2003). Research involving cross-cultural comparisons suggests that East Asians respond to threatening self-relevant information in a self-improving/effacing, rather than self-protecting/enhancing, way (see Heine, 2005a for a

review). For instance, compared with Westerners, East Asians rate opportunities to lose as more important than opportunities to win (Lee, Aaker, & Gardner, 2000), persist more on a task following failure and less after success (Heine et al., 2001b; Oishi & Diener, 2003), and are motivated more by negative role models. A closer examination of this research provides new perspectives on the long-studied social phenomenon of self-enhancement in response to negative feedback.

Before cross-cultural inconsistencies were widely recognized, it had long been assumed that self-enhancement was a person's default reaction to negative feedback (Greenwald, 1980; Taylor & Brown, 1988). Evidence from research involving East Asian participants not only brought about new ways of theorizing about self-enhancement motivation, but also led to novel explorations aimed at a fuller understanding of this phenomenon. Such efforts include the recent debate over whether self-enhancement is fundamental to all human beings (see Sedikides, Gaertner, & Toguchi, 2003; Sedikides, Gaertner, & Vevea, 2005, 2007 for one side of this debate, and see Heine & Hamamura, 2007 for the other side). I hope to contribute to the debate by incorporating several overlooked factors that are salient in the East Asian self-enhancement literature.

Explaining cultural differences: Different routes to social well-being

Negative feedback not only poses challenge to the feedback receiver's worth as a competent task performer, but also conveys to the person a kind of negative social message that others fail to care for the person's feelings. False feedback research in the past has largely focused on how

reactions to negative feedback are guided by the goal to restore a positive self-view. Researchers have emphasized the influence of negative feedback on one's sense of "Am I good?" or "Do I look good?" (see Campbell, Sedikides, Reeder, & Elliot, 2000, for a similar view). Although it is incontrovertible that the way people feel about themselves is an important aspect of psychological life, what has been missing from this research is the influence of negative feedback on the way people feel in a given interpersonal context – an equally important aspect of psychological life. Besides "Am I good?" and "Do I look good?", a person also cares about "Is it going well?" and "Did anyone get hurt?). The latter two questions reflect one's concern about interpersonal interaction dynamics, which are indispensable aspects of social lives(see Figure 2). While the impact of negative feedback on self-esteem and public self image (Tetlock, 1981; Schlenker, 1980; Weary, 1980; Shrauger & Lund, 1975; Baumeister & Jones, 1978; Dodgson & Wood, 1998) has received some attention in the self-presentation literature, I am aware of few studies that have explicitly tested the impact feedback has on individuals' concern with interpersonal interaction dynamics (but see Lalwani & Shavitt, 2009, for an exception). Negative feedback involves more than just a threat to self-esteem, and this could explain why some people, or people in some situations or cultures, tend not to self-enhance.

A large portion of the West-East differences in response to negative feedback has been attributed to a fundamental difference in the self-view of Westerners and East Asians (Markus & Kitayama, 1991). Western culture embraces individualistic self-construal, which is a form of self that differentiates a person from others in terms of unique traits, experiences, and characteristics.

The Western cultural self places an emphasis on independence, self-sufficiency, uniqueness, and freedom from social constraints. East Asian culture, on the other hand, nurtures collectivistic self-views, which consist of a form of self that is derived from membership in important groups and represent aspects of the self that are shared with group members and that members from non-members. The East Asian cultural self emphasizes cooperation, interpersonal harmony, and the importance of others.

The well-being of an individualistic self could be optimized by focusing on preserving self-esteem, where one's self-view is not socially conferred, a sense of "I think I am doing well". The welfare of a collectivistic self is optimized by maintaining social esteem (i.e., face), where one's self-view is defined by the extent to which one has fulfilled social expectations with respect to one's relative position/role. The collectivistic self is socially conferred in a sense of "Others think I am doing well" (Heine & Buchtel, 2009) and "Things are going well".

The differential emphasis Westerners and East Asians place on preserving self-esteem versus social esteem has arisen from the two distinct cultures that shaped different psychological processes aimed at a sense of wellbeing. Along with this distinction, some social psychologists contend that East Asians and Westerners differentially prioritize the two resources that promote a sense of wellbeing—that is, self-esteem and face (e.g. Heine, 2005, 2008; Heine & Buchtel, 2009). A focus on the individualistic self leads individuals to attend to self-esteem, which would benefit most from self-enhancement. A focus on the collectivistic self leads individuals to maintain relationship harmony and social order, where self-enhancement would not be of much

help. This reasoning suggests that inconsistencies seen between Westerners and East Asians in their responses to negative feedback may be attributed to the divergent routes they each take to achieve a sense of well-being.

Another route to social well-being: The concept of face

When negative self-relevant information is presented, one can either bolster one's self-evaluations or public image to maintain a sense of well-being. Alternatively, one could avoid confrontations and attend to social harmony to restore a sense of well-being. As discussed above, much research has revealed that Westerners have a habitual tendency to confront or retaliate against negative feedback in a self-enhancing manner. Although evidence is limited, it has been found that East Asians tend to reduce the social impact of negative feedback and respond to it in a self-criticizing (self-deprecating) manner, such as making internal attributions for one's failure and persisting on the failed task (Heine et al., 2001b). It seems that members of the East Asian culture place a lesser emphasis on self-esteem restoration than those of the Western culture.

As has been suggested by many researchers (Heine, 2005; Cross, Hardin, & Gercek-swing 2011) elsewhere in the literature, whereas some people (e.g., Westerners) or people in some situations (e.g., when the focus is on the individualistic self) maintain well-being mainly through restoring threatened self-esteem in the face of negative feedback, other people (e.g., East Asians) or people in other situations (e.g., when the focus is on the collectivistic self) do it through focusing on repairing a threatened "face".

This section aims at introducing the concept of "face" in social psychology terms and setting the stage for a discussion of face-related variables that may come into play in affecting one's responses towards negative feedback.

In an East Asian society, face occupies a central place in people's lives just as self-esteem does to Westerners. When East Asians lose face, "it is impossible for them to function properly in the society" (Hu, 1944. p. 45).

Goffman (1956) laid the groundwork for the concept of face based on Chinese anthropologist Hu's (1944) work. Goffman (1956) conceptualized face as "an image of self delineated in terms of approved social attributes" (p. 5). Several other scholars have refined and elaborated on this concept. Face has been defined as "the respectability and/or deference which a person can claim for himself from others by virtue of their relative position" in a hierarchy and the proper fulfillment of his/her role (Ho, 1976, p. 883). Brown and Levinson (1987) consider face to be a public self-image that every member wants to claim for himself. Ting-Toomey (1988) conceptualizes face as an individual's claimed sense of favorable social self-image in a relational and network context. It has been seen as a "measure of the recognition accorded by society" (Hwang, 1989, p. 305) and described as a form of respect with which people treat each other in the course of their interactions.

In spite of an absence of completely convergent views among previous researchers, three significant aspects inherent in the conceptualization of face can be inferred. First, part of face refers to people's concern with how they are evaluated by others. This part of the concept of face

appears to be similar to the Western concept of public image (or public self; see Leary &

Kowalski, 1990). Similar to the Western public image, maintaining face often involves creating,

maintaining, defending, and enhancing one's own social identity (Goffman, 1959). However,

unlike the Western public image over which individuals have agentic control to the degree that

one can actively influence public opinions of one's self through self-enhancing (Goffman, 1959),

face is a social judgment which has to be passively claimed from others. It reflects the public

knowledge about a person that is consensually shared over which one does not have much

agentic control. In situations where individuals are not in a position to have agentic control in

terms of enhancing their public images (i.e., face), image enhancing actions often take a back

seat to more situationally appropriate face-saving strategies.

More importantly, face involves both sides of the interaction. It entails interacting with

others in ways that "permit protection of each actor's face" (King, 1989). Face has a natural

relational aspect to it. A concern for other's face is what most clearly distinguishes

face-management from public image (or impression-management) and other related ideas. Public

image management involves making one's best characteristics salient to the interaction partner

(Leary & Kowalski, 1990). On the other hand, face-management is about saving the face of all

participants in a given social interaction. Face-management helps maintain the interaction order

and flow as a way to avoid embarrassing moments for all participants (Goffman, 1955). It not

only involves maintaining public image to the degree allowed by the situation, but also the

upholding of both one's own and the interaction partner's image to keep the social encounter

smooth and harmonious (Goffman, 1955) to the extent that sometimes it may mean prioritizing the interaction partner's face. The distinctive feature of face that involves maintaining others' face plays a direct role in informing the current research, where one's response to negative feedback dependent on maintaining important others' face will be examined.

To an East Asian who has a habitual tendency to attend to external situations, what matters is to have a lot of face, that is, a great deal of social approval and being treated in a way that matches his or her status relative to others in a given situation. Self-esteem is not a major concern; a person can have a low self-esteem and still feel good about his/her life if he/she has much face that comes with the kind of respect permitted by his or her status and actual situation. The current research hopes to demonstrate situations in which people would inhibit self-serving tendencies to give way to face-management. I expect to see self-construal, publicness, and other people's status and standards play a role in these situations, redistributing participants' efforts to either mainly enhance self-esteem or care for face.

Face-loss situations: Self-construal, External standards, Status, and Publicness matter

In pioneering field work on face, several conditions were identified where face loss may arise: 1) failure to fulfill social expectations (Modigliani, 1968, 1971); 2) a violation of social norms (Edelmann, 1985); and 3) not being treated by others as respectfully as one's own face deserves (Ho, 1976). Loss of face is exacerbated if those conditions are witnessed by real or imagined others. These conditions inform important manipulations in the experimental designs in the current research.

Although the desire for face may be culturally universal (Goffman, 1955; Brown & Levinson, 1987), one's concern with face appears to be strongest, most common, and most consistent in the context of communal relationships (e.g., those in East Asian cultures), which are characterized by expectations of mutual concern. Negative feedback from others naturally implies the loss of face to East Asians given their emphasis on external approval and social harmony. As has been discussed above, the East Asian cultural model embraces an interdependent form of self which seems to be at the root of the East-West difference in terms of responding to feedback. The current research experimentally induced the East Asian mode of self conception (i.e., Interdependent self-construal, or InterSC in the following—see Studies 2 and 3), with the expectation that it would lead to response patterns distinct from those with a Western mode of self conception (i.e. Independent self-construal, or IndeSE in the following). It is thus expected that people who possess an interdependent form of self-construal emphasize self-esteem less than face when it comes to responding to negative feedback, compared with those who possess an IndeSC.

The preceding discussion of face loss conditions suggests that face loss and related behaviors may be examined in situations where social expectations are made salient. To examine the association between social expectations and face-loss resulted behaviors, the current research manipulated conditions where participants with either an independent or interdependent self-construal received feedback that indicates that other people think that they have failed or succeeded at a task (Other Standard, see Study 2). While people in general consider others'

standards seriously to the degree that others' standards convey important information about social acceptance (e.g., Sociometer theory, Leary, 2005), not all people react to other's standards in the same manner. In support of a positive self-view, those who prioritize self-esteem (e.g., a person who possesses an IndeSC) would react more defensively to other people's high standards and be more accepting of other people's low standards than those who do not. Conversely, to those who prioritize face (e.g., a person with an InterSC), retaliating against other people's comments puts the others' face under threat. Thus they would more readily accept others' standards as valid, which is helpful for maintaining a harmonious social discourse (see Figure 2).

The discussion of face loss conditions suggests that upholding other peoples' face in an interaction is important because it implies that the others are "being treated as respectfully as one's face deserves". It also suggests that not all negative feedback from others would affect all people. A large part of how much face a person deserves hinges on that person's position in the social hierarchy. Therefore, the current research (Study 2) also involves manipulation of the other's status aiming at exploring the impact of status on the variations of self-serving behaviors. Whereas a person who emphasizes self-esteem would feel more compelled to defend against a high status other's criticism than a low status other's because impressing a high status other is more important than impressing a low status other, a person who emphasizes face would not feel the same. Negative feedback that comes from a high status person would not be considered by a face-centered person threatening, because the high status person in any given interaction is supposed to have more power to judge the other and be treated respectfully as his/her status

deserves. Negative feedback from a low status person, on the other hand, is a signal that interaction rules are disrupted because a low status person is not in a position to criticize and embarrass the other. After all, the upholding of the higher-positioned person's face is always expected from face-centered people for maintaining the social order (Chang & Holt, 1994) in a given hierarchical relationship.

According to the discussion of face loss conditions, face loss is exacerbated if the situations are made public. In one of the study conditions (Studies 2 and 3) in the current research, participants were asked to provide responses to feedback in public as if they were to communicate with an audience. Face, by definition, is a socially (and most often publicly) granted identity. In a private setting, face is only relevant in the sense that one would anticipate face loss once a private negative outcome is made public. In a public situation, interaction harmony is achieved by each individual playing the proper role of explicitly showing signs of caring for the other interactant's face. Given the above reasoning, the current research addressed individuals' responses to feedback against the backdrop of a public situation versus a private situation (Study 3).

Inhibiting self-serving tendencies: A way of saving face

Self-serving behaviors certainly bring many benefits to people as they serve to protect self-esteem and preserve self-positivity. Self-serving behaviors, on the other hand, also come with social costs as they may, in some situations, raise social discomfort and damage interpersonal relationships (Carlson & Shovar, 1983; Forsyth, Berger, & Mitchell, 1981; Powers

& Zuroff, 1988). For instance, retaliating against another person's criticism may enhance one's self-esteem at the expense of hurting the social relationship. Attempting to explain away one's negative performance may protect one's positive self-view at the risk of embarrassing other interactants. These self-serving behaviors are likely to cause interpersonal tension which could pose a serious threat to those who are concerned more about social harmony (i.e., face) than self-esteem. This explains why those people refrain from self-enhancement and inhibit self-serving tendencies in some situations.

Inhibited self-serving behaviors are defined broadly in the current research and can include different forms. One form of inhibited self-serving behavior may be an attenuated self-serving tendency. Another form may be an absence or reverse (e.g., self-criticizing or self-deprecating behaviors) of a self-serving tendency. Being self-critical (or self-deprecating) serves to inhibit self-serving tendencies which could potentially benefit social interactions in two ways. On the one hand, criticizing one's self allows the other person to feel good about him or her self as a result of downward social comparison. On the other, self-criticism implies that the feedback from the other person is valid, or that one has expected even less respect that the feedback conveys. This discrepancy between one's ostensible expected respect and other's actual appraisal of one's self allows an interaction to smoothen without confrontations or conflict. The current research utilized a series of response measures to examine participants' tendency to inhibit self-serving tendencies. For example, participants were presented with a detailed interpretation of their test result (Studies 2 and 3) which contained both positive and negative information

about their selves. Then they were asked to recall the detailed feedback in their own words while responding to an audience. A tendency to either recall no more positive than negative self-relevant information, or to reveal more negative than positive self-relevant information would be a sign of inhibited self-serving behavior.

Alternatively, an individual can inhibit self-serving tendencies by making internal attributions for failure. Blaming oneself functions similarly to self-criticism in that it allows the individual to prematurely take responsibility for the fault, thereby eliminating the opportunity of direct confrontations involved in questioning the validity of the feedback. In the current research, participants were asked to make attributions for their performance results. Attributing failure to internal factors (e.g. ability and effort) and success to external factors (e.g. luck or task difficulty) would be a sign of inhibiting self-serving tendencies.

Some of these inhibited self-serving behaviors have already been observed in false feedback studies with East Asian samples (Heine et al., 2001b, Hoshino-Browne & Spencer, 2000). Heine (2005b; also see Heine, & Buchtel, 2009) and other authors (Ting-Toomey, 1988) speculated that prioritizing face is likely to elicit self-criticizing/deprecating responses in the face of negative feedback in East Asians, in a similar way that prioritizing self-esteem elicits self-enhancing/serving responses in Westerners. The potential association between face and cross-cultural differences in response to false feedback sheds new light on individuals' responses to negative feedback. The current research adopts the concept of face and rethink false feedback research from the perspective of saving face.

Rethinking false feedback studies in the light of face

The concept of face is one that emerges quite naturally in research on East Asians' ways of responding to negative feedback, but has been largely absent in the Western false feedback research literature. Although face is an indigenous construct to the East Asian culture, it has been considered a universal desire (Goffman, 1955; Brown & Levinson, 1987). Translated into psychology terms, face reflects one's concern about public reputation as determined by others' approval; it also reflects one's concern with others' wellbeing and social harmony.

Through the theoretical lens of face, false feedback research conducted in the past lack manipulations concerning important characteristics of the social context in which responses to negative feedback are made (see Arkin et al., 1980; Brown & Garland, 1971, Smith & Whitehead, 1993 for examples of exceptions). Although face itself may not be as familiar a concern to Westerners as it is to East Asians, factors related to face undoubtedly plays an important role in Westerner's lives. These factors, explicitly, are self-construal, other's standards, other's status and publicness of the situation. I believe that the perspective of face drawn from cross-cultural research will be useful for understanding prior false feedback research, and for designing novel research to address unanswered questions in both the self-enhancement and self-presentation literatures.

Past attempts at explaining self-serving behavioral tendencies in false feedback research using an isolated, private setting are insufficient in terms of capturing the behavioral variances which could have been caused by interpersonal dynamics. In studies which did include

interpersonal interactions, responses were collected as reactions to other unrelated, unimportant

participants or researchers. Very few studies have examined variations of self-serving tendencies

people exhibit which might have stemmed from concerns about other, important participants in a

given interaction (Baumgardner, Kaufman, Levy, 1989; Brockner & Chen, 1996; Lalwani, &

Shavitt, 2009). The current research addresses this oversight in past false feedback research in

that it examines how people respond to feedback in situations where important others are present.

While I acknowledge that being self-serving allows those who are concerned about self-esteem

to regain self-positivity when protecting unrelated, unimportant others' welfare is not a major

concern, I also assert that a person who cares about the other's wellbeing and social harmony

would inhibit self-serving behaviors, because protecting the integrity of the other's self-esteem

would be deemed more important than making oneself feel good, especially when the other is an

important figure (e.g., a higher status person).

The current research will go beyond past studies by manipulating degrees of importance of

others (e.g., high status vs. low status) involved in a feedback receiving situation. This

manipulation allows one to test the inhibited self-serving tendencies of people who focus more

on social and interpersonal harmony than self-esteem in various interpersonal situations: When

feedback comes from a high-status other, concerns with protecting the other's face would lead to

inhibited self-serving responses.

The current research: Self-serving or inhibited self-serving? It depends on social contexts!

The current research is concerned with responses following negative feedback in various

social contexts and the role concerns with others play in this process. Derived from the

discussion about face, I assume that people not only possess a need for having a positive

self-view, but also possess a need for maintaining interpersonal harmony. Negative information

related to one' self threatens the validity of people's desired self-view, as well as their desired

social relationships.

Although in some situations, people are sensitive to opportunities for self-enhancement, in

other situations, their goal may shift from protecting self-feelings to protecting the other's

feelings designated by the interaction context. That is, when one is concerned about others (e.g.,

when one possesses an InterSC), especially when others' welfare is prioritized in a certain

interaction, inhibited self-serving responses may result in order to maintain relationship harmony

and the hierarchical order, and thus protect the other people's welfare. Inhibited self-serving

behaviors include self-deprecating actions such as attributing failure to internal factors rather

than situational ones, taking responsibility for one's own faults, criticizing one's self, and doing

the opposite for success. These self-deprecating strategies would be particularly effective in

repairing the face of the affected others in an interaction (especially when the others' welfare is

important and prioritized).

Three experiments were conducted to collect evidence for these variations of self-serving

tendencies as a function of social context. In these experiments, characteristics of contexts

including self-construal, other's status, other's standard, other's performance and publicness of

the situation were manipulated to examine people's reactions to feedback. I predicted that the

IndeSC would be associated with concerns with self-esteem and thus self-serving reactions, whereas the InterSC would be associated with more concerns with the other's welfare and social harmony and thus inhibited self-serving reactions. These pattern of behaviors were expected to be moderated by specificity of situation. I predicted that people with the IndeSC would respond more self-servingly towards a high-status other rather than a low-status other, especially in public than in private. On the other hand, those with the InterSC would respond similarly to the IndeSC individuals in private, but would inhibit self-serving tendencies in public, especially when responding to a high-status person rather than a low-status person.

Materials and tasks overview

Three experiments (see Figures 1, 2, and 3) were conducted to test the idea that social contexts associated with face-saving motivation moderate the relationship between self-relevant feedback and one's responses. Participants completed an ego-involving task, believing that they had done well or poorly (internal feedback, see Studies 1, 2 and 3), and that an audience of varied status either did or did not think that they had done well or poorly (Other's Standard, see Study 2), or that the audience had done well or poorly (see Study 3). Participants were then tested on a number of post-feedback response measures. These measures include attributions made for failure/success, evaluation of the task, and reconstruction of detailed feedback (only in Studies 2 and 3). Participants provided responses on these measures believing that another participant who varied in level of relative status would see their reactions (only in Studies 2 and 3). All the tasks and measures were programmed with the online software Qualtrics and

presented electronically to participants. Participants used the computer keyboard to enter their responses, which allows data to be saved electronically.

Ego-involving task. Participants completed an ego-involving task on a computer. The task was described in such a way that participants would believe it assesses an important aspect of "integrative ability". This task name was fabricated to ensure that participants did not have a good sense of what their "integrative ability" level was; otherwise, the feedback might not have been convincing. Participants were told that they would take part in a standardized test of integrative ability which had proven to have high validity and reliability. The task was in fact an established intelligence test, Raven's Progressive Matrices (Raven, Court & Raven, 1988), which includes 36 multiple choice question items. Each question contains a 6×6, 4×4, or 3×3 matrix of figures that follow a certain pattern (see Figure 1 for an example). For each question, the participant is asked to identify the missing element that completes the pattern depicted by the matrix. The task was administered in a private setting, so that no one was around during the time when participants were completing the task. Participants' own standards of evaluation as well as their perceptions of others' standards (Study 2) or performance (Study 3) were later manipulated, which constituted different kinds of false feedback.

Internal false feedback. Before the task started, previous participants' scores were made available to the participant. Previous participants' scores were made up (i.e., fictional) and manipulated so that some participants saw that the majority of previous participants' scores were on the low end (between 20 and 60 out of 100, such as 26.9, 37.4, 56.0—the Low-standard

condition in studies 1 and 3), and others saw that most previous scores were on the high end

(between 60 and 100, such as 78.4, 85.1, 98.5—the High-standard condition in studies 1, 2 and

3). After having participants spend sixty seconds viewing previous participants' scores, they

were asked to estimate what they considered to be a good score range, which served as a

manipulation check for participants' standards.

After the task was completed, task results were presented on the computer screen in the form

of a single number score along with a paragraph that included a detailed interpretation of the

score. All the participants saw scores in the same narrow range: 58-62 points (with one decimal

point). If a person viewed the low-score version for previous scores, then this test result would be

indicative of positive performance. If a person viewed the high-score version for previous scores,

then this test result would be indicative of unsatisfactory performance.

In Studies 2 and 3, participants also received a paragraph of detailed feedback following the

test score. The detailed feedback included an equal amount of positive and negative information

allegedly pertaining to the participant's probable behaviors (see Appendix B). The feedback

contained three sets of four behavioral descriptions, two positive and two negative in valence,

exemplifying each of the three critical personality traits, trustworthiness, kindness, and

socialness. The three sets were presented to the participants in a random order right after they

received their scores with the four behavioral descriptions having been randomized within each

set.

Prime. Participants were primed to either focus on the self or on others in Studies 2 and 3.

The concept of an independent self or an interdependent self was primed to direct participant's attention to either their uniqueness or their similarity with others. This task is adapted from prior research (Trafimow, Triandis, & Goto, 1991; Lalwani & Shavitt, 2009). I expected that the IndeSC prime would direct participants' attention towards their self-esteem, while the InterSC prime would lead participants to be more sensitive to social contexts and emphasizing the other interactant' welfare. In studies 2 and 3, the self-construal prime was introduced after participants had received the integrative ability test score and feedback and before participants read about the audience's standards (Study 2) or performance (Study 3), after which participants would respond to the dependent measures. Because the prime was presented with the cover story that it was the second part of the integrative ability test, introducing it after the integrative ability test helped maintain the credibility of the cover story. For this reason, the prime also needed to be presented before introducing the audience. If it was presented after introducing the audience's standard or performance, it would have disrupted the continuity of the cover story and would have been more likely to raise suspicion in the participants. Moreover, because the prime was used to increase the temporal accessibility of a particular self-construal, arranging it as close to the dependent measures as possible helped ensure that the effect of the prime lasted when participants responded to the dependent measures.

External false feedback. In addition to internal false feedback, participants also received feedback regarding other people's standards (Study 2) or performance (Study 3) for evaluating an Integrative Ability test score. In Study 2, Other's standards were delivered in a way that some

participants believed that another participant (e.g., a senior graduate student or a high-school student in Study 2) held a high standard ("A score of above 80 is considered by this person a good score") or low standard ("A score above 40 is considered by this person a good score") for Integrative Ability scores. In Study 3, participants were told that another participant who was a senior graduate student had completed the same test and received either a high score ("80", in the grad-success condition) or a low score ("40", in the grad-fail condition).

Audience status manipulation. After having received the score (Studies 1, 2 and 3) and feedback (Studies 2 and 3 only), participants were instructed to complete a series of response measures. In Study 1, participants completed the post-feedback measures in private. In Studies 2 and 3, they were led to believe that either a high school student or a senior graduate student would have access to their responses to the feedback.

Post-feedback response measures. Multiple measures were used to examine how participants would react to feedback. These measures included attributions made for performance, evaluation of the test, comparison to others, and recall of the detailed interpretation of test results (Studies 2 and 3 only). The order in which the first three of those dependent measures were presented to participants was randomized (recall was always the last measure).

Study 1

Study 1 involved internal false feedback (positive vs. negative) only; the primary goal was to test whether the internal feedback manipulation was perceived as intended and to establish the effect of negative (vs. positive) internal feedback on self-serving responses.

Design

Study 1 followed a one-factor (Internal feedback: positive vs. negative) between-subject

design.

Hypotheses

Study 1 was conducted in a private setting where only internal feedback (positive vs.

negative) was involved. Participants were told that their responses would be kept anonymous and

confidential; their responses should thus not have involved any concerns for maintaining a public

image in the eyes of others. Given the nature of the manipulation, I expected that the primary

goal for participants in Study 1 when responding to the private feedback would be to maintain a

positive self-view (i.e., to self-serve). I predicted that participants' responses would gravitate

towards protecting self-esteem. I hypothesized that when receiving internal, negative feedback

about their performance and responding in a private setting, participants would be likely to

attribute poor performance to external factors, derogate the test (i.e., perceiving the test to be

unfair, invalid, and unclear), derogate others (i.e., perceiving others to be incompetent and

similar to themselves), express less interest in taking the test again, and recall more positive than

negative test feedback. I hypothesized that the opposite patterns (except for a less prominent

pattern for recall) would be observed when participants received internal, positive performance

feedback and responded privately.

Participants

An a priori power analysis using the software G*Power 3.1 was conducted to determine an approximate sample size. Given the one-factor two-level multivariate design in Study 1, the power analysis recommended a sample size between 80 and 110 to achieve a power between 0.8 and 0.9 to detect a medium effect. One hundred undergraduates at Syracuse University participated in Study 1 for course credit. Participants were randomly assigned to the positive internal feedback or negative internal feedback condition. Ninety-five participants finished the study (21 males vs. 74 females), and their data were entered into the statistical analysis. Participants in Study 1 had a mean age of 18.6 ($SD = 1.50$) at the time of the study. On average, 17.1 (out of 36, $SD = 5.83$, or 47.5%) of the Raven's test items were completed within the five minute time limit, of which an average of 10.4 ($SD = 3.67$, or 60.8%) items were correct. 63.2% of the participants were Caucasians, 5.3% African Americans, 7.4% Hispanics, and 24.2% Asians.

Procedure

Participants were run individually in a private setting for Study 1. After the participant arrived at the laboratory, he or she was greeted by a trained experimenter who had no knowledge of the hypotheses of the study. Then the participant was directed to an individual private cubicle and asked to sit in front of the computer (see Figure 3 for an illustration of the study procedure).

The participant was directed to read the consent form presented at the beginning of the computer program first. Then the participant was told that they would complete multiple parts of the study with strict confidentiality; the experimenter only entered the room (to provide

directions) when the participant encountered a "Stop" signal in between sections of the study. The participant was then told—

> *"Please sit comfortably in front of the computer as you will be doing a task on it. Before it begins, please spend a few minutes reading the consent and if you agree, please click yes to proceed. Then you will be asked to fill out some demographic information, which is a standard part of any study. You subject ID is _____ . Any information you put in will only be connected with this number and won't be linked to your name or identification. For the most part I will leave you alone in the room. But, whenever you see a stop sign on the computer, please come out and get me so I can give you more information."*

Then the experimenter left participant alone in the room. After the participant answered demographic questions including gender, age, year in school, and ethnicity, there was a "Stop" signal on the computer asking the participant to look for the experimenter for further directions. The experimenter entered the cubicle to describe the "Integrative Ability" task to the participant and directed him or her to begin the practice questions. The participant was told—

> *"This task is about an important ability called Integrative Ability. According to two decades of research, integrative ability is considered the strongest indicator of success in relationships, work, and physical well-being. People who do well in this task are those who will succeed in work as well as play, building flourishing careers and lasting, meaningful relationships. The test has a total of 100 points. We will get you started on some practice questions of the integrative ability task. You will do two practice items. There is no time limit for the practice,*

so you can take as long as you want. Those are not going to be scored. Feel free to go back and

forth while you familiarize yourself with the test."

After the participant finished the practice items, another stop sign appeared on the

computer screen. The experimenter then entered the room to explain the next part: previous

participants' scores. The participant was told—

"Before you actually start the test, we will show you some previous participants' scores for

you to get an idea about the task. The test has a total of 100 points. These scores are

standardized scores rounded up to one decimal point. These data were collected over the last 5

years from schools, colleges, and universities all over the country. These students came from

various majors, years, and ethnicity backgrounds, although we cannot disclose their

demographic information to you. These students are a representative sample of high school

students, graduate students and college students just like you in the US. If you hover your

mouse over a subject ID, you will see that person's score on the Integrative Ability test. There

is an example on the screen which you can try out. You have one minute to check out some

scores like this one, which should give you an idea of what the test is like. You do not have to

go by order since these scores are randomly shuffled."

Two hundred previous participants' scores were made up and presented in ten columns on

the next screen. The participant was randomly presented with one of the two versions of previous

scores that were set up beforehand, one mostly containing low scores (between 20 and 60, out of

100), and the other high scores (between 60 and 100). The participant was automatically directed

to the next screen when the one minute timer ran out. On this screen, the participant was asked

"Now that you have viewed some previous participants' scores, which category of the following

scores would you think a typical person would reasonably get in the integrative ability test?" as a

manipulation check. The participant was given the following options of score ranges: 1-10 pts,

11-20 pts, 21-30 pts, and so on until 91-100 pts.

After the participant provided his or her judgment, the stop signal for directions for the

actual task appeared. The experimenter entered the room and provided instructions for the actual

integrative ability task:

"Now is the actual Integrative Ability test. In the actual test, you have 5 minutes to

answer 36 questions. These questions are similar to the practice items, but some are more

difficult than others. You want to make sure you are as accurate and fast as possible. You can

always skip questions and come back later. I will leave you alone from this point on. Your

behavior is not observed or recorded in any form, as we hope to make you feel as comfortable

as possible in order to maximize your performance on the task. The computer will generate

your result and an interpretation of your score immediately after the 5 minutes run out.

Please just come out and see me after you are done."

After the participant completed the 5-minute task, a score was shown on the next screen. All

the participants received a test score around 60 pts with variations no greater than +2 or -2 (e.g.

59.8 pts, 61.5 pts). The exact test scores were varied among the participants to minimize the

potential cost caused by participants crosstalking about the study. If the same score was

presented every time, participants who cross-talked could have raised suspicions about the experiment, which could have invalidated the data that were collected thereafter.

After receiving the feedback, the participant was directed out of the cubicle into a different room adjacent to the cubicle. Participants were told that the cubicle was the "Testing Room", while the room they were currently in was the "Survey Room". Participants received dependent measures on a computer in this room. After the participant had been seated, the experimenter provided instructions about the dependent measures under the cover story that the survey was for our lab to improve the test. The participants were told—

"Besides accumulating data on the Integrative ability test, our lab is also in the process of developing educational tools to help the public learn more about integrative ability. Information you provide in the following questionnaire in terms of your experience with this test would be crucial for us. Information you have input is assigned a random number, thus is not identifiable. The data we collect from you will not be disclosed to any other parties."

Participants were left alone to answer the survey questions. In the survey, participants were presented with a self-evaluation question, attribution measures, test evaluation questions, and comparison-with-others questions. Participants always received the comparison-with-others questions last. The comparison-with-others questions were always presented last because requiring participants to compare themselves with others could have affected how they made attributions and evaluated the test. The order in which they received all other questions was randomized.

The self-evaluation question asked participants how well they thought they did on the integrative ability test (Self-evaluation) on a 7-point scale (1= extremely poor, 7 = extremely well). In terms of attribution, participants were asked to indicate on 5-point scales (1 = not at all, 5 = extremely) the extent to which their ability (Ability Attribution), amount of effort they put into taking the test (Effort Attribution), and luck (Luck Attribution) were responsible for their performance. These specific dimensions have been used in many previous studies (e.g. Miller & Ross, 1975; Weary-Bradley, 1978; Greenberg et al., 1982) and have been considered to be valid measures of causal attributions (Elig & Frieze, 1979). In terms of test evaluation, participants were asked to indicate how difficult (Difficulty Perception), fair (Fairness Perception) and valid (Validity Perception) they perceived the test to be, and how clear (Clarity Perception) the instructions for the test were on 7-point scales. Comparison-with-others questions asked participants how well they would predict other participants would do on the same test (Other Prediction) on a 7-point scale, and how similar they thought other participants were to themselves (Other Similarity) on a 7-point scale. It should be noted that the attribution measures were 5-point scales while other dependent measures were 7-point scales. The attribution measures were directly adopted from previous research (see Taylor & Doria, 1981; Rosenfeld, 1990, for examples) in the hope of keeping the results comparable with established findings.

After participants had answered these questions, they received a message on the computer screen which stated that their answers were saved. At this point the experiment was completed. Participants were then probed for suspicion, fully debriefed and thanked.

Results

Manipulation checks.

Self-standard manipulation. After viewing previous scores, participants were asked to judge on a 10 point scale (1= 1-10, 10= 91-100) what a typical score would be in the integrative ability test. The manipulation was effective, as demonstrated by the finding that participants who viewed mostly high scores (between 60 and 100, out of 100) thought a typical score would be significantly higher ($M = 8.34$, $SD = .85$, $N = 56$) than those who viewed mostly low scores (between 20 and 60, out of 100) did ($M = 4.74$, $SD = .85$, $N = 39$), $F(1, 93) = 383.98$, $p < .001$, $\eta_p^2 = .81$.

Feedback type manipulation. After viewing previous scores (which were either high scores or low scores), participants were asked to evaluate on a 7-point scale (1 = extremely poor, 7 = extremely well) how well they thought they did in the integrative ability test (i.e., self-evaluation). If the false feedback manipulation was effective, participants' self-evaluation after feedback should be influenced. Confirming this notion, feedback type had a significant effect on self-evaluation, $F(1, 93) = 41.97$, $p < .001$, $\eta_p^2 = .91$. Participants in the negative feedback condition considered their performance to be worse ($M = 3.32$, $SD = 1.30$, $N = 56$) than those in the positive feedback condition ($M = 5.08$, $SD = 1.31$, $N = 39$).

Analysis.

Seven dependent measures, including Ability Attribution, Effort Attribution, Luck Attribution, Difficulty Perception, Test Evaluation, Other Prediction, and Other Similarity, were

entered into Multivariate GLM (General Linear Model) in SPSS. Separate Univariate ANOVAs

generated from this analysis were focused on so as to examine the effect of feedback type on

these individual dependent measures. Descriptives and the effects of feedback type on each of

the dependent measures are shown in Table 2.

Main findings.

Attributions. Participants were asked to indicate on 5-point scales (1 = not at all, 5 =

extremely) the extent to which their ability (Ability Attribution), amount of effort they put into

taking the test (Effort Attribution), and luck (Luck Attribution) were responsible for their

performance. These specific dimensions have been used in many previous studies (e.g. Miller &

Ross, 1975; Weary-Bradley, 1978) and have been considered to be valid measures of causal

attributions (Elig & Frieze, 1979). Self-serving attributions are reflected by attributing negative

outcomes to external, uncontrollable factors such as bad luck and attributing positive outcomes

to internal, controllable factors such as ability and effort.

It was hypothesized that when receiving negative feedback, participants would be likely to

attribute poor performance to external factors such as luck while attributing positive feedback to

internal factors such as ability and effort. Consistent with such self-serving motivations,

feedback type had a significant effect on ability attribution, $F(1, 93) = 8.85$, $p = .004$, $\eta_p^2 = .09$.

Participants who received negative feedback were less likely to attribute their test results to their

ability ($M = 3.09$, $SD = 0.90$), compared with those who received positive feedback ($M = 3.64$,

$SD = 0.87$). No such significant differences were found for other attributions. Although only

marginally significant, the results for effort attribution were in the expected direction ($p = .10$),

where participants in the negative feedback condition ($M = 3.36$, $SD = 0.90$) attributed their

performance less to effort than those in the positive feedback condition ($M = 3.64$, $SD = 0.67$).

Participants seemed to have attributed both types of feedback to a similar amount of luck (p

$= .90$), which may be due to the possibility that there was a floor effect for luck attribution. That

is, the integrative ability test was conducted in such a way that luck probably did not seem to

play a role in affecting participants' outcomes.

Test Perceptions. Participants were asked to indicate how difficult (Difficulty Perception),

fair (Fairness Perception) and valid (Validity Perception) they perceived the test to be, and how

clear (Clarity Perception) the instructions for the test were on 7-point scales. It was predicted that

participants would derogate the test (i.e., perceiving the test to be difficult, unfair, invalid, and

unclear) when responding to negative feedback and show an opposite behavioral pattern in

responding to positive feedback.

Three of the four dependent measures, Fairness Perception, Validity Perception, and Clarity

Perception, were found to be significantly correlated with each other (see Table 1, and note that

similar correlations among the three measures remain in Studies 2 and 3, see Tables 6 and 12,

respectively). And because these three variables were all measured on the same 7-point scale, for

the results section, these three variables were combined into one composite variable (Test

Evaluation) by computing the average of the three ratings. The measure for difficulty did not

show a consistent correlational relationship with the above three measures across the three

studies. In addition, difficulty conceptually measures an aspect of the test distinct from fairness, validity and clarity, because a test can be either easy or difficult despite being fair, valid and clear. Therefore, ratings for the difficulty measure were reported separately in the results section. Results for each of the four measures are listed in Appendix C.

Difficulty Perception. Feedback type did not have a significant effect on the difficulty perception measure, $p > .05$.

Test Evaluation. Feedback type had a significant effect on the test evaluation average measure, $F(1, 93) = 13.88$, $p < .001$, $\eta_p^2 = .13$. Participants in the negative feedback condition evaluated the test more negatively ($M = 4.87$, $SD = 1.13$), compared with those in the positive feedback condition ($M = 5.70$, $SD = 1.00$).

Comparison-to-others. Participants were asked to indicate how well they would predict other participants would do on the same test (Other Prediction) and how similar they thought other participants were to themselves (Other Similarity) on 7-point scales. It was predicted that negative feedback would trigger defensive social comparison to others, leading the participants to derogate others and predicting that others would do similarly poorly, whereas positive feedback would elicit opposite effects. The findings were not consistent with this prediction, in that they showed that participants in the negative feedback condition were more likely to predict that others would do well on the test ($M = 4.71$, $SD = 1.19$), compared with those in the positive feedback condition ($M = 3.97$, $SD = 1.16$), $F(1, 93) = 9.11$, $p = .003$, $\eta_p^2 = .09$. This result might seem to contradict the prediction and the results already reported, but a closer examination of the

particular design of this study allows a reconciliation between this result and the other data.

When asked "How well do you think other participants will do on the Integrative Ability test?",

participants most likely referred to the previous scores they had viewed before the start the of the

task (see the Discussion section for more detailed reasoning). Therefore, this dependent variable

was treated as another manipulation check question in Studies 2 and 3. There was no significant

effect found for Other Similarity perception.

The results of Study 1 confirmed my hypotheses that when receiving this kind of internal,

negative performance feedback and responding in a private setting, participants would be more

likely than when receiving positive feedback to attribute poor performance to external factors,

and derogate the test (i.e., perceive the test to be unfair, invalid, and unclear).

Study 1 Discussion

Study 1 demonstrated that the novel kind of manipulation of false feedback employed in the

current research is effective in triggering different responses. As intended, showing previous

scores to participants for a limited time helped set up a prior expectation. Participants then

judged an invariant test result based on that expectation in deciding whether or not that result

indicated a positive outcome. As the data suggested, participants who viewed high previous

scores considered the test score to indicate failure, while those who viewed low previous scores

considered the same score to be a success. This manipulation evoked typical, self-serving

responses in the participants in response to failure feedback as opposed to success feedback.

Participants who judged their test scores to be a failure tended to externalize the outcome,

considering the test to be less reflective of ability and evaluating the test more negatively than those who judged the test scores to be a success. These findings are consistent with previous false feedback research that suggests a general tendency for people to resort to self-defensive strategies in the face of negative feedback, such as attributing failure to external factors (Miller & Ross, 1975; Millimet & Gardner, 1972) and discrediting the task (Ditto & Lopez, 1992), etc.

Contrary to what would have been hypothesized, the failure feedback group predicted that others would perform better than the success feedback group did. At first glance, one may conclude from this result that participants who received failure feedback made less self-defensive predictions about others' performance than those who received success feedback. This conclusion would have contradicted the other findings in Study 1 which showed greater self-defensiveness in the failure feedback group. However, one explanation for this contradiction may be due to the specific false feedback manipulation created in this study. Participants were shown previous participants' scores before the start the of the task, based on which they may have reasonably inferred other participants' performance when asked "How well do you think other participants will do on the Integrative Ability test?" Therefore, this particular feedback manipulation had an impact on participants' impressions of other participants' performance. This post-study question, then, acted more as a manipulation check question tapping participants' established understanding of other people's outcomes than their reactions to their own outcome. In Studies 2 and 3, this question was considered a manipulation check question rather than a dependent variable.

It should be noted that the effects observed in Study 1 may be mainly driven by female participants given that over two thirds of the participants were female. Unfortunately the unbalanced group size between the two genders did not allow an examination for the effect of gender on the dependent measures. If anything, previous research has only occasionally reported gender differences in the manifestation of self-serving biases (see Campbell & Sedekides, 1999 for a review), with men being more self-serving than women. Therefore, there is reason to infer that with a more gender-balanced sample, more pronounced effects for Feedback Type would have been observed.

Study 2

Study 1 demonstrated that, as expected, negative feedback administered via the procedure developed for this research leads to more defensiveness (as assessed by the attribution and test evaluation measures) than does positive feedback. Study 2 considered the effect of feedback when it was responded to in public while assuming the presence of an audience that varied in status. The procedure for Study 2 was identical to Study 1 up to the point when participants received the score for the integrative ability task. One modification is that the previous scores shown at the beginning of the test were high scores for all the participants in Study 2. Thus, all participants in Study 2 received negative feedback. Unlike Study 1, which was conducted with complete privacy, Study 2 involved responding to the feedback in a public setting where participants were aware of an audience's standards/expectations. Participants in Study 2 were told that another participant of varying status held specific standards as to what was considered a

good score on the integrative test. Participants were then told that their responses to the

post-study survey would be viewed by the other participant. Study 2 also adopted a priming

method from Lalwani and Shavitt (2009) to instill either a Western or an East Asian mode of

thinking in the participants by making either an IndeSC or an InterSC salient. In sum, Study 2

zeroed in on the negative feedback condition to see if contextual factors moderate the extent of

participants' defensiveness, and furthermore, to see if they do so differently for participants with

independent versus interdependent self-construals.

Design and Rationale.

Study 2 followed a 2 (Prime: independent self-construal vs. interdependent self-construal) ×

2 (Other Status: High school student vs. Senior graduate student) × 2 (Other standard: high vs.

low) between-subject factorial design. This study introduced three new independent variables

(Prime, Other standard, and Other Status) and two new dependent variables (retest intention and

recall of feedback), and collected responses in a public situation for the following purposes.

First, priming participants to endorse either an independent or interdependent self-construal

helped create different cultural modes related to self-serving behaviors in various situations. The

independent – interdependent self-construal model is a more general extension of the

individualistic – collectivistic cultural distinction. The IndeSC is considered to be more prevalent

in individualistic cultures and is associated with concerns about self-esteem and distinguishing

one's self from others, while the InterSC is more prevalent in collectivistic cultures and is

associated with less concern about self-esteem and more concern about connecting one's self

with others. The notion that the IndeSC and the InterSC coexist within both individualistic

cultures and collectivistic cultures has received wide recognition (Markus, & Kitayama, 1991;

Cross et al, 2011). Therefore, there is reason to infer from past cross-cultural research that within

any culture, people with an IndeSC will be more concerned about self-esteem than those with an

IndeSC. As a result, the IndeSC would be associated with more self-serving tendencies,

compared with the InterSC.

Second, audience's status was introduced to examine contextual variations in self-esteem

concerns. Although participants did not directly interact with the audience in Study 2, they were

directed to respond to the dependent measures as if they were to communicate with the audience.

To a self-esteem-centered person, (i.e., possessing an IndeSC) not impressing a high status

audience poses a greater threat than not impressing a low status audience, because the high status

audience's feedback carries greater importance for determining one's self-worth than the low

status audience's feedback. Conversely, a person who prioritizes interpersonal relationship and

social harmony (i.e., possessing an InterSC thus concerned about face) would express their

opinions about the task in a way that the status order in a given situation is upheld. Thus, it is

necessary to manipulate audience's standard to create specific situations in which status order

may or may not be maintained.

Audience's standard was manipulated such that whether the audience held a harsh standard

(high standard condition) or a lenient standard (low standard condition) in evaluating participants'

test outcome would convey additional failure or success feedback, respectively. A person who

prioritizes self-esteem would be more defensive in response to another's high standard than to a low standard. This high reactivity to others' standards would be manifested in strong self-serving reactions. A person who does not prioritize self-esteem, on the other hand, would be more accepting of others' standards because self-esteem is not an immediate concern. After all, defending against other people's opinions in a public situation may put the other's face at risk, which does not fit with the InterSC.

Moreover, the notion of face would lead to the prediction that to a person with an InterSC who deemphasizes self-esteem and focuses on interpersonal harmony, negative feedback from a high-status audience holding a high standard would not be as humiliating as the same feedback from a low-status audience. Thus, when a powerful audience is not impressed with such a person (high standard condition), that person would be more inhibited about being self-serving. Defensiveness when a low-status audience might think he or she performed poorly is especially pronounced because when a low status audience thinks poorly of one, the loss of face is more severe as one is supposed to be higher in esteem than the low status audience. On the other hand, succeeding in a powerful audience's eyes would be less expected than succeeding in a low-status audience's eyes. Succeeding by a low-status audience's standard, instead, would not be surprising because it corresponds to what a low-status person is supposed to do. Therefore, the high-status audience's low standard may elicit more inhibited self-serving behavior than the low-status audience's.

The addition of audience's standard is important because it helps clarify whether the people with an InterSC may be just a little less self-serving in the presence of a high status audience than a low status audience compared with the IndeSC people in general, or if they avoid being self-serving at all in some situations despite being self-serving in other situations. For instance, demonstrating that the InterSC people become more self-serving after failure (high standard condition) than success (low standard condition) in the low-status audience's eyes would provide evidence for their self-serving tendencies. But their lack of self-serving tendencies in some situations could be supported by demonstrating that their defensiveness after failure in the powerful person's eyes (the high standard condition) is no higher than it is when they succeeded in the other's eyes (the low standard condition).

Fourth, unlike Study 1 which was conducted with complete privacy, participants in Study 2 all responded to the post-study questionnaires in public (with an audience in mind). The concept of face suggests that the public situation allows interpersonal concerns to surface and be separated from self-esteem concerns. This is not suggesting that people do not have self-esteem concerns in public. In fact, people should have both self-esteem and interpersonal concerns whether in private or in public. However, in certain situations (e.g., in a collective culture and/or with important others in the audience), interpersonal concerns are more easily identified and distinguished from self-esteem concerns. In a public setting, acting in the service of interpersonal harmony (which requires attention to interpersonal status) is more easily separable from acting to uplift one's self-esteem. Study 2 allows an examination of these distinct reactions.

Finally, two new dependent measures were added to Study 2, namely retest intention and recall of the detailed positive versus negative feedback interpretation. Retest intention was assessed by asking participants to what degree they would like to take the test again in the future on a 1-7 scale (1 = not at all, 7 = very much). It has been suggested that people are more motivated by positive rather than negative outcomes. This question is added as one additional measure for defensiveness to negative feedback as previous research (Miller & Hom, 1990) showed that defensiveness is associated with lowered interest in being involved in the failed task a second time. Recall of the detailed positive versus negative feedback interpretation was added to help measure the spontaneous self-defensive tendencies participants possess in response to the feedback. The procedure for assessing recall was adopted from Green and Sedikides (2000), where participants were asked to recall in three minutes as many as they could the personality behaviors that they had received as part of the feedback (see Appendix B for the complete list of personality behaviors). All the participants answered the recall question at the very end of the study based on the estimation that time between receiving the feedback and recalling the feedback would be approximately equal for all the participants. This arrangement helped rule out the possible confounding effects caused by different lengths of time lapses between feedback presentation and recollection when the order of the recall question was otherwise randomized with all other questions.

Hypotheses

Study 2 involves feedback responding situations in which variations in self-serving reactions may be examined. When a person prioritizes self-esteem (e.g., the IndeSC condition), he or she would feel more threatened in front of a high status person than a low status person, especially when the other person holds a high standard. The self-esteem centered person would then exhibit more self-serving reactions in the presence of the high status audience than the low status audience, especially when the audience holds a high standard. Self-serving reactions include making external attributions, derogating the task in question, and recalling less negative than positive feedback in response to failure feedback, while making internal attributions, praising the task, and recalling no less negative than positive feedback in response to success feedback.

When a person deemphasizes self-esteem and focuses on interpersonal harmony (e.g., the InterSC condition), his or her face would be threatened when a low status person rather than a high status person thinks poorly of him or her (e.g., when that person holds a high standard), and he or she would fear that the other person's face is threatened when a high status person rather than a low status person thinks highly of him or her (e.g., the low standard condition). In any given interaction, the interactants are expected to act according to the hierarchical order and protect the face of the person higher in status. For that reason, that person would exhibit more self-serving reactions in the presence of the low status audience than the high status audience, especially when the audience holds a high standard.

Given the manipulations in Study 2, the following hypotheses are tested (see Table 3):

1. There would be a main effect of prime type. People primed with the independent self will be

overall more self-serving than people primed with the interdependent self.

2. There would be a main effect of other standard. In general, people would be more self-serving when they learned that the other person thinks they did poorly than when they learned that the other person thinks they did well.

3. Prime type would interact with other standard. People primed with an IndeSC would be more self-serving in response to negative outcomes (i.e., when the audience holds a high standard) than to positive outcomes (i.e., when the audience holds a low standard) to a greater extent than those primed with an InterSC.

4. Prime type would interact with other status. Whether or not the audience holds a high standard, those primed with an IndeSC would be more self-serving in reacting to a high-status audience than a low-status audience, whereas those primed with an InterSC would inhibit self-serving more severely in reacting to a high-status audience than a low-status audience.

5. There would be a three-way interaction between prime, other status, and other standard.

   5a. The tendency for those primed with an IndeSC to be more self-serving in reacting to others' high standards than low standards would be magnified when the other is a high-status person rather than a low-status person.

   5b. Those primed with an InterSC would inhibit self-serving more readily in reacting to others' high standards than to their low standards, and this tendency would be magnified when the other is a high-status person rather than a low-status person.

   Participants. Similar to Study 1, an a priori power analysis using the software G*Power 3.1

was conducted to determine an approximate sample size for Study 2. Given the three-factor

eight-level multivariate design in Study 2, the power analysis yielded an approximate sample

size between 150 and 450 to achieve a power of 0.9 in detecting a medium to small effect. The

approximate sample size required to achieve a power of 0.8 in detecting a medium to small effect

is between 120 to 360. Two hundred and fifty four Syracuse University students who enrolled in

the Fall 2015 semester Introductory Psychology class participated Study 2 for course credit. Two

participants' data were excluded from the analysis because they withdrew from the study for

various involuntary reasons such as a fire drill or family emergencies. There were 114 males and

138 females. On average, 16.5 (out of 36, $SD = 5.97$, or 45.8%) of the Raven's test items were

completed within the five minute time limit, of which an average of 9.4 ($SD = 3.32$, or 57.0%)

items were correct. 59.9% of the participants were Caucasians, 7.1% African Americans, 10.7%

Hispanics, 19.8% Asians, and 1.9% other ethnic groups.

Procedure. The procedure for viewing previous scores and receiving a score in Study 2 was

identical with Study 1, except that the previous scores were high scores for all the participants in

Study 2 (see Figure 4 for an illustration of the study procedure).

After participants received their own scores, they were also presented with what was framed

as a detailed interpretation of their scores. They were told that:

You may be wondering what your score really means. The computer will generate a more

detailed interpretation of what your score means. The computer will make specific

predictions of your behaviors, you know, things that your score indicates you would or would

not do. You have 1.5 minutes to read over this feedback.

All the participants received the same paragraph of detailed feedback which contained

twelve sentences that describe a person's behavior pertaining to the three critical personality

traits trustworthiness, kindness, and sociability either positively or negatively. The behaviors

were adopted from the Person Memory paradigm by Sedikides and his colleagues (Sedekides &

Green, 2000; see Appendix B). An example of positive behavior for the trait trustworthiness was

"You would follow through on a promise made to friends."; and an example of negative behavior

in this category was "You would gossip about a good friend to other people."

After participants received the paragraph of feedback, they were randomly assigned to

receive either an IndeSC prime or an InterSC prime. The prime task was described in such a way

that it led participants to believe that it tested a verbal aspect of integrative ability. The exact

wording was as follows:

"As you have read on the screen, now is another task that assesses a different aspect of

integrative ability. You will be asked to type things out on the computer. You have a

one-minute time limit on this. You will see more specific directions on the screen. Please

make sure you read the directions carefully. Please come out and see me when you are

done."

*(*IndeSC prime*) "A person's self-concept derives from a belief in the wholeness and*

uniqueness of internal attributes. The ultimate goal of a person's life is to develop one's

distinct potential and to self-actualize. A person should have the autonomy to express his/her

unique configuration of needs, rights, and capacities. Now spend 1 minute to write down thoughts about how you think you are different from your family and friends."

*(*InterSC prime*) "A person is fundamentally connected to others and share a common fate with others. A person is part of an encompassing social relationship. A person's behavior is determined, contingent on the thoughts, feelings, and actions of others. Now spend 1 minute to write down thoughts about how you think you are similar to your family and friends."*

A timer counting down from 60 seconds was kept visible on the computer screen when participants were providing answers to the priming task. After the time ran out, participants were told that they had completed the integrative ability test and would do a post-study survey.

The participant was directed out of the cubicle to receive the post-study survey. The post-study survey session in Study 2 was different from Study 1 in that the survey was administered while participants were made to believe that another participant would see their responses. Some participants were told that the other participant was a senior graduate student (high status other condition), whereas others were told that the other participant was a high school student (low status other condition). As part of the cover story, participants were presented with a computer screen with a message reading "sending initiation messages to room 507" while receiving the following instructions on the computer screen as well as from the experimenter:

"We have another lab upstairs at room 507. Please wait while we communicate with the other room. In the other lab room we are running the same study on some high school

students (or senior graduate students who are finishing up their schooling and entering

professorship in various colleges in the coming year, in the senior graduate student

condition). Now there is a high school student (or a senior graduate student) who will be

taking the test soon, so what you fill out in the survey will be used to provide some info about

this study to that person. Please wait while I check if we are connected with the lab upstairs."

The experimenter then acted as if he/she was checking the connections between the two lab

rooms, making noises using the keyboard and the mouse from a distance and sounding busy.

Then experimenter returned to the cubicle to tell the participants that the participant in the other

lab room had also viewed previous scores, so as to lead participants into thinking that the other

participant may or may not have adopted the same performance standard as they did. The

experimenter delivered the instructions:

"OK. We are connected with that lab and everything is ready. The student in the other

lab just reviewed previous participants' scores like you did at the beginning. But don't worry,

those do not include your result. The high school student (or graduate student) would not

know your score. That person also had only 1 minute. The other room will send some input

over soon. I will leave you to read the input privately."

The experimenter then left the participant alone in the cubicle to "receive input from the

other lab room". This is when participants were introduced to the other participant's expectation

in terms of what he or she considered to be a good score. The participants randomly received one

of the two Other Standard condition manipulations. Participants in the high other standard

condition learned that the other participant considered a score higher or equal to 80 to be a good

score, versus 40 in the low other standard condition. Since all participants viewed previous

scores ranging between 60 and 80 and received a score around 60 for themselves, they could

infer that their own result would not be considered a good score when considered in light of the

other person's high standard, or would be considered a good score in comparison to the other

person's low standard. Participants received the following directions from the experimenter:

"For your information, after reviewing previous participants' scores, the student in room 507

considers the following to be a good score for the integrative ability test: > 80 or = 80 (or >

40 or = 40, in the low other standard condition)."

After the participant had received the other standard manipulation, the experimenter

provided instructions about the dependent measures to bolster the cover story that the other

participant would be given the opportunity to view their answers. The participants were told

"Now is the actual survey. Keep in mind that the info you fill out will be sent over to the other

room, so the high school student (or senior graduate student) will have some knowledge

about it before they participate in the same study."

Participants were then started on the dependent measures on the computer. Participants in

Study 2 received the same post-study survey as Study 1, except that the order in which survey

questions was presented was slightly modified. Participants always received the self –evaluation

question first, and the comparison-with-others questions last. Whether they received the

attribution measures or the test evaluation questions after the self-evaluation question was

randomized. The order in which they received questions within each set of measures was also randomized.

Lastly, participants were directed to complete the feedback recall task after being presented with the following cover story:

"You read a detailed interpretation of your test score earlier. Although the high school student (or graduate student) does not know what your score is, that person is allowed to know what your score means. Please just type out your score interpretation that you can remember from before, so that the high school student (or graduate student) can learn more about the test. You have 3 minutes to recall the feedback."

Participants were then instructed to recall the detailed feedback that followed their test score. They were told that

"In the next page, we're going to do a memory task. We know you weren't asked to memorize them, but we'd like you to type out all of the sentences that you can remember from the interpretation of your test score. Even if you can't remember them exactly, or you can just remember a part of a sentence, it doesn't matter—just put down what you can recall. You have 3 minutes to do this."

Similar to Study 1, the order in which participants received the attribution questions and the questions related to test quality was randomized. Participants always completed the recall task at the end to avoid a situation in which what they recalled skewed their responses to the former two sets of questions.

Results

    Analyses. Similar to the analyses for Study 1, seven dependent measures, including Ability

Attribution, Effort Attribution, Luck Attribution, Difficulty Perception, Test Evaluation, Other

Similarity, and Retest Intention were entered into a Multivariate GLM process. Separate

Univariate ANOVA analyses generated from this model were focused on to examine the effect

of Prime, Other Standard, and Other Status on individual dependent measures. An alpha level

of .05 was used for all the significance tests. Bonferroni correction was applied to multiple

comparisons where necessary.

    Manipulation checks.

    Self-standard manipulation. Similar to study 1, after viewing previous scores (which were

mostly high scores), participants were asked to judge on a 10 point scale (1= 1-10, 10 = 91-100)

what a typical score would be in the integrative ability test. The manipulation was effective, as

demonstrated by the finding that participants thought a typical score would be 7.79 on average

($N = 252$, $SD = 1.09$) which was significantly higher than the midpoint (5.5 out of 10) of the

scale, $t(251) = 33.6$, $p < .001$. Similar to the result of the manipulation check for Study 1, this

result suggests that the manipulation of internal feedback was effective.

    Other's performance manipulation. As suggested by Study 1, the initially planned dependent

variable Other Prediction is more suitable to be considered another manipulation check question

due to the particular way in which false feedback was operationalized in this research. When

participants were asked to predict how well other participants would perform on the same task,

they were likely to base their answers on the previous participants' scores that they viewed at the beginning of the task. In fact, the results showed that on average, participants predicted that other participants would perform well on a 7-point scale, $M = 4.68$, $SD = 1.23$, $N = 252$. A one-sample t-test showed that participants' predictions were significantly higher than the middle point of the scale (4 out of 7), $t(251) = 8.80$, $p < .001$. This result reflected the fact that all the participants viewed very high previous participants' scores in the case of Study 2.

Other's Standard manipulation. After the participants were introduced to different prime, other's standard, and other's status conditions, they were asked how well they thought they did in the integrative ability test (self-evaluation) on a 7-point scale (1= extremely poor, 7 = extremely well) as a manipulation check. The results showed that other standard was an effective manipulation in that it had a main effect on self-evaluation, $F(1, 243) = 16.96$, $p < .001$. Participants felt that they did worse ($M = 3.38$, $SD = 1.46$, $N = 126$) when the audience held a high standard compared to the low-standard condition ($M = 4.09$, $SD = 1.38$, $N = 126$).

Main findings.

Attributions. The same set of measures for attributions from Study 1 were used in Study 2. Participants were asked to indicate on 5-point scales (1 = not at all, 5 = extremely) the extent to which their ability (Ability Attribution), amount of effort they put into taking the test (Effort Attribution), and luck (Luck Attribution) were responsible for their performance.

The analysis revealed a Prime × Standard interaction for luck attribution (see Table 4 and Figure 6), $F(1, 244) = 3.95$, $p = .048$, $\eta_p^2 = .016$. No such interactions were found for the other

three attributions. Multiple comparisons revealed that the IndeSC was associated with greater

defensiveness to other's standard differentials, compared with the InterSC (consistent with

hypothesis 3). Specifically, participants primed with the IndeSC made significantly more luck

attributions when responding to the other's high standard ($M = 2.12$, $SD = 1.04$) than the other's

low standard ($M = 1.72$, $SD = 0.89$), $F(1, 244) = 5.26$, $p = .023$, $\eta_p^2 = .021$. No such significant

differences were found for the InterSC participants. When the audience was perceived to hold a

low standard (indicating a positive outcome), the IndeSC group were significantly less likely to

believe it was due to luck ($M = 1.72$, $SD = 0.89$), compared with the Intersc group($M = 2.09$, SD

$= 0.94$, $F(1, 244) = 4.58$, $p = .033$, $\eta_p^2 = .018$ No such significant difference was found when the

audience held a high standard. Confirming my predictions, these results suggested that the

independent self tended to be more self-serving than the interdependent self in response to the

other's standard differentials.

This two-way interaction was not qualified by a Prime × Standard× Status three-way

interaction for luck attribution(see Table 5 for the means in each condition). It was hypothesized

that the IndeSC group's tendency to make more luck attributions in response to the audience's

high standard (indicating negative external evaluation) than to an audience's low standard

(indicating positive evaluation) would be more pronounced when the audience was a high-status

person than when it was a low-status person (hypothesis 5a). Unexpectedly, the data indicates

that this tendency was more prominent when the other was a low-status person rather than a

high-status person, as suggested by the significant simple comparison between the high-school

high standard ($M = 2.17$, $SD = 1.12$) and high-school low standard conditions ($M = 1.67$, $SD = 0.92$), $F(1, 244) = 4.67$, $p = .032$, $\eta_p^2 = .019$.

It was also hypothesized that the InterSC group's tendency to refrain from making more luck attributions in response to the audience's high standard than low standard would be more prominent when the audience is a high-status person than a low-status person (hypothesis 5b). Again, the data suggest that this pattern was instead more prominent in the low-status condition than the high-status condition. We found a marginal trend such that when the high school student, but not the graduate student, held a low standard (indicating positive evaluation), the InterSC group were more likely to attribute the result to luck ($M = 2.12$, $SD = 1.02$) than participants in the IndeSC group ($M = 1.67$, $SD = 0.92$), $F(1, 244) = 3.41$, $p = .056$, $\eta_p^2 = .015$. Other comparisons were not significant.

Test Perceptions. Similar to Study 1, participants were asked to indicate how difficult (Difficulty Perception), fair (Fairness Perception) and valid (Validity Perception) they perceived the test to be, and how clear (Clarity Perception) the instructions for the test were on 7-point scales. The three dependent measures, fairness perception, validity perception, and clarity perception, were found to be significantly correlated with each other (Table 6). These three variables were combined into one composite variable (Test Evaluation) by taking an average among the three ratings. Results for each of the three variables are listed in Appendix C.

Difficulty Perception. Similar to Study 1's finding for difficulty perception, neither the independent variables nor their interactions had a significant effect on the difficulty measure, $p > .05$.

Test Evaluation. Prime had a marginally significant effect on test evaluation, $F(1, 244) = 3.44$, $p = .065$, $\eta_p^2 = .014$. Participants evaluated the test more negatively when primed with an IndeSC ($M = 4.89$, $SD = 1.17$, $N = 125$) than when primed with an InterSC ($M = 5.16$, $SD = 1.05$, $N = 127$). Confirming hypothesis 1, this result suggests that the tendency for people to derogate the test is more strongly associated with an IndeSC.

Other standard had a main effect on test evaluation, $F(1, 244) = 8.64$, $p = .004$, $\eta_p^2 = .34$. When the other held a high standard, participants considered to the test to be less fair, valid, or clear ($M = 4.81$, $SD = 1.15$) than when the other held a low standard ($M = 5.24$, $SD = 1.04$). This result was consistent with hypothesis 2.

Unlike the results for luck attribution, the Prime × Standard interaction for test evaluation was not significant (see Table 7 for the means in each level of the conditions), $p = .70$, although there was a descriptive trend similar to that for luck attribution. The other's different standard seemed to have a greater influence on the test evaluation of the IndeSC group than the InterSC group.

The overall Prime × Other Standard × Other Status interaction was not significant for test evaluation either ($p = .91$, see Table 8 for the means in each level of the conditions). One simple comparison suggested that when responding to the high school student (low status audience), the

independent self evaluated the test significantly more negatively in the high standard condition

($M = 4.65$, $SD = 1.12$) than the low standard condition ($M = 5.20$, $SD = 1.22$), $F(1, 244) = 4.30$, p

$= .039$, $\eta_p^2 = .017$. No such significant difference was found for the IndeSC group in the

high-status other condition, or for the InterSC group in either the high or low status other

condition.

Other Similarity. When asked how similar they thought other participants were to

themselves (other similarity) on a 7-point scale, participants in different conditions did not

answer differently. In other words, the independent variables in the current study had no

significant impact on this particular dependent variable.

Retest Intention. As an added dependent measure in Study 2, participants were asked

whether they would be interested in taking the same test again in the future on a 7-point scale.

Prime and other's standard interacted to influence retest intention (see Table 9 and Figure 7),

$F(1, 244) = 3.84$, $p = .05$, $\eta_p^2 = .015$. Participants primed with the IndeSC were less willing to

take the test again when responding to the other's high standard ($M = 3.14$, $SD = 0.93$) than the

other's low standard ($M = 3.50$, $SD = 1.03$), $F(1, 244) = 3.86$, $p = .051$, $\eta_p^2 = .016$. When the

audience was perceived to hold a high standard (suggesting a negative outcome), the IndeSC

participants were significantly less willing to take the test again ($M = 3.14$, $SD = 0.93$), compared

with the InterSC participants ($M = 3.52$, $SD = 0.96$), $F(1, 244) = 3.82$, $p = .047$, $\eta_p^2 = .016$. These

results were consistent with Hypothesis 3.

The two-way interaction revealed above was not qualified by a Prime × Standard× Status

three-way interaction (see Table 10 for the means in each level of the conditions). It was predicted that the tendency for the IndeSC participants to express higher levels of interest in taking the test again after receiving the audience's low standard than high standard would be more pronounced in the high status other condition than the low status other condition (hypothesis 5a). However, a significant pairwise comparison suggested that this tendency was more pronounced in the low status other condition than the high status other condition, high standard ($M = 2.97$, $SD = 0.99$) vs. low standard ($M = 3.52$, $SD = 1.06$), $F(1, 244) = 5.02$, $p = .023$, $\eta_p^2 = .021$.

It was also hypothesized that the higher levels of interest in taking the test again shown by the InterSC participants relative to the IndeSC participants in response to the audience's high standard would be magnified in the high-status other condition. However, the data suggested that this contrast was magnified in the low-status other condition (InterSC group ($M = 3.58$, $SD = 0.92$) vs. IndeSC group ($M = 2.97$, $SD = 0.98$)), $F(1, 244) = 7.00$, $p = .009$, $\eta_p^2 = .028$.

Recall. Recall data was coded based on a "gist" criterion by two independent coders. Inter-rater reliability was $r = .89$ for recall of the positive sentences and $r = .90$ for the negative sentences. Given the high agreement between the two coders, the average ratings taken between the two coders were entered for the analysis. Only correctly recalling the specific behavior that was presented was considered correct recall. The free recall data were then analyzed through a Repeated Measure Mixed ANOVA with positivity of the behavior entered as the repeated measure and Prime, Other status, and Other Standard entered as the between-subject factors.

In general, participants recalled more positive ($M = 2.68$, $SD = 1.12$) than negative behavior ($M = 2.45$, $SD = 1.11$), $F(1, 211) = 3.69$, $p = .056$, $\eta_p^2 = .017$. This result is consistent with previous research where people were found to recall less negative than positive self-relevant information. In follow-up analyses, no other significant main or interactive effects on recall were found.

Study 2 Summary and Discussion

Study 2 primarily demonstrated that the three factors derived from examining the concept of face, self-construal, audience's standards, and audience's status, have an impact on how people react to feedback in a public situation. All the participants received a negative test outcome in Study 2, but when they noticed that an audience held a different standard than their own, they became more self-serving (e.g., blaming the test) when the audience held a high standard than a low standard. This effect was moderated by self-construal type and status. I found that people primed with an IndeSC tended to be more self-serving than those primed with an InterSC in response to an audience's standard differentials, especially in some situations (e.g., facing a low-status audience).

Specifically, the IndeSC group was found to be more likely to attribute a negative test outcome to luck, derogate the test, express less interest in taking the failed test again when they noticed an audience held a high standard than a low standard, compared with the interdependent participants. These results suggest that those primed with an IndeSC were more concerned about the consequences of the test experience for their self-esteem than the interdependent participants.

When the audience held a high standard, the independent participants felt compelled to defend their self-views in the face of others' negative evaluations. When the audience held a low standard, on the other hand, the independent self was sensitive to the signal that they might have not done as poorly, and they were ready to embrace the audience's positive evaluation.

Although all the participants showed a general tendency to be more self-serving in the face of the audience's high standard than a low standard, the InterSC group was found to inhibit self-serving tendencies in many cases. The interdependent participants' tendency to make luck attributions for the negative test outcome in the face of the audience's different standards was similar to that of the independent participants. But if anything, descriptively, the interdependent participants were less likely to make luck attributions for the negative test outcome when they noticed that the audience's standard became more harsh, which is a pattern opposite to that of the independent participants. The interdependent participants also showed higher, rather than lower, interest in taking the failed test again when the audience held a high standard than a low standard, which supports my prediction of inhibited self-serving tendencies. On the Test Perception measure, the InterSC group did not derogate the test as much as the IndeSC group did. They also seemed to have displayed less reactivity in terms of evaluating the test when responding to the audience's different standards (not significantly but descriptively).

The audience's status also came into play in Study 2, in which participants made their responses believing that the audience would view their answers. I hypothesized that when the audience was a high-status person rather than a low-status person, the tendency for those primed

with an IndeSC to be more self-serving toward the audience's high standard than toward its low standard would be more pronounced. However, unexpectedly, the data revealed that this tendency was more pronounced when the audience was a low-status instead of a high-status person. For example, participants primed with the IndeSC believed their performance was more likely to be due to luck, evaluated the test more negatively, and showed less interest in taking the test again when they found that a low status audience held a high standard rather than a low standard). No such contrast was found for the IndeSC group when the audience was a high status person.

Some evidence was found for the inhibited self-serving reaction predictions for the InterSC participants in the high-status audience condition. Although the difference was marginal, the InterSC group evaluated the test less negatively than the IndeSC group did when the audience held a high standard, and more positively than the IndeSC group when the audience held a low standard, and this was especially the pattern in the high-status audience condition rather than the low-status audience condition.

Inconsistent with my hypotheses, however, patterns contradicting strengthened inhibited self-serving reactions in front of a high status audience were found on the luck attribution and the retest intention measures. When the audience held a low standard (indicating positive external evaluation), the InterSC group made more luck attributions than the IndeSC group and expressed less interest in retaking the test than the IndeSC group, a tendency to inhibit self-serving; but it

was especially the case when the audience was a low-status person rather than a high-status person.

Note that across all the dependent measures, the data in Study 2 did not lend support for the prediction that the interdependent participants would inhibit self-serving more strongly in reacting to the audience's high standard than low standard. The interdependent participants did inhibit self-serving when compared with the independent participants; but they were similar to the independent participants in terms of being more self-serving in response to the audience's high standard than low standard.

To sum up, Study 2 suggested that the self-construal prime manipulation was effective in triggering different reactions to feedback. It demonstrated that the IndeSC was associated with higher levels of self-serving tendencies in response to an audience's high standard than low standard, whereas the InterSC was associated with higher levels of inhibited self-serving tendencies. However, the status manipulation did not have an impact on participants' reactions as intended. If anything, the different pattern of reactions between the IndeSC participants and the InterSC participants was unexpectedly magnified when the audience was a low status person, rather than a high status person.

Study 3

Study 2 introduced the audience's standard, which in some cases differed from participants' own standards. Others' standards are relevant in discussing self-esteem concerns versus interpersonal concerns, in that they help clarify whether people with InterSCs would be

self-serving at all (see Study 2's hypotheses). Study 2 suggested that the InterSC participants

reacted less self-servingly than the IndeSC participants in response to the audience's high

standard versus low standard. This finding implies that the InterSC participants inhibited

self-serving tendencies on some of the response measures compared with the IndeSC participants.

However, it is possible that the reason why the InterSC participants in Study 2 inhibited

self-serving tendencies in some conditions was because they received an overwhelmingly

negative test outcome which overrode the potential positive influence of the audience's lenient

standard. It is not immediately clear from Study 2 whether the InterSC people do not self-serve

at all even in the face of success feedback.

In order to overcome the limitations of Study 2, Study 3 was designed with a feature that

allowed a direct examination of the InterSC participants' self-serving tendencies in the face of

positive feedback. Study 3 involved situations in which participants faced a direct conflict

between self-esteem needs and interpersonal needs. Two contrasting feedback type conditions

were created in Study 3 to elicit this conflict. Rather than presenting the participants with the

audience's standards, half of the participants in Study 3 were led to believe that they failed the

test and found that an audience succeeded in the same test. In this situation, one could seek

immediate remedy to self-esteem, whether it be derogating the test or externalizing the result, but

doing so runs the risk of invalidating the other person's success. The other half of the

participants in Study 3 received feedback which indicated that they succeeded in the test while

the audience failed. A person who focuses on social harmony would help the failed audience

restore a positive feeling by downplaying the validity of the test or externalizing the outcome

even if it meant that the positive implications of their own success would have been lessened.

Putting the participants in a situation where there was always a discrepancy between the

participant's performance and another person's performance would conveniently increase the face

concerns of interdependent participants. This manipulation of feedback type is also ecologically

valid, because people typically receive evaluative information about their performances in a

social context where others are performing at different levels.

Publicness of feedback responding situations was also manipulated. Unlike Study 1 which

was conducted in private, or Study 2 in which participants all responded believing that their

answers would be viewed by another person, in Study 3, half of the participants responded to the

post-study questionnaire in a private situation similar to Study 1, whereas the other half

responded in a public situation similar to Study 2. While it is known that self-esteem concerns

are associated with varied self-serving tendencies in public than in private (e.g., Schlenker,

Weigold, & Hallam, 1990; Schneider, 1969; Smith & Whitehead, 1993), it is not clear how

publicness of the situation would affect the self-serving levels of those with social harmony

concerns (i.e., face concerns). It is even less clear how the comparison and contrast of

self-serving levels between people with different self-construals is influenced by publicness.

Therefore, manipulation of publicness is necessary for addressing these questions.

Unlike Study 2 where the audience was either a high status person or a low status person,

Study 3 focused on the high status audience condition. All the participants in the public condition

were told that their responses would be viewed by a senior graduate student. The status

manipulation in Study 2 seemed to suggest that the low status audience (although unexpected)

rather than the high status audience had a greater impact on participants' reactions. However,

those results were hard to interpret because it wasn't clear that participants in Study 2 perceived

the graduate student as higher in status than the high school student. Therefore, the high status

audience condition was focused in Study 3 as both theories of self-enhancement and the notion

of face would suggest that the high status audience manipulation would be the more face valid

operationalization in eliciting either self-serving or inhibited self-serving tendencies.

Design. Study 3 followed a 2 (Feedback type: Self-Succeed Grad-Fail vs. Self-Fail

Grad-Succeed) × 2 (Prime: independent self-construal vs. interdependent self-construal) × 2

(Publicness: public vs. private) between-subject factorial design.

Procedure. The study procedure for the public condition was identical to Study 2, with the

following exceptions (See Figure 5 for an illustration of the study procedure):

a. Like Study 2, Study 3 also involved introducing the alleged "other person" to the actual

participants. Differently from Study 2, the "other participant" in Study 3 was always a senior

graduate student (High Status).

b. Rather than presenting participants with the graduate student's standard, participants were

presented with the graduate student's (allegedly) actual performance. Participants were told that

the graduate student had completed the integrative ability test and were shown that person's

score which was fabricated and manipulated by the experimenter. Two feedback conditions were

created this way: Self-Succeed Grad-Fail feedback (SSGF) and Self-Fail Grad-Succeed feedback (SFGS). For the SSGF feedback, participants were shown low previous scores (between 20 and 60) before their own task started, and thus were provided with a low self-expectation. After being presented with their own results (around 60) when the task was completed, they were led to believe that the senior graduate student received a score lower than their own (around 40, which was around the average of previous scores). For the SFGS feedback, participants were shown high previous scores (between 60 and 100) before the task started, and thus were provided with a high self-expectation. After being presented with their own results (around 60) when the task was completed, they were led to believe that the senior graduate student received a score much higher than their own (around 80, which was around the "norm" of previous scores).

 c. Different from Study 1 in which participants responded to the post-study questionnaires in a completely private and confidential setting, or Study 2 in which participants responded in a public situation, the publicness of the situation in which participants answered post-study questions in Study 3 was manipulated. Half of the participants were randomly assigned to the public condition while the other half to the private condition. The procedure for the public condition was identical to Study 2, where participants answered post-study measures believing that their answers would be viewed by the senior graduate student. In the private condition, participants were told that their answers would be kept anonymous. Specifically, they were told that

(Private condition)"Before you leave, please fill out this anonymous post-study survey. Your

responses will not be disclosed to anyone and will only be used for archival purposes."

Hypotheses.

Predictions for Study 3 are laid out in Table 11. In Study 3, participants found that either

they themselves failed the test and performed below the norm while a high status other

succeeded and performed above the norm (i.e., the SFGS feedback condition), or that they

themselves succeeded in the test and performed above the norm while a high status other failed

and performed below the norm (i.e., the SSGF feedback condition). Participants were then told to

reflect upon and describe their experience in the form of the post-study questionnaire, either in

response to the high status person or in private. The publicness manipulation coupled with the

self-construal prime allows for the examination of conditions in which self-esteem concerns or

other's welfare concerns would each differentially manifest.

As the concept of face would suggest, the interdependent self would be more closely

associated with caring for the face of another person (especially a high-status other, such as a

graduate student) than the independent self would, and this tendency would be more prominent

in public than in private. Behavior in favor of the other's welfare would be aimed at protecting

the other person's image and avoiding humiliating moments for the other person. When a person

succeeds in a test the other person fails, he/she would protect the other person's feelings by

externalizing his/her own success and invalidating the test to make the person look and feel

better. When a person fails in a test the other person succeeds, he/she would uphold the other

person's face by internalizing his/her own failure and praising the test to legitimize the other person's success. In contrast, people who prioritize self-esteem over another person's face (i.e., those primed with the IndeSC) will react defensively to protect their own welfare. Specifically, the following hypotheses were tested:

1. As hypothesized for Study 2, there would be a main effect for prime type. People would show more self-serving responses when primed with an independent self than when primed with an interdependent self, making external attributions, derogating the test and derogating other people in comparison.

2. There would be a main effect for feedback type. People in the SFGS condition would be more self-serving in general than those in the SSGF condition. This pattern would confirm past false feedback research which has consistently suggested that failure feedback evokes more self-defensive responses than success feedback.

3. Prime type would interact with feedback type. Compared with those primed with an InterSC, those primed with an IndeSC would react more negatively to failure feedback, and more positively to success feedback.

4. Prime type would interact with Publicness. Whether receiving SFGS or SSGF feedback, those primed with an IndeSC would be more self-serving in public than in private, whereas those primed with an InterSC would be less self-serving in public than in private.

5. There would be a Prime × Feedback Type × Publicness interaction.

5a. The tendency for the independent self to react more defensively to the SFGS feedback than to the SSGF feedback would be magnified in the public situation as opposed to the private situation.

5b. The interdependent self would be self-serving in private where they would react more defensively to the SFGS feedback than to the SSGF feedback, but their self-serving tendencies toward both types of feedback in private would be weaker than the independent self. Importantly, the interdependent self would inhibit self-serving tendencies in public, and they would be more likely to inhibit self-serving tendencies when reacting to the SFGS feedback than to the SSGF feedback in public.

Participants. Given the similar experimental design to Study 2, an a priori power analysis generated for Study 3 the same sample size recommendations as that in Study 2. That is, an approximate sample size between 150 and 450 is required to achieve a power of 0.9 in detecting a medium to small effect. The approximate sample size required to achieve a power of 0.8 in detecting a medium to small effect is between 120 to 360. A total of 357 college students participated in Study 3, among which 166 students were from Syracuse University and 191 students were recruited though Mechanical Turk. Forty-four (23.0%) participants' data from the Mechanical Turk pool were considered invalid because those participants took an unusual length of time (shorter than fifteen minutes or longer than an hour) for the study. Four participants' data (2.1%) from the Mechanical Turk pool were considered invalid because they did not finish the task even if they passed the time length criterion. A total of 309 participants' data, including all

of the 166 participants' data collected at Syracuse University and 143 participants' data collected

through Mechanical Turk, entered the analysis. In the Syracuse University student sample, the

mean age was 20.1 ($SD = 8.51$) years old. There were 80 males, 85 females, and 1 "other"

gender. On average, 17.6 (out of 36, $SD = 7.20$, or 48.9%) of the Raven's test items were

completed within the five minute time limit, of which an average of 9.9 ($SD = 3.67$, or 56.3%)

items were correct. 55.1% of the participants were Caucasians, 9.5% African Americans, 3.0%

Hispanics, 25.7% Asians, 1.2% Native Americans, and 4.8% other ethnic groups. In the MTurk

student sample, the mean age was 24.6 ($SD = 6.44$) years old. There were 67 males, 73 females,

and 3 "other" genders. On average, 15.0 (out of 36, $SD = 10.84$, or 41.7%) of the Raven's test

items were completed within the five minute time limit, of which an average of 9.27 ($SD = 4.38$,

or 61.8%) items were correct. 63.1% of the participants were Caucasians, 13.5% African

Americans, 7.1% Hispanics, 11.3% Asians, 2.1% Native Americans, 0.7% Pacific Islanders, and

2.1% other ethnic groups.

Results.

    Analyses. The data for Study 3 were analyzed in a similar manner as Study 2. Seven

dependent measures, including Ability Attribution, Effort Attribution, Luck Attribution,

Difficulty Perception, Test Evaluation, Other Similarity, and Retest Intention were entered into

separate Univariate ANOVA analyses to examine the effect of Prime, Publicness, and Feedback

Type on these individual measures. As in Study 2, the variable Test Evaluation was constructed

by taking an average of the ratings for Fairness Perception, Validity Perception, and Clarity

Perception, because these ratings are closely correlated with each other (see Table 12). Results

for each of the three variables separately are listed in the Appendix C. An alpha level of .05 was

be used for all the significance tests. Bonferroni correction was applied to multiple comparisons.

Results did not differ whether the data was collected in the lab or on MTurk, therefore, data from

the two sources were combined.

Manipulation checks.

Self-standard manipulation. Like Study 2, participants were asked to judge on a 10 point

scale (1= 1-10, 10= 91-100) what a typical score would be in the integrative ability test right

after viewing previous scores (either mostly high or mostly low scores). This question was used

to make sure participants did in fact process the information conveyed by previous scores. This

manipulation was effective, as demonstrated by the finding that those who viewed high previous

scores expected a typical score to be significantly higher ($M = 9.06$, $SD = 0.62$, $N = 160$) than

those who viewed low previous scores ($M = 5.55$, $SD = 1.25$, $N = 149$), $F(1, 307) = 801.21$, p

$< .001$.

Other's performance manipulation. Similar to Studies 1 and 2, the initially planned

dependent variable Other Prediction was treated as another manipulation check question because

of the close association between viewing previous participants' scores and predicting other

participants' performance. The result is consistent with both Study 1 and Study 2; those who

viewed low previous scores tended to predict other participants' performance would be

significantly lower ($M = 4.44$, $SD = 1.13$, $N = 147$) than those who viewed high previous scores

did ($M = 4.78$, $SD = 1.19$, $N = 159$), $F(1, 304) = 6.70$, $p = .01$. Notice that there were 3 missing data points in the Other Prediction ratings, resulting in a total number of 306 ratings.

Feedback Type manipulation check. After the participants were introduced to different publicness, prime, and other's performance conditions, they were asked how well they thought they did in the integrative ability test (self-evaluation) on a 7-point scale (1= extremely poor, 7 = extremely well).

The feedback in the current study was manipulated so that participants in the SFGS feedback condition saw high previous scores first, then found they failed the task, and later were told that the graduate student succeeded in the same task; those in the SSGF feedback condition saw low previous scores first, then found they succeeded in the task, and later were told that the graduate student failed. The results showed that feedback type had a significant effect on self-evaluation, $F(1, 292) = 119.6$, $p < .001$. Participants in the SFGS feedback condition considered their performance to be worse ($M=3.21$, $SD = 1.45$, $N = 156$) than those in the SSGF feedback condition did ($M = 4.94$, $SD = 1.25$, $N = 144$). These results confirmed that the manipulation for feedback type was significantly affecting participants' self-evaluation.

Main findings.

Attributions. Similar to Studies 1 and 2, participants were asked to indicate on 5-point scales (1 = not at all, 5 = extremely) the extent to which their ability (Ability Attribution), amount of effort they put into taking the test (Effort Attribution), and luck (Luck Attribution) were responsible for their performance in the post-feedback questionnaire.

It was found that ability attribution was significantly influenced by feedback type, $F(1, 295)$ = 6.28, p = .013, η_p^2 = .021; so was effort attribution, $F(1, 295)$ = 6.94, p = .01, η_p^2 = .023. No such effects were found for luck attribution. Participants in the SFGS feedback condition were less likely to attribute their results to ability (M = 3.15, SD = 1.09 vs. the SSGF feedback condition, M = 3.44, SD = 0.84) or effort (M = 3.19, SD = 1.00, vs. the SSGF feedback condition, M = 3.51, SD = 0.88). These results showed that participants who received the failure (other succeeded) feedback tended to be more self-serving, compared with those who received the success (other failed) feedback. These results supported hypothesis 2, suggesting that failure feedback in general evoked more self-defensive responses than success feedback.

In Study 3, half of the participants responded to the post-feedback questionnaires in a completely private setting which was a similar setup as Study 1 (private condition), whereas the other half responded with the assumption that the graduate student would view their answers, which was similar to Study 2 (public condition). Publicness had a significant influence on ability attribution, $F(1, 295)$ = 4.03, p = .046, η_p^2 = .013, and effort attribution ($F(1, 295)$ = 10.69, p = .001, η_p^2 = .035. No such effects were found for luck attribution. Participants who answered post-feedback questions in a public situation were less likely to attribute their test results to ability (M = 3.17, SD = 0.95 vs. private condition, M = 3.40, SD = 1.00) or effort (M = 3.14, SD = 0.99 vs. M = 3.51, SD = 0.91 in the private condition) than those in the private condition. Other main effects of publicness were not significant. These results seem to suggest that participants were less likely to attribute their outcome to internal factors such as ability and effort in public

than in private. But because the participants either received a desirable outcome or an undesirable performance outcome, it is not clear whether the participants were more or less self-serving in public than in private.

There was not a significant main effect for prime on the attribution measures, nor were there any significant two-way interactions between prime and feedback type on those measures. The Prime × Publicness × Feedback Type interaction was not significant for ability attribution (p = .73, see Table 13 for the means in each level of the conditions). Nonetheless, this three way interaction was noticeable for effort attribution (see Table 14), $F(1, 295) = 2.44$, $p = .12$, η_p^2 = .008. Pairwise comparisons suggested that the IndeSC participants made significantly more effort attribution for the SSGF feedback ($M = 3.88$, $SD = 0.82$) than for the SFGS feedback ($M = 3.28$, $SD = 1.13$) in the private situation, $F(1, 295) = 9.18$, $p = .003$, $\eta_p^2 = .030$. No such significant difference was found for the interdependent participants in private, providing some support for my hypothesis that the IndeSC participants would react more defensively than the InterSC participants to different types of feedback in the private situation. The IndeSC participants also made significantly more effort attribution for the SSGF feedback in the private ($M = 3.88$, $SD = 0.82$) than the public condition ($M = 3.13$, $SD = 1.01$), $F(1, 295) = 11.87$, p = .001, $\eta_p^2 = .039$. This pattern, however, contradicts my hypothesis that there would be a stronger self-serving tendency for the IndeSC participants in the public situation rather than in the private situation. No other pairwise comparisons were found significant.

Test Perception. Similar to Studies 1 and 2, the three dependent measures, Fairness

Perception, Validity Perception, and Clarity Perception, were combined into one composite

variable (Test Evaluation) by taking an average among the three ratings because those were

found to be closely correlated with each other (see Table 12). Results for each of the three

variables are listed in the Appendix C.

Difficulty Perception. Similar to the finding for difficulty perception in Studies 1 and 2,

neither the independent variables nor their interactions had a significant effect on this measure,

$p > .05$.

Test Evaluation. Feedback type had a significant effect on test evaluation, $F(1, 295) = 18.7$, p

$< .001$, $\eta_p^2 = .059$. Participants in the SFGS feedback condition were more likely to derogate the

test ($M = 4.70$, $SD = 1.10$) than those in the SSGF feedback condition ($M = 5.24$, $SD = 1.06$).

Other main effects of feedback type were not significant.

Publicness of the situation had a significant effect on test evaluation, $F(1, 295) = 6.38$, p

$= .012$, $\eta_p^2 = .021$. Participants who answered dependent measure questions in a public situation

were more likely to derogate the test ($M = 4.76$, $SD = 1.12$, vs. $M = 5.11$, $SD = 1.08$) than those

in the private condition.

Prime and feedback type interacted to affect test evaluation (see Table 15 and Figure 8), $F(1,$

$295) = 5.54$, $p = .019$, $\eta_p^2 = .018$. Multiple comparisons suggested that people primed with the

InterSC did not perceive the test to be significantly different whether reacting to the SFGS or

SSGF feedback, $p > .05$. People primed with the IndeSC, on the contrary, rated the test

significantly more negatively when receiving the SFGS feedback ($M = 4.59$, $SD = 1.13$) than when receiving the SSGF feedback ($M = 5.43$, $SD = 0.90$), $F(1, 295) = 22.18$, $p < .001$, η_p^2 = .070, which confirmed hypothesis 2. Participants in the IndeSC condition ($M = 5.43$, $SD = 0.90$) rated the test more positively than participants in the InterSC condition ($M = 4.99$, $SD = 1.64$) after receiving the SSGF feedback, $F(1, 295) = 4.92$, $p = .027$, $\eta_p^2 = .016$. Other multiple comparisons were not significant.

For test evaluation, the two-way interaction revealed above was not qualified by a Prime × Feedback type × Publicness three-way interaction ($p = .93$, see Table 16 for the means in each level of the conditions). It was hypothesized that the tendency for the IndeSC participants to react more defensively to the SFGS feedback than to the SSGF feedback would be magnified in the public situation as opposed to the private situation. While the IndeSC participants rated the test more negatively after receiving the SFGS feedback than the SSGF feedback in both the public (SFGS, $M = 4.36$, $SD = 1.58$, vs. SSGF feedback, $M = 5.29$, $SD = 0.88$, $F(1, 295) = 12.03$, $p = .001$, $\eta_p^2 = .039$) and private (SFGS, $M = 4.79$, $SD = 1.16$, vs. SSGF feedback, $M = 5.52$, SD = .88, $F(1, 295) = 10.20$, $p = .002$, $\eta_p^2 = .033$) conditions, there was only a descriptive trend for this tendency to be more pronounced in the public condition than in the private condition.

Other Similarity. Similar to Study 2 results, when asked how similar they thought other participants were to themselves (Other Similarity) on a 7-point scale, the participants in different conditions did not answer differently.

Retest Intention. Participants were asked whether they would be interested in taking the same test again in the future on a 7-point scale.

Publicness of the situation had a marginally significant effect on and retest intention, $F(1, 295) = 3.03$, $p = .083$, $\eta_p^2 = .010$. Participants who answered dependent measure questions in a public situation expressed less interest in taking the same test again ($M = 3.32$, $SD = 1.14$) than those in the private condition ($M = 3.57$, $SD = 1.07$) did.

Prime and feedback type interacted to affect participants' interest in taking the same test again (see Table 17 and Figure 9), $F(1, 295) = 8.26$, $p = .004$, $\eta_p^2 = .027$. When the IndeSC was primed ($M = 3.84$, $SD = 0.96$), participants were more willing to take the test again after receiving the SSGF feedback, compared with the InterSC participants ($M = 3.25$, $SD = 1.21$), $F(1, 295) = 8.90$, $p = .003$, $\eta_p^2 = .029$. In addition, although feedback type did not significantly affect people's intention to retake the test when they were primed with the InterSC, $p > .05$, those primed with the IndeSC were significantly less willing to take the test again after receiving the SFGS ($M = 3.24$, $SD = 1.06$) rather than the SSGF feedback ($M = 3.83$, $SD = 0.96$), $F(1, 295) = 9.63$, $p = .002$, $\eta_p^2 = .032$, which, again, confirmed hypothesis 2.

The two-way interaction was not qualified by a Prime × Feedback type × Publicness three-way interaction ($p = .32$, see Table 18 for the means in each level of the conditions). It was predicted that the tendency for the IndeSC participants to showed higher level of interest in taking the test again after receiving the SSGF feedback than the SFGS feedback would be more pronounced in the public condition than the private condition (see Hypothesis 5a). However, the

only significant simple comparison suggested that this tendency was especially pronounced in the private condition instead (SSGF feedback, $M = 3.94$, $SD = 0.93$, vs. SFGS feedback, $M = 3.17$, $SD = 1.13$), $F(1, 295) = 10.85$, $p = .001$, $\eta_p^2 = .035$.

Recall. Recall data were coded and analyzed using the same procedure as in Study 2. Inter-rater reliability was $r = .86$ for recall of the positive sentences and $r = .97$ for the negative sentences. Only correctly recalling the specific behavior that was presented was considered correct recall. Free recall data were analyzed through a Repeated Measure Mixed ANOVA with positivity of the behavior being the repeated measure and prime, publicness, and feedback type being the between-subject factors.

There was a marginally significant effect for positivity of the behavior sentences on the amount of free recall, which showed that participants recalled more positive ($M = 2.37$, $SD = 1.33$) than negative behavior ($M = 2.22$, $SD = 1.27$), $F(1, 284) = 3.16$, $p = .077$, $\eta_p^2 = .011$.

There was a significant Positivity × Prime × Publicness interaction effect on the amount of free recall (see Table 19 and Figure 10), $F(1, 284) = 3.88$, $p = .050$, $\eta_p^2 = .013$. Pairwise comparisons showed that when responding in public, participants in the IndeSC group recalled significantly more positive self-relevant behavior ($M = 2.61$, $SD = 1.34$) than negative behavior ($M = 2.17$, $SD = 1.01$), $F(1, 284) = 4.87$, $p = .028$, $\eta_p^2 = .017$. Other pairwise comparisons were not significant.

Study 3 Summary and Discussion

Study 3 aimed at examining how people react to feedback in comparison with another

person's performance in either a public or a private situation, and how their responses were influenced by their self-construal. The participants first compared their own performance to a pre-established "norm" and then found that another person either performed better or worse than them in the same task. The other person was described as a higher status person (a senior graduate student) in order to maximize the possible effect of caring for that person's welfare. Participants were then asked about attributions for their outcomes, perception of the task, and motivation to take the test again either in private or in public (knowing that the audience would view their responses).

The nature of feedback had a general impact on how people reacted to that feedback. All the participants in Study 3 showed an average tendency to be more self-serving after receiving failure feedback than success feedback. They assumed less personal responsibility and rated the test more negatively for the failure feedback than the success feedback for themselves, presumably to defend a positive self-view.

Publicness of the situation in which participants responded to the feedback mattered. Whether for the failure or success feedback, and no matter what self-construal the participants were primed to hold, participants in Study 3 had a general tendency to be less willing to acknowledge the importance of ability and effort, rate the test negatively, and expressed less interest in taking the test again in public than in private.

Self-construal type played an important role in moderating participants' responses to different types of feedback. Specifically, the independent participants were more likely to

derogate the test when they failed than when they succeeded, and showed a stronger tendency to

self-serve in this manner than the interdependent participants. The IndeSC was associated with

being more derogating of the test when receiving failure feedback than success feedback than

was the InterSC. The IndeSC participants also expressed less interest in taking the test again after

receiving failure feedback than success feedback, whereas the InterSC participants expressed

more interest in retaking the test in response to failure feedback than success feedback.

Publicness had an impact on how participants primed with different self-construals

responded to different types of feedback. I predicted that the IndeSC group would become more

self-serving in public than in private. This prediction received support on only one response

measure: Recall. The IndeSC participants' tendency to recall more positive self-relevant

descriptions than negative ones was found to be more prominent in public than in private. This

prediction, on the other hand, was contradicted by the findings on two other response measures:

effort attribution and retest intention. The tendency for the IndeSC participants to make lower

effort attribution sand show lower interest in taking the test again after receiving failure than

success feedback was found to be more pronounced in the private condition than the public

condition.

I also predicted that unlike the IndeSC group, the InterSC group not only would show

self-serving reactions to feedback in private, but also would inhibit self-serving tendencies in the

face of feedback in public. Findings for the success feedback condition supported this prediction.

Those primed with an InterSC showed lower interest in taking the test again and evaluated the

test more negatively than those primed with an IndeSC did after receiving the SSGF feedback, and they did so especially in public than in private. No such effects were found for the failure feedback condition, though, or for any other dependent variables. This may be a sign that the interdependent participants were concerned about caring for the graduate student's welfare when they were told that the graduat student had failed in the same test and that their responses would be viewed by the graduate student.

To sum up, Study 3 found further support for the findings in Study 2 that suggested that the self-construal prime manipulation was effective in triggering different responses to feedback. Consistent with findings in Study 2, the IndeSC was associated with stronger self-serving tendencies than the InterSC. The addition of the SSGF condition in Study 3 evoked inhibited self-serving tendencies in the interdependent participants, which supported the notion that the interdependent participants cared for the audience at the expense of their own self-esteem even in the face of positive feedback. The manipulation of publicness of feedback responding situations also had an impact on participants' responses to feedback. The IndeSC participants' self-serving tendency was more in evident in public than in private (with an exception for the Effort Attribution measure). However, the prediction that the interdependent participants would inhibit their self-serving tendencies to a greater extent in public than in private did not receive much support in Study 3.

General Discussion

The current research examined situations in which self-esteem concerns and interpersonal

concerns dominate social encounters, respectively. Of major interest were people's distinctive behavior patterns in these situations. Three studies were conducted to illustrate that social contexts put important constraints on one's responses to negative feedback.

All three studies making up the current research involved false feedback which was provided in the form of a bogus test score allegedly reflecting an important but conceptually vague ability – "Integrative Ability". In these studies, all the participants received the same test score, but were provided with the opportunity to view various previous participants' scores which were fabricated and manipulated by the experimenter prior to taking the test. Thus, whether the test score implied positive or negative performance depended on whether the participants were shown low previous scores or high previous scores. Participants in Studies 1 and 3 received either the high score version or the low score version for previous scores, whereas those in Study 2 all received the high score version.

Study 1 was conducted with complete confidentiality where participants were told to respond to feedback in private. Studies 2 and 3 involved some kind of social situation manipulation. Participants in Study 2 were told that their responses after receiving the feedback would be viewed by another person of varied status who held a different standard for evaluating their performance than their own. Study 3 involved the manipulation of the publicness of the situation, while all the participants were told to respond to another person whose actual score was either higher or lower than both their own and the "norm". In Studies 2 and 3, participants

were randomly assigned to receive either an IndeSC prime or an InterSC prime prior to providing their responses to the feedback they had received.

The various social situation manipulations that unfolded in the three studies allowed the self-serving tendencies participants exhibited to fluctuate with regard to self-construal, nature of the feedback, the audience's standard, the audience's status, and the publicness of the responding situation. While some results of Studies 2 & 3 did not conform closely to my hypotheses, there were still significant effects that were consistent with some of the expected trends. In particular, consistent results on the dependent measures Test Evaluation and Retest Intention emerged across Studies 2 and 3, with the IndeSC being associated with stronger tendencies to self-serve than the InterSC on these measures. Lack of consistent results was found on other dependent measures between Study 2 and Study 3, including attributions made for the test outcome and recall for the detailed feedback. The following is a discussion of the findings for each of the critical factors involved in these three studies.

Feedback type

Based on findings from Studies 1 and 3, feedback type greatly impacted people's responses. In both studies, feedback type was manipulated in such a way that half of the participants found that their test performance exceeded the "norm" the experimenter had pre-established in their mind (i.e., failure feedback), whereas the other half received success feedback. Both studies revealed a main effect for feedback type on a number of dependent measures. Participants who received the failure feedback tended to be more self-serving, compared with those who received

the success feedback in both studies, and this effect persisted regardless of self-construal, publicness, audience's status, or audience's standard. These findings confirmed the notion that failure feedback evoked more self-defensive responses than success feedback in general.

Self-construal

Self-construal was manipulated in Studies 2 and 3, where half of the participants were primed to hold a temporary IndeSC, and the other half an InterSC. Priming was found to influence how people react to feedback in both studies, which supported the prediction that the self-serving tendency is more strongly associated with an IndeSC than an InterSC.

Study 2 demonstrated that the independent participants made more luck attributions when they found that an audience held a stringent standard rather than a lenient standard, and they did so to a greater degree than the interdependent participants. Study 3 found that the IndeSC participants, but not the InterSC participants, recalled more positive feedback than negative feedback (mainly in public). Both Studies 2 and 3 demonstrated that the IndeSC participants who received unfavorable evaluation rated the test more negatively and expressed less interest in taking the test again than those who received favorable evaluation, and that they did so to a greater degree than the InterSC participants. These results suggest that an IndeSC is associated with greater reactiveness to feedback type than an InterSC. These findings confirmed my hypotheses that people's responses to various types of feedback are influenced by their self-conceptions.

These findings are in line with the distinction made between independent and interdependent self-concepts as a generalization for the distinction between individualistic and collectivistic cultures. Cross-cultural research that has examined the impact that cultural variations in the self-concept have on self-serving tendencies has found that in general, people from collective cultures are less self-serving in response to false feedback than those from individualistic cultures (Heine & Hamamura, 2007; Heine, Kitayama, & Hamamura, 2007; Takata, 2003). These cross-cultural differences can also be explained by self-construal differences. In other words, those cross-cultural studies imply that members of individualistic cultures possessing an independent form of self show greater self-serving biases than members of collectivistic cultures who embrace an interdependent sense of self. While the current study did not directly compare different culture groups, the notion that the IndeSC and the InterSC coexist within both individualistic cultures and the collectivistic cultures has received wide recognition (see Cross et al., 2011 for a review). The independent–interdependent self construal model is a more general extension of the individualistic–collectivistic cultural distinction, from which it could be inferred that people with an interdependent self construal are less likely to show self-serving tendencies than those with an independent self construal, a generalization supported by the current study.

There has not been much research linking self-construal to self-serving responses to false feedback (see Jacobson et al., 2012 for an exception). These findings are consistent with previous research which suggested that type of self-construal significantly influences people's values and their perception of events (Gardner et al., 1999; Lalwani & Shavitt, 2009; Oishi,

Wyer, & Colcombe, 2000). For instance, Lalwani and Shavitt (2009) used the same priming procedure as the current research and found that participants with a salient IndeSC had a greater tendency to engage in self-deceptive enhancement (as reflected on a scale) than did those in the InterSC condition (Study 1). Oishi, Wyer, and Colcombe (2000) found that people who were subliminally primed with independence-related concepts provided more internal attributions for another person's negative outcomes compared with those who were primed with interdependence-related concepts (but see Krull et al., 1999). Jacobson et al. (2012) found that when participants were primed with an InterSC (using the same priming procedure as in the current study) they were equally accepting of positive and negative health related feedback. These findings, along with findings in the current research, suggest that when an independent sense of self-concept is aroused, a tendency toward self-centrism emerges.

The inhibited self-serving tendencies exhibited by the InterSC groups are in line with the conceptualization of face which involves concerns about social and interpersonal harmony. Face concerns are known to be more important to people who live in a collectivistic culture where an InterSC is more prevalent and more culturally adaptive. Face concerns are less likely to lead to self-serving behavior in general due to their relational nature. Therefore, face might have played a role in moderating self-serving levels participants exhibited in the current studies, although face was not formally operationalized or measured in the current studies. Furthermore, it is reasonable to draw a connection between an InterSC and concerns about face because both

constructs share the common emphasis on interpersonal dependence and other's needs (Cross,

Bason, & Morris, 2000).

Audience's standard

The current research also suggests that how people respond to failure feedback is influenced

by their representation of the audience's standards. Study 2 manipulated audience standard in

such a way that half of the participants found that an audience held a high standard in evaluating

their test outcome, while the other half of the participants found that the audience held a low

standard. Recall that all the participants received negative feedback in Study 2 because they were

all shown a high-score version for "previous scores" prior to the task.

Confirming my hypotheses, Study 2 revealed that the IndeSC participants were more

concerned about being self-serving than the InterSC participants when they knew the audience

thought they did poorly than when they knew the audience thought they did well. Specifically,

the IndeSC participants, more than InterSC participants derogated the test, attributed the outcome

to more luck, and showed decreased interest in retaking the test after learning about the other

person's high standard than after learning about the other person's low standard. The InterSC

participants showed a stronger tendency to express interest in retaking the test and evaluate the

test positively (although this difference was not statistically significant) after receiving the other

person's high standard than low standard, as opposed to the IndeSC participants. Overall, the

InterSC was found to be associated with lower levels of reactiveness toward the audience's

different standards.

The finding that the other's standards have an effect on people's reactions is consistent with a number of traditional social psychology theories of the self. For instance, Cooley's century old theory of the "looking-glass self" (1902/1964) proposed that people understand their selves through the eyes of others. Contemporary research on self-regulation (Moretti & Higgins, 1999 a, b) has provided ample evidence in support of this view, suggesting that how people evaluate themselves and perceive the difficulty of their goals is greatly influenced by the perceived expectations of others.

There has been scant research that has examined people's reactions to the other's standards as a function of self-construal (see White, Lehman, & Cohen, 2006 for a relevant study). The current research filled the gap in the literature and suggested that the InterSC seems to be associated with acceptance of the audience's different standards. When the InterSC was primed, people exhibited less self-enhancement after exposure to the audience's low standard and fewer self-defensive reactions after exposure to the audience's high standard, compared to when the IndeSC was primed. This finding is consistent with White, Lehman, and Cohen's (2006) research, which showed that people who were primed with an InterSC experience less positive affect after exposure to a downward comparison target and also less negative affect after exposure to an upward comparison target, a similar nondefensive reaction to different types of feedback situations as was found in the current study.

The findings related to the interaction between self-construal and an audience's standard lend support to the role face plays. The benevolent reactions displayed by the participants primed

with the InterSC can potentially be explained by face concerns. When a person is concerned about face, he or she reacts in a way that maintains social harmony and avoids direct confrontations. Defending against the other's high standard in a public situation may undermine the credibility of the other's standard, hurt the other's public image, and thus cause face loss for the other. In a similar vein, savoring the other's low standard in public may convey to the other an impression of arrogance and narcissism, which may cause face loss for oneself. Alternatively, reacting in compliance to the other's standards sends a signal of respect, appropriateness and caring for the other's opinions, which saves face for both sides. Therefore, although the current research did not directly operationalize and measure face concerns, these findings regarding self-construal and audience's standards are consistent with the face account.

Audience's Status

The current research found some support for the role audience's status plays in one's response to feedback. Audience's status was manipulated in Study 2 in such a way that half of the participants were made to believe that their responses to feedback would be viewed by a senior graduate student (the high status audience condition), whereas the other half by a high school student (the low status audience condition). Audience's status was found to moderate the self-serving reactions to feedback of participants who were primed with either an IndeSC or an InterSC.

I expected to find that a high status audience would have a greater impact on both the IndeSC group and the InterSC (in diverging directions) than a low status audience. To members

of the IndeSC group who are concerned about self-esteem, evaluations from a high status audience carries greater power than those from a low status audience. A person who emphasizes self-esteem would feel more compelled to defend against a high status other's criticism than a low status other's because impressing a high status audience is more important than impressing a low status audience. Thus, it was predicted that the IndeSC would be associated with greater reactiveness to the high status audience's varied standards than the low status audience's. To people in the InterSC group who are concerned about the other's welfare and interpersonal harmony, upholding the high status audience's opinions is more important than upholding the low status audience's. Therefore, it was predicted that the InterSC would be associated with greater inhibited self-serving tendencies in responding to the high status audience's varied standards than to the low status audience's.

For the InterSC group, there was some marginal evidence in support of the more pronounced inhibited self-serving reaction prediction in the high-status audience condition than in the low-status audience condition. The tendency for the InterSC group to evaluate the test less negatively when the audience held a high standard and more positively when the audience held a low standard compared to the IndeSC participants was more pronounced when the audience was a high-status person than a low-status person. This finding is consistent with the concept of face, as a major part of how much face a person possesses hinges on that person's position in the social hierarchy. A face-centered person who is focused on preserving social rank and harmony is comfortable with not impressing a high status person because the high status person in any

given interaction is supposed to have greater power to judge the other (most often negatively). Receiving negative comments from a low status person, on the other hand, is a signal that interaction rules have been disrupted because a low status person is not in a position to criticize and thus embarrass the other. After all, the upholding of the higher-positioned person's face is always expected from face-centered people (Chang & Holt, 1994) in a given hierarchical relationship.

Most results involving Other Status, however, did not support my hypotheses and suggested that an audience of a low status rather than high status made a greater difference in affecting participants' reactions to feedback. For instance, the tendency for the IndeSC group to make more luck attributions, evaluate the test more negatively, and express less interest in taking the test again when the audience held a high standard rather than low standard was found to be more pronounced when the audience was a low-status rather than a high-status person. In other words, the self-serving reactions observed in the IndeSC participants were more pronounced in the low-status audience condition than the high-status audience condition. Similarly, the inhibited self-serving tendency found with the InterSC participants as manifested in being less likely to make luck attributions and in expressing more interest in taking the test again in response to the audience's high versus low standard was more pronounced in the low-status audience condition than in the high-status audience condition.

Despite enormous attention paid to false feedback and self-serving tendencies (see Hepper, Gramzow, & Sedikides, 2010 for a review), researchers have surprisingly largely ignored

whether the feedback giver's status moderates people's self-serving responses. Two relevant

studies were conducted in the area of social comparison in connection with self-evaluation, but

suggested inconsistent conclusions. Webster, Powell, Duvall, and Smith (2006) found that

college students who underperformed a lower-status other felt worse about themselves than

students who underperformed a higher-status other. This finding implied that the reason why the

IndeSC participants in the current research (Study 2) showed greater reactiveness to audience's

varied standards in the low-status audience condition rather than the high-status audience

condition may be because they felt worse when a low-status person sent them the message that

they did poorly. However, Zell, Alicke, and Strickhouser (2015) found that college students who

outperformed a fictitious participant evaluated the participant more positively than those who

underperformed the participant, and this tendency was more pronounced when the other

participant was higher in status than when the other participant was equal or lower in status.

Considering these findings together with the current study, it is not clear how exactly status

influence people's responses to evaluative feedback.

Publicness of feedback responding situation

Publicness seemed to have played a role in affecting how participants responded to feedback,

although findings from the current research did not confirm the hypotheses tested regarding to

the effect of publicness.

Publicness was manipulated in Study 3, where half of the participants responded to the

post-study questionnaire in a public situation, and the other half responded in a private situation.

It was hypothesized that the differences in self-serving behavior between the independent participants and interdependent ones would be magnified in public relative to in private. When responding to feedback in a public situation, the independent self would prioritize his/her self-esteem and focus on his/her own public image, whereas the interdependent self would emphasize social harmony and making sure that no one gets humiliated in the ongoing social interaction even if it means he or she needs to inhibit his or her own self-esteem and public image promotion needs. The finding for the recall measure was consistent with this notion. That finding revealed that when responding in public, participants in the IndeSC group recalled significantly more positive self-relevant behavior than negative behavior. No such contrast was found with the IndeSC participants in private, or with the InterSC participants either in public or private.

However, other findings from Study 3 in the current research provided no positive evidence to support the hypotheses tested related to publicness. Study 3 found that in general, participants tended to externalize the feedback they received more when in public than when in private. They were found to be less likely to make ability and effort attributions publicly than privately for the feedback they received. Participants who responded in a public situation were also on average more likely to derogate the test and expressed less interest in taking the test again than those in the private condition. It is difficult to interpret these effects because these effects did not depend on whether the participants received failure feedback or success feedback.

Furthermore, the IndeSC participants who were told that they failed on the test on which a high status person succeeded showed self-serving tendencies by expressing lower interest in taking the test again than those who were told that they succeeded on the test on which a high status person failed. This tendency was found to be more pronounced in the private condition rather than the public condition, which contradicts my prediction. The IndeSC participants also evaluated the test more negatively after receiving the Self-Fail Grad-Succeed feedback than those who received the Self-Succeed Grad-Fail feedback, but this self-serving response was not more pronounced in the public condition than in the private condition (despite a descriptive trend in that direction).

The differentiation between private and public feedback has its precedents in the literature mainly conducted with Western participants. Studies based on a self-presentational enhancement account suggested that Western participants are more self-serving after public failures than private ones arguably due to public image concerns (Baumeister & Jones, 1978; Frey, 1978; Greenberg & Pyszczynski, 1985). An opposite pattern was obtained in other studies when self-presentational enhancement was made undesirable because the participants were led to believe that an audience was going to check the accuracy of information they provided (Smith & Whitehead, 1993; Arkin et al., 1980; Brown & Gallagher, 1992; Greenberg et al., 1982; Ross, Biebrauer, & Polly, 1974; Weary, 1980). Nevertheless, none of these previous studies considered the role self-construal and interpersonal concerns play in affecting people's responses to feedback in public versus in private. Study 3 provided data to fill this gap, suggesting that the

IndeSC participants were more self-serving when responding in private than when responding to an audience when it came to effort attributions and retest intentions. However, they were less self-serving in private than in public when asked to recall feedback descriptions. These contradictory results may partly be due to the difference between self-report (of Effort Attribution and Retest Intention) and recall (spontaneously) measures. Nevertheless, neither the measure difference, nor the self-presentational enhancement account nor the information accuracy account proposed in previous research could satisfactorily explain these results.

The publicness of the responding situations was not exactly a face-to-face interaction; rather, participants were told that the audience was in a different room and would review their responses. Despite minimum face-to-face interaction, the current research found effects for the audience's standards and status. This implies that if follow up research was to involve face-to-face interaction between the participants and the audience, there might be even stronger effects elicited by the audience.

Conclusions

The current series of studies to my knowledge is the first false feedback research which systematically varied feedback source and interpersonal context to examine their impact on people's reactions to feedback.

These studies demonstrated that experimentally primed self-construal has an impact on people's responses to feedback. Across two studies, it was consistently found that temporarily activated independent self-construal (IndeSC) was associated with self-serving responses to

feedback, and interdependent self-construal (InterSC) was associated with inhibited self-serving responses. Differential responses exhibited by the IndeSC individuals and the InterSC individuals were found to be influenced by characteristics of feedback source and interpersonal context including audience's standard, audience's status, and pubicness. These findings lend support to the notion that people with different self-conceptions achieve well-being through diverging routes, the InterSC individuals through caring for the other's welfare (e.g., face) while the IndeSC individuals through caring for self-esteem.

In conclusion, the current research examined the impact self-construal and interpersonal contexts have on one's reactions to negative self-relevant information using newly developed perspectives provided by cross-cultural research (i.e., the concept of face). This research addressed a gap in past false feedback research which largely ignored the role self-construal and interpersonal context play in shaping people's responses. This research provided evidence for the argument that social contexts put important constraints on one's self-serving responses to negative feedback, and that people's way of construing their selves has an impact on how they interact with their immediate social situations regarding negative feedback.

The current research has benefited from existing cultural comparisons of individuals' self-serving tendencies which have suggested universal patterns in some cases but cultural differences in others. Findings in the current research helped to clarify the principles that not only encompass past findings in false feedback research, but also accommodate the effects of cultural variations. This research implied that the independent self-construal individuals and the

interdependent self-construal individuals likely achieve a sense of wellbeing through diverging routes, namely, self-esteem enhancement versus interpersonal harmony management.

Limitations and future directions

This line of research adds to the false feedback literature by proposing that self-construal, feedback source and interpersonal context influence individuals' responses to self-relevant feedback. Future research might continue to address unanswered questions in this research both in methodology and in theoretical aspects.

First, I hypothesized that a high-status audience rather than a low-status audience would have greater impact on both the IndeSC and the InterSC individuals' reponses to feedback. The results indicated the opposite pattern where both the self-serving tendencies exhibited by the IndeSC individuals and the inhibited self-serving tendencies exhibited by the InterSC individuals tended to be associated with low-status rather than high-status audience. These findings are inconsistent with the notion that self-esteem is more severely threatened by a higher rather than lower status other, nor are they in line with the concept of face which emphasizes protecting the integrity of the higher status rather than lower status interactant. The current research did not contain a manipulation check question to ask whether participants perceive the Graduate student to be higher than them in status, and the high school student to be lower than them in status. Therefore, it is unclear whether the status manipulation worked as intended. An alternative explanation could be that the participants who were mostly freshmen and sophomores perceived the high school students as peers and thus considered their standards to be more important than a

the standards of a graduate student, who seemed irrelevant to undergraduate students. Another

alternative account could be that as undergraduate students, the participants in the current

research may have been more concerned about impressing a high school student than a graduate

student because of a desire to be a "role model" and/or to maintain their superior status in front

of the high school student, but not in front of the graduate students. More research with an

improved manipulation of audience's status and manipulation checks should be conducted to

explore these alternatives and clarify these findings.

Second, I hypothesized that responding to an audience rather than responding privately

would have a greater impact on both the IndeSC and the interSC individuals' responses to

feedback. Despite the support for this hypothesis provided by the recall measure for the IndeSC

individuals, no such effect was found on the same measure for the InterSC individuals. Moreover,

opposite tendencies were revealed in the IndeSC individuals on other dependent measures such

as attribution and retest intention. No supportive evidence was found for the InterSC individuals

on these same or other dependent measures. One should acknowledge that there are underlying

differences in the nature of the recall measure and the other dependent variable measures, which

were self-report measures. Nevertheless, it is odd to find that the IndeSC individuals were less

self-serving in public than in private on self-report measures which by nature supposedly induce

more self-presentational enhancement in public than in private. As suggested by some previous

research (see Brown & Gallagher, 1992, and Smith & Whitehead, 1993, for examples), this

could be because participants feared that the information they provided would be subject to the

audience's scrutiny. This reasoning, however, is not robust because the two response measures which produced significant differences, Effort Attribution and Retest Intention, were both highly subjective measures and participants should have felt free to boast on these measures without worrying about being scrutinized. Therefore, more research is needed to clarify the influence the publicness of the situation has on people's responses to feedback. Future research which manipulates publicness should consider the role self-presentation concerns, information scrutiny concerns, and the characteristics of the measures play in accounting for variations in individuals' responses.

Last but not least, the discussion of audience's status and publicness of situation is relevant because these are important contextual factors derived from the concept of face. This research benefited from the discussion of face in that it offered novel factors to explain variations in people's responses to false feedback. More importantly, results from this research offered implications for developing a unifying account for various responses to feedback. This account, as discussed elsewhere, would be based on the notion that different individuals (e.g., possessing different self-construals) may achieve social well-being through two different routes, one centered around self-esteem and the other centered around face(also see Figure 2). The current research did not directly examine this account because face was not sufficiently operationalized, manipulated or measured; neither was social well-being. Future research could carry on this exploration, tapping into the different roles self-esteem concerns and face concerns play in affecting the social wellbeing outcomes of different individuals.

One who argues against studying face in the context of a Western culture may be concerned about the fact that most Westerners are foreign to the concept of face, making it difficult for the manipulation of face to elicit the desired variability among the Western participants. One approach to this issue could be to examine face-related phenomena cross-culturally. Another, more cost efficient approach is to conduct regional comparisons within the US society. The culture of honor such as that dominates many states in the southern US shares similar assumptions and cultural scripts with the culture of face (Leung & Cohen, 2011). Behaviors and situations involved in defending for honor in many ways overlap with those involved in saving face. Therefore, it may be feasible to compare how individuals react to feedback in the culture of honor as opposed to in the culture of dignity in the northern US to shed light on the distinction between saving face and maintaining self-esteem.

Appendix A Tables and Figures

Table 1

Correlations between the test perception measures in Study 1

Test Perception	Difficulty	Fairness	Validity	Clarity
Difficulty	1			
Fairness	-.24*	1		
Validity	.04	.51**	1	
Clarity	-.14	.20	.18	1

Note. * *p* < .01; ** *p* < .001.

Table 2

Descriptives and effects of feedback type on response variables in Study 1

	Positive feedback (n = 39)	Negative feedback (n = 56)	p-value	η_p^2
	M (SD)	M (SD)		
Ability attribution (1-5)	3.64 (0.87)	3.09 (0.90)	.004	.087
Effort attribution (1-5)	3.64 (0.67)	3.36 (0.90)	.10	.029
Luck attribution (1-5)	1.90 (0.88)	1.88 (0.81)	.90	.00
Difficulty perception (1-7)	5.13 (1.26)	4.93 (1.28)	.45	.01
Test evaluation (1-7)	5.70 (1.00)	4.87 (1.13)	.001	.13
Other prediction (1-7)	3.97 (1.16)	4.71 (1.19)	.003	.089
Other similarity (1-7)	3.90 (1.45)	4.38 (1.12)	.07	.034
Total	N = 95			

Table 3

Study 2 predictions

		IndeSC	InterSC
Graduate Student	High Standard	Self-serving++++: Externalize failure, derogate the test, avoid retaking	Inhibited self-serving----: Externalize success, derogate the test, avoid retaking
	Low Standard	Self-serving++: Internalize success, praise the test, interest to retake	Inhibited self-serving--
High school	High Standard	Self-serving+++	Inhibited self-serving---
Student	Low Standard	Self-serving +	Inhibited self-serving-

Note. "+" and "-" signs are used to differentiate self-serving responses (+) from inhibited self-serving (-) responses. Number of "+" or "-" represents the strength of the predicted effects in such a way that the more signs indicate the stronger predicted tendencies. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal.

Table 4

Effect of prime and audience's standard on luck attribution in Study 2

Luck attribution*	IndeSC	InterSC
	M (*SD*)	*M* (*SD*)
High standard	2.12 (1.04)	2.00 (0.95)
Low standard	1.72 (0.89)	2.09 (0.94)

Note. * *p* < .05. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal.

There was a significant Prime × Standard interaction for luck attribution, $F(1, 244) = 3.95$, $p = .048$, $\eta_p^2 = .016$.

Table 5

Means of luck attribution for each condition in Study 2

Luck attribution (*ns*)		IndeSC	InterSC
		M (*SD*)	*M* (*SD*)
Graduate	High standard	2.07 (0.94)	2.00 (0.85)
	Low standard	1.78 (0.85)	2.06 (0.86)
High school	High standard	2.17 (1.12)	2.00 (1.01)
	Low standard	1.67 (0.92)	2.12 (1.02)
Total	*N* = 252		

Note. ns = non-significant. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. The Prime × Standard× Status three-way interaction was not significant despite a significant simple comparison between the low standard and high standard cells in the IndeSC high-school condition, $F(1, 244) = 4.67$, $p = .032$, $\eta_p^2 = .019$, and a marginal simple comparison between the IndeSC and InterSC cells in the high-school low standard condition, $F(1, 244) = 3.41$, $p = .056$, $\eta_p^2 = .015$.

Table 6

Correlations between the test perception measures in Study 2

Test perceptions	Difficulty	Fairness	Validity	Clarity
Difficulty	1			
Fairness	-.15*	1		
Validity	.02	.49**	1	
Clarity	.05	.23**	.31**	1

Note. * *p* < .01; ** *p* < .001.

Table 7

Effect (non-significant) of prime and audience's standard on test evaluation in Study 2

Test evaluation (*ns*)	IndeSC	InterSC
	M (*SD*)	*M* (*SD*)
High standard	4.66 (1.04)	4.97 (0.95)
Low standard	5.14 (0.89)	5.34 (0.94)

Note. ns = non-significant. IndeSC = Independent self-contrual; InterSC = Interdependent

self-construal. Prime had a marginal effect on test evaluation, $F(1, 244) = 3.44$, $p = .065$, η_p^2

= .014. The Prime × Standard interaction for test evaluation was not significant, $p = .70$.

Table 8

Means of Test Evaluation for each condition in Study 2

Test evaluation (*ns*)		IndeSC	InterSC
		M (*SD*)	*M* (*SD*)
Graduate	High standard	4.68 (1.17)	5.03 (1.10)
	Low standard	5.06 (1.12)	5.30 (0.80)
High	High standard	4.65 (1.12)	4.93 (1.20)
school	Low standard	5.20 (1.22)	5.37 (1.01)
Total	*N* = 252		

Note. ns = non-significant. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. The Prime × Other Standard × Other Status interaction was not significant for test evaluation, p = .91. There was a significant simple comparison between the low standard and high standard cells in the IndeSC high-school condition, $F(1, 244) = 4.30$, $p = .039$, $\eta_p^2 = .017$.

Table 9

Effects of prime and audience's standard on retest intention in Study 2

Retest intention*	IndeSC	InterSC
	M (*SD*)	*M* (*SD*)
High standard	3.14 (0.93)	3.52(0.96)
Low standard	3.50 (1.03)	3.36 (0.99)

Note. * *p* =.05. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal.

There was a significant Prime × Standard interaction for retest intention, $F(1, 244) = 3.84$, $p = .05$, $\eta_p^2 = .015$.

Table 10

Means of retest intention for each condition in Study 2

Retest intention (*ns*)		IndeSC	InterSC
		M (*SD*)	*M* (*SD*)
Graduate	High standard	3.33 (.84)	3.43 (1.04)
	Low standard	3.48 (1.01)	3.45 (0.79)
High school	High standard	2.97 (0.99)	3.58 (0.92)
	Low standard	3.52 (1.06)	3.27 (1.15)
Total	*N* = 251		

Note. ns = non-significant. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. The Prime × Other Standard × Other Status interaction was not significant for retest intention. There was a significant simple comparison between the low standard and high standard cells in the IndeSC high-school condition, $F(1, 244) = 5.02$, $p = .023$, $\eta_p^2 = .021$. There was also a significant simple comparison between the IndeSC and InterSC cells in the high-school high standard condition, $F(1, 244) = 7.00$, $p = .009$, $\eta_p^2 = .028$.

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Table 11

Study 3 predictions

		Self-Fail Grad-Succeed	Self-Succeed Grad-Fail
Private	IndeSC	Self-serving+++: Externalize failure derogate the test, avoid retaking	Self-serving+: Internalize success, praise the test, interest to retake
	InterSC	Self-serving+	Self-serving
Public	IndeSC	Self-serving++++	Self-serving++
	InterSC	Inhibited self-serving----	Inhibited self-serving--

Note. "+" and "-" signs are used to differentiate self-serving responses (+) from inhibited

self-serving (-) responses. Number of "+" or "-" represents the strength of the predicted effects in

such a way that the more signs indicate the stronger tendencies. IndeSC = Independent

self-contrual; InterSC = Interdependent self-construal.

Table 12

Correlations between the test perception measures in Study 3

Test perceptions	Difficulty	Fairness	Validity	Clarity
Difficulty	1			
Fairness	.13*	1		
Validity	.18*	.51**	1	
Clarity	.07	.24**	.18**	1

Note. * $p < .01$; ** $p < .001$.

Table 13

Means for ability attribution in each of the conditions in Study 3

Ability attribution (*ns*)		Self-Fail Grad-Succeed *M* (*SD*)	Self-Succeed Grad-Fail *M* (*SD*)
Private	IndeSC	3.22 (1.19)	3.54 (1.05)
	InterSC	3.33 (1.06)	3.54 (0.95)
Public	IndeSC	3.09 (1.19)	3.33 (0.66)
	InterSC	2.97 (0.88)	3.30 (0.95)
Total	*N* = 303		

Note. ns = non-significant. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. Feedback Type had a significant effect on ability attribution, $F(1, 295) = 6.28$, $p = .013$, $\eta_p^2 = .021$. Publicness also had a significant effect on it, $F(1, 295) = 4.03$, $p = .046$, $\eta_p^2 = .013$. There was not a significant main effect for Prime. The Prime × Publicness × Feedback Type interaction was not significant for ability attribution, $p = .73$. Results did not differ between the lab sample and the MTurk sample.

Table 14

Means for effort attribution in each of the conditions in Study 3

Effort attribution[†]		Self-Fail Grad-Succeed *M* (*SD*)	Self-Succeed Grad-Fail *M* (*SD*)
Private	IndeSC	3.28 (1.13)	3.88 (0.82)
	InterSC	3.30 (0.81)	3.54 (0.70)
Public	IndeSC	3.15 (1.08)	3.13 (1.01)
	InterSC	3.00 (1.01)	3.30 (0.95)
Total	$N = 303$		

Note. [†] Small *p* value. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. Feedback type had a significant effect on effort attribution, $F(1, 295) = 6.94$, $p = .01$. Publicness also had a significant effect on it, $F(1, 295) = 10.69$, $p = .001$. The Prime × Publicness × Feedback Type interaction was marginal, $F(1, 295) = 2.44$, $p = .12$. There was a significant simple comparison between the Self-Fail Grad-Succeed and Self-Succeed Grad-Fail cells in the IndeSC condition, $F(1, 295) = 9.18$, $p = .003$, $\eta_p^2 = .030$. There was also a significant simple comparison between the private and public cells in the IndeSC Self-Succeed Grad-Fail condition, $F(1, 295) = 11.87$, $p = .001$, $\eta_p^2 = .039$. Patterns did not differ between the lab sample and the MTurk sample.

Table 15

Effects of prime and feedback type on test evaluation in Study 3

Test evaluation*	IndeSC	InterSC
	M (*SD*)	*M* (*SD*)
Self-Fail Grad-Succeed	4.59 (1.13)	4.79 (1.07)
Self-Succeed Grad-Fail	5.43 (0.90)	5.01 (1.19)

Note. * *p* < .05. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal.

Feedback type had a significant effect on test evaluation, $F(1, 295) = 18.7$, $p < .001$, $\eta_p^2 = .059$.

There was a significant Prime × Feedback Type interaction, $F(1, 295) = 5.54$, $p = .019$, $\eta_p^2 = .018$. Results did not differ between the lab sample and the MTurk sample.

Table 16

Means for test evaluation in each of the conditions in Study 3

Test evaluation (*ns*)		Self-Fail	Self-Succeed
		Grad-Succeed	Grad-Fail
		M (*SD*)	*M* (*SD*)
Private	IndeSC	4.79 (1.16)	5.52 (0.88)
	InterSC	4.97 (1.11)	5.10 (1.11)
Public	IndeSC	4.36 (1.58)	5.29 (0.93)
	InterSC	4.56 (1.40)	4.92 (1.28)
Total	*N* = 303		

Note. ns = non-significant. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. The Prime × Feedback type × Publicness interaction was not significant (*p* = .93). The was a significant simple comparison between the Self-Fail Grad-Succeed and Self-Succeed Grad-Fail cells in both the private IndeSC condition ($F(1, 295) = 10.20$, $p = .002$, $\eta_p^2 = .033$), and the public IndeSC condition ($F(1, 295) = 12.03$, $p = .001$, $\eta_p^2 = .039$). Patterns did not differ between the lab sample and the MTurk sample.

Table 17

Effects of prime and feedback type on retest intention in Study 3

Retest Intention**	IndeSC	InterSC
	M (*SD*)	*M* (*SD*)
Self-Fail Grad-Succeed	3.24 (1.06)	3.46 (1.12)
Self-Succeed Grad-Fail	3.83 (0.96)	3.26 (1.21)

Note. ** $p < .01$. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal.

There was a significant Prime × Feedback Type interaction, $F(1, 295) = 8.26$, $p = .004$, η_p^2

$= .027$. Results did not differ between the lab sample and the MTurk sample.

Table 18

Means for retest intention in each of the conditions in Study 3

Retest Intention (*ns*)		Self-Fail Grad-Succeed	Self-Succeed Grad-Fail
		M (*SD*)	*M* (*SD*)
Private	IndeSC	3.17 (1.13)	3.94 (0.93)
	InterSC	3.64 (0.97)	3.43 (1.15)
Public	IndeSC	3.32 (0.98)	3.67 (0.99)
	InterSC	3.22 (1.27)	3.09 (1.26)
Total	*N* = 303		

Note. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal. The Prime ×
Feedback type × Publicness interaction was not significant (*p* = .32). The was a significant
simple comparison between the Self-Fail Grad-Succeed and Self-Succeed Grad-Fail cells in the
private IndeSC condition, $F(1, 295) = 10.85$, $p = .001$, $\eta_p^2 = .035$. Patterns did not differ between
the lab sample and the MTurk sample.

Table 19

Effects of prime and valence of behavior descriptions on recall of behaviors in Study 3

Recall*		Positive behavior	Negative behavior
		M (*SD*)	*M* (*SD*)
Private	IndeSC	2.32 (1.49)	2.27 (1.27)
	InterSC	2.33 (1.06)	2.07 (1.35)
Public	IndeSC	2.61 (1.34)	2.17 (1.01)
	InterSC	2.27 (1.31)	2.36 (1.38)
Total	*N* = 292		

Note. * p = .05. IndeSC = Independent self-contrual; InterSC = Interdependent self-construal.

There was a significant Positivity × Prime × Publicness interaction, $F(1, 284) = 3.88$, $p = .050$,

$\eta_p^2 = .013$. This significance was mainly driven by the simple comparison between the Positive

behavior and Negative behavior cells in the public IndeSC condition, $F(1, 284) = 4.87$, $p = .028$,

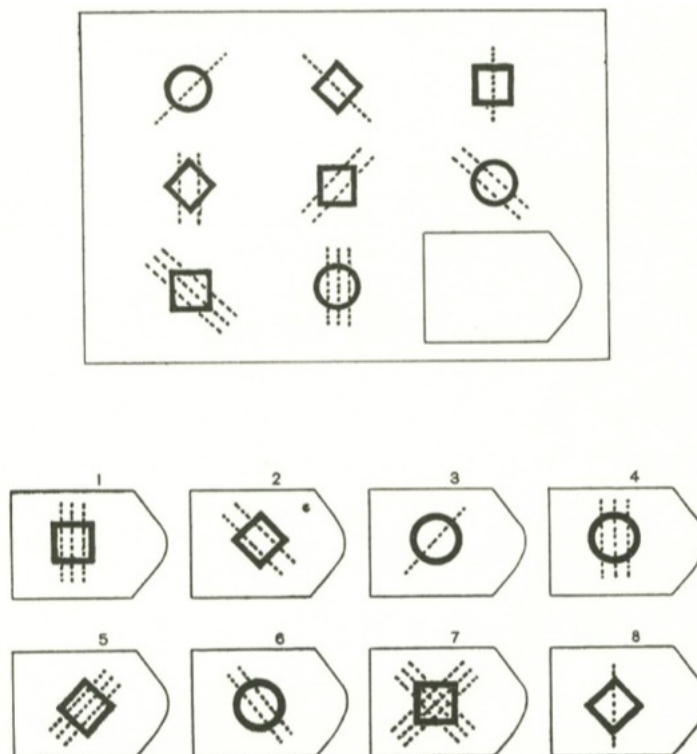$\eta_p^2 = .017$. Results did not differ between the lab sample and the MTurk sample.

Figure 1. An example item (3 × 3 matrix) of the 36-item "Integrative Ability" test in the current

research. These items are part of the intelligence test Raven's Progressive Matrices (Raven, Court

& Raven, 1988). Each question contains a 6 × 6, 4 × 4, or 3 × 3 matrix of figures that follow a

certain pattern such as the above. For each question, the participant is asked to identify the

missing element that completes the pattern depicted by the matrix. The answer for this example
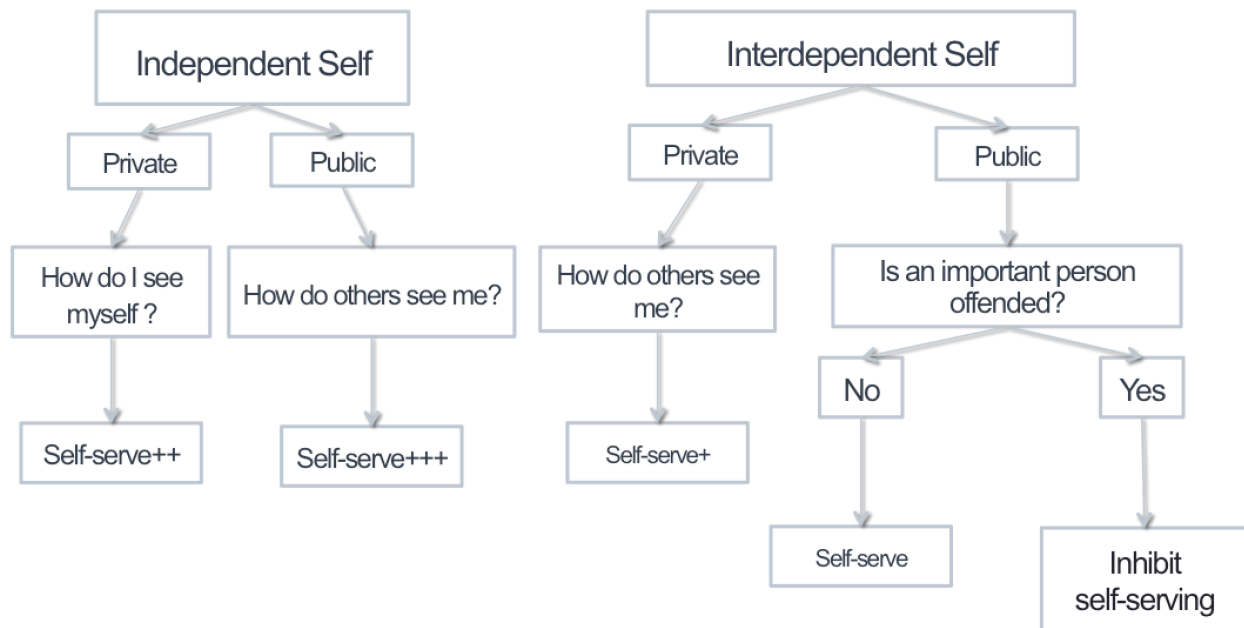
is Choice 5.

Figure 2. Theoretical framework for the current research. Hypotheses for Studies 2 and 3 were derived based on this framework.
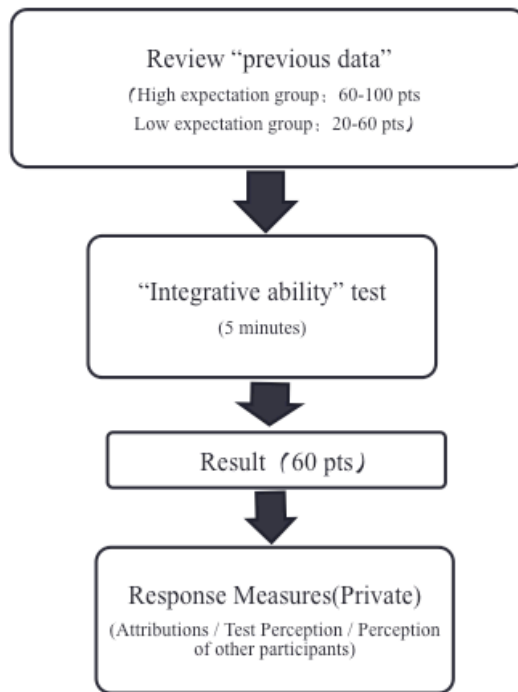
Figure 3. Study 1 experiment design and procedure. Study 1 followed a one-factor (Internal

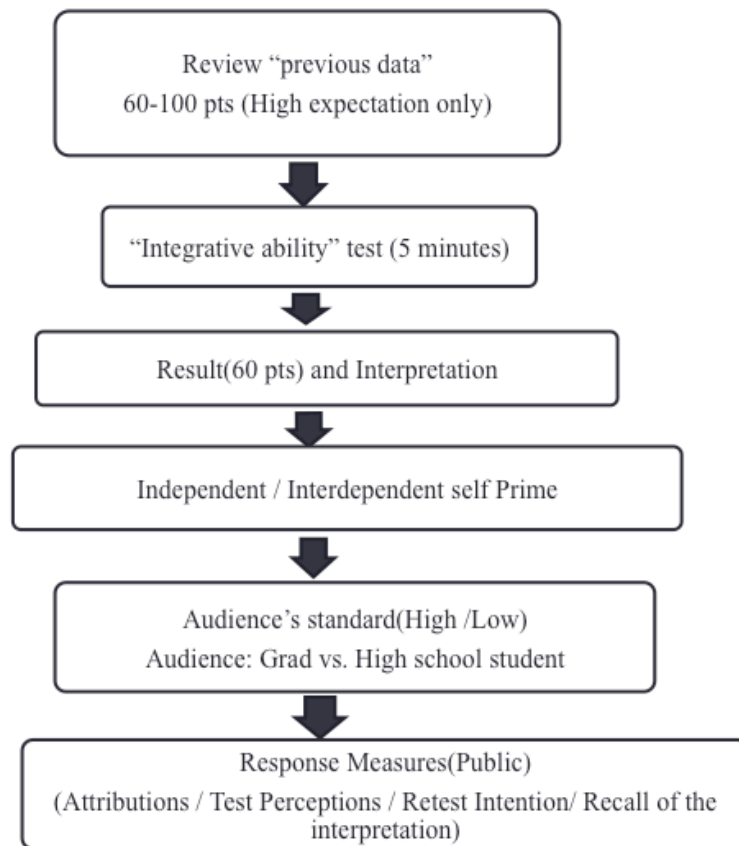feedback: positive vs. negative) between-subject design.

Figure 4. Study 2 experiment design and procedure. Study 2 followed a 2 (Prime: independent self-construal vs. interdependent self-construal)× 2 (Other Status: high school student vs. senior graduate student) ×2 (Other standard: high vs. low) between-subject factorial design.

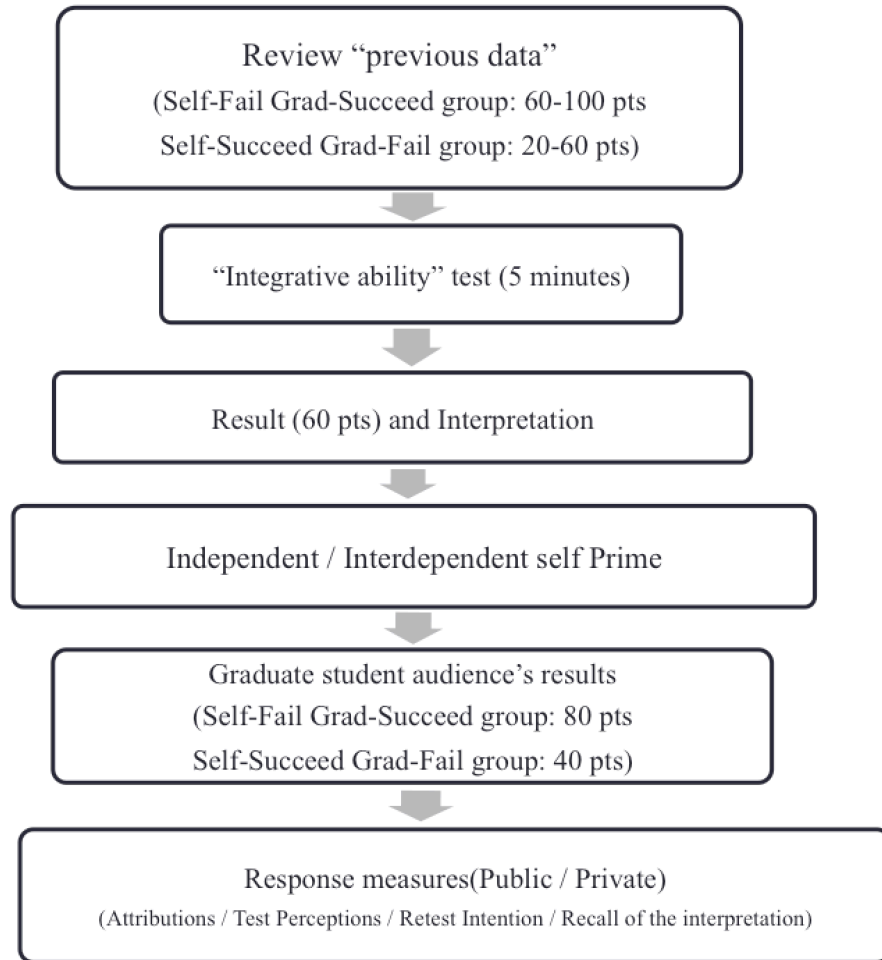*Figure 5*. Study 3 experiment design and procedure. Study 3 followed a 2 (Feedback type:

Self-Succeed Grad-Fail vs. Self-Fail Grad-Succeed) × 2 (Prime: independent self-construal vs.

interdependent self-construal) × 2 (Publicness: public vs. private) between-subject factorial

design.
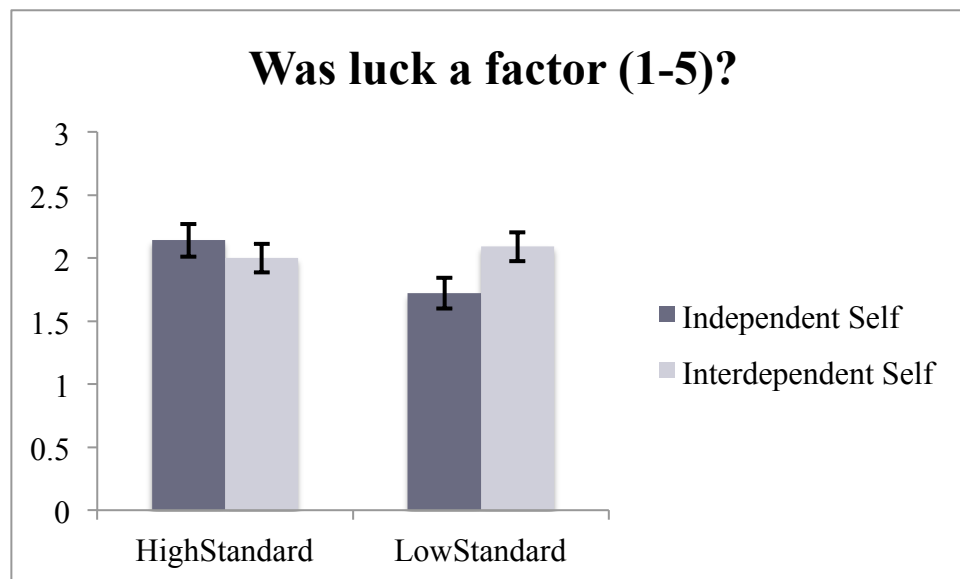
Figure 6. The effects of self-construal and audience's standard on luck attribution in Study 2.
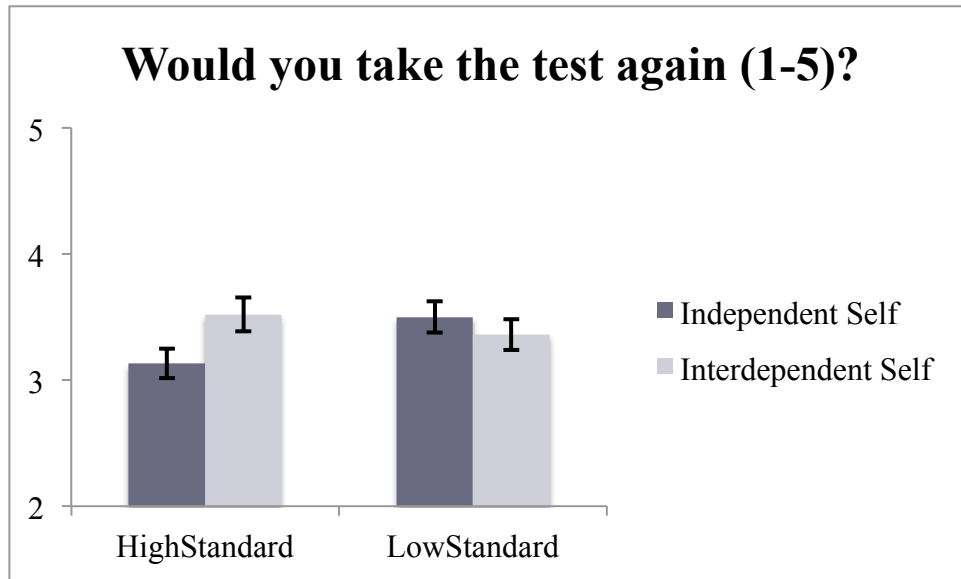
Figure 7. The effects of self-construal and audience's standard on retest intention in Study 2.

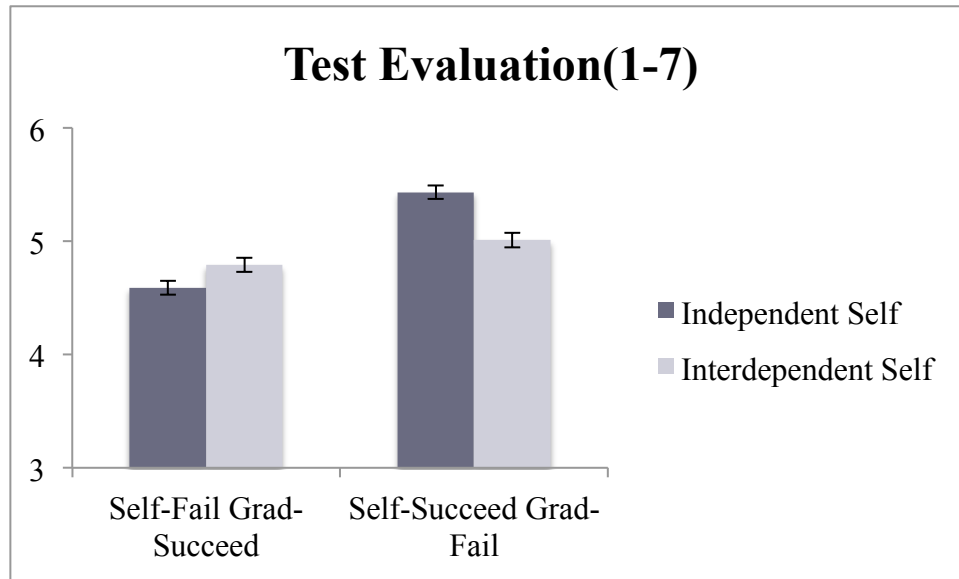*Figure 8.* The effects of self-construal and performance comparison on test evaluation in Study 3.
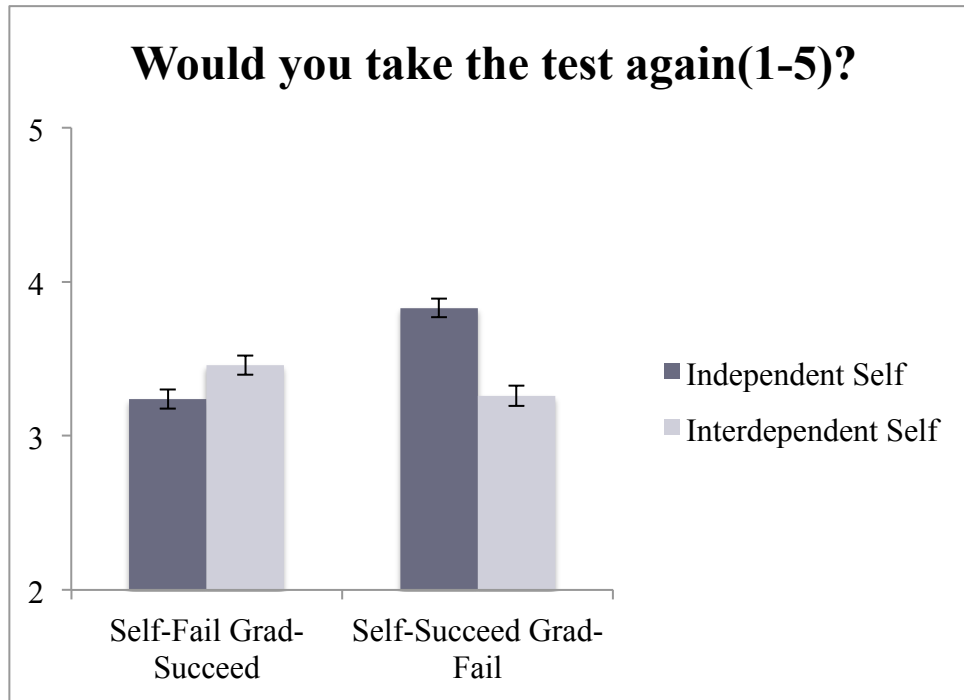
Figure 9. The effects of self-construal and performance comparison on retest intention in Study

3.
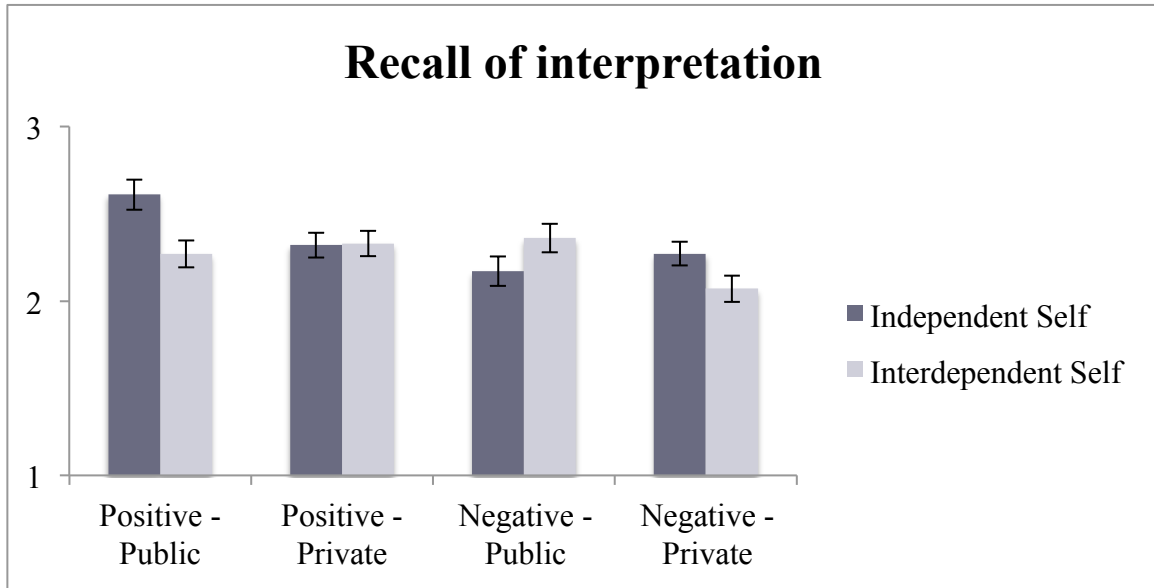
Figure 10. The effects of self-construal, publicness, and valence of behavioral interpretation on recall of interpretation in Study 3.

Appendix B   Materials for constructing detailed feedback

Social

- You would be promoted to the leader's position in a job because you are the person that everyone seemed to listen to and respond to.

- You would laugh along with everyone else at the embarrassing stories from when you were young that your dad was telling about you.

NonSocial

- You would fidget in the library whenever a new person walked by.

- You would be mentally exhausted after even the briefest conversation with others.

Trustworthy

- You would follow through on a promise made to friends.

- A teacher would leave you alone in a room while taking a test and not be afraid that you would cheat.

Untrustworthy

- An employer would not rely on you to have an important project completed by the deadline.

- You would gossip about a good friend to other people.

Kind

- You would help your friend study for a difficult exam even though you had a great deal of work to do.

- You would help people by opening a door if their hands were full.

Unkind

- You would ignore someone at a party that you did not know very well.

- You would get in a heated argument with someone over a minor issue.

Appendix C   Supplementary analyses

Study 2

Analyses. Nine dependent measures, including Ability Attribution, Effort Attribution, Luck Attribution, Difficulty Perception, Fairness Perception, Validity Perception, Clarity Perception, Other Similarity, and Retest Intention were entered into separate Univariate ANOVA analyses to examine the effect of Prime, Other Standard, and Other Status on these individual measures. An alpha level of .05 was used for all the significance tests. Bonferroni correction was applied to multiple comparisons where necessary. A total of 250 participants' data were included because the SPSS GLM procedure utilized the listwise deletion method.

Results. In general, the results for this set of analyses are consistent with those reported in Study 2 results section.

Attributions. None of the main effects were significant for any of the attribution measures. There was a Prime × Standard interaction for luck attribution, $F(1, 243) = 4.24$, $p = .04$. No such interactions were found for the other three attributions. Multiple comparisons showed that participants primed with the IndeSC made significantly more luck attributions when responding to the other's high standard ($M = 2.14$ $SD = 1.04$) than the other's low standard ($M = 1.89$, $SD = 0.89$), $F(1, 243) = 5.71$, $p = .02$. No such significant differences were found for the InterSC participants. When the audience was perceived to hold a low standard (indicating a positive outcome), the IndeSC group were significantly less likely to believe it was due to luck ($M = 1.72$, $SD = 0.89$), compared with the InterSC group ($M = 2.09$, $SD = 0.94$, $F(1, 243) = 4.59$, $p = .03$. No such significant difference was found when the audience held a high standard.

This two-way interaction was not qualified by a Prime × Standard × Status three-way interaction for Luck Attribution, despite a significant simple comparison between the high-school high standard ($M = 2.17$, $SD = 1.12$) and high-school low standard conditions ($M = 1.67$, $SD = 0.92$) for the IndeSC group, $F(1, 243) = 4.67$, $p = .032$. There was also a marginal trend such that when the high school student, but not the graduate student, held a low standard, the InterSC group were more likely to attribute the result to luck ($M = 2.12$, $SD = 1.02$) than participants in the IndeSC group ($M = 1.67$, $SD = 0.92$), $F(1, 243) = 3.68$, $p = .056$. Other comparisons were not significant.

Test Perceptions.

Difficulty Perception. Similar to Study 1's finding for Difficulty Perception, neither the independent variables nor their interactions had a significant effect on the difficulty measure, $p > .05$.

Fairness Perception. Neither Prime nor Audience's Status had a significant main effect on Fairness Perception, although Audience's Standard did ($F(1, 243) = 3.79$, $p = .05$).   Participants who perceived that the audience held a high standard ($M = 4.42$, $SD = 1.52$) considered the test to be less fair than those who perceived a low standard ($M = 4.82$, $SD = 1.41$). No significant two-way or three-way interactions were found for Fairness Perception. A significant simple comparison showed that the IndeSC participants, in particular, considered the test to be less fair in response to the high school student's high standard ($M = 4.79$, $SD = 1.54$)   than to low standard ($M = 4.09$, $SD = 1.48$), $F(1, 243) = 3.88$, $p = .05$.

Validity Perception. Prime had a significant effect on Validity Perception, $F(1, 243) = 5.56$, $p = .02$. Participants considered the test to be less valid when primed with an IndeSC ($M = 4.27$, $SD = 1.56$) than when primed with an InterSC ($M = 4.72$, $SD = 1.51$). Other Standard had a main effect on Validity Perception, $F(1, 243) = 7.36$, $p = .007$. When the other held a high standard, participants considered to the test to be less valid ($M = 4.21$, $SD = 1.61$) than when the other held a low standard ($M = 4.79$, $SD = 1.43$). No significant two-way or three-way interactions were found for Validity Perception. A significant simple comparison showed that the IndeSC participants, in particular, considered the test to be less valid in response to the high school student's high standard($M = 3.89$, $SD = 1.69$) than to low standard ($M = 4.70$, $SD = 1.53$), $F(1, 243) = 4.87$, $p = .03$. When the graduate student held a high standard, the IndeSC participants ($M = 4.00$, $SD = 1.39$) considered the test to be less valid than the InterSC participants ($M = 4.83$, $SD = 1.11$) did, $F(1, 243) = 3.81$, $p = .05$.

Clarity Perception. Audience's Status had a significant main effect on Clarity Perception, $F(1, 243) = 5.40$, $p = .02$. Audience's Standard had a marginal main effect on Clarity Perception, $F(1, 243) = 3.06$, $p = .08$. Participants considered the test instructions to be less clear when the audience was a high status person ($M = 5.77$, $SD = 1.52$) rather than a low status person ($M = 6.16$, $SD = 1.52$), and when the audience held a high standard ($M = 5.84$, $SD = 1.51$) rather than a low standard ($M = 6.13$, $SD = 1.34$). No significant two-way or three-way interactions were found for Clarity Perception, neither were any significant simple comparisons.

Other Similarity. The independent variables in the current study had no significant impact on this particular dependent variable.

Retest Intention. None of the main effects were significant for Retest Intention. Prime and Standard interacted to influence Retest Intention, $F(1, 243) = 4.00$, $p = .047$. Participants primed with the independent self were less willing to take the test again when responding to the other's high standard ($M = 3.13$, $SD = 0.93$) than the other's low standard ($M = 3.50$, $SD = 1.03$), $F(1, 243) = 4.07$, $p = .045$. When the audience was perceived to hold a high standard, the independent self was significantly less willing to take the test again ($M = 3.13$, $SD = 0.93$), compared with the interdependent self ($M = 3.52$, $SD = 0.96$), $F(1, 243) = 4.19$, $p = .042$.

The two-way interaction revealed above was not qualified by a Prime × Standard× Status three-way interaction ($p = .16$). However, There was a significant pairwise comparison between the IndeSC ($M = 2.97$, $SD = 0.99$) and InterSC ($M = 3.58$, $SD = 0.92$) participants in the high school high standard conditions, $F(1, 243) = 7.00$, $p = .009$. There was also a significant pairwise comparison between the high standard ($M = 2.97$, $SD = 0.99$) and low standard ($M = 3.52$, $SD = 1.06$) cells in the IndeSC high school student condition, $F(1, 243) = 5.22$, $p = .023$.

Recall. Results for recall remained the same as those reported in Study 2 results section.

Study 3

Analyses. Nine dependent measures, including Ability Attribution, Effort Attribution, Luck Attribution, Difficulty Perception, Fairness Perception, Validity Perception, Clarity Perception, Other Similarity, and Retest Intention were entered into separate Univariate ANOVA analyses to examine the effect of Prime, Other Standard, and Other Status on these individual measures. An alpha level of .05 was

used for all the significance tests. Because SPSS deleted missing data listwise when applying ANOVAs, this set of analyses were based on 300 participants' data rather than 303 participants as in the Study 3 results section.

Results. In general, the results for this set of analyses are consistent with those reported in Study 3 results section.

Attributions. Ability Attribution was significantly influenced by Feedback Type, $F(1, 292) = 6.57$, $p = .011$, as well as by Publicness, $F(1, 292) = 3.68$, $p = .056$. Likewise, Effort Attribution was significantly influenced by Feedback Type, $F(1, 292) = 7.16$, $p = .008$, as well as by Publicness, $F(1, 292) = 10.16$, $p = .002$. Participants who received the SFGS feedback were less likely to attribute their results to ability ($M = 3.16$, $SD = 1.09$, vs. the SSGF feedback condition, $M = 3.46$, $SD = 0.83$) or effort ($M = 3.19$, $SD = 1.00$, vs. the SSGF feedback condition, $M = 3.52$, $SD = 0.87$). Those who answered dependent measure questions in a public situation make less ability attributions ($M = 3.17$, $SD = 0.95$, vs. private condition, $M = 3.40$, $SD = 1.00$) or effort attributions ($M = 3.15$, $SD = 0.98$, vs. $M = 3.51$, $SD = 0.91$ in the private condition). Prime did not have a significant main effect on any of the attribution measures. Luck attribution, in particular, was not influenced by any of the conditions.

The Prime × Publicness × Feedback Type interaction was not significant for Ability Attribution ($p = .81$), neither was it significant for Effort Attribution ($p = .15$). No significant simple comparisons were found for Ability Attribution. For Effort Attribution, pairwise comparisons suggested that the IndeSC participants made significantly more effort attribution for SSGF feedback ($M = 3.88$, $SD = 0.82$) than for SFGS feedback (M= 3.28, $SD = 1.15$) in the private situation, $F(1, 292) = 8.80$, $p = .003$. No such significance was found for the InterSC participants. The IndeSCs participants also made significantly more effort attribution for the SSGF feedback in the private(M = 3.88, SD= 0.82) than the public condition (M = 3.17, SD = 1.00), $F(1, 292) = 10.38$, $p = .001$. No other pairwise comparisons were found significant.

Test Perceptions.

Difficulty Perception. Neither the independent variables nor their interactions had a significant effect on the Difficulty Perception measure.

Validity Perception. Validity Perception was significantly affected by Feedback Type, $F(1, 292) = 16.68$, $p < .001$. Participants who received the SFGS feedback were less likely to consider the test to be valid ($M = 3.94$, $SD = 1.60$) than those received the SSGF feedback($M = 4.72$, $SD = 1.53$). Validity Perception was also significantly affected by Publicness of the situation, $F(1, 292) = 4.21$, $p = .041$. Participants who answered dependent measure questions in a public situation reported the test to be less valid ($M = 4.08$, $SD = 1.56$) than those in the private condition($M = 4.50$, $SD = 1.64$).

There was a Prime and Feedback type interaction on Validity Perception, $F(1, 292) = 8.23$, $p = .004$. Multiple comparisons suggested that people primed with an IndeSC considered the test to be significantly less valid when receiving SFGS feedback ($M = 3.75$, $SD = 1.67$) than when receiving SSGF feedback ($M = 5.05$, $SD = 1.33$), $F(1, 292) = 23.96$, $p < .001$, a pattern not observed in those primed with an InterSC. In addition, the IndeSC participants ($M = 5.05$, $SD = 1.33$) rated the test to be more valid than the InterSC

participants did ($M = 4.34$, $SD = 1.66$) after receiving the SSGF feedback, $F(1, 292) = 6.32$, $p = .012$. Other multiple comparisons were not significant.

The overall three-way interaction was not significant for Validity Perception ($p = .46$). Multiple comparisons suggested that the IndeSC participants considered the test to be more valid after receiving the SSGF feedback than after receiving the SFGS feedback, both in private ($F(1, 292) = 13.56$, $p < .001$) and in public ($F(1, 292) = 10.83$, $p = .001$. No such distinctions were found for InterSC participants whether responding in private or in public. When responding to the SSGF feedback in a private situation, those primed with an IndeSC had a greater tendency to perceive the test to be valid ($M = 5.25$, $SD = 1.30$) than those primed with an InterSC did ($M = 4.54$, $SD = 1.67$), $F(1, 292) = 4.26$, $p = .04$. When responding to the SFGS feedback in a public situation, the IndeSC participants rated the test to be less valid ($M = 3.44$, $SD = 1.30$) than the InterSC participants did ($M = 4.14$, $SD = 1.64$), $F(1, 292) = 3.58$, $p = .06$.

Fairness Perception. Fairness Perception was significantly affected by Feedback Type, $F(1, 292) = 14.22$, $p < .001$. Participants who received the SFGS feedback were less likely to consider the test to be fair ($M = 4.37$, $SD = 1.54$) than those who received the SSGF feedback($M = 4.99$, $SD = 1.39$).

A marginal Publicness × Feedback Type interaction was found for Fairness Perception, $F(1, 292) = 3.26$, $p = .07$. Participants rated the test to be less fair in public after receiving the SGFS ($M = 4.14$, $SD = 1.52$) rather than the SSGF feedback($M = 5.10$, $SD = 1.41$), $F(1, 292) = 13.95$, $p < .001$. Other simple comparisons were not significant for this two-way interaction.

The Prime × Publicness × Feedback Type interaction for Fairness Perception was not significant ($p = .19$). The IndeSC participants considered the test to be more fair after receiving the SSGF feedback than after receiving the SFGS feedback, both in private ($F(1, 292) = 5.10$, $p = .025$) and in public ($F(1, 292) = 10.83$, $p = .018$. The InterSC participants did not respond differently to the different types of feedback in private, but considered the test to be more fair after receiving the SSGF feedback ($M = 3.97$, $SD = 1.38$) than after receiving the SFGS feedback ($M = 5.00$, $SD = 1.48$) in public ($F(1, 292) = 8.47$, $p = .004$). Unexpectedly, when receiving the SFGS feedback, the InterSC participants perceived the test to be more fair in private ($M = 4.78$, $SD = 1.47$) rather than in public ($M = 3.97$, $SD = 1.38$), $F(1, 292) = 6.17$, $p = .014$.

No other effects were found for Fairness Perception.

Clarity Perception. Clarity Perception was significantly affected by Publicness, $F(1, 292) = 8.17$, $p = .005$. Participants who answered dependent measures in public reported the test instructions to be less clearer ($M = 5.63$, $SD = 1.57$) than those in the private condition($M = 6.12$, $SD = 1.22$).

The Prime × Publicness × Feedback Type interaction for Clarity Perception was not significant ($p = .51$). Simple comparisons showed that the IndeSC participants considered the test to be more clear after receiving the SSGF feedback ($M = 6.07$, $SD = 1.16$) than after receiving the SFGS ($M = 5.32$, $SD = 1.67$) feedback in public, $F(1, 292) = 4.53$, $p = .034$. The IndeSC participants rated the test instructions be to less clear after receiving the SFGS feedback in public ($M = 5.32$, $SD = 1.67$) rather than in private ($M = 6.10$, $SD = 1.12$), $F(1, 292) = 5.74$, $p = .017$. No other effects were found for Clarity Perception.

Other Similarity. Neither the independent variables nor their interactions had a significant effect on the Other Similarity measure.

Retest Intention. No main effects of the independent variables were found for Retest Intention. Prime and Feedback type interacted to affect participants' intention to take the same test again, $F(1, 292) = 8.54$, $p = .004$. Multiple comparisons suggested that the IndeSC participants were significantly less willing to take the test again after receiving the SFGS ($M = 3.23$, $SD = 1.06$) rather than the SSGF feedback (M = 3.84, $SD = 0.96$), $F(1, 292) = 10.17$, $p = .002$, a pattern not observed in those primed with an InterSC. In addition, the IndeSC participants ($M = 3.84$, $SD = .96$) were more willing to take the test again than the InterSC participants($M = 3.26$, $SD = 1.21$) after receiving the SSGF feedback, $F(1, 292) = 9.13$, $p = .003$. Other multiple comparisons were not significant. Other two-way interactions were not significant.

This two-way interaction was not qualified by a significant three-way interaction ($p = .34$), although multiple comparisons suggested that when responding to the SSGF feedback in a private situation, the IndeSC participants were more willing to take the test again ($M = 3.94$, SD = 0.93) than those primed with an InterSC were ($M = 3.43$, $SD = 1.15$), $F(1, 292) = 4.45$, $p = .036$. This pattern was reversed in the SFGS feedback condition, where they were less willing to take the test again ($M = 3.15$, $SD = 1.14$) than those primed with an InterSC were ($M = 3.63$, $SD = 0.97$) in a private situation, $F(1, 292) = 4.07$, $p = .045$. In line with these results, when responding to the SSGF feedback in a public situation, the IndeSC participants expressed more willingness to take the test again ($M = 3.69$, $SD =1.00$) than the InterSC participants did ($M = 3.09$, $SD = 1.26$), $F(1, 292) = 4.70$, $p = .031$. Not surprisingly, the IndeSC participants were more willing to take the test again after receiving the SSGF feedback ($M = 3.94$, $SD = 0.93$) than after receiving the SFGS feedback ($M = 3.15$, $SD = 1.14$) when responding in private, $F(1, 292) = 11.22$, $p = .001$, a pattern not found in public, or in the InterSC participants either in private or in public.

Recall. Results for recall data remain the same as those reported in Study 3 results section since it was an analysis independent from the above analyses.

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Curriculum Vitae

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Contact and Personal Information

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Professional Position

July, 2016-present   **Post Doctoral Fellow** in **Social Psychology**
Department of Psychology, Wesleyan University

Education

2011-present   **Ph.D candidate** in **Social Psychology**
Department of Psychology, Syracuse University
Advisor: Leonard Newman, Ph.D
Expected graduation date: December, 2016
Dissertation Title:
Reacting to negative self-relevant information in an interpersonal context

2012-2014   **M.S.** in **Applied Statistics**
Department of Mathematics, Syracuse University

| 2009-2011 | **M.S.** in **Experimental Psychology** |
| | Department of Psychology, Syracuse University. |

| 2005-2009 | **B.S.** in **Psychology** |
| | Beijing Normal University, China. |

Research and Teaching Interests

My research interest lies at the intersection of cognition, motivation, and social context. Specifically, I examine intrapsychic and behavioral reactions to self-threatening (or self-enhancing) information. I investigate contextual influences on motivated information processing, considering the role of power status, time and self-construal. My teaching interests include, but are not limited to social psychology, introductory psychology, social cognition, psychology of the self, cultural psychology, research methods and statistics, and motivation.

Publications

Peer Reviewed Journal Articles

Tan, M., & Newman, L. S. (Under review). Mnemic Neglect in the West and East: A cross-cultural investigation of indirect spontaneous self-enhancement.

Tan, M., & Wyble, B. (2015). Understanding how visual attention locks-on to a location: Toward a computational model of the N2pc component. *Psychophysiology*, *52*, 199–213. DOI:10.1111/psyp.12324.

Chen, H., **Tan, M**, Callahan-Flintoft, C., & Wyble, B. (Under review). Distractor suppression is not the whole story: A revised theory of the Pd's underlying mechanisms.

Manuscripts in Preparation

Tan, M., Chuang, Y., & Wilkins, L. C.(in preparation). *Perceived competition with White men reduces Asian men's liking of Asian/White interracial couples*

Tan, M., & Gramzow, R. (in preparation). *Te*mporal t*rajectory of exaggerated recall of academic performance.*

Tan, M., & Newman, L. S. (in preparation). *Reacting to negative self-relevant information in an interpersonal context: The role of power status, publicness, and self-construal.*

Tan, M., & Newman, L. S. (in preparation). *Automatic vigilance and motivated attention through the RSVP paradigm.*

Tan, M., Newman, L. S., Duff, K., Caldwell, T., & Winer, E. S. (in preparation). *Age, competence and warmth perceptions of names: Updating the norms.*

Awards, Honors and Grants

2015	Outstanding TA award, Syracuse University.
2015	Diversity Fund Graduate Student Travel Award ($250), The Society for Personality and Social Psychology.
2011, 2014, 2015	The Graduate Student Organization Travel Grant at Syracuse University. (Total amount: $750)
2011, 2012	Summer Research Fellowship by the Department of Psychology at Syracuse University. (Total amount: $2,000)

Conference Presentations

Tan, M., Newman, L.S., & Zhang, B. (2015, February). *A cross-cultural exploration of the processing of self-threatening feedback.* Poster presented at the 16th Annual Meeting of the Society for Personality and Social Psychology, Long Beach, CA.

Wyble, B., **Tan, M.**, & Chen, H. (2014, May). *A convergent gradient field model of visual attention.* Poster presented at the 13th Annual Meeting of Vision Sciences Society, St. Pete Beach, FL.

Tan, M., Newman, L., & Zhang, B. (2014, February). *A cross-cultural exploration of the processing of self-threatening information.* Poster presented at the 15th Annual Meeting of the Society for Personality and Social Psychology, Austin, TX.

Tan, M., & Wyble, B. (2013, November). *The N2pc reflects the shifting, but not the sustaining of attention: an exploration of the electrophysiological correlates of attention deployment.*

Poster presented at the 21st Annual Meeting on Object Perception, Attention, and Memory Conference, Toronto, Ontario.

Tan, M., & Tang, Y. (2012, May). *Automatic vigilance and motivated neglect through the RSVP paradigm.* Poster presented at the 84th Meeting of the Midwestern Psychological Association, Chicago, IL.

Tan, M., & Wyble, B. (2011, November). *Testing a model of Lag-1 sparing between two targets in the same or different locations with behavior and EEG.* Poster presented at the 2011 Psychonomics Conference, Seattle, WA.

Colloquia

Tan, M. (2015, February). *Defending against negative self-relevant feedback cross-culturally.* Social Psychology area brownbag meeting, Syracuse University.

Tan, M. (2014, September). *The N2pc reflects the shifting, but not the sustaining of attention: an exploration of the electrophysiological correlates of attention deployment.* Cognition, Brain, and Behavior area proseminar, Syracuse University.

Tan, M. (2013, October). *Cross-Cultural Explorations of the Processing of Self-Threatening Information.* Social Psychology area brownbag meeting, Syracuse University.

Tan, M. (2013, September). *Understanding selective forgetting processes in the person memory paradigm: its validity and reliability.* Cognition, Brain, and Behavior area proseminar, Syracuse University.

Tan, M. (2011, March). *Interaction between working memory encoding and visual attention: Space matters!* Cognition, Brain, and Behavior area proseminar, Syracuse University.

Teaching and Mentoring Experience

Undergraduate research assistant supervisor

2009-Present	**Supervisor** for Research Assistants
	• Recruited, trained, and supervised over 30 undergraduate students in research across over 10 studies.

- Created training protocols (e.g., experiment logs, scripts for data collection) and data analysis manuals. Conducted approximately 2 hours of didactic instruction per week with individual undergraduates.
- Provided ongoing training and supervision during experiment sessions and regular lab meetings.

Course Instructor (all undergraduate)

- Designed curriculum, course content, exams, and activities, and lectured to classes of 30-60 psychology- and non-psychology major students in the following capacities:

Spring 2016
Summer 2015
Summer 2014   **Introduction to Psychology** at Syracuse University.

Fall & Spring 2014
Summer 2013   **Statistical Methods** at Syracuse University.

Fall 2012   **Cognitive Psychology Labs** at Syracuse University.

Teaching Mentor

- Evaluated mock teaching performance, delivered training sessions, and facilitated workshops and practice for new graduate teaching assistants in the following capacities:

2012-Present   **Mentor**, Graduate Teaching Assistant Orientation, Syracuse University.
             Workshop facilitated: **The American Classroom**

2014   **Mentor**, Leadership and Culture program, Syracuse University.
             Training session presented: **Setting Goals**

2014   **Mentor,** International Graduate Student Orientation, Syracuse University.
             Workshop facilitated: **Adjusting to a New Culture**

Teaching Assistantship

Spring 2015-Present
Spring 2013
2009-2012   **Recitation leader,** Course: Introduction to Psychology at Syracuse University.
                 - Taught three to four recitation sessions weekly, delivering lecture reviews, administering quizzes and managing in-class activities,

including group discussions, hands-on games, experiments, debates, and role plays.

- Graded assignments and quizzes, maintained course grade records, and proctored exams.

Advanced Research Training

2015	R language programming workshop	Syracuse University
2013	SAS programming in multivariate statistics	SUNY College of Environmental Science and Forestry
2012	Bayesian statistics methods workshop	Syracuse University

Professional Service

February, 2015 **Graduate Student Representative** for Social Psychology faculty search

February, 2014 **Convention Organization Committee**
1st Annual Convention of the Chinese Society for Personality and Social Psychology. Austin, Texas.

2011-2013 **Program Representative**
Women in Science and Engineering (WiSE) Program, Syracuse University.

2012- 2013 **Graduate Student Area Representative**
Psychology Department, Syracuse University.

Professional Affiliations

Society for Personality and Social Psychology
Society for Experimental Social Psychology
Chinese Society for Personality and Social Psychology
American Psychological Association