Other-Handicapping: Providing Another with an Excuse for Failure

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This thesis titled
Other-Handicapping: Providing Another with an Excuse for Failure

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ABSTRACT

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Self-handicapping is an esteem-protecting strategy whereby individuals prospectively generate impediments to successful performance so that their abilities will not be called into question in the event of failure (Berglas & Jones, 1978; Jones & Berglas 1978). Demonstrations of this phenomenon are replete in the social psychological literature, and thus to extend this work beyond the domain of the self, the current study investigated whether individuals would also be willing to handicap the performance of a close other. Male participants brought a close male friend to the lab. The friends were separated and each was primed into either an interdependent or independent self-construal. Each participant believed that his friend was taking two intelligence tests for a separate study on intellectual assessment. In the contingent feedback condition, participants were led to believe that their friend had performed well on the first test because of his ability, whereas in the noncontingent feedback condition participants were led to believe that their friend’s initial success was due to luck. Because lack of preparation could be used to excuse poor performance, it was expected that participants would allocate less practice time to their friend before he took the second test when they expected him to perform poorly (noncontingent condition) compared to when they expected him to perform well (contingent condition). Consistent with predictions, participants did in fact allocate less practice time to their friends in the noncontingent condition compared to the contingent condition, but this effect only occurred when
participants were primed into an independent self-construal. The results of this study suggest that participants in the independent condition tried to protect their friends’ self-esteem by prospectively erecting an external attribution for his expected failure.

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OVERVIEW

Self-handicapping is a strategy of anticipatory esteem-defense in which individuals generate external impediments to successful performance in order to ambiguate the implications that failure might have for the self (e.g. McCrea, Myers, & Hirt, in press; Rhodewalt & Tragakis, 2003). Self-handicapping is posited to benefit the self via two attributional mechanisms (Baumeister & Scher, 1988; Berglas & Jones, 1978) that are based on Kelly’s (1973) principles of discounting and augmentation. Consistent with the discounting principle, self-handicapping provides the individual with an excuse in the face of failure. Moreover, and consistent with the augmentation principle, success in the presence of a handicap is compelling evidence of the self’s superior abilities in a given domain. In all, the literature has indicated that individuals are more likely to self-handicap for the benefit of discounting failure than for the benefit of augmenting success (Rhodewalt & Tragakis, 2003).

One aspect of self-esteem protection that has not been addressed thus far by empirical work on self-handicapping is that individuals are not solely threatened by their own failures. Rather, self-esteem can also be threatened by the failure of a close other, as a close other’s failure may reflect poorly on the self (Cialdini et al., 1976) or even be assimilated by the self (Aron & Aron, 1986). Indeed, a large body of research suggests that people merge their identities with close others, a phenomenon referred to as “including another in the self,” or “other-inclusion” (e.g., Aron, Aron, Tudor, & Nelson, 1991). According to this work, when individuals are in this merged mindset, the failures and disappointments of a close other can be experienced as if they were one’s own failures and disappointments (Aron & Aron, 1986). Hence, although it is well-
documented that individuals will erect handicaps when the self is threatened, it is not known whether this self-protective strategy will be applied in the case of a close other whom the self has expanded to include. The current study was based on the hypothesis that handicapping a close other on a self-relevant performance task can serve as an additional mechanism of self-esteem protection. By shielding a close other from an internal attribution of failure, the self reaps indirect benefits in the form of self-esteem protection. Additionally, the self protects the other from blaming her/his abilities as the cause of their failure.

To explore this question, male participants in the current study were given an opportunity to allocate an amount of practice time for a male friend before he took an ostensibly diagnostic (and intimidating) test of his intelligence. Level of close-other inclusion was manipulated, along with expectancies regarding the friend’s ability to avoid failure on the task. It was predicted that those who were exposed to an interdependence prime and were led to doubt their friend’s ability to succeed would be relatively likely to undermine the friend’s performance by allocating less practice time for him. In so doing, the esteem of both the included other and the self would be jointly protected.
SELF-HANDICAPPING

*Berglas and Jones (1978)*

Berglas and Jones (1978) brought Princeton undergraduates into the lab, and told them that they were participating in a drug trial. Participants were told that one of the drugs, Pandocrin, temporarily inhibited intellectual performance while the other drug, Activil, temporarily enhanced performance. The drug trial required participants to take a baseline measure of their intelligence followed by a second test of their intelligence after they chose to ingest either Pandocrin or Activil.

Half of the participants received noncontingent success feedback on the first test. The purpose of the noncontingent feedback was to impart participants with a positive yet unstable self-conception (e.g., “I feel that I just got lucky”). In turn, it was hypothesized that such feedback should heighten perceived external expectations for performance on the second test. As predicted, participants who received noncontingent success feedback tended to avoid potential disconfirmation of their unstable self-conception of high intellectual ability by electing to ingest Pandocrin prior to the second test. Notably, Berglas and Jones (1978) found that participant’s drug choice did not depend on whether the experimenter was aware of the drug they chose. If individuals self-handicap to protect their public selves, they argued, then one would expect self-handicapping to occur only in situations where an audience was aware of the handicap. Consequently, Berglas and Jones concluded that self-handicapping occurs primarily in the service of self-esteem preservation rather than public-esteem preservation.
Distinguishing Between Claimed and Behavioral Handicaps

A theoretical distinction was later drawn between claimed and behavioral self-handicaps (Leary & Shepperd, 1986). Behavioral self-handicaps are concrete actions that undermine one’s best chances for success, whereas claimed self-handicaps take the form of excuses that individuals report prior to performance (e.g., “Before I take this exam, you should know that I have terrible test anxiety”). The importance of this distinction was highlighted by Hirt, Deppe, and Gordon’s (1991) finding that men who scored high on the Self-Handicapping Scale (Jones & Rhodewalt, 1991) engaged in behavioral self-handicapping, whereas both men and women who scored higher on the scale were willing to make claimed self-handicaps. Moreover, if participants had an opportunity to choose between a claimed or a behavioral self-handicap, then even those who scored high in chronic self-handicapping preferred to use the less costly, claimed handicap. Why would individuals ever engage in the high cost act of behavioral self-handicapping rather than the less costly act of claiming a handicap? Hirt et al. (1991) suggested that claimed self-handicaps may be sufficient to preserve one’s standing in the eyes of an audience but not with the self. Thus, they speculated that behavioral self-handicapping occurs because the self may require the more indisputable disadvantage of a behavioral handicap in order to preserve self-esteem.

Self-Esteem Protection

The notion that self-handicapping allows the self to preserve ability perceptions in the face of failure has received considerable empirical support. For example, Rhodewalt, Morf, Hazlett, and Fairfield (1991) found that participants’ state self-esteem remained stable if they failed following an experimenter-introduced handicap, but suffered in the
absence of a handicap. Also, Feick and Rhodewalt (1997) found that underperforming students who claimed a self-handicap were subsequently higher in self-esteem compared to those who underperformed and did not self-handicap. By self-handicapping, the participants were able to discount their shortcomings as a student as the cause of their failures in the classroom (see also McCrea & Hirt, 2001).

To tease apart self-handicapping from a related form of esteem protection – self-affirmation (Steele, 1988) – Hirt and McCrea (2003) provided an example of a track athlete facing an important meet against her rival school. According to their analysis, if the athlete fails to perform well, she might still preserve her global self-esteem via a less costly self-protective mechanism like self-affirmation (e.g., “I might be lousy at track, but I’m still great at math”). Notably, however, although self-affirmation may temporarily repair the athlete’s mood, it will not help her when she is reminded of her failure on the track. In other words, self-affirmation cannot help her escape the fact than an important ability has been called into question. Hence, the advantage of self-handicapping over self-affirmation and other self-protective mechanisms in this context is that the athlete can still preserve her positive perceptions of her track abilities (e.g., “I could have won the race, if only I had not been so lazy in practice last week”). Consistent with this example, McCrea and Hirt (2001) found that self-handicapping’s positive effects on self-esteem were mediated by the preservation of positive ability beliefs regarding the domain in which the individual self-handicapped.

*Discounting mechanism.* McCrea and Hirt (2001) surveyed students in an introductory psychology class before an upcoming exam, after this exam, and before a second exam. To measure behavioral handicapping, students’ test preparation was
assessed, and to measure claimed self-handicaps, participants listed any concurrent stressful events they believed might harm their exam performance. As anticipated, self-handicappers preserved their global self-esteem in the face of failure, but only when they employed behavioral self-handicaps rather than claimed self-handicaps. Also, and consistent with Berglas and Jones’ (1978) conceptualization, the relationship between self-esteem and self-handicapping was mediated by the type of attribution students made to explain their performance. Specifically, if a self-handicapping student failed, they still maintained self-esteem to the extent that they discounted personal deficits in their abilities as the cause of their failure. Conversely, if a self-handicapping student succeeded, their self-esteem was enhanced to the extent that their ability attributions had increased as well. Also consistent with the discounting mechanism, McCrea (2008) found that participants’ self-esteem was protected when a handicapped performer considered how their performance could have been better in the absence of that handicap.

*Augmenting mechanism.* Individuals may also self-handicap in order to augment their ability attributions. Tice (1991) found that participants with high (but not low) self-esteem self-handicapped for the purpose of augmentation. In Tice’s paradigm, participants in one condition were given the opportunity to self-handicap on a test that could only indicate exceptional ability but not deficiency, whereas in the other condition participants took a test that could only indicate significant deficiency but not exceptional ability. Tice found that only those with high self-esteem self-handicapped in the condition where the test could only indicate exceptional ability. Also, high self-esteem participants were more likely than low self-esteem participants to believe that
augmenting one’s abilities through self-handicapping enhanced perceptions of their success.

**Self-Presentational Concerns**

Berglas and Jones’ (1978) contention that self-protection rather than impression management is the principle motivation behind self-handicapping has not gone unchallenged. Kolditz and Arkin (1982) argued that self-handicappers are primarily trying to preserve their public image rather than preserve their private self-esteem. These researchers replicated the Berglas and Jones paradigm but strengthened the privacy condition by ensuring that participants’ drug choice occurred under conditions of total anonymity (in the Berglas and Jones study, the research assistant could still, ostensibly, be aware of participants’ drug choice). In addition, Kolditz and Arkin strengthened the public choice condition by leading participants to believe that they would consume their chosen drug and receive their performance feedback in the presence of the experimenter. Under these conditions, self-handicapping was almost solely restricted to conditions under which the drug choice was *publicly* made. Also supportive of the self-presentation account, Shepperd and Arkin (1989) found that participants who were high in public self-consciousness were more likely to self-handicap.

In another investigation, Hirt, McCrea, and Kimble (2001) found that public self-focus enhanced self-handicapping tendencies. In this study, public self-focus was elicited by means of a video camera that recorded participants’ performance in the public condition as they took a test of their general intellectual ability. In order to further enhance participants’ sense of being publicly monitored, they were also briefly interrupted by the experimenter during the study. Despite the fact that public self-focus
increased self-handicapping behavior, these findings do not necessarily favor “an impression management” account. Rather, Hirt et al. argued that public self-focus increased self-handicapping mostly because it enhanced participants’ perceptions that the task was threatening to the self. Thus, they argued that protecting dubiously positive self-conceptions may still be the primary motivation underlying self-handicapping. In fact, the effect of the public self-focus manipulation on self-handicapping was fully mediated by an increase in doubt that one could perform well on the task, but not by self-presentational concerns. Also, self-handicapping has been shown to effectively protect positive self-regard in both laboratory and naturalistic settings (e.g. McCrea, 2008; Feick & Rhodewalt 1991; Hirt & McCrea, 2001).

Nevertheless, researchers have maintained that it is difficult to truly disentangle self-presentational concerns from self-esteem concerns because individuals develop a sense of their self-worth, in part, from convincing others that they are worthy (e.g., Arkin & Oleson, 1998; Kolditz & Arkin, 1982; Rhodewalt & Tragakis, 2003). In recognition of the moderating role of self-presentational concerns, the present study occurred in a public performance context in order to increase the likelihood that performance handicapping would be observed.

Chaotic Reinforcement Histories

The initial Berglas and Jones (1978) work suggested that there is a motivation to protect positive beliefs about the self that are insecure as a result of a reinforcement history that is not contingent on performance. Such “chaotic reinforcement histories” can give rise to a positive, yet uncertain self-regard because there is little perceived connection between the self’s behavior and the self’s outcomes. Given this theorizing, it
is not surprising that Oleson et al. (2000) found that self-handicapping was associated with self-doubt. Also, Shepperd and Arkin (1986) found that it was not level (high or low) of self-esteem but the stability of self-esteem that best predicted whether or not males would self-handicap. Specifically, men who were uncertain of their personal worth were more likely to self-handicap. Furthermore, Arkin and Oleson (1998) noted that those with positive self-regard may even be more likely to self-handicap than those with low self-regard because the former have more to protect. Additionally, Thompson (2004) found that self-handicapping was more associated with noncontingent success than noncontingent failure or contingent success.

Such chaotic reinforcement histories can be operationalized experimentally via noncontingent performance feedback. Berglas and Jones (1978) first elicited self-handicapping by rigging an intelligence test such that, in one condition, most of the items had no correct answer (see also Alter & Forgas, 2007). Consequently, when participants were given noncontingent feedback indicating that their performance was outstanding, they felt uncertain about their ability to reproduce this level of performance. Similarly, Hirt and McCrea (2000) gave participants bogus feedback indicating that they had scored high on a measure of intelligence called “Integrative Orientation” that had supposedly been embedded in a large packet of prescreening questionnaires administered at the beginning of the academic term. In fact, however, the test had not been included in the prescreening packet, leading participants to feel uncertain about their ability to replicate superior performance on a task that they could not even remember performing.

Because noncontingent feedback manipulations have successfully elicited self-handicapping, the present study of other-handicapping also employed noncontingent
feedback concerning the performance of the participant’s friend. That is, noncontingent feedback was employed to make participants doubt their friend’s ability to succeed on a high-stakes intelligence test. It was expected that noncontingent feedback would increase the likelihood of other-handicapping just as noncontingent feedback increases the likelihood of self-handicapping.

OTHER-INCLUSION: MOTIVATIONS AND MECHANISMS

Why might individuals handicap the performance of a close other, and how might this be self-protective? Baumeister and Leary (1995) argued that the desire to belong and be connected to others is a fundamental human motivation. That is, the need to belong is universal, innate, and cannot be derived from more basic human motivations. To illustrate this point, Baumeister and Leary reviewed a series of studies whose outcomes supported an evolutionary hypothesis that the “need to belong” was naturally selected in the course of human development (e.g., Panksepp, Siviy, & Normansell, 1985). They argued that if such a fundamental, naturally selected connectedness motivation does exist (see also Barchas, 1986; Bugental, 2000), then close social ties should impact cognitive activity in fundamental ways. This may occur, they reasoned, when a close other is included in one’s self-construal, and information about the close other is processed in a manner that is similar to the way information is processed about the self (see also Aron & Aron, 1986; Aron & Aron, 1996; Aron, Aron, Tudor, & Nelson, 1991). In so doing, both the positive and negative qualities of the included other are assimilated to the self (e.g., Blanton & Stapel, 2008; Crocker & Luhtanen, 1990; Stapel & Koomen, 2001).
**Other-Inclusion**

Conceptions of self are highly influenced by culture. For example, in the Japanese language the word “self” means “one’s share of the shared life space (Markus & Kitayama, 1991, p. 228). Thus, rather than being static and inflexible, the self fluidly adapts to cultural circumstances and context. Markus and Kitayama reviewed empirical work indicating that Asian cultures have a default conception of self as fundamentally connected with others. This self-construal is referred to as the “interdependent self.” According to their review, self-construal shifts from independent to interdependent (and vice versa) significantly impact emotions, motivations, and cognitions. In kind, the current work examined how interpersonal closeness would moderate the extent to which individuals engaged in the self-protective strategy of impeding a close other’s performance.

In Western cultures, the phenomenon of other-inclusion has been examined in the context of close, and perhaps most notably, romantic relationships (Aron et al, 1991; Aron & Aron, 1986; Mashek, Aron, & Bonciminio, 2002). The aspects of a close other that are posited to be included in the self are their resources (e.g., knowledge, social status, material possessions, social ties), perspectives, and identity. Phenomenologically, the individual experiences the outcomes of an included other as if they are happening to themselves. Thus, although the default for Westerners appears to be the independent self (Markus & Kitayama, 1991), Westerners will still expand the self to include others who are close.

*Self-expansion.* One reason why individuals are motivated to include another in the self is so that the richness of the other can expand the self’s capabilities (Aron et al.,
Such self-expansion occurs when the contents of one’s self-construal increase in domain diversity (e.g., the business executive who takes ballroom dancing lessons on weekends with her partner). Self-expansion can also be perceived as a form of self-improvement. As the self expands, it grows more capable of achieving goals which is experienced as a pleasurable, reinforcing process (Aron et al., 2004). For example, Aron, Paris, and Aron (1995) examined self-expansion processes by tracking large samples of undergraduates across 10 weeks. In the first of two prospective longitudinal studies, students who fell in love reported an increase in the diversity of domains within their self-concept. In the second study, students who fell in love experienced heightened self-efficacy and self-esteem.

Resource-inclusion. The primary motivation underlying other-inclusion is thought to be resource inclusion. According to Aron et al. (2004), as a close other’s resources become more available to the self, cognitive reorganization occurs in which the other’s resources are increasingly assimilated into one’s self-concept. Aron et al. (1991) demonstrated that resource-inclusion could uniquely predict an individual’s resource allocation decisions. This was shown by employing a decomposed game procedure (Liebrand, 1984) that directs participants to make allocations to themselves and to others across several trials. In this paradigm, a prediction derived from resource-inclusion motivation is that relative differences between allocations to self and others should diminish systematically along a “closeness continuum” from strangers, to friendly acquaintances, to close friends. Moreover, because an included-other’s gains should be experienced as gains for the self, this resource allocation pattern should hold regardless of whether the other is even made aware of the partner’s choices. In an initial study, the
predicted results were obtained. In a second study, participants allocated real money to the self, a close friend, a friendly acquaintance, or a stranger. Moreover, the anonymity of these allocations was maintained by providing participants with pre-addressed envelopes to mail. As expected, differences in the allocation of real money between self and other were least for the close friend, intermediate for the acquaintance, and greatest for the stranger.

Nevertheless, it could be argued that individuals allocated more money to close others either because they liked them, or because they perceived close others as being similar to the self. To rule out these counter-explanations, Aron et al. (1991) conducted a third study. Here, the targets were a friend, stranger, or disliked other. Aron et al. reasoned that if differences in resource allocation were actually being driven by other-inclusion as opposed to liking or similarity, then disliked others should be treated just like the stranger because neither the stranger nor the disliked other are included in the self. These predictions were confirmed, suggesting that individuals often treat the resources of an included-other as if they were the self’s resources.

This finding was relevant for the current study. Perhaps, just as individuals allocate money to close others as if they were the self, they might also protect close others from esteem-related threats in a manner that is similar to how they protect the self. Thus, just as people handicap the self to protect their own esteem, they should also be willing to handicap an included-other to jointly protect the esteem of the other and the self.

*Perspective-inclusion.* It was theorized that participants in the current study should feel that a threat to a close other represents a threat to the self. This may involve
the participant taking the close other’s perspective (e.g., “I feel almost as nervous as if I were taking the intelligence test”). There is evidence to suggest that people do take the perspective of a close other who has been included in the self. One illustration was provided by Sande, Goethals, and Radloff (1988). According to their findings, individuals generally believe that their own personalities are richer, more adaptive, and more multifaceted than others, and consequently believe that they are more unpredictable and possess more traits than others. However, this tendency to perceive variability within the self was reduced when the comparison others were both well-liked and well-known (i.e., close to the self).

To empirically demonstrate perspective-inclusion, Aron et al. (1991) adopted Lord’s (1980) distinction between figure and ground perspectives. Lord found that when imagining an experience, people often see the self as the ground of experience, while others are viewed as figures in the experience. This figure/ground distinction in perspective led participants to better remember instances of others interacting with object nouns than instances of the self interacting with object nouns. Aron et al. reasoned that if a close other’s perspective was truly included within the self’s perspective, the figure/ground perspective distinction should diminish as close others grow progressively more “ground-like.” Accordingly, Aron et al. replicated the Lord paradigm by having participants imagine themselves, their mother, or Cher interacting with object nouns. As expected, nouns imagined with Cher were best remembered (presumably because the non-close Cher was most figure-like). Conversely, there were no differences between the number of nouns remembered for self and for mother (a close other). In a second study, the figure/ground distinction was reproduced among non-close others, but minimized
among close others, even after controlling for familiarity. In the present study, it was hypothesized that, to the extent that individuals shared the perspective of an included-other and experienced an esteem-related threat to the other as if it were a threat to the self, the likelihood of other handicapping should be enhanced.

**Identity-inclusion.** When another’s identity has been merged with the self, there is a sharing of characteristics between the self and other (Aron et al., 2004). Aron et al. (1991) investigated whether the self would have a difficult time distinguishing characteristics of the other from characteristics of the self. Their paradigm followed the logic of Smith et al. (1999), who suggested that one consequence of a self-other overlap model of close relationship cognition is that, “reports on attributes of one will be facilitated or inhibited by matches and mismatches with the second” (p. 873). To examine this speculation, Aron et al. had participants rate a large number of traits as true or false of themselves, their spouse, and Bill Cosby. They predicted that participants would be slowest to make me/not me decisions about trait characteristics that were previously identified as pertaining either to the self or the spouse, but not to both. Such differences in response latencies, it was argued, would reflect a difficulty in distinguishing between overlapping selves.

In Aron et al.’s (1991) study, married graduate student couples rated the extent to which traits were like or not like themselves, their spouse, or Bill Cosby. Later, participants performed a speeded task in which they had to quickly decide whether or not the traits presented in the prior task applied to them or not. As predicted, participants exhibited slower response times when traits differed between self and spouse and made more errors when traits differed between self and spouse in comparison to when the traits
matched. Additionally, response latencies varied according to scores on the Inclusion of Other in the Self Scale (IOS; Aron, Aron, & Smollan, 1992), supporting the argument that participants’ identities were more cognitively integrated with their spouses than they were with Bill Cosby or, in a second study, with their spouse’s friend.

Aron and Fraley (1999) later examined whether this reaction-time interference effect could differentiate between varying levels of closeness. Across two academic semesters, Aron and Fraley administered the reaction-time test along with a battery of additional measures. The interference index was found to relate to love and closeness measures, subjective feelings of closeness, and to scales that assessed whether or not individuals behaved as if they were close. Finally, and notably, the interference index predicted whether participants were still together three months after the study, as well as changes in the couples’ reported closeness.

Mashek, Aron, and Boncimino (2002) further explored the notion that cognitive representations of self and other overlap by comparing the causal importance of closeness with factors that chronically co-vary with closeness (i.e., familiarity and similarity). Across three studies, participants exhibited greater source confusions in episodic and semantic memory when trying to remember which traits they had previously rated for self and close others as compared to source confusions made between trait ratings of the self and non-close others. Moreover, increased source confusions between self and close others were associated with reported interpersonal closeness even after controlling for familiarity and similarity. Thus, the source-memory confusions appeared to result from a sense of personal connectedness or identity-inclusion rather than from perceived similarity or familiarity. In the present work, it was hypothesized that a sense of identity-
inclusion should contribute to the deployment of other handicapping strategies in the service of self-protection as well as other-protection.

**SELF AND SOCIAL JUDGMENT**

To be able to predict the circumstances under which other handicapping will occur, it is important to understand when the accomplishments of a close other will be treated as if they are the self’s own accomplishments or failures. That is, when does the self assimilate the abilities and performance of another, and when does it contrast itself against another?

*Tesser’s Self-Evaluation Maintenance Model*

Tesser’s (1988) Self-Evaluation Maintenance Model (SEM) makes predictions regarding when the success of others will enhance versus diminish one’s self-esteem. According to the SEM, individuals can either respond to the success of others via an esteem-enhancing reflection process – “Basking in Reflected Glory” (BIRGing; Cialdini et al., 1976) – or via an esteem-diminishing comparison process (e.g., “I am depressed because she is clearly more intelligent than I am”). Of particular relevance for the current study, however, were the model’s predictions regarding how the variables of closeness and domain relevance moderate responses to the success of another. Tesser asserted that individuals will engage in esteem-diminishing comparison processes when outperformed by a close other in a domain that is self-relevant, but will BIRG when a close other outperforms them in a domain that is not self-relevant. More generally, the SEM also predicts that post-performance self-evaluations will be more affected when a close other outperforms the self than when a non-close other outperforms the self.
Arguably, the SEM would predict for the current study that participants might actually *want* their friend to fail an intelligence test if the domain of intelligence was perceived as self-relevant. Indeed, participants’ self-esteem might actually be enhanced by their friend’s failure via downward social comparison. A key difference between the current study and the typical SEM paradigm, however, was that, in the current study, the participant was not competing with his friend. In addition, subsequent research has identified moderators of the assimilative and contrastive effects posited by the SEM.

*Inclusion-Exclusion*

Following Tesser’s development of the SEM, and paralleling Aron’s work on self-other inclusion, a number of researchers came to regard comparison target inclusion-exclusion as a critical moderator of assimilative and contrastive responses to social comparisons (e.g., Markman & McMullen, 2003; Schwarz & Bless, 1992; Stapel & Koomen, 2001). An early self-other assimilation effect on self-esteem was demonstrated by Crocker and Luhtanen (1990), who found that African-Americans’ self-esteem was enhanced when another African-American individual was characterized as being high in intellectual abilities, but was reduced when the other was described as having low abilities. Apparently, the qualities of the other in-group member were assimilated into the participants’ self-construal, resulting in self-esteem changes depending on how the other’s abilities were characterized. This idea was further developed by Brewer and Gardner (1996), who argued that the self can fluidly shift from an “I-self” to a “we-self” and that such shifts may encourage individuals to feel mutual concern for an included-other (see also Marx, Stapel, & Muller, 2005). Moreover, self-evaluation processes can shift such that others’ merits can be viewed and experienced as reflecting positively on
the self. Most importantly, this can even occur when the close other outperforms the self in an important, ego-relevant domain.

Relatedly, Brown, Novick, Lord, and Richards (1992) found that individuals will assimilate another’s qualities into their self-construal when the other is believed to be similar to the self. These authors led participants to believe that another participant shared their attitudes or, more trivially, their birthday. In the first study, it was found that participants viewed themselves as less attractive after they rated an attractive stranger and more attractive after they rated a stranger who was unattractive. However, when participants were led to believe that the attractive stranger shared their attitudes, their self-ratings of attractiveness increased in comparison to when they rated an unattractive stranger who shared their attitudes. This effect was replicated in a second study in which participants believed that the stranger shared their birthday, although this only occurred among those with low self-esteem. Thus, even trivial similarities like a shared birthday may be potent enough to shift self-evaluation processes from contrasting the self with another to assimilating another’s qualities.

Recently, Blanton and Stapel (2008) demonstrated how the priming of an interdependent mindset can elicit assimilative effects even when the target of social comparison is not consciously perceived. Employing a priming procedure modeled after Brewer and Gardner (1996), these researchers subliminally flashed an image of either an attractive female face or a deformed female face. Those who were primed with an interdependent self mindset and viewed the deformed face later rated themselves as less attractive in comparison to those who viewed an attractive female face. In a second study, the interdependent self was nonconsciously primed during a vigilance task (employing
words such as “we,” “us,” and “our”) and attractive or unattractive social comparison targets were subliminally presented. Once again, participants rated themselves lower on attractiveness when they were primed with an interdependent mindset and presented subliminally with an unattractive (as opposed to attractive) comparison target.

Of particular relevance for the current work, Gardner, Gabriel, and Hoschild (2002) conducted a study that pitted SEM predictions against predictions derived from an other-inclusion mechanism. Borrowing from a SEM paradigm (Tesser & Campbell, 1982), these researchers instructed friend pairs and a same-sex confederate to solve either GRE analytic problems (self-relevant domain) or answer movie-trivia questions (non-relevant domain). Prior to completing this task, participants read a story that primed either an interdependent or independent self-construal. According to the results, the classic SEM effect in which individuals forecast poorer performance for a friend in a self-relevant domain than they forecast for a stranger or themselves (e.g. see also Tesser, 1980, 1988) was only found among participants who received the independent prime. Conversely, those who received the interdependent prime predicted that their friend would actually outperform them in the self-relevant domain, a result that the SEM would not have predicted.

The other-inclusion literature suggests that the self can expand to include the resources, perspectives, and characteristics of close others. Consequently, individuals may respond to the failures and accomplishments of included others as if they were the self’s own failures and accomplishments (Gardner et al., 2002; Markman & McMullen, 2003, Marx et al., 2005). This may impact self-regard either positively or negatively. In the current study, it was hypothesized that this assimilative effect would motivate
individuals to handicap their friend on a threatening diagnostic task. Other-handicapping would be performed in the service of obscuring attributions for the friend’s potential failure. Just as individuals enhance and protect the self, individuals should also be willing to enhance and protect included others as if they were part of the self (Fincham, Beach, & Baucom, 1987). Also, if individuals are willing to manipulate post-feedback attributions in order to protect close others (Brown, 1986), then they should also be willing to manipulate pre-feedback attributions via behavioral other-handicapping. Although other-handicapping would cost the friend his best chance of success, it would also yield attractive attributional benefits. Namely, other-handicapping should jointly protect the esteem of the other as well as the self that has expanded to include the other.

**STUDY OVERVIEW**

In the present study, men were led to believe that their male friend was taking two intelligence tests as part of a larger study on culturally fair intellectual assessment. The study employed a 2 (Self-Other Construal: independent vs. interdependent) X 2 (Feedback Type: noncontingent vs. contingent) between-subjects design. Self-other construal was manipulated by employing the “Trip to the City” priming procedure developed by Brewer and Gardner (1996). Feedback Type was manipulated by having participants examine both a (bogus) report of their friend’s “stellar” performance on the first intelligence test, and a self-report of the strategies that the friend ostensibly employed while taking the first test. In the “contingent success” feedback condition the self-report indicated that the friend employed “reasoning” while taking the first intelligence test, and that he was confident in his ability to reproduce his successful performance. Conversely, in the “noncontingent success” feedback condition, the self-
report indicated that the presumably baffled friend mostly employed a strategy of “guessing” while taking the first intelligence test. The self-report also indicated that the friend was not confident in his ability to reproduce his initial success. All participants were led to believe that the friend was motivated to perform well on the intelligence tests. The primary dependent variable in this study was the amount of practice time participants allocated to their friend in order to prepare him for the second intelligence test. Insufficient allocations of practice time might be evidence of behavioral other-handicapping. Below are the hypotheses that were made prior to conducting the current study.

**Hypotheses**

1. A main effect should be observed in which participants will allocate less practice time for friends who experienced response noncontingent success than for friends who experienced response contingent success.

2. This main effect should be qualified by a construalXfeedback interaction. Namely, in the noncontingent condition, participants primed with an interdependent mind-set should allocate less practice time for their friends than participants primed with an independent mind-set. In the response contingent condition, on the other hand, no differences were predicted as a function of self-construal priming.

The hypotheses listed above were grounded in theoretical reasoning based on prior empirical work. For example, the current study manipulated feedback regarding the friend’s performance (contingent, noncontingent). Noncontingent success feedback has been found to elicit behavioral self-handicapping in a host of previous studies (e.g., Alter & Forgas, 2007; Berglas & Jones, 1978; McCrea, Hirt, & Milner, 2008), and so it was
predicted that participants would extend the same protections to their friends following noncontingent feedback, especially when the friend was included in the self.

Self-construal was also manipulated in the current study (independent, interdependent). Recently, Aron, Aron, and Norman (2004) suggested that there is a close connection between other-inclusion and empathy, and thus it was reasonable to expect that individuals would feel motivated to protect the esteem of someone they empathized with (i.e. an included-other) as well as their own esteem, by employing a strategy of other-handicapping. By protecting an included-others’ esteem, other-handicapping would simultaneously serve the interests of the other and the self. After all, both would be protected from the threatening implications of the friend’s potentially poor performance on the second, ostensibly more accurate, intelligence test.

To the extent that participants included the friend into their self-construal, it was expected that the friend’s outcomes would be temporarily assimilated into participants’ own self-evaluation. In the past, a variety of priming manipulations have been shown to shift self-construal from an independent to an interdependent sense of self (e.g., Brewer & Gardner, 1996; Stapel & Koomen, 2001). In turn, such self-construal shifts have been shown to elicit shifts in self-evaluations and motivations in response to social comparisons (Gardner et al., 2002). It was reasoned that that those primed to assimilate the other into their self-evaluations would be motivated to obscure potentially negative attributions regarding the others’ competence. This goal could be accomplished by withholding vital practice time from the friend (other-handicapping).
METHOD

Participants

Participants were 40 pairs of male friends ($n=80$) recruited from the Ohio University Psychology Study Sign-Up System. Five participants were excluded from the final analyses because they did not pay attention and/or follow instructions during the session.

Procedure

Upon arrival, the pair was seated at a table where they completed informed consent. The pair was then told that each of them would be participating in different studies in separate rooms (i.e. either a study on “Male Friendship” or “Intelligence Testing”). Ostensibly, study assignment was randomly determined after the friends were separated. In reality, however, both participants were participating in the same study, and would have similar experiences.

While they were still together, the pair was told that one of them would be completing a study examining male friendships. This study involved filling out surveys, many of which would contain questions about the friend they arrived with, and an exercise in which they would try to infer their friend’s thoughts and feelings. Meanwhile, the other participant would be taking part in a study comparing two intelligence tests (i.e. “Kansas Analogy Test of Intelligence” and the “Culture Fair Intelligence Test”). Participants were told that the intelligence testing study was part of a collaborative effort among several universities to create a test that was both accurate and culturally unbiased. The pair member assigned to the intelligence testing study would first take a traditional intelligence test called the Kansas Analogy Test of Intelligence, after which he would
complete a more recently developed (and more intimidating) intelligence test called the Culture Fair Intelligence Test (Cattell & Cattell, 1961; for a similar procedure, see McCrea et al., 2008). After introducing the Culture Fair Test, the experimenter asked both pair members to complete two difficult items from the Culture Fair Test. Completion of these items was intended to plant a seed of doubt in participants’ minds regarding their own abilities, as well as their beliefs about their friend’s ability to succeed on the Culture Fair Test.

At this point, the friends were separated and led to different cubicles. After they were separated, both were then told that “you were randomly chosen to participate in the male friendship study” rather than the intelligence testing study. Even though participants were in the male friendship study, they were told that they would still be asked to momentarily help the experimenter with the intelligence testing study. Participants were then provided with the following handout about the Culture Fair Test and how they would be helping the experimenter:

Advancing the science of measuring intelligence is important because intelligence is the single **BEST** predictor of future career success. Intelligence is also the best predictor of many other achievements and accomplishments across the lifespan. On the Culture Fair Intelligence Test, a score of 70% (missing 6 out of 20 questions) or lower indicates *low ability*, whereas scores above 70% do not.

Although the test is a very good measure of intelligence, it is affected by the amount of practice a person has had with these kinds of problems. Differing levels of familiarity with the items on the Culture Fair Test among the participants in
this study presents a problem in terms of assessing intelligence in an accurate and unbiased manner. To avoid bias, neither the experimenter nor the test-taker will select the amount of time that the test-taker can prepare for the Culture Fair Test. Rather, we will later ask **YOU** to allocate the amount of time that your friend will be able to practice for the test, employing a range between 2 minutes and 12 minutes. Within this range of time, research has shown that those who have been allocated lower amounts of practice time typically receive scores that are *much lower* than their true level of intelligence would warrant. In other words, people who have not had much practice with these kinds of problems tend to get a score that is significantly below their true level of intelligence. Conversely, those who are given higher amounts of practice time receive a more accurate intellectual assessment. Indeed, within this range of time (2-12 minutes), if one receives a lot of practice time, then the Culture Fair Test is the most accurate measure of one’s true level of intelligence that is available. However, it is **CRITICAL** for the success of the study that the experimenters observe test performance under a broad range of practice times. Thus, for example, allocations of 2 minutes of practice time are needed just as much as allocations of 12 minutes of practice time. All levels of practice time are needed. Importantly, your friend will NOT be told that you chose his practice time for him. However, he will be made aware of the impact that practice time may have on his performance.

Because it was critical that participants understood these instructions, the experimenter orally explained this information as well. Thus, participants heard this information twice. As a manipulation check, participants indicated how much they personally believed that
practice time impacted performance on the Culture Fair Test, and the extent to which lack of practice might excuse a poor performance. Then they completed three individual difference measures: the Self-Handicapping Scale (Jones & Rhodewalt, 1982), the Self-Esteem Scale (Rosenberg, 1965) and the Relational-Interdependent Self-Construal Scale (Cross, Bacon & Morris, 2000).

*Self-construal manipulation.* Participants then completed an additional exercise in which they circled the pronouns in a story entitled “A Trip to the City.” This exercise delivered the self-construal prime (Gardner et al., 2002). Half of the participants completed the *interdependent* version that contained numerous second-person (e.g., “we” and “us”) pronouns, whereas the other half completed the *independent* version that contained numerous first-person (e.g., “I” and “me”) pronouns. Following the self-construal prime, participants completed the IOS Scale (Aron, Aron, & Smollan, 1992) to assess their perceived degree of self-other overlap with the friend. It was expected that those primed with an interdependent mindset would report a higher degree of self-other overlap with their friend than those who received the independence prime.

Participants notified the experimenter when they were done. The experimenter then informed them that the friend performed “extremely well” (i.e., “in the 91st percentile”) on the first intelligence test (Kansas Analogies Test). Because of the friend’s exceptional performance on the Kansas Test, the experimenter stated that the research team had high expectations for the friend’s performance on the Culture Fair Test. Indeed, the experimenters would be examining the friend’s performance closely to see if he could *reproduce* his stellar performance. The experimenter’s ostensibly high expectations were meant to amplify the threatening nature of the Culture Fair Test.
Contingency manipulation. To bolster the cover story, participants then received a report describing the friend’s “stellar” performance. This was followed by another form labeled the “Testing Strategies Form” (see Appendix). The Testing Strategies Form was used to deliver the contingency manipulation (noncontingent success, contingent success). It included a bogus self-report from the friend regarding the strategies he employed while answering questions on the first intelligence test (e.g. “I reasoned it through,” “I used my intuition,” “I used a process of elimination,” “I was unsure so I had to guess”). The experimenter stated that “guessing” was a less effective strategy on the Culture Fair Test. Thus, the more one reported guessing on the Kansas Test, the more doubtful it was that one would succeed on the Culture Fair Test. The Testing Strategies Form also contained self-ascriptions of confidence, personal performance standards, self-presentational concerns, and other thoughts about the upcoming Culture Fair Intelligence Test.

The purpose of the “Testing Strategies Form” was (ostensibly) to help the participant complete the component of the male friendship study wherein he was to infer his friends’ thoughts and feelings. The experimenter explained that the friend’s responses to various self-report questions could be useful for making inferences regarding the friend’s thoughts and feelings about the upcoming Culture Fair Intelligence Test (e.g. one could infer that the friend values intelligence highly if he reported that failure on an intelligence test would be extremely upsetting to him).

Critically, when examining the “Testing Strategies Form,” one group of participants read that their friend “randomly guessed” on the majority of items (non-contingent feedback condition) on the Kansas Test, and that he lacked confidence in his
ability to reproduce his successful performance. Conversely, the other group read that their friend solved almost every problem by means of “reasoning” (*contingent feedback* condition), and that he was confident in his ability to reproduce his first successful performance. Importantly, all participants read that the friend valued intelligence highly, and cared very much about others’ perceptions of his intelligence.

*Dependent variables.* After reviewing the Testing Strategies Form, participants described their initial reaction to their friend’s—ostensibly superior—performance on the Kansas Analogies Test (i.e., “relieved,” “happy” and “proud”). Then, they reported the extent to which they believed that luck or chance affected the friend’s performance, and they indicated their concern over the friend’s potential failure on the Culture Fair Test (e.g., “I have doubts about my friend’s ability to perform well on this test.”). As instructed, participants used the friend’s answers on the Testing Strategies Form to help them infer his thoughts and feelings regarding the second upcoming assessment of his intelligence (e.g., “I think my friend is worried that he will not perform as well as others expect him to;” “I think my friend has doubts about his ability to perform well on the test;” etc.) In addition, participants rated the extent to which the outcome of their friend’s performance mattered to them (e.g., “It is important to me that my friend does well on the test;” “I would be proud if my friend did well on the test;” “I am concerned about what others will think of my friend’s performance”).

After completing these dependent measures, participants reviewed the previously presented information regarding the Culture Fair Test and their allocation of preparation time (i.e., all levels of practice time allocation are *equally* needed; choosing less practice time for the friend obscures the test’s diagnosticity, etc.). Participants then allocated
practice time for their friend with the number of practice minutes allocated being the primary dependent variable.

Following the primary dependent measure, participants responded to 3 open-ended questions in which they reported their thoughts about the friend’s upcoming performance as well as factors that they thought might affect his performance (e.g. test anxiety). Finally, participants answered 5 items regarding social comparisons and feelings of envy toward the friend (e.g. “I would feel envious if I found out that my friend was more intelligent than me;” “After I examined the Testing Strategies Sheet, I thought that my friend was more intelligent than me.”). Upon completion of these items, participants were probed for suspicion, debriefed and thanked for their participation (see Figure 1 for an outline of the study procedure).

RESULTS

Instruction and Manipulation Checks

Instructions. For participants to handicap their friend on the Culture Fair Intelligence Test, it was critical for them to understand that providing the friend with insufficient practice time would excuse his potentially poor performance. To ensure that participants understood this handicapping opportunity, they were asked two questions regarding the impact of practice time on performance. Results were strongly suggestive, as 94.7% of participants marked at least a 7 (1=not at all, 9=very much) in response to the question “To what extent does practice help performance on the Culture Fair Intelligence Test?” Moreover, 84.1% of participants answered at least a 7 (1=not at all, 9=very much) on an item stating that lack of practice would excuse a poor performance on the Culture Fair Intelligence Test. Given these responses, it appears that participants adequately
understood the relationship between practice time and performance on the Culture Fair Test, and they correctly perceived that low practice allocations could potentially excuse a poor performance.

Feedback manipulation. Another critical feature of the experiment was the feedback manipulation. Noncontingent success feedback promotes self-handicapping because it renders people uncertain about their ability to reproduce an initial success (Berglas & Jones, 1978). In the current study, it was important to create a similar sense of uncertainty regarding the friend’s ability to perform well on the Culture Fair Test. Thus, participants were led to believe that their friend experienced either contingent or noncontingent success on an initial assessment of his intelligence (The Kansas Test). The contingency manipulation was delivered via the Testing Strategies Form.

Notably, the contingency manipulation proved very effective. For example, those who received noncontingent feedback had significantly more doubt in their friend’s ability to do well than those in the contingent group $F(1, 73)=28.92, p <.001$. Further, those receiving noncontingent feedback perceived their friend to be less confident about his ability to perform well on the intelligence test than those in the contingent group $F(1, 73)=43.74, p <.001$. Finally, those who received noncontingent feedback had a lower sense of “global confidence” regarding the friend’s upcoming performance on the Culture Fair Test compared to those who received contingent feedback $F(1,73)=41.68, p < .001$.

Construal prime. Another set of items assessed the effectiveness of the self-construal prime. It was expected that participants primed into an interdependent self-construal would report being more interconnected or merged with their friend as measured by the Inclusion of Other in the Self (IOS) Scale (Aron, Aron, & Smollan,
1992). Unfortunately, scores on the IOS Scale did not relate to construal condition $F < 1$. Given the failure of this manipulation check, exploratory analyses were performed to determine what effect the prime had on participants. Independent sample t-tests revealed that only one item significantly differed between construal conditions. This was an item related to envy (“I am concerned that this experiment will show that my friend is more intelligent than me.”). Specifically, those in the interdependent condition reported being more concerned about a potential upward social comparison with the friend than those in the independent condition $t(72) = 2.09, p < .05$. This result is consistent with Tesser’s SEM (1988) whereby people are relatively more concerned about upward social comparisons when the target of social comparison is close to the self. Notably, the exploratory analyses also showed that the construal prime had very different effects depending on feedback condition. In recognition of the nuanced effects of the self-construal prime, a careful analysis of its effects will be described later in the results section, and the effects of the construal prime will be discussed in further detail in the discussion section.

Perception that friend cared. This study strongly manipulated perceptions of the friend’s overall psychological state by means of his (bogus) self-report on the Testing Strategies Form. For example, the Testing Strategies Form depicted the friend as highly uncertain of himself in the noncontingent condition, or highly confident in his abilities in the contingent condition. Differences in the friend’s perceived confidence as a function of contingency condition show that this manipulation was highly effective. However, although the friend’s confidence was intended to vary by condition, participants in all conditions were meant to believe that the friend cared about the outcome of his
performance. This was important because participants might be less likely to handicap their friend if he was apathetic about The Culture Fair Intelligence Test. If the friend were apathetic, then other-handicapping would not protect his self-esteem because it was never threatened in the first place. In order to show that the friend was not perceived as apathetic about the Culture Fair Test, the Testing Strategies Sheet depicted him as caring about what others thought of his performance; caring about his intelligence; and caring about the meaning of his score. It appears that Testing Strategies Form was effective in making participants in all conditions believe that the friend cared about the outcome of the Culture Fair Intelligence Test. The following questions were on a 7-point scale, and none significantly differed by condition. To start, the average response to the item “I think my friend wants to avoid a poor performance on the intelligence test” was 6.24. The average response to “I think my friend will be upset if he does not do as well as others expect him to” was 4.93. The average response to “I think my friend would feel proud if he did well on this test” was 6.52. Finally, the average response was 6.59 on the item: “I think my friend wants to do as well as he possibly can.” Taken together, it appears that participants believed that their friend cared about the Culture Fair Test.

*Practice Time Allocation*

As noted, participants perceived that lower practice time allocations would obscure attributions about the friend’s competence in the event of failure. Participants could allocate between 2 and 12 minutes of practice time for the friend. It was predicted that those who received noncontingent feedback would allocate less practice time to the friend (i.e. to prevent/obscure attributions that would implicate the friend’s abilities as the cause of his poor performance). To test this prediction, a 2(Self-Construal: independent
vs. interdependent) X 2(Feedback: contingent vs. non-contingent) analysis of variance (ANOVA) was conducted on the number of practice minutes that participants allocated to the friend. Main effects of Self-Construal and Feedback were not significant, $F$s < 1. Importantly, however, there was a significant Self-Construal X Feedback interaction $F(1,71)=4.78, p<.05$.

Closer inspection of the interaction uncovered evidence of other-handicapping, but only among those primed with an independent mindset (see Table 1 and Figure 2). Contrasts revealed that only two conditions significantly differed. Specifically, participants who received noncontingent feedback gave their friend significantly less practice time ($M=6.00$ minutes) than those who received contingent success feedback ($M=7.95$ minutes), but only when they were primed into an independent mindset $t(71)=2.04, p<.05$. Thus, evidence for other-handicapping was only found among those who were primed with an independent mindset rather than an interdependent mindset. Indeed, the means between those who received contingent and noncontingent feedback did not significantly differ when participants were primed with an interdependent mindset $t(71)=1.04, p=.30$ (see Table 1 and Figure 2).

In light of these results, data analyses proceeded in two directions. First, a search was conducted to uncover possible mediators of the other-handicapping effect that was found in the independent condition. Secondly, an explanation was sought for why those in the interdependent condition exhibited a pattern of practice time allocation that was inconsistent with the use of an other-handicapping strategy, whereas those in the independent condition exhibited a pattern that was consistent with other-handicapping.
Factor Analyses Performed to Uncover Candidate Mediators

Factor analyses were conducted in order to search for candidate mediators. Because of the novelty of this research, a large number of questions were asked in order to find variables that might mediate other-handicapping. Broadly speaking, these included: (a) 18 questions assessing participants’ thoughts and feelings about the friend’s upcoming performance; (b) 15 questions assessing perceptions of the friend’s thoughts and feelings; and (c) 6 questions measuring social comparisons and envy. Because of the conceptual distinctions between these three sets of variables, factor analyses were conducted on all three sets individually. Next, in order to see how the entire set of variables held together, a global factor analysis was performed on the set as a whole. In other words, factor analyses were conducted on 39 questions which were asked after the contingency manipulation. Thus, factor analyses were performed on each of 3 conceptually distinct groups when the variables were conceptually divided; and a factor analysis was performed when these same variables were placed into a single large group. Notably, all factor analyses were principle component analyses employing a direct oblimin rotation.

First set of variables. On the first 18 items (a), Catell’s (1966) Scree Test indicated that two variable components should be retained. The first component explained 29.17% of the variance. This factor represented the extent to which participants personally cared about the outcome of the friends’ intellectual assessment. The three items that loaded most highly were: “It is important to me that my friend avoids a poor performance on the intelligence test” (.716); “I would be disappointed if my friend does not perform well” (.727); and “I am concerned about how others might regard my friend's
performance” (.793). Accordingly, these three items were averaged to create a candidate mediating variable hereafter referred to as “Self-Cares.”

The second component explained 19.15% of the variance. This variable represented doubt that the friend could perform well on the test. The factor loaded most highly on three items: “I am confident that my friend will perform well” (.923); “I expect my friend to do poorly on this test” (.889); and “I have doubts about my friend's ability to perform well on this test.” These three items were averaged (one item was reverse scored) to create a candidate mediating variable hereafter referred to as “Doubting Friend.”

*Second set of variables.* A principal component analysis that was performed on the 15 questions (b) that represented perceptions of the friends’ thoughts and feelings regarding the test indicated that two components should be retained. The first component explained 33.23% of the variance. This factor represented participants’ perception that the friend was confident in his ability to do well on the intelligence test. It loaded most highly on the following three items: “I think my friend has doubts about his ability to perform well on this test” (.891);”I think my friend is confident that he will perform well” (.918); and “I think my friend expects to do very well on this test” (.880). These three items were averaged (one item was reverse scored) to create a candidate mediator hereafter referred to as “Friend’s Confidence.”

The second factor explained 25.17% of the variance. It represented the extent that the friend was perceived to care about the outcome of the Culture Fair Intelligence Test. It loaded most highly on the following 3 items: “I think my friend will be upset if he does not do as well as others expect him to” (.797); “I think my friend will be disappointed in
himself if he performs poorly” (.825); and “I think my friend is worried about what
others will think of his upcoming performance” (.850). These three items were averaged
to create a candidate mediating variable hereafter referred to as “Friend Cares.”

Third set of variables. A third principal component analyses performed on the 6
items (c) assessing social comparisons indicated that two factors should be retained. The
first component explained 45.14% of the variance. The factor loaded most highly on 3
items regarding participants’ concern that the friend was smarter than them: “I would feel
envious if I found out that my friend was more intelligent than me” (.895); “I am
concerned that this experiment will show that my friend is more intelligent than me”
(.837); and “During this experiment, I have been thinking about how my own intelligence
compares to my friend’s intelligence” (.727). These items were averaged together to
create a candidate mediating variable hereafter referred to as “Envy.”

The second factor explained 25.30% of the variance. It loaded most highly on 2
items regarding the belief that the friend was smarter than the self: “Before I attended this
experiment, I believed that my friend was more intelligent than me” (.892); and “After I
examined the Testing Strategies Sheet, I thought that my friend was more intelligent than
me” (.859). These two items were averaged to create the candidate mediating variable
hereafter referred to as “Friend Smarter.”

Factor analysis on the entire set. Finally, a factor analysis conducted on the entire
set of 39 questions indicated that two factors should be retained. The first factor
explained 21.51% of the variance. It represented that both the participant was confident,
and that he perceived the friend as confident. This factor loaded most highly on the
following four items: “I am confident that my friend will perform well” (.884); “I think
my friend is confident that he will perform well” (.878) “I think my friend has doubts about his ability to perform well on this test” (.878); and “I think my friend expects to do poorly on this test” (.879). These four items were averaged (two items were reverse scored) to create the candidate mediator hereafter referred to as “Global Confidence.”

Finally, the second factor explained 18.46% of the variance. It represented that the outcome of the test mattered to the participant and was perceived to matter to the friend as well. The four items loading most highly on this measure were: “I think my friend is worried about what others will think of his upcoming performance” (.755); “I think my friend will feel that he has let others down if he does not do his best” (.875); “I am concerned about how others might regard my friend's performance” (.733); and “I am concerned that this experiment will show that my friend is more intelligent than me” (.677). These four items were averaged together to create the candidate mediator variable hereafter referred to as “Global Caring.”

In sum, the results of factor analyses yielded 8 candidate mediators: “Doubting Friend,” “Self-Cares,” “Friend’s Confidence,” “Friend Cares,” “Envy,” “Friend Smarter,” “Global Confidence,” and “Global Caring” (See Tables 2-5 for means of each of these factors by condition) The next goal was to discover whether or not any of these variables mediated the significant relationship between feedback type and other-handicapping that was found in the independent condition.

Path Analysis in Independent-Construal Condition

Step 1. Path analyses were performed within the independent construal condition according to the Judd and Kenny’s (1981a, 1981b) procedures. Notably, these analyses were not performed on the interdependent construal condition, because this condition did
not show significant differences between those receiving contingent and noncontingent feedback. Thus, the procedures described below were only applied to those in the independent construal condition \((n = 37)\). Under Judd and Kenny’s procedures, data fits a meditational model when three conditions are met: (1) the independent variable predicts the dependent variable; (2) the independent variable predicts the mediating variable; and (3) the mediating variable significantly predicts the dependent variable when the independent variable is controlled. To satisfy step one, a regression analysis was performed whereby feedback condition was regressed on practice time. As expected, feedback condition significantly predicted practice time \(F(1, 35) = 4.53, p < .05\) in the independent condition. Thus, step one was satisfied as the independent variable (feedback) predicted the dependent variable (practice time).

**Step 2.** To satisfy step two, regression analyses were performed to assess whether or not the independent variable (feedback) would predict any of the 8 candidate mediating variables. Three variables passed the second step. Notably, all three of these candidate mediators were related to confidence (doubt) that the friend could perform well. The candidate mediators that passed the second step of the procedure were: “Doubting Friend,” “Friend’s Confidence” and “Global Confidence.” Specifically, those in the noncontingent condition had significantly more doubt in the friend than those in the contingent condition \(F(1, 35) = 23.65, p < .001\). Likewise, those in the noncontingent condition perceived the friend to be considerably less confident \(F(1, 35) = 40.92, p < .001\). Finally, those in the noncontingent condition were both personally less confident and perceived their friend as less confident. That is, global confidence was lower in the noncontingent condition than in the contingent condition \(F(1, 35) = 36.81, p < .001\).
Step 3. The three candidate mediators were then subjected to the final step (3) of the procedure to demonstrate mediation. According to Judd and Kenny, the mediator must significantly predict the dependent variable when the independent variable is controlled in the third step of the path analysis. Unfortunately, none of the three candidate mediators passed the final step. The extent to which participants doubted their friend was not significantly related to practice time when feedback was controlled $F(2,34)=.2.29, p=.117$. Likewise, the extent to which participants perceived that the friend was confident was not significantly related to practice time when feedback was controlled $F(2,34)=2.29, p=.116$. Finally, the global confidence variable did not significantly relate to practice time when feedback was controlled $F(2,34)=2.32, p=.113$.

In sum, a significant interaction was found in which those primed with an independent self-construal exhibited a pattern consistent with other-handicapping by allocating less practice time to the friend after noncontingent success compared to a condition in which the friend experienced contingent success. To explain this effect, several candidate mediating variables were identified via factor analyses. Unfortunately, no mediator was found. Although variables related to doubt passed the first two steps of a mediation analysis, ultimately, none of them were found to mediate the other-handicapping effect.

What Happened in the Interdependent Construal Condition?

As noted, the construal prime affected participants differently depending on feedback condition. Also, among those primed with an interdependent self-construal, practice allocations were not significantly different between feedback conditions $F(1,36)=1.01, p=.332$. Why did those in the interdependent condition fail to exhibit a
pattern of other handicapping whereas those in the independent condition did exhibit a pattern of other-handicapping? An explanation for this difference between construal conditions will focus on examining the participants who received noncontingent feedback. This is because practice allocations were not significantly different between construal conditions among those who received contingent feedback $F(1,35)=1.61, p = .212$. Conversely, a marginally significant difference between construal conditions was found among those who received noncontingent feedback $F(1,36)=3.46, p=.071$. Thus, the most important reason that a pattern consistent with other-handicapping was found in the independent condition but not in the interdependent condition appears to be that participants in the interdependent condition gave the friend significantly more practice time after noncontingent feedback. In other words, because the difference between construal conditions on practice time only approached significance when participants received noncontingent feedback, examining how the prime impacted participants who received noncontingent feedback is critical for explaining why the interdependent group did not other-handicap, whereas the independent group did appear to other-handicap.

*Noncontingent condition.* To uncover the impact of the construal prime on those who received noncontingent feedback, exploratory analyses using independent samples t-tests were performed to explore the reactions of participants who received noncontingent feedback. Notably, all of the items that were significantly different between construal conditions appeared consistent with a general pattern. Namely, they converged on the notion that those in the interdependent condition felt that the friend’s outcome was more important. Notably, this pattern did not emerge among those who received contingent feedback. Participants in the interdependent condition more strongly endorsed the
statements: “If my friend did very well on this intelligence test, then this would reflect positively upon me as well” $t(36) =2.00, p = .052$; “If my friend did not perform well on the intelligence test, then I would share in his disappointment” $t(36) =2.22, p <.05$; and “It is important to me that my friend does well on this test” $t(36)=1.91, p =.064$.

Additionally, participants primed into an interdependent mindset reported experiencing more pride $t(36)=-2.27, p <.05$ and more relief $t(36)=2.46, p <.05$ when they heard about their friend’s initial success on the Kansas Test. In sum, those who were primed with an interdependent construal felt that the friend’s outcome was more important and/or more self-relevant when they received noncontingent feedback. The enhanced importance of the test may have made these participants more reluctant to handicap their friend.

Contingent condition. On the other hand, the construal prime had a very different impact on those who received contingent feedback. Among those, exploratory analyses using independent samples t-tests revealed that the construal prime significantly altered participants’ confidence in their friend. The three composite measures of confidence (doubt) that were generated by factor analyses were all significantly impacted by construal condition, but only in the contingent feedback group. Those who were primed into an interdependent mindset had more doubt that their friend could perform well $t(35)=2.01, p=.052$; believed that their friend was less confident in his abilities $t(35)=2.07, p<.05$; and measured lower on the global confidence variable $t(35)=2.16, p <.05$. In sum, those primed into an interdependent mindset doubted the friend more and believed that he was less confident after contingent feedback compared to those in the independent group. This enhanced doubt may reflect that participants in the
interdependent group regarded the outcome of the test as more important than those in the independent group.

In conclusion, the pattern of responses in the noncontingent condition reflects that those primed into an interdependent mindset felt that the outcome of the friend’s intelligence test was significantly more important than those in the independent group. Recall that there was a marginally significant difference between construal conditions on practice allocation but only among those who received noncontingent feedback. In other words, there was only a difference in other-handicapping between construal conditions when noncontingent feedback was received but not when contingent feedback was received. This difference, along with the construal prime’s impact on perceived importance in the noncontingent condition, suggests that those primed into an interdependent mindset and who received noncontingent feedback felt that the friend’s outcome was more important and/or self-relevant. Consequently, they felt that it was more costly to handicap the friend. Because of the higher cost of handicapping, the interdependent group may not have withheld as much practice time as those in the independent group when noncontingent feedback was received. This may explain why a pattern of other-handicapping was not found among those who were primed with an interdependent self-construal—handicapping was more costly for them.

DISCUSSION

The current study recruited 40 pairs of male friends. The friends were separated and exposed to a self-construal prime (independent, interdependent) and bogus feedback (contingent success, noncontingent success) regarding their friend’s performance on an intellectual assessment. The feedback conditions manipulated participants’ expectations
about their friend’s ability to perform well on a second, more intimidating intelligence test (Culture Fair Intelligence Test). Participants then anonymously allocated practice time for the friend prior to his taking the Culture Fair Test. Practice time choice (2-12 minutes) was the primary dependent variable. Notably, manipulation checks demonstrated that insufficient practice time was perceived as a potential excuse for poor performance on the Culture Fair Test. As expected, participants allocated less time (handicapped the friend more) when poor performance seemed likely (noncontingent condition) compared to when success seemed more likely (contingent condition). However, this significant other-handicapping effect only occurred when participants were primed into an independent mindset. Conversely, no significant differences in practice allocation were found between feedback conditions when participants were primed into an interdependent mindset.

Importantly, patterns of practice allocation for the friend (in the independent group) mirrored classic patterns of self-handicapping in the sense that handicapping was elicited by noncontingent success (e.g. Alter & Forgas, 2007; Berglas & Jones, 1978; Higgins & Harris, 1988; Kolditz & Arkin, 1982; Mayerson & Rhodewalt, 1988; McCrea, Hirt, & Milner, 2008; Tucker, Vuchinich & Sobell, 1981). A tenant of self-handicapping theory is that self-handicappers sabotage themselves because they want to downplay negative attributions about their competence (e.g. “I did poorly on the test because I did not study, not because I am incompetent.”). Because self-handicapping protects the self from negative “internal-stable” attributions, the use of this strategy is especially likely following noncontingent success. After all, noncontingent success simultaneously raises expectations while rendering future success uncertain (Self, 1990). Similar to the
established link between self-handicapping and noncontingent success, this study found that participants were more likely to handicap a friend (other-handicapping) when his chances of success were perceived as dubious due to noncontingent feedback.

**Obtained Results Compared to Predictions**

Some of the obtained results were consistent with predictions, whereas others were not. To begin, the pattern of practice allocation in the independent condition was consistent with the hypothesis that less practice would be allocated for the friend following noncontingent compared to contingent feedback. An interesting feature of this result was that participants allocated less practice time when the friend presumably needed practice the most. After all, the friend seemed poised for diminished performance following noncontingent feedback, and insufficient practice should have amplified his risk of failure even more. Obtaining this expected, yet counterintuitive finding is encouraging. However, the results of this study did not perfectly mirror hypotheses. First, a main effect was expected in which those who received noncontingent feedback would allocate less practice time than those who received contingent feedback. This effect was not obtained, however, as the interdependent condition did not exhibit the classic handicapping pattern of increased handicapping following noncontingent success. Thus, the behavior of those in the interdependent condition washed out the expected main effect of feedback on practice allocation.

Secondly, although the expected Construal X Feedback interaction was obtained, this interaction was expected to occur in the opposite direction. Specifically, the interdependent group was expected to allocate significantly less practice time following noncontingent feedback. However, it was the independent (but not the interdependent)
group that allocated less practice time after noncontingent feedback. Thus, contrary to expectations, those in the independent condition were more willing to handicap the friend following noncontingent feedback than those in the interdependent condition.

*Examining unexpected findings.* Why was it expected that the interdependent group would handicap more after receiving noncontingent feedback than the independent group? To start, the “we-self” should feel more threatened by the friend’s potentially poor performance than the “I-self” because the interdependent self-construal is characterized by interconnectedness with others (e.g. Markus & Kitayama, 1991); therefore the friend’s performance should have been more self-relevant for those primed with an interdependent construal. Increases in the outcome’s importance should thereby magnify the perceived threat posed by the friend’s potential failure. Increased threat should, in turn, make defensive strategies like other-handicapping more likely, especially following noncontingent feedback. Nevertheless, results indicated that those in the independent condition were more likely to employ the handicapping strategy following noncontingent feedback.

Interestingly, the assertion that those primed into an interdependent mindset would care more about the friend’s performance on the Culture Fair Test appears to have been correct. This heightened caring was expressed in different ways depending on the type of feedback received. Among those who received contingent feedback, there was evidence that those in the interdependent mindset cared more about the outcome of the test than those in the independent condition. The interdependent prime made participants in the contingent condition significantly more doubtful and less confident about the friend’s ability to do well on the Culture Fair Test. This higher level of doubt in the
contingent condition (where the friend’s future success was made to seem quite likely) may reflect increased caring. For instance, perhaps increased doubt among interdependents in the contingent condition signifies that they cared more and, therefore, thought about the test more elaborately. Thus, increased level of doubt/concern among interdependents may reflect that those in the interdependent mindset cared more about the outcome of the test than those in the independent mindset.

Secondly, there was evidence that interdependents who received noncontingent feedback cared more about the outcome of the test than independents who received noncontingent feedback. In the noncontingent condition, those receiving the interdependent prime felt more relief and more pride about the friend’s ostensibly stellar performance on the Kansas Test. Also, they expected to share in the friend’s disappointment more if he performed poorly. Moreover, they more strongly believed that the friend’s performance would reflect positively on them if he did well. This is, perhaps, an example of the self basking in the reflected glory of the friend (Cialdini et al., 1976). Finally, and perhaps most importantly, participants in the interdependent condition reported that the test’s outcome was more personally important to the self (i.e. “It is important to me, that my friend does well on the test”). Notably, many of these items indicate that participants in the interdependent group regarded the test’s outcome as more self-relevant (e.g. the self would share in the friend’s disappointment; the self would BIRG more, etc.). Increases in self-relevance should lead to increases in perceived importance. Thus, consistent with expectations, those in the interdependent group cared more about the outcome of the test. This was reflected by higher levels of doubt among interdependents in the contingent group, and by higher perceived outcome-importance in
the noncontingent group. But, contrary to expectations, this heightened level of caring reduced rather than increased rates of other-handicapping.

Why would increased caring lead to less handicapping? Perhaps heightened caring made participants perceive other-handicapping as a more costly strategy, thereby decreasing the likelihood of its enactment. After all, erecting a handicap would likely cost the participant a chance to BIRG if the friend appeared to be well-poised to perform well on the Culture Fair Test. As noted, interdependent participants expected to bask in the friend’s reflected glory more if he performed well. Also, even if the friend failed the Culture Fair Test, it should be easier to dissociate the self from a friend’s poor performance than it is to dissociate the self from one’s own poor performance. Thus, one might say that participants in the interdependent condition were in a relatively good situation because they could BIRG if the friend did well, and the self would not be terribly harmed if the friend did poorly.

In sum, perhaps a participant in the interdependent condition stood to gain more than he stood to lose through the gamble of allocating higher levels of practice time for the friend rather than handicapping him. Ironically, perhaps those primed with an independent self-construal were less selfish because they were more motivated by concern for the friend, rather than a selfish desire to BIRG. In other words, because the outcome was less important (probably because the self was less implicated) for those in the independent condition, these participants were more willing to manipulate attributions through a costly handicapping/sabotage strategy to protect the friend from negative internal-stable attributions regarding his potential failure.
Mediation of other-handicapping. Hirt et al. (2001) found that self-handicapping under conditions of high public self-focus was mediated by doubt/concern regarding one’s ability to perform well. This was consistent with Berglas and Jones’ (1978) original speculation that doubt in one’s ability to perform well played a pivotal role in eliciting self-handicapping. Similarly, it was anticipated that other-handicapping should be mediated by doubt/concern about the friend’s ability to perform well on the Culture Fair Intelligence Test. Although mediation was not obtained, one should not rule out the notion that doubt/concern about the friend’s abilities played a pivotal role in promoting other-handicapping in the independent group. After all, the only variables (among 8 candidate mediators) that feedback variable significantly predicted were those associated with doubt regarding the friend’s ability. Also, on its own, global confidence was a marginally significant predictor of the practice time allocation in the independent condition. This data, along with prior evidence and theory indicating that doubt mediates self-handicapping, suggests that doubt may have played an important role in eliciting other-handicapping.

Implications of the Current Study

Theoretical implications. A theoretical contribution of the current study is the suggestion that processes like self-handicapping may actually transcend the self. Previous research has repeatedly demonstrated that people erect handicaps to discount failures and/or augment success. Deeply engrained in the understanding of handicapping phenomenon was the assumption that people sabotaged their own successful performance for attributional benefits. Indeed, this assumption was entrenched so deeply in this thinking that Berglas and Jones (1978) dubbed the effect self-handicapping. However,
this study shifts the paradigm somewhat by suggesting that, at least some of the time, people sabotage the performance of *others* to discount the other’s abilities as the cause of potential failure and/or augment their potential success.

*Practical Implications.* It is difficult to speculate about the real-world scope of other-handicapping at the present time. *Self*-handicapping has been shown to exist in the “real world” via a number of impressive field studies. For example, self-handicapping has been observed in the classroom (e.g. McCrea & Hirt, 2001; Rhodewalt, & Hill, 1995), and within athletic contexts (e.g. Rhodelwalt, Saltzman, & Wittmer, 1984). Also, clinical reports of self-handicapping exist, and therapeutic interventions have even been designed to help self-handicappers (Leahy, 2001). Thus, it is at least known that instances of behavioral self-handicapping are readily observable in the field. Given that there has not been any field research investigating other-handicapping, there is no way of knowing whether or not other-handicapping is more or less common than self-handicapping.

Although real-world examples of behavioral other-handicapping may turn out to be rarer and/or more subtle than self-handicapping, this does *not* mean that other-handicapping does not occur beyond the laboratory. In the current study, men were presumably so motivated to manipulate attributions in favor of a friend that they withheld essential practice time from him. Indeed, the desire to favorably manipulate attributions for the benefit of others should be common. Other-handicapping represents one means of accomplishing this objective.

A subtle method of other-handicapping may occur when people enable, support or even promote an individual’s self-destructive/self-handicapping behavior. For instance, a student whose girlfriend is a self-handicapper may want to personally believe (and want
his friends and the girlfriend herself to believe) that her failures are due to lack of effort. The attributional payoffs that the boyfriend receives from discounting attributions regarding his girlfriend’s ability may prevent him, to some extent, from intervening in her self-destructive behavior, and it may even motivate him to promote it. Human lives are highly intertwined, and there is no reason to believe that chronic self-handicappers are also chronic loners. Perhaps those who are close to self-handicappers may contribute to their destructive behavior. In other words, self-handicappers may surround themselves with other-handicappers who contribute to the sabotage. These other-handicappers would reap the payoff of other-handicapping attributional benefits and the target of other-handicapping would as well. Still, until empirical work is done, the real-world scope of other-handicapping can only be speculated.

Recommendations for Future Research

*Manipulating diagnosticity.* Because the other-handicapping effect is new, the first step of future research should be to increase certainty that the phenomenon is what it is believed to be. Were participants truly withholding practice time (handicapping) for the purpose of manipulating attributions about the friend’s abilities? One way to increase certainty in this conclusion would be to conduct a study in which feedback type is manipulated along with the *perceived diagnosticity* of the Culture Fair Intelligence Test (cf. Shepperd & Arkin, 1989). Under this design, half of the participants would be told that the test which the friend is taking is *not* diagnostic of “true intelligence” (e.g. because the test is still being developed), whereas the other half would be told that the test will be a powerfully accurate measure of the friend’s *true* intelligence. If participants are truly handicapping the friend for the purpose of manipulating attributions about his
abilities, then evidence for other-handicapping should only be found when the test is perceived as a diagnostic measure of intelligence. After all, there would be no reason to manipulate attributions if the test is non-diagnostic.

*Manipulating practice instructions.* Similarly, another way to increase certainty that other-handicapping is occurring would be to manipulate the instructions regarding practice time. Specifically, one group of participants would be told that practice is critically important for success on the Culture Fair Test, whereas the other group would be told that practice does not make any difference on performance (cf. Hirt et al., 2001). If participants are truly handicapping the friend for the purpose of manipulating attributions about his abilities, then evidence for other-handicapping should only be found when practice is believed to matter. After all, the participant would not perceive an opportunity to handicap the friend if practice did not matter. If practice does not matter, then withholding practice time would not lead to a discounting of failure or an augmentation of success.

*Manipulating empathy.* Results of the current study suggest that exploring the moderating impact of empathy on other-handicapping is a promising direction for future research. Speculation about the moderating role of empathy is largely based on results suggesting that other-handicapping has more to do with protecting the other than with protecting the self. It was previously believed that increasing interconnectedness (via the interdependent prime) would increase other-handicapping under conditions of noncontingent feedback. It was reasoned that other-handicapping would increase because the friend’s outcome would be, to some extent, a matter of self-interest. After all, the friend’s failure would reflect poorly on the self since the self had presumably been
expanded to include the friend. Contrary to this prediction, however, evidence for other-handicapping was found in the independent condition rather than the interdependent condition. Also, feeling that the other’s outcomes were connected to the self (e.g. “If my friend performed well on the intelligence test, then this would make me look good in the eyes of others as well”) actually reduced other-handicapping. Thus, perhaps other-handicapping is mostly enacted in the service of protecting the other’s esteem rather than with protecting the self’s esteem. In order to assess this suggestion, future research might manipulate empathy. That is, if other-handicapping is more about protecting the other than protecting the self, then (following noncontingent feedback) participants should be more likely to handicap the friend in a high-empathy condition than in a low-empathy condition. It would be an exciting and provocative finding if participants who empathized with their friend sabotaged her/him more than those who remained detached from their friend. Empathy could be manipulated via instructions to either “remain objective and detached as you make inferences about your friend” (low empathy), or to “try to imagine how your friend feels” (high empathy) (e.g. Batson et al., 1988; Toi & Batson, 1982).

Second generation questions. To explore the mechanisms underlying other-handicapping, it would be helpful to largely replicate the current study, but then provide participants with the bogus feedback that their friend did very poorly on the Culture Fair Intelligence Test following the practice time allocation. The extent to which participants discount their friend’s competence as the cause of failure could then be assessed (cf. Rhodewalt, Morf, Hazlett, Fairfield, 1991). Participants should discount the friend’s failure to the extent that they handicapped him. This finding would increase certainty that other-handicapping is used to manipulate attributions about the friends’ competency.
Limitations of the Current Study

Single item DV. The limitations of the current study will now be addressed. First, the success of the study largely hinged on a single dependent variable (the practice time allocation choice). This is a procedural limitation. Future procedures should find a way to measure other-handicapping in several ways. Relying on a single measure is risky. For one, single measures make error more likely. For instance, it is always possible that the practice time measure did not truly represent the construct of other-handicapping. Thus, different handicaps should be used in future research. Perhaps, for example, participants could handicap the friend in a future study by making him listen to performance-inhibiting (rather than performance-enhancing) music (cf. Shepperd, & Arkin, 1989).

Question quantity. A second problem is that participants may have been asked too many questions (i.e., 99, in total). The large number of items may have made participants less careful in their responses, thereby increasing error variance. In future research, items should be “trimmed” from the experimental paradigm. For example, the Self-Construal Scale (Cross, Bacon, & Morris, 2000) and the Self-Handicapping Scale (Jones, & Rhodewalt, 1986) were unhelpful during data analysis. Both of these scales might be excluded in future studies.

Demand characteristics. There was a manipulation check item about practice time’s impact on performance stating: “If my friend did not practice much for the Culture Fair Test and performed poorly, his lack of practice would excuse his poor performance.” The benefit of this question was that it demonstrated that participants believed that they could discount internal-stable attributions about the friend’s failure through handicapping. As noted in the results section, almost all participants considered lack of
practice time as a valid excuse for poor performance. Ironically, however, this item may have worked to reduce other-handicapping tendencies. This reduction in other-handicapping is consistent with prior self-handicapping research. Self (1990) argued that the self-handicapping and excuse-making literature suggests that these strategies are reduced when the handicap or excuse is made too salient or obvious (Arkin, Appelman, & Bruger, 1980; Arkin, Gabrenya, Appelman & Cochran, 1979; Smith, et al., 1982). Indeed, there was a significant and positive correlation (r=.35) between this manipulation check item and practice time allocation. In other words, the more salient the excuse, the less likely participants were to handicap the friend. Thus, although virtually every participant understood that low practice time excused poor performance, those for whom this excuse was particularly salient were less likely to erect a handicap. Therefore, in the future, a more subtle version of this item should be utilized.

CONCLUSION

To conclude, the two main benefits of this research were; (1) the potential discovery of an interesting and novel effect (other-handicapping); and (2) the creation of a novel research paradigm that can be used again to verify the other-handicapping effect and tease apart its mechanisms. One of the most successful features of this experimental paradigm was the feedback manipulation. This manipulation appeared to capture the essence of a self-handicapping feedback manipulation in the sense that participants truly doubted the friend’s ability to succeed on an ego-relevant task in the noncontingent condition, compared to the contingent condition. A priori, one might have expected that it would be difficult to manipulate participants’ expectations about the friend’s ability to
perform well on the Culture Fair Test. After all, people should have some idea of how smart their friend is. Nevertheless, the manipulation proved very effective.

Second, it is impressive that no participants expressed suspicion regarding the cover story whereby the experimenter asked them to choose their friend’s practice time to preserve the “unbiased” nature of the experiment. Participants were probed for suspicion during debriefing, and no one ever discerned the true nature of the study. Indeed, participants did not even recognize that the practice time choice was an important feature of the study. Thus, although there were concerns that the cover story would be overly suspicious, this was not the case. Instead, a plausible situation was created in which the experimenters were able to investigate other-handicapping. A final strength of the research paradigm is that, in many ways, it mirrored self-handicapping paradigms, the principle difference being that, in the current paradigm, the esteem-threat was redirected from the self to the self’s friend. The resemblance of the current study’s paradigm and the current study’s results (at least in the independent group) to self-handicapping studies increases confidence that other-handicapping is real and that other-handicapping belongs to the same family as self-handicapping.

In summary, this study produced the expected, yet counterintuitive finding that participants withheld practice from their friend when he seemed to need practice most (i.e. when his success seemed unlikely). Allocating less practice time increased the friend’s chances of failure on an ego-relevant task (a diagnostic intelligence test), while simultaneously shielding the friend from negative internal-stable attributions regarding his potential failure. This effect has been dubbed “other-handicapping,” and it appears to operate as a “benevolent” form of sabotage.
### TABLES AND FIGURES

#### Table 1

*Practice Allocation (in minutes) by Self-Construal and Feedback Conditions*

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<thead>
<tr>
<th>Feedback Type</th>
<th>Self-Construal</th>
<th>Mean</th>
<th>St. Error</th>
<th>N</th>
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<td>Contingent Success</td>
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<td></td>
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<td>.68</td>
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<tr>
<td>NonContingent Success</td>
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<td>.68</td>
<td>18</td>
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<tr>
<td></td>
<td>We-Self</td>
<td>7.65</td>
<td>.65</td>
<td>20</td>
</tr>
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</table>

#### Table 2

*Self-Related Factor Means by Self-Construal and Feedback Conditions*

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<tr>
<th>Self-Construal</th>
<th>Feedback Type</th>
<th>Self-Cares</th>
<th>Doubting Friend</th>
</tr>
</thead>
<tbody>
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<td>I-Self</td>
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<td></td>
<td>NonContingent</td>
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<td></td>
<td>Total</td>
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<td>We-Self</td>
<td>Contingent</td>
<td>2.87</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
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<td>2.38</td>
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<td></td>
<td>Total</td>
<td>2.61</td>
<td>2.09</td>
</tr>
<tr>
<td>Feedback Totals</td>
<td>Contingent</td>
<td>2.89</td>
<td>1.50</td>
</tr>
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<td></td>
<td>NonContingent</td>
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<td>2.75</td>
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<tr>
<td></td>
<td>Grand Total</td>
<td>2.62</td>
<td>2.13</td>
</tr>
</tbody>
</table>
Table 3

*Friend-Related Factor Means by Self-Construal and Feedback Conditions*

<table>
<thead>
<tr>
<th>Self-Construal</th>
<th>Feedback Type</th>
<th>Friend’s Confidence</th>
<th>Friend Cares</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-Self</td>
<td>Contingent</td>
<td>6.44</td>
<td>4.93</td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>3.94</td>
<td>4.43</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5.23</td>
<td>4.68</td>
</tr>
<tr>
<td>We-Self</td>
<td>Contingent</td>
<td>5.89</td>
<td>4.87</td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>4.58</td>
<td>4.48</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5.20</td>
<td>4.67</td>
</tr>
<tr>
<td>Feedback</td>
<td>Contingent</td>
<td>6.17</td>
<td>4.90</td>
</tr>
<tr>
<td>Totals</td>
<td>NonContingent</td>
<td>4.28</td>
<td>4.46</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>5.21</td>
<td>4.68</td>
</tr>
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</table>
Table 4

*Social Comparison-Related Factor Means by Self-Construal and Feedback Conditions*

<table>
<thead>
<tr>
<th>Self-Construal</th>
<th>Feedback Type</th>
<th>Envy</th>
<th>Friend</th>
<th>Friend Smarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-Self</td>
<td>Contingent</td>
<td>2.77</td>
<td>3.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>2.55</td>
<td>3.32</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>2.67</td>
</tr>
<tr>
<td>We-Self</td>
<td>Contingent</td>
<td>3.59</td>
<td>3.94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>2.97</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>3.26</td>
</tr>
<tr>
<td>Feedback Totals</td>
<td>Contingent</td>
<td>3.17</td>
<td>3.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>2.77</td>
<td>3.55</td>
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<td>Grand Total</td>
<td></td>
<td>2.97</td>
<td>3.70</td>
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</tr>
</tbody>
</table>
Table 5

*Global Factor Means by Self-Construal and Feedback Conditions*

<table>
<thead>
<tr>
<th>Self-Construal</th>
<th>Feedback Type</th>
<th>Global Confidence</th>
<th>Global Caring</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-Self</td>
<td>Contingent</td>
<td>6.51</td>
<td>2.95</td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>4.28</td>
<td>2.56</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5.43</td>
<td>2.76</td>
</tr>
<tr>
<td>We-Self</td>
<td>Contingent</td>
<td>6.06</td>
<td>3.17</td>
</tr>
<tr>
<td></td>
<td>NonContingent</td>
<td>4.96</td>
<td>2.80</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5.48</td>
<td>2.97</td>
</tr>
<tr>
<td>Feedback</td>
<td>Contingent</td>
<td>6.29</td>
<td>3.05</td>
</tr>
<tr>
<td>Totals</td>
<td>NonContingent</td>
<td>4.64</td>
<td>2.68</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>5.45</td>
<td>2.87</td>
</tr>
</tbody>
</table>
FIGURES

PROCEDURE

I. Friends arrive & cover story is delivered

II. Friends are separated

III. Participants learn about opportunity to obscure the meaning of the friend’s second intellectual assessment

IV. Individual difference measures

V. Self-construal prime (independent vs. interdependent)

VI. Success feedback for friend’s first intelligence test (contingent vs. noncontingent)

VII. Dependent measures

VIII. Practice time allocation for the friend’s second intellectual assessment (i.e. opportunity to handicap the friend’s performance

Figure 1. Outline of experimental procedure.
Figure 2. Practice Allocation (in minutes) by Self-Construal and Feedback Conditions
REFERENCES


Batson, C.D., Dyck, J.L., Brandt, J.R., Batson, J.G., Powell, A.L., McMaster, M.R., & Griffin, C.


APPENDIX: THE CULTURE-FAIR TEST

The Culture-Fair Test: An Improved Measure of Intelligence

Fig 1. Traditional Measures of Intelligence as a function of cultural background.

Fig. 2. Scores on the Culture-Fair Intelligence Test as a function of cultural background.
Example Items from the Culture Fair Test of Intelligence

Directions:
Look carefully at the first square and how the dots are arranged. Then determine which of the choices would allow for the same conditions to be met. Mark your response on the line to the right. Just as if you were taking the actual test, you will have 10 seconds to answer each example item.

STOP! You have finished the example items.

Rosenberg Self-Esteem Scale

Please record the appropriate answer for each item, depending on whether you Strongly agree, agree, disagree or strongly disagree with it.
1=Strongly agree  
2=Agree  
3=Disagree  
4=Strongly Disagree  

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

My close relationships are an important reflection of who I am.

1 2 3 4 5 6 7
Strongly Agree Strongly Disagree

When I feel very close to someone, it often feels to me like that person is an important part of who I am

1 2 3 4 5 6 7
Strongly Agree Strongly Disagree

I usually feel a strong sense of pride when someone close to me has an important accomplishment.

1 2 3 4 5 6 7
Strongly Agree Strongly Disagree

I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are.

1 2 3 4 5 6 7
Strongly Agree Strongly Disagree

When I think of myself, I often think of my close friends or family also.

1 2 3 4 5 6 7
Strongly Agree Strongly Disagree

If a person hurts someone close to me, I feel personally hurt as well.

1 2 3 4 5 6 7
Strongly Agree Strongly Disagree
In general, my close relationships are an important part of my self-image.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall, my close relationships have very little to do with how I feel about myself.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

My close relationships are unimportant to my sense of the kind of person I am.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

My sense of pride comes from knowing who I have as close friends

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When I establish a close friendship with someone, I usually develop a strong sense of identification with that person.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Self-Handicapping Scale

Please indicate (by writing a number in the blank each item) the degree to which you agree with each of the following statements as a description of the kind of person you think you are most of the time. Use the following scale.

0 = disagree very much
1 = disagree pretty much
2 = disagree a little
3 = agree a little
4 = agree pretty much
5 = agree very much

____1. When I do something wrong, my first impulse is to blame circumstances.

____2. I tend to put things off until the last moment

____3. I tend to overprepare when I have an exam or any other kind of “performance”

____4. I suppose I feel “under the weather” more often than most people

____5. I always try to do my best, no matter what.

____6. Before I sign up for a course or engage in any important activity, I make sure I have the proper preparation or background

____7. I tend to get very anxious before an exam or “performance.”

____8. I am easily distracted by noises or my own creative thoughts when I try to read

____9. I try not to get too intensely involved in competitive activities so it won’t hurt much if I lose or do poorly

____10. I would rather be respected for doing my best than admired for my potential.

____11. I would do a lot better if I tried harder.

____12. I prefer small pleasures in the present to larger pleasures in the dim future.

____13. I generally hate to be in any condition but “at my best.”
14. Someday I might “get it all together.”

15. I sometimes enjoy being mildly ill for a day or two because it takes off the pressure.

16. I would do much better if I did not let my emotions get in the way.

17. When I do poorly at one kind of thing, I often console myself by remembering I am good at other things.

18. I admit that I am tempted to rationalize when I don’t live up to other’s expectations.

19. I often think I have more than my share of bad luck in sports, card games, and other measures of talent.

20. I would rather not take any drug that interfered with my ability to think clearly and do the right thing.

21. I overindulge in food and drink more often then I should.

22. When something important is coming up, like an exam or job interview, I try to get as much sleep as possible the night before.

23. I never let emotional problems in one part of my life interfere with other things in my life

24. Usually, when I get anxious about doing well, I end up doing better

25. Sometimes I get so depressed that even easy tasks become difficult.

Please fill out the following information about yourself.

1. Sex: Male ( ) Female ( )

2. Where would you put yourself on the following scale?

_____________/_____________________________/_____________________________
Distinct   Normal   Distinct
Underachiever   Achiever   Overachiever
Self-Construal Prime

Please read the paragraph on the next page carefully and circle all the PRONOUNS found within the paragraph. The pronouns may be singular (e.g. he, she, me, I, you, mine, yours, etc.) or plural (e.g. we, they, our, their, etc.). Please take your time.

Interdependent Self-Construal

We go to the city often. Our anticipation fills us as we see the skyscrapers come into view. We allow ourselves to explore every corner, never letting an attraction escape us. Our voices fill the air and street. We see all the sights, we window shop, and everywhere we go we see our reflections looking back at us in the glass of a hundred windows. At nightfall we linger, our time in the city almost over. When finally we must leave, we do so knowing that we will soon return. The city belongs to us.

Independent Self-Construal

I go to the city often. My anticipation fills me as I see the skyscrapers come into view. I allow myself to explore every corner, never letting an attraction escape me. My voice fills the air and street. I see all the sights, I window shop, and everywhere I go I see my reflection looking back at me in the glass of a hundred windows. At nightfall I linger, my time in the city almost over. When finally I must leave, I do so knowing that I will soon return. The city belongs to me.
Inclusion of Other in the Self Scale

Please circle the picture below which best describes your CURRENT relationship with the friend that you are attending this experiment with.
Summary of Results for the Kansas Analogies Test of Intelligence

Experimenter Initials_____________________  

Date__________________  

Test Taker’s Name______________________  

Score__________________  

Test-Takers’ Ranking among American College Students “91st percentile”________  

Experimenters’ Personal Notes:  

“Very impressive! Pay extra attention to_______(insert name)______’s score on the Culture Fair Test.
(Contingency Manipulation)

Response NON-Contingent Success Feedback Condition

Printed below is a series of questions that your friend answered about his performance on the Kansas Analogies Test of Intelligence. Your friend was made aware that you would be viewing this sheet. You will use your friend’s responses to infer his thoughts and feelings regarding the second assessment of his intelligence (i.e. The Culture Fair Test).

Test-Taking Strategies for the Kansas Analogies Test of Intelligence

Pre-Test Question

Please circle the number which best represents your current thoughts and feelings. Your friend will be allowed to view your responses.

I will try my hardest to get a high score on this intelligence test.

1 2 3 4 5 6 7 8 X
Strongly Agree
Disagree

I would be upset if I performed poorly on this intelligence test

1 2 3 4 5 6 7 X 9
Not Extremely
At All

Strategy Questions (Answer As You Take the Test)

Please circle the item which best indicates the strategy you used for answering the given question on the Kansas Analogies Test. Your friend will be allowed to view your responses.

Question 1

a. I reasoned out my answer
b. I used intuition to get my answer
c. I used a process of elimination to get my answer
d. My answer just automatically came to mind
e. I was very unsure about this question, so I just guessed  X
Question 2
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed \( \times \)

Question 3
I reasoned out my answer \( \times \)
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 4
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed \( \times \)

Question 5
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed \( \times \)

Question 6
I reasoned out my answer
I used intuition to get my answer \( \times \)
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 7
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 8
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 9
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 10
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 11
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind  X
I was very unsure about this question, so I just guessed

Question 12
I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 13
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed X

Question 14
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed X

Question 15
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed X

Question 16
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed X

Question 17
I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 18

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 19

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 20

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Post-Test Questions

Please circle the number which best represents your current thoughts and feelings. Your friend will be allowed to view your responses.

If I took another intelligence test, then my score would be about the same.

1 2  X  4  5  6  7  8  9
Strongly Disagree

If I took this test again, I could likely REPEAT my level of performance

1 2  X  4  5  6  7  8  9
Strongly Disagree
I want others to regard me as intelligent.

Strongly  1  2  3  4  5  6  7  X  9  Disagree

I feel that luck may have played a role in my performance on the Kansas Analogies Test of Intelligence.

Strongly  1  2  3  4  5  6  X  8  9  Disagree

A poor performance on the Culture Fair Intelligence Test would NOT disturb me if I did not practice much.

Not  1  2  3  4  5  6  7  8  X  9 At All

I personally value my intelligence

Not  1  2  3  4  5  6  7  X  9 At All

I would be upset if other people believed that I was incompetent

Not  1  2  3  4  5  6  7  X  9 At All

Being smart is very important to me.

Not  1  2  3  4  5  6  7  8  X Extremely
At All

I am *doubtful* about my ability to perform well on the Culture Fair Intelligence Test.

1 2 3 4 5 6 7  X   9
Not Extremely
At All

I am *worried* about my ability to perform well on the Culture Fair Intelligence Test.

1 2 3 4 5 6 7  X   9
Not Extremely
At All
Response CONTINGENT Success Feedback

Test-Taking Strategies for the Kansas Analogies Test of Intelligence

Pre-Test Question

Please circle the number which best represents your current thoughts and feelings. Your friend will be allowed to view your responses.

I will try my hardest to get a high score on this intelligence test.

1  2  3  4  5  6  7  8  X
Strongly        Strongly
Disagree        Agree

I would be upset if I performed poorly on this intelligence test

1  2  3  4  5  6  7  X  9
Not            Extremely
At All

Strategy Questions (Answer As You Take the Test)

Please circle the item which best indicates the strategy you used for answering the given question on the Kansas Analogies Test. Your friend will be allowed to view your responses.

Question 1

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 2

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed
Question 3

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 4

I reasoned out my answer
I used intuition to get my answer  X
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 5

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 6

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 7

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 8
I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 9

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer  X
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 10

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 11

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind  X
I was very unsure about this question, so I just guessed

Question 12

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed  X

Question 13

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

**Question 14**

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind X
I was very unsure about this question, so I just guessed

**Question 15**

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind X
I was very unsure about this question, so I just guessed

**Question 16**

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

**Question 17**

I reasoned out my answer
I used intuition to get my answer
I used a process of elimination to get my answer  X
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

**Question 18**

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed
Question 19

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Question 20

I reasoned out my answer  X
I used intuition to get my answer
I used a process of elimination to get my answer
My answer just automatically came to mind
I was very unsure about this question, so I just guessed

Post-Test Questions

Please circle the number which best represents your current thoughts and feelings. Your friend will be allowed to view your responses.

If I took another intelligence test, then my score would be about the same.

1  2  3  4  5  6  7  8  X
Strongly Disagree
Strongly Agree

If I took this test again, I could likely REPEAT my level of performance

1  2  3  4  5  6  7  8  X
Strongly Disagree
Strongly Agree

I want others to regard me as intelligent.

1  2  3  4  5  6  7  X  9
Strongly Disagree
Strongly Agree

I feel that luck may have played a role in my performance on the Kansas Analogies Test of Intelligence.
A poor performance on the Culture Fair Intelligence Test would \textit{NOT} disturb me if I did not practice much.

1 2 3 4 5 6 7 8 9
\begin{tabular}{ll}
\text{X} & \\
Strongly & Disagree \end{tabular}

I personally \textit{value} my intelligence

1 2 3 4 5 6 7 8 9
\begin{tabular}{ll}
\text{X} & \\
Not & Extremely \end{tabular}

I would be upset if other people believed that I was incompetent

1 2 3 4 5 6 7 8 9
\begin{tabular}{ll}
\text{X} & \\
Not & Extremely \end{tabular}

Being smart is very important to me.

1 2 3 4 5 6 7 8 9
\begin{tabular}{ll}
\text{X} & \\
Not & Extremely \end{tabular}

I am \textit{doubtful} about my ability to perform well on the Culture Fair Intelligence Test.

1 2 3 4 5 6 7 8 9
\begin{tabular}{ll}
\text{X} & \\
Not & Extremely \end{tabular}
I am *worried* about my ability to perform well on the Culture Fair Intelligence Test.

[1 X 3 4 5 6 7 8 9]
Not
At All

**DEPENDENT MEASURES**

**Questions Pertaining To Kansas Test**

*Participants’ Reaction to Bogus Feedback about Friend’s “Stellar” Performance*

The questions below have to do with your reaction to your friend’s performance on the Kansas Analogies Test and to your expectations about your friend’s upcoming performance on the second intelligence test (The Culture Fair Test). You will need the Testing Strategies sheet to answer some of these questions. Please take your time.

When I first learned about my friend’s performance on the Kansas Test of Analogies I felt:

**Proud**

[1 2 3 4 5 6 7 8 9]
Not
At all

**Happy**

[1 2 3 4 5 6 7 8 9]
Not
At all

**Relieved**

[1 2 3 4 5 6 7 8 9]
Not
At all
**Luck’s Role in Friend’s Performance**

I believe that my friend may have gotten lucky on some of the items on the Kansas Analogies Test.

1. Not at All
2. Very Much

**Questions Pertaining to Culture Fair Test**

**Participants’ Perceptions of the Experimenter’s Expectations for Second Test**

I believe that the experimenters’ expectations for my friend’s second intellectual assessment are…

1. Very Low
2. Very High

**Participant’s Expectations for Second Intelligence Test & Concern about Failure (or Evaluative Concern)**

The questions below have to do with your friend’s upcoming intellectual assessment via the Culture Fair Test. Use the Testing Strategies Sheet to help you form your expectations. Please take your time.

I have doubts about my friend's ability to perform well on this test.

1. Not at All
2. Very Much

I am confident that my friend will perform well.

1. Not at All
2. Very Much

I am uncertain how well my friend will do.
Inferences About the Friend

*Inferring the Friend’s Personal Standards, Impression Management Concerns, Evaluative Concern & Personal Expectations via the Bogus ‘Strategies’ Sheet*

For the questions below, you will use your friend’s responses to items on the Testing Strategies Sheet to infer what he is thinking and how he is feeling about the upcoming assessment of his intelligence via the Culture Fair Test.

I think my friend wants to avoid a poor performance on the intelligence test.

1  2  3  4  5  6  7
Not at All                                      Very Much

I think my friend will be upset if he does not do as well as others expect him to.

1  2  3  4  5  6  7
Not at All                                      Very Much

I think my friend will be disappointed in himself if he performs poorly.

1  2  3  4  5  6  7
Not at All                                      Very Much

I think my friend is worried about what others will think of his upcoming performance.

1  2  3  4  5  6  7
Not at All                                      Very Much
I think my friend has doubts about his ability to perform well on this test.

Not at All 2 3 4 5 6 7 Very Much

I think my friend will feel that he has let others down if he does not do his best.

Not at All 2 3 4 5 6 7 Very Much

I think my friend is confident that he will perform well.

Not at All 2 3 4 5 6 7 Very Much

I think my friend has set a high standard for his performance on this test.

Not at All 2 3 4 5 6 7 Very Much

I think my friend feels that it is important for him to do well on this test.

Not at All 2 3 4 5 6 7 Very Much

I think my friend is uncertain of how well he will do.

Not at All 2 3 4 5 6 7 Very Much

I think my friend would feel proud if he did well on this test.

Not at All 2 3 4 5 6 7 Very Much

I think my friend expects to do very well on this test.

Not at All 2 3 4 5 6 7 Very Much

I think my friend wants to do as well as he possibly can.

Not at All 2 3 4 5 6 7
I think my friend expects to do poorly on this test.

| Not at All | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Much |

I think my friend is worried that he will not do as well as others expect him to.

| Not at All | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Much |

I think my friend won't be satisfied unless he gets a high score.

| Not at All | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Much |

**Reports about the Self**

The following questions have to do with your thoughts and feelings about the upcoming assessment of your friend’s intelligence on the Culture Fair Test. Please take your time.

**Impression Management Concerns**

I would feel embarrassed if my friend did not perform well on the upcoming intelligence test.

| Not at All | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Much |

If my friend performed well on the intelligence test, then this would make me look good in the eyes of others as well.

| Not at All | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Much |

I am concerned about how others might regard my friend's performance.

| Not at All | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Much |
It is important to me that my friend avoids disappointing others with his performance.

1  2  3  4  5  6  7
Not at All  Very Much

Standards for Friend’s Performance

It is important to me that my friend does as well as he possibly can.

1  2  3  4  5  6  7
Not at All  Very Much

Social Comparison Questions

If my friend performed well on the intelligence test, then I would feel envious of him.

1  2  3  4  5  6  7
Not at All  Very Much

If my friend did very well on this intelligence test, then this would reflect positively upon me as well.

1  2  3  4  5  6  7
Not at All  Very Much

Empathy Questions

If my friend did not perform well on the intelligence test, then I would be concerned that he felt upset.

1  2  3  4  5  6  7
Not at All  Very Much

If my friend did not perform well on the intelligence test, then I would share in his disappointment.

1  2  3  4  5  6  7
Not at All  Very Much

If my friend performed well on the intelligence test, then I would share in his happiness.

1  2  3  4  5  6  7
Not at All                                 Very Much

**Importance for Self**

I would be proud if my friend did well on the intelligence test.

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It is important to *me* that my friend does well on this test.

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I would be disappointed if my friend does not perform well.

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It is important to me that my friend *avoids* a poor performance on the intelligence test.

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Practice Time Allocation

*Important Reminder 1*

Please let the experimenter know when you are done filling out the items in this packet. Remember, this experiment *always* ends exactly at the hour. Thus, after you are finished answering the questionnaires in this packet, you will rate the interestingness of magazine articles until this hour-long session is complete.

*Instructions: (Read Carefully)*

Your friend will soon be taking the Culture Fair Intelligence Test. A score of 70% (missing 6 out of 20 questions) or lower indicates low ability; whereas scores above 70% do not.

Please allocate the amount of practice time (between 2 and 12 minutes) your friend will receive prior to taking the Culture Fair Test.

Your friend will *NOT* be told that you made this choice for him. However, he *IS* aware that low levels of practice time within this range will likely lead to a score that is *much lower* than his true level of intelligence would warrant. He is also aware that his score will be a *highly accurate* measure of his true intelligence if he receives a larger amount of practice time within this range.

*Important Reminder 2*

Please remember that the experimenters *NEED* to observe performance on the Culture Fair Test at *ALL* levels of practice time. Thus, for example, allocations of 2 minutes of practice time are needed *just as much* as allocations of 12 minutes of practice time.

Please circle the number of practice minutes you would like your friend to receive.

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Minutes
(Open-Ended Questions)

In the space below, please write any thoughts and feelings you have about the upcoming assessment of your friend’s intelligence.
The research team closely examines participants’ intellectual performance on the Culture Fair Test. Although the test is a highly accurate measure of intelligence, inevitably there are always some extraneous factors that may temporarily interfere with someone’s test-taking abilities, even when they receive ample practice time.

Please use the space below to let the research team know if you are aware of any factors that might cause your friend to receive a score on the Culture Fair Test that is lower than his true level of intelligence would warrant.

Common examples include: test-anxiety, lack of sleep, sadness, stress, everyday distractions, severe relationship problems, mild illness (e.g. a cold, sore throat, etc.), hunger, fatigue, lack of motivation, heavy alcohol consumption last night, etc. Please tell the research team about these or any other factors that you personally believe may cause the Culture Fair test to significantly underestimate your friend’s true intelligence.
Please use the space below to let the research team know whether or not you think there are any factors that might help your friend earn a score on the Culture Fair Test that is greater than his true level of intelligence would warrant.

For example, we are interested in factors like: did your friend recently consume an alertness aid, consume caffeine; did he seem to be “on” or “hot” today; does he have momentum on his side; has he ever had prior exposure to the Culture Fair Test; did he seem unusually focused today, etc. Please tell us about these or any other factors that you personally believe may cause the Culture Fair test to OVERESTIMATE your friend’s true intelligence.
Social Comparison Questions

1. Before I attended this experiment, I believed that my friend was more intelligent than me.

1 2 3 4 5 6 7
Not at All Very Much

2. I would feel envious if I found out that my friend was more intelligent than me.

1 2 3 4 5 6 7
Not at All Very Much

3. I am concerned that this experiment will show that my friend is more intelligent than me.

1 2 3 4 5 6 7
Not at All Very Much

4. During this experiment, I have been thinking about how my own intelligence compares to my friend’s intelligence.

1 2 3 4 5 6 7
Not at All Very Much

5. After I examined the Testing Strategies Sheet, I thought that my friend was more intelligent than me.

1 2 3 4 5 6 7
Not at All Very Much