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Individual Differences in Self-Enhancement and Self-Protection Strategies:

An Integrative Analysis

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Abstract

Research has identified a large number of strategies that people use to self-enhance or self-protect. We aimed for an empirical integration of these strategies. Two studies used self-report items to assess all commonly recognized self-enhancement or self-protection strategies. In Study 1 ($N = 345$), exploratory factor analysis identified four reliable factors. In Study 2 ($N = 416$), this model was validated using confirmatory factor analysis. The factors related differentially to the key personality variables of regulatory focus, self-esteem, and narcissism. Expanding this integrative approach in the future can reveal a great deal about the structure and dynamics of self-enhancement and self-protection motivation.

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People are motivated to possess a positive self-concept. They often go to great lengths to attain positive views of the self (self-enhance) and avoid negative views of the self (self-protect) (Alicke & Govorun, 2005; Baumeister, 1998; Sedikides, Green, & Pinter, 2004). Researchers have documented many varied manifestations, or *strategies*, that people use to self-enhance and self-protect (Greenwald, 1980; Sedikides, Skowronski, & Gaertner, 2004; Tesser, Crepaz, Collins, Cornell, & Beach, 2000). However, research has focused on studying the strategies separately. Thus, a more integrative approach is now needed. This article constitutes a first empirical attempt to examine, systematically and holistically, the strategies that people use to enhance and protect a positive self-concept.

The Motive to Enhance and Protect Positive Self-Views

The motivation to enhance and protect positive self-views is inherent in psychologically healthy adults. People are skilled at processing information in a biased manner, in order to arrive at conclusions that flatter the self (Kruglanski, 1989; Kunda, 1990). Taylor and Brown (1988) referred to many such biases (e.g., unrealistically positive self-evaluations, perceptions of control, optimism) under the umbrella of "positive illusions." Since then, researchers have conceptualized an array of cognitive, affective, and behavioral patterns as manifestations of the motivation to enhance and protect a positive self-concept.

Although both self-enhancement and self-protection are part of an overarching desire to feel good about the self, there are important differences. Self-enhancement operates routinely, to regulate the positivity of the self-concept, whereas self-protection for the most part operates situationally, in response to threats to the self-concept (Alicke & Sedikides, in press). Thus, self-enhancement focuses on attaining, maximizing, and regulating *positive* self-views, whereas self-protection focuses on avoiding, minimizing, and repairing *negative* self-views. It is often difficult to tease apart the two self-motives empirically, partly because a given behavior (e.g., self-handicapping) can reflect either self-enhancement (e.g., maximizing credit for success) or self-protection (e.g., minimizing blame for failure; Tice, 1991). Given this and the two motives' common purpose, we will discuss them together.

Self-enhancement and self-protection are prevalent and pervasive motives, which often take precedence over other long-term goals (e.g., academic achievement; Crocker & Park, 2003), and which can impact self-views across cultures (Sedikides, Gaertner, & Toguchi, 2003; Sheldon, Elliot, Kim, & Kasser, 2001; Yamaguchi et al., 2007). Sedikides and Skowronski (1997, 2000) have proposed that the motives to self-enhance and self-protect may have served an adaptive evolutionary function. Given the pervasiveness, habitual occurrence, and breadth of self-enhancement and self-protection, the motives warrant further investigation (Alicke, 1999; Alicke & Sedikides, in press).[1]

Self-Enhancement and Self-Protection Strategies

To achieve a fuller understanding of self-enhancement and self-protection, one must consider its manifestations as a whole. That is, researchers ought to examine not only each animal that inhabits the "self-zoo" (Tesser et al., 2000), but also how the zoo operates as a dynamic system. Next, we provide a brief review of the species of self-enhancement and self-protection strategy (for in-depth treatments, see: Baumeister, 1998; Campbell & Sedikides, 1999; Sedikides & Gregg, 2003, 2008; Taylor & Brown, 1988; Tesser et al., 2000). Although there are many ways to group the species, we review them under three headings: cognitive strategies that occur chronically, cognitive strategies prompted by a self-relevant event, and behavioral strategies. These headings are fluid and not mutually exclusive. Also, by the term "strategy" we do not assume that these patterns are consciously intentional, merely that they systematically serve to satisfy self-enhancement or self-protection. Finally, there exist other determinants of these patterns of cognition and behavior, not all of which are motivated (e.g., expectations, reality). However multiply determined, these patterns have in common that they result in enhanced or protected self-views (Alicke & Sedikides, in press). It is this shared variance in which we are interested, and on which we focus hereafter.

Cognitive strategies to foster positive self-views. People deploy many cognitive strategies to reach self-serving conclusions about the world. As noted by Taylor and Brown (1998), people possess unrealistically positive self-views: most believe they are better than average and possess far more positive than negative traits (Alicke, 1985), and they claim to possess higher ability compared to objective data (Gramzow, Elliott, Asher, & McGregor,

2003) or others' opinions (John & Robins, 1994). This rose-tinted veneer is also applied to persons or objects associated with the self, including relationships (Murray, 1999), possessions (Nesselroade, Beggan, & Allison, 1999), and groups (Brewer, 1979). People's construals are carefully constructed to reflect flatteringly on the self: people define desirable traits in ways that fit their own skills (Dunning, Perie, & Story, 1991), declare traits desirable when they themselves possess them (Dunning, Leuenberger, & Sherman, 1995), and believe that their weaknesses are common but their skills are rare (Suls & Wan, 1987).

People are unrealistically optimistic about their future: they believe that they will experience far more positive events compared to negative events and compared to others (Weinstein, 1980). Relatedly, people over-estimate their degree of personal control, even over chance events such as gambling (Langer, 1975). Ironically, they also believe that they are less susceptible to biases in judgment than others (Pronin, Gilovich, & Ross, 2004). This may reflect the tendency to value introspection about one's (good) intentions when evaluating oneself but to value only behavior when evaluating others (Pronin & Kugler, 2006).

In a social context, people often choose to make flattering downward social comparisons (Wills, 1981). However, focusing on another's success can sometimes enhance the self by "basking in reflected glory," especially when the success is by a close other, in a personally unimportant domain (Cialdini et al., 1976; Tesser, 1988). People also self-enhance by comparing the current self favorably to their own past (Wilson & Ross, 2001).

Cognitive strategies in response to self-relevant events. Self-serving cognitive strategies are strongly evident in response to valenced self-relevant events. First, people possess a "filter" that interprets ambiguous information as relatively flattering (Taylor & Crocker, 1981). Second, people claim personal responsibility for their own or group success, but attribute failure to external, temporary, or specific causes (Mezulis, Abramson, Hyde, & Hankin, 2004). Third, people readily accept positive feedback as valid and accurate, and its provider as expert; but expend effort rejecting negative feedback as invalid and inaccurate, and its provider as incompetent (Ditto & Boardman, 1995; Ditto & Lopez, 1992; Greenwald, 2002). Fourth, people construe traits as more important after positive feedback but less important after negative feedback (Tesser & Paulhus, 1983). Fifth, they use downward

counterfactual thinking—simulating worse alternatives—to repair mood and self-views (Sanna, Chang, & Meier, 2001).

Other responses to threat involve self-affirmation (Steele, 1988). Self-affirmation strategies are less defensive because they restore self-integrity indirectly, allowing people to take on board threatening information. For example, following a threat in one domain (e.g., intelligence), people bring to mind their strengths in other domains (e.g., sport), their personal values (e.g., morality), or their relationships (e.g., secure attachments) (Sherman & Cohen, 2006). Also, people exhibit *mnemic neglect*: they recall positive feedback better than negative, but only when feedback is about the self (Sedikides & Green, 2000). In addition, they bring to mind their past successes more often than their failures (Walker, Skowronski, & Thompson, 2003). They may, however, focus on negative events in order to perceive self-improvement or emphasize hardships that they successfully overcame (Wilson & Ross, 2003). Finally, the affective experience of negative feedback wears off more quickly and effectively than that of positive feedback (Walker et al., 2003; Walster & Berscheid, 1968).

Behavioral strategies. People pursue exposure to flattering information in their social behavior. For example, they solicit positive feedback (Sedikides, 1993) and choose to interact with others who are likely to provide it (Sanitioso & Wlodarski, 2004). People even form firmer friendships with those who can provide flattering social comparisons and reflected glory (Tesser & Paulhus, 1983) and who are similar to (i.e., will validate) themselves (Richardson, 1939). When engaged in social interaction, people self-present by emphasizing their positive qualities and downplaying their negative qualities (Leary & Kowalski, 1990). Nevertheless, they are willing to admit to weaknesses in specific unimportant areas (Showers, 1992): these "pockets of incompetence" are unthreatening to one's self-concept and may render other positive claims more credible (Taylor & Brown, 1988, p. 203).

In the performance domain, people prefer to undertake diagnostic tasks that provide likely success, but avoid those that focus on failure (Brown, 1990). Before evaluative tasks, people self-handicap by pursuing self-defeating behavior (e.g., drug consumption, procrastination) (Ferrari & Tice, 2000; Jones & Berglas, 1978). This way, if one fails, self-esteem is protected by blaming the external cause, but if one succeeds, self-esteem is

enhanced because success was achieved despite the obstacle (Rhodewalt, Morf, Hazlett, & Fairfield, 1991). Relatedly, defensive pessimism involves setting unrealistically low expectations to prevent disappointment (Norem & Cantor, 1986) or publicly exaggerating these low expectations to avoid embarrassment (Martin, Marsh, & Debus, 2001).

Finally, people are liable to derogate other individuals and groups to which they do not belong, particularly after a threat to the self (Abrams & Hogg, 1988; Crocker, Thompson, McGraw, & Ingerman, 1987). Indeed, stereotypes and prejudice may partly reflect the motive to self-enhance, given the derogation of others and affirmation of one's personal worldviews involved (Fein & Spencer, 1997).

Grouping and Integrating Self-Enhancement and Self-Protection Strategies

We have grouped self-enhancement and self-protection strategies according to mode (i.e., cognitive or behavioral). However, other dimensions may prove useful. For example, strategies may be driven primarily by self-enhancement versus self-protection (Alicke & Sedikides, in press; Heimpel, Elliot, & Wood, 2006; Tice, 1991). We have also distinguished between private versus public strategies (Leary & Kowalski, 1990; Martin et al., 2001), and between strategies that are chronically active versus triggered by a self-relevant event. Finally, one may identify strategies that involve derogating others versus those that do not (Campbell, Reeder, Sedikides, & Elliot, 2000) and strategies that are played out in agentic versus communal domains (Sedikides & Gregg, 2008).

Arguably, to identify the dimensions that are most empirically useful in defining these strategies, one must assess multiple self-enhancement and self-protection strategies simultaneously and examine their underlying structure. The majority of research, however, has assessed only one or two strategies at a time. One exception is Martin et al. (2001), who showed that self-handicapping, defensive pessimism, and external attributions for negative outcomes are significantly related. Moreover, several studies have demonstrated that self-affirmation reduces defensive strategies (e.g., self-serving trait definitions, attributional bias, derogating others, avoiding negative feedback; Kumashiro & Sedikides, 2005; Sherman & Cohen, 2006; Tesser & Cornell, 1991). Such results are consistent with the notion that these strategies reflect a common need for self-protection that is reduced by self-affirmation.

Tesser et al. (2000) conducted the most integrative research to date by demonstrating that self-affirmation, social comparison, and cognitive dissonance reduction are relatively substitutable for one another: that is, engaging in one strategy reduced the use of another. This evidence supports the idea that seemingly diverse patterns of thought or behavior can serve one underlying goal of maintaining self-esteem. However, such an intensive approach to manipulating and assessing the strategies limits the number and scope of strategies that can be examined in this way. Surprisingly, we could locate no prior study that assessed general and multiple strategies of both self-enhancement and self-protection and examined their interrelations. This is a primary focus of the present research.

Individual Differences in Implementation of Self-Enhancement and Self-Protection Strategies

The second focus of our research concerned individual differences. That is, are different self-enhancement and self-protection strategies equally characteristic for all people? The existence of so many strategies suggests that people may implement different ones to varying extents. Indeed, researchers have referred to self-enhancement and self-protection as dispositions (Sedikides & Gregg, 2003, 2008; Taylor, Lerner, Sherman, Sage, & McDowell, 2003). So, who is more likely to self-enhance or self-protect, and who uses which strategies? Three key variables may be pertinent: regulatory focus, self-esteem, and narcissism.

Regulatory focus can be orientated toward either promotion or prevention. Promotion focus is one's tendency toward attaining positive aspirations and potential successes, whereas prevention focus is one's tendency toward avoiding feared outcomes and potential failures (Higgins, 1998). Thus, we might expect dispositional or situational promotion focus to relate positively to enhancement strategies, and prevention focus to protection strategies. Consistent with this proposition, Molden and Higgins (2008) showed that self-serving attributions for failure were predicted by prevention focus.

Self-esteem has been related to successful self-enhancement (Sedikides & Gregg, 2003). Individuals with higher self-esteem are more likely to report unrealistically positive self-views (Baumeister, Campbell, Krueger, & Vohs, 2003), show self-serving attributional bias (Blaine & Crocker, 1993), and engage in self-affirmation (Steele, Spencer, & Lynch, 1993). Conversely, people who suffer from depression, a correlate of self-esteem, seek

negative feedback or maladaptive reassurance (Van Orden & Joiner, 2006) and attach high importance to their pockets of incompetence (Showers, 1992). Tice's (1991) research further suggested that people with high self-esteem may be more prone to self-enhancing, whereas those with low self-esteem may be more prone to self-protecting. Thus, on average we would expect self-esteem to be positively related to the use of self-enhancement strategies or negatively related to the use of self-protection strategies.

Narcissism may contribute to self-enhancement over and above self-esteem. Although the two are correlated (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004), narcissism involves a more urgent need to self-enhance (Sedikides & Gregg, 2001) or an addiction to ego (Baumeister & Vohs, 2001). People with high narcissism possess grandiose views of the self and take every opportunity to enhance those views (Campbell, Rudich, & Sedikides, 2002; John & Robins, 1994). They are also concerned with self-presenting positively (Buss & Chiodo, 1991) and associating with successful people (Campbell, 1999; Horton & Sedikides, in press). Narcissists show self-serving biases for both success and failure (Rhodewalt & Morf, 1995) and readily exploit others when doing so (Campbell et al., 2000). Narcissists also respond to negative feedback with defensiveness and aggression (Bushman & Baumeister, 1998; Twenge & Campbell, 2003). This combination of findings suggests that narcissists may engage in both enhancement- and protection-oriented strategies.

The Present Research

In this article, we attempt to examine the above issues empirically, and to stimulate future research in the area. We believe that it is time to direct empirical attention toward integrating the reviewed strategies into a "bigger picture" of self-enhancement and self-protection. If we are to argue that the many strategies are underlain by a common motive, we must show that they are interlinked. If we are to understand the underlying dimensions, we must distil the strategies into superordinate factors and examine their interrelations. Finally, we need to link these superordinate factors to key personality characteristics.

We address these questions using a self-report approach to assess individual differences in self-enhancement and self-protection tendencies. Although limited in important ways, self-report provides crucial advantages as an initial foray into integration. In particular,

extant research has assessed each strategy using different methods according to the objectives of each study. It would therefore be impossible to assess every strategy in the way that it has been typically assessed. A self-report approach allows us to assess tendencies to engage in all strategies, in one session, using the same response format, and to examine common and distinct variance among them. There is precedent for self-report assessment of many self-enhancement and self-protection strategies. For example, scales or items exist to assess self-handicapping (Jones & Rhodewalt, 1982), defensive pessimism (Cantor & Norem, 1989), self-affirmation (Pietersma & Dijkstra, 2008), attributional style (Peterson et al., 1982), better-than-average beliefs (Alicke, 1985), and comparative optimism (Weinstein, 1980). Other strategies are assessed using self-report items in experimental context, including counterfactual thinking (Sanna et al., 2001), self-serving bias (Sedikides, Campbell, Reeder, & Elliot, 1998), social comparisons (Taylor, Neter, & Wayment, 1995), and feedback-seeking (Sedikides, 1993). Thus, despite disadvantages in self-reports of strategies that are usually assessed by observing behavior (e.g., self-presentation) or by comparing experimental conditions (e.g., mnemic neglect), these are outweighed by the advantages of assessing multiple strategies using one method.

We conducted two studies: one exploratory and one confirmatory. In Study 1, we developed self-report items to assess the above self-enhancement and self-protection strategies, and examined their underlying factor structure. In Study 2, we validated this structure with confirmatory factor analysis, and examined individual differences (regulatory focus, self-esteem, and narcissism) in self-reported use of each type of strategy. This represents, to our knowledge, the first empirical integration of multiple strategies at once.

Study 1

In Study 1, we developed self-report items to assess typical implementation of self-enhancement and self-protection strategies. It was vital to include as many distinct strategies as possible. Thus, we engaged in an exhaustive literature search to identify strategies that have been described in the literature as reflecting the motive to self-enhance or self-protect, and wrote a self-report item to index each one. We asked participants to complete all items and subjected these items to factor analysis in order to identify the underlying dimensions.

Method

Participants

We recruited 345 participants via voluntary online research websites (e.g., http://psych.hanover.edu/research/exponnet.html) and participant pools at the University of Southampton and Northern Illinois University (in exchange for course credit).[2] The sample comprised 262 women and 83 men (aged 16-61, $M = 24.39$, $SD = 9.00$). Most participants were resident in the USA (55%) or the UK (40%), and 76% were students.

Materials and Procedure

Our first task was to develop the self-enhancement and self-protection items. We conducted an exhaustive literature search to identify all documented strategies. We employed research search engines, such as ISI Web of Science, Ovid PsychInfo, Google Scholar, and PubMed, using general keywords (e.g., "self-enhance") and specific strategies (e.g., "ingroup favoritism"). We also inspected recent reviews (Alicke & Govorun, 2005; Baumeister, 1998; Crocker & Park, 2003; Leary, 2004; Sedikides & Gregg, 2003, 2008; Sedikides et al., 2004). This procedure gave rise to a list of strategies. Where two specific strategies could reflect one overarching strategy, both were retained as separate. For example, *procrastination* could be a specific case of *self-handicapping*; however, because it has been studied separately, we retained procrastination as a separate item. Further, several strategies could be pursued in both an enhancement- and a protection-oriented way. For example, social comparison might involve seeking comparisons with others less fortunate than oneself, or avoiding comparisons with others who are better off. In these situations, we included two items, one for each.

We adopted at least one item to represent every strategy reviewed in this article. Each scale item comprised a brief description of the strategy, was worded in the second person, and would be understood readily by a layperson (Table 1). All items were worded in the direction of high self-enhancement or self-protection (i.e., not reverse coded). Item wordings were refined in response to discussions and piloting with several students and researchers. In total, the final scale included 60 items, and is available upon request.

Participants accessed a website to complete the self-enhancement/self-protection strategies items and demographic information. Participants were told that they would see

several patterns of thought, feeling, and behavior in which people engage during the course of everyday life. They were asked to consider how characteristic or typical each pattern was of them. Items were presented in a randomized order for each participant, and they responded to each on a scale from 1 (*not at all characteristic of me*) to 6 (*very characteristic of me*). Participants were provided with written debriefing on completion.

<div align="center">*Results and Discussion*</div>

To evaluate the structure and composition of the strategies items, we subjected them to Maximum Likelihood Exploratory Factor Analysis with oblique rotation. Inspection of eigenvalues and scree plot suggested the presence of four factors, supported by a parallel analysis (Figure 1). Given the proximity of the cross-over to the five factor mark, we examined four- and five-factor solutions, but the four-factor solution was much more interpretable. The fit statistic was $\chi^2(1536) = 2307.84$, $p < .001$. Items that loaded greater than .35 on a factor, and no greater than .30 on any other factor, were retained in that factor. Table 1 displays the final items in each factor, along with their loadings.

The first rotated factor explained 10.3% of the variance and contained 18 strategies that primarily concern protecting the self from anticipated or actual self-threat, including a mix of behavioral and cognitive tendencies. Fourteen items clearly concerned protection (i.e., self-handicapping, defensive pessimism, derogating outgroups, moral hypocrisy, selective friendships, self-serving attributions for failure), two items were less clear-cut but could also concern protection (i.e., illusions of control, judging oneself by intentions but others by behavior), and two could concern enhancement (i.e., self-serving group attributions, ingroup bias). Given its overall focus on self-protection, we named this factor *Defensiveness*.

The second rotated factor explained 7.7% of the variance and contained 10 strategies primarily dealing with maximizing anticipated or actual success. These spanned behavior and cognition, including self-serving self-presentation and interactions, remembering positive feedback, and self-serving attributions for success. Given its focus on obtaining and retaining positive feedback (i.e., self-enhancement), we named this factor *Positivity Embracement*.

The third rotated factor explained 5.9% of the variance and contained 6 cognitive strategies dealing with making flattering construals of the world. These included positive

illusions, comparative optimism, and construals of ambiguous or negative feedback: mainly chronic tendencies and mainly concerning attaining positive self-views (i.e., self-enhancement). Given its cognitive nature, we named this factor *Favorable Construals*.

The fourth rotated factor explained 5.5% of the variance and contained 6 cognitive strategies. Four items concerned intrapersonal responses to threat (i.e., focusing on values, relationships, and strengths; downward counterfactual thinking), whereas two concerned temporal comparison. Despite the mention of threat in several items, these items were more enhancement-oriented (i.e., focused on positive outcomes and self-views) than protection-oriented. Given its theoretical overlap with self-affirmation (Steele, 1988), we named this factor *Self-Affirming Reflections*.

When mean scores were computed, the four scales were internally consistent and positively correlated (Table 2). The exception was Defensiveness and Self-Affirming Reflections, which were not significantly correlated. This may reflect several differences: Defensiveness was largely behavioral and protection-oriented, whereas Self-Affirming Reflections was entirely cognitive and enhancement-oriented. There were small demographic differences in each scale. Older participants were less likely to report using defensiveness ($r_{AGE} = -.33$, $p < .001$). Men were more likely than women to endorse defensiveness ($t = 3.27$, $p < .01$, $d = 0.35$) and favorable construals ($t = 3.82$, $p < .001$, $d = 0.41$), whereas women were more likely than men to endorse positivity embracement ($t = 2.12$, $p < .05$, $d = 0.23$) and self-affirming reflections ($t = 2.49$, $p < .05$, $d = 0.27$). These differences fall within the conventional range of small effect sizes (Cohen, 1988). We also compared inter-factor correlations separately for men and women using Fishers r-to-z transformations; no correlation differed significantly by gender, $Zs < 0.97$, $ps > .33$.

Thus, Study 1 suggested that self-enhancement and self-protection strategies are grouped into four principal families: defensiveness, positivity embracement, favorable construals, and self-affirming reflections. Defensiveness involves self-protection strategies that are triggered by threat, positivity embracement involves primarily self-enhancement strategies that are triggered by opportunity for positive feedback, favorable construals involve primarily self-enhancement strategies that are chronic, and self-affirming reflections involve

self-enhancement strategies that are triggered by threat. Regarding other dimensions that might have distinguished between strategies, the four families seem mixed in their focus on agency/communion and on derogating others. No demographic differences were found that suggest this structure to be more or less valid in certain age or gender groups. Next, we sought to validate this structure in an independent sample using confirmatory factor analysis, and to examine associations between the families of strategies and key personality variables.

Study 2

Study 2 had two main objectives. The first was to replicate and validate the factor structure obtained in Study 1, using confirmatory factor analysis (CFA). If self-enhancement and self-protection strategies group together into the families suggested by the EFA in Study 1, the structure should hold reliably in another sample. Moreover, this structure should fit the data better than plausible alternative models, such as a single generic factor, or two factors reflecting a simple distinction between enhancement and protection. There should also be meaningful individual differences that validate and distinguish between families. Our second objective, then, was to examine the associations between the four families of strategies and key personality variables: regulatory focus, self-esteem, and narcissism.

With respect to *regulatory focus* (Higgins, 1998), we expected that defensiveness, which deals with anticipated or real threat, would be most strongly related to prevention focus. The remaining three strategies (i.e., positivity embracement, favorable construals, self-affirming reflections), which deal more with anticipated, real, or evoked successes, would be most strongly related to promotion focus. We predicted that *self-esteem* would relate positively to positivity embracement, favorable construals, and self-affirming reflections, given that individuals with higher self-esteem are more prone to self-enhancing (Sedikides & Gregg, 2003, 2008). However, we predicted that self-esteem would relate negatively to defensiveness, given that individuals with higher self-esteem are less prone to self-protecting (Heimpel et al., 2006; Tice, 1991). In contrast, we expected *narcissism* to relate positively to both enhancement-oriented (i.e., positivity embracement, favorable construals, self-affirming reflections) and protection-oriented (i.e., defensiveness) strategies. Narcissists self-enhance at any given opportunity (Baumeister & Vohs, 2001; Wallace & Baumeister, 2002), but also

respond to failure defensively (Bushman & Baumeister, 1998; Campbell et al., 2000).

Method

Participants

We recruited 416 participants (76% female) from online voluntary research websites, as in Study 1, and from the University of Southampton participant pool (in exchange for course credit). Ages ranged from 15-65 ($M = 23.92$, $SD = 8.13$). Most participants were resident in the USA (49%) or the UK (41%), and 78% were students.

Materials and Procedure

Regulatory focus. We used a short form of Lockwood, Jordan, and Kunda's (2002) Regulatory Focus Scale (van Kleef, van Trijp, & Luning, 2005). Two 6-item subscales assess promotion focus (e.g., "I frequently imagine how I will achieve my hopes and aspirations") and prevention focus (e.g., "In general, I am focused on preventing negative events in my life"). Van Kleef et al. (2005) showed that the scales loaded on distinct factors and were reliable. In the present study, participants responded to the 12 items on a scale from 1 (*not at all true of me*) to 7 (*extremely true of me*).

Global self-esteem. We used Rosenberg's (1965) Self-Esteem Scale to assess participants' global level of self-worth. Participants responded to the 10 items on a scale from 1 (*strongly disagree*) to 4 (*strongly agree*).

Narcissism. We assessed narcissism with the 15-item short form of the Narcissistic Personality Inventory (Schütz, Marcus, & Sellin, 2004). Schütz et al. (2004) demonstrated the scale's high internal and test-retest reliability, and provided evidence for convergent and discriminant validity. Participants are given 15 pairs of phrases, one phrase representing a narcissistic response (e.g., "I have a natural talent for influencing people") and the other a non-narcissistic response (e.g., "I am not good at influencing people"). For each pair, they select the option closest to their beliefs. The number of narcissistic responses was summed.

Results and Discussion

Confirmatory Factor Analysis

We tested the four-factor model obtained in Study 1 using AMOS 7.0. Each item was allowed to load only on one factor, and the four factors were allowed to correlate with each

other. Modification indices led to correlated error variances between four similarly worded pairs of items within the Defensiveness factor (i.e., three self-handicapping items, two external attribution items, and two group-relevant items). To evaluate model fit, we examined the indices recommended by Hu and Bentler (1999). These were the χ^2 statistic (which is highly sensitive to sample size, and can be considered acceptable if the ratio of χ^2 to df is 2.0 or less; Bollen, 1989); the comparative fit index (CFI: good if .90 or more; Bentler, 1990); the root-mean-square error approximation (RMSEA: good if .06 or less); and the standardized root-mean-square residual (SRMR: good if .08 or less; Bentler, 1990).

The four-factor model fit the data reasonably, $\chi^2(730) = 1478.19$, $p < .001$, χ^2:df ratio = 2.03, CFI = .81, RMSEA = .05, SRMR = .06. All items loaded significantly onto their respective factors (ps < .001), As in Study 1, all four factors were internally consistent and positively correlated (Table 2).

We also examined two plausible alternative models for comparison. First, a model in which all items loaded onto a single factor fit the data significantly worse than the four-factor model, $\Delta\chi^2(6) = 628.21$, $p < .001$, providing discriminant validity for the four factors (Kline, 2005). Second, to approximate a simple enhancement/protection distinction, we examined a two-factor model in which the items from positivity embracement, favorable construals, and self-affirming reflections loaded onto one factor, which was allowed to correlate with the defensiveness factor. This model also fit the data significantly worse than the four-factor model, $\Delta\chi^2(5) = 297.50$, $p < .001$. Thus, it appears that a four-factor model of self-enhancement and self-protection strategies best represents the structure of self-report responses in two independent samples.

Associations with Personality Variables

Table 2 contains raw correlations among the families of strategies and the key self-regulatory and self-evaluation variables. Consistent with previous research, the two self-regulatory variables (promotion and prevention) were not highly correlated (Lockwood et al., 2002). As expected, promotion focus correlated positively with positivity embracement, favorable construals, and self-affirming reflections, whereas prevention focus correlated positively with defensiveness (and, to a lesser extent, positivity embracement). The two self-

evaluation variables (self-esteem and narcissism) were positively correlated. As expected, self-esteem correlated positively with all families apart from defensiveness, whereas narcissism correlated positively with all four families of strategies.

We next tested two latent-variable structural models: in one, promotion focus and prevention focus predicted the four families of self-enhancement and self-protection strategy; in the other, self-esteem and narcissism predicted the four families. The former provided information on the regulatory focus that characterize people who endorse each type of strategy, the latter on the self-views that characterize people who endorse each type of strategy. To estimate associations most efficiently, we used three item parcels as indicator variables for each latent factor (items were randomly assigned to parcels; αs > .65).[3] In each structural model, the strategy factors were allowed to correlate, as were the personality predictors. Thus, for each pair of personality variables, we were able to examine the *unique* association between each personality variable and each of the four strategy factors (controlling for the other personality variable). In supplementary structural models, we controlled for age and gender. Given that none of the path coefficients was altered by more than .06 or altered in statistical significance, we report all results without age and gender in the model. We display the path coefficients in Table 3.

Regulatory focus. The structural model fit the data reasonably well, $\chi^2(120) = 357.72$, $p < .001$, χ^2:*df* ratio = 2.98, CFI = .91, RMSEA = .07, SRMR = .08. Promotion focus was positively related to Favorable Construals, Positivity Embracement, and Self-Affirming Reflections, but unrelated to Defensiveness (Table 3). Prevention focus was positively related to Defensiveness and Positivity Embracement, but negatively related to Favorable Construals and Self-Affirming Reflections. This supports the prediction that the primarily enhancement-oriented strategies of feedback-seeking, construing events in flattering ways, and self-affirming are used most by promotion-focused individuals, whereas the primarily protection-oriented strategies in the defensiveness family are used most by prevention-focused individuals. The positive link between prevention focus and positivity embracement may reflect the two items that refer to avoiding negative feedback (Table 1, items 8 and 10).

Self-esteem and narcissism. The model fit the data well, $\chi^2(120) = 261.93$, $p < .001$,

χ^2:*df* ratio = 2.18, CFI = .96, RMSEA = .05, SRMR = .06. As predicted, self-esteem (controlling for narcissism) was positively related to Favorable Construals and Self-Affirming Reflections, but negatively related to Defensiveness (Table 3). Also as predicted, narcissism (controlling for self-esteem) was positively related to three of the four types of strategy (but not to Self-Affirming Reflections). Thus, people with high self-esteem and people with high narcissism share their tendency to construe the world in flattering ways, but differ in their relative use of other types of strategies: people with high self-esteem prefer to self-affirm, whereas those with high narcissism favor defensiveness and seeking positive feedback. One important distinction between these preferences concerns their focus on enhancement or protection (i.e., self-esteem linked only to enhancement-oriented strategy families, and narcissism to both enhancement- and protection-oriented ones). Another is the contexts in which they operate (i.e., self-esteem linked primarily to intrapersonal strategy families, and narcissism primarily to interpersonal ones). This is consistent with the literature on narcissists' defensive reactions to negative feedback and boastful self-presentation, as well as their need for interpersonal self-regulation (Rhodewalt & Morf, 2005).

General Discussion

This research provides a first attempt to redress a critical omission in the self-enhancement and self-protection literature. The past three decades have witnessed an explosion of studies documenting many manifestations of self-enhancement, and scores of strategies used to achieve it. However, the vast majority of these studies assessed only one strategy, and only a handful have assessed two or three strategies simultaneously. This piecemeal approach has partly obscured the links among different strategies, how they group together, and which types of person are most likely to implement which types of strategy. In the present research, we assessed all commonly recognized strategies using self-report items, and examined their factor structure in two independent samples. We then inspected their intercorrelations and associations with key individual differences.

Our studies revealed that self-enhancement and self-protection strategies group into four families, which are characterized by different regulatory focus and different types of self-view. Favorable Construals include cognitive strategies that serve to construe the world

and self-relevant events in self-flattering ways. This family of strategies is oriented toward self-enhancement rather than self-protection, and is characteristic of people with high promotion focus, low prevention focus, high self-esteem, and high narcissism. Favorable construals is the family most reminiscent of Taylor and Brown's (1988) self-enhancing triad of positive illusions. Self-Affirming Reflections include cognitive strategies that involve self-affirmation after threat and temporal comparisons. This family of strategies, which echoes self-affirmation theory (Sherman & Cohen, 2006; Steele, 1988), is also enhancement-oriented but can be triggered by threats. Self-affirming reflections are characteristic of people with high promotion focus, low prevention focus, and high self-esteem.

Positivity Embracement is a family of strategies that involve seeking out positive feedback (behaviorally) and capitalizing on it (cognitively) in interpersonal and agentic situations. This family of strategies is primarily enhancement-oriented, and is characteristic of people with high promotion focus, slight prevention focus, and high narcissism. Finally, Defensiveness comprises cognitive and behavioral strategies that aim to avoid, minimize, and reduce the self-relevance of negative feedback and threat. These include diverse behaviors such as self-handicapping, outgroup derogation, and attributions for failure. Unlike the other families, defensiveness strategies are more oriented toward self-protection, and are characteristic of people with high prevention focus, high narcissism, and *low* self-esteem. These strategies conceptually echo the type of defensive self-protection emphasized by psychodynamic theorists (Freud, 1937).

Earlier, we speculated about several dimensions that might define self-enhancement and self-protection strategies. Of these, the enhancement-protection distinction emerged as most promising in our studies: three strategy families are clearly enhancement-oriented (i.e., favorable construals, positivity embracement, self-affirming reflections), and one clearly protection-oriented (i.e., defensiveness). In addition, whereas defensiveness and self-affirming reflections are triggered by potential or real threat, positivity embracement is triggered by potential or real positive feedback, and favorable construals are more chronic or active in ambiguous situations. However, participants in the present studies were not currently in an evaluative situation. An important extension of this research will be to assess

propensity to use each type of strategy immediately before or after a threat or boost to the self. For example, our results suggest that promotion-focused and high-self-esteem individuals would respond to threat by engaging in self-affirmation, and prevention-focused individuals and narcissists by engaging in defensiveness. However, the factors do not clearly discriminate public from private strategies, or agentic from communal situations. Further research could attempt to clarify these distinctions.

Our results support prior research in demonstrating positive associations between self-enhancement and both self-esteem and narcissism (Campbell et al., 2002; John & Robins, 1994; Sedikides & Gregg, 2003). However, our findings further suggest that, controlling for one another, they are linked to disparate strategies. A high-self-esteem person engages in exclusively enhancement-oriented strategies, particularly intrapersonal ones. This pattern is reminiscent of the finding that people with high self-esteem self-enhance to maximize positive self-views, whereas those with low self-esteem do so to minimize negative self-views (Heimpel et al., 2006; Tice, 1991). In contrast, a narcissist engages in both enhancement- and protection-oriented strategies, including interpersonal and agentic ones.

Our findings support prior research on narcissists' pursuit of glory, defensive responses to threat (Bushman & Baumeister, 1998; Campbell et al., 2000), and need for the social environment to maintain grandiose self-views (Rhodewalt & Morf, 2005). Future research ought to demonstrate these patterns experimentally. For example, given the opportunity to use a choice of strategies, will a narcissist prefer a favorable construal, embracing positive feedback, or a defensive strategy? Will this preference differ after self-threat? Morf's (2008) recent data suggest that narcissists are more sensitive at an automatic level to opportunities for self-enhancement than to threats (i.e., self-protection). Relatedly, Foster and Trimm (2008) found that narcissists report high approach but low avoidance motivation, although their research differed from ours in several ways. First, these authors assessed approach/avoidance instead of the conceptually distinct promotion/ prevention focus. Second, their measures of avoidance concerned affect (e.g., fear of failure), which narcissists may not endorse even though they avoid failure behaviorally. Finally, Foster and Trimm's study was general in scope, whereas we concentrated on a domain that is especially

central for narcissists. Our results suggest that in the context of the self, both enhancing positive self-views and protecting from negative self-views are important to narcissists.

Future research would do well to assess additional individual differences, such as "big five" personality traits (McCrae & Costa, 1985), implicit self-esteem (Greenwald & Banaji, 1995), and well-being (Ryff, 1989). A broad approach to self-enhancement such as ours could speak to the relative health of over-positive (Taylor et al., 2003) versus accurate self-views (Bergner, 2007). Some aspects of self-enhancement may serve adaptive functions, such as positive mood and coping with trauma (Bonanno, Rennicke, & Dekel, 2005). Others may be less helpful; for example, self-handicapping can hinder performance (Zuckerman & Tsai, 2005), and seeking positive feedback can impede self-improvement (Sedikides & Luke, 2007; for a review, see Sedikides, Gregg, & Hart, 2007). Also, research could examine the prevalence of different types of self-enhancement/self-protection strategy in Eastern versus Western cultures (cf. Sedikides et al., 2003; Sedikides, Gaertner, & Vevea, 2005).

We believe that our broad perspective of self-enhancement and self-protection strategies, as well as our findings, will be useful for simplifying and understanding prior research, allowing assessment of global self-enhancement in novel research, and addressing unresolved questions. One example is the above-mentioned psychological health issue (Bergner, 2007; Taylor et al., 2003). Another is for understanding and classifying new strategies that are identified. For example, Epley and Whitchurch (2008) documented bias in recognizing one's own face among an array of morphed attractive-to-unattractive faces. Researchers who assess novel strategies may wish to consider their place in our framework (in this case, favorable construals). This will help to guide hypotheses about contexts in which the strategy will be most prevalent and who is most likely to use it.

Another important theoretical question is whether or not the motive for self-esteem is insatiable. Tesser et al. (2000) assessed the substitutability of three reactions to threat: social comparison, self-consistency, and self-affirmation. They concluded that people are satisficers, who cease self-enhancement effort when reaching a necessary level of self-regard. Further studies could examine whether other types of strategy show this pattern. For example, strategies in the same family may substitute more effectively for one another than those in

different families. Moreover, individual differences in substitutability may prove important. A person might have a toolbox of preferred strategies on which she or he tends to rely, which includes different tools according to one's personality. Our results suggest that for a person with high self-esteem, defensiveness strategies will substitute less well than self-affirmation strategies. In contrast, for a narcissist, defensiveness strategies will substitute very well. Furthermore, narcissists seem most likely to be "maximizers" instead of satisficers, and may pursue any available strategies to enhance their greedy ego (Baumeister & Vohs, 2001).

Limitations of the present research include the self-report approach to assessing self-enhancement and self-protection strategies. Although optimal for tapping many strategies at once, self-report is not the ideal tool to assess every one. And, arguably, people may not always be consciously aware of their propensity to use a given strategy (as this might decrease its effectiveness). In utilizing this approach, we reasoned that these behaviors are at least partly consciously accessible in memory and that the associations we have observed among the self-reported strategies reflect how these strategies are represented, verbalized, and organized. In addition, one can reflect on habitual tendencies to engage in self-serving behavior while not necessarily being aware of that behavior on-line (Alicke & Sedikides, in press). We hope that researchers build on this work to test these assumptions, validate our measure further, and identify the utility and limitations of our approach.

We also acknowledge the potentially biased samples achieved via the internet: most participants were students and older ages were underrepresented. Nevertheless, we believe that this research substantially informs how different ways of self-enhancing relate to one another and vary between individuals. A complementary agenda for future research would be to strike a balance between the competing demands of breadth and specificity: for example, it may be possible to assess a family of strategies in one session using experimental methods.

In conclusion, our research highlights the importance of examining individual differences in self-enhancement and self-protection in an integrative manner. The findings help address the issue of which types of person implement which strategies to boost, regulate, and protect positive views of the self. We hope that our findings clarify the landscape of self-enhancement and self-protection strategies and point to promising research directions.

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Footnotes

[1] In discussing self-enhancement and self-protection motives, we do not disregard the relevance of other self-motives in everyday patterns of cognition and behavior. For example, self-assessment affects people's choices of self-evaluation information (Trope, 1980), self-improvement affects their reactions to feedback (Markman, Elizaga, Ratcliff, & McMullen, 2007), and self-verification affects their choices of interaction partner (Swann, Rentfrow, & Guinn, 2003). It is beyond the scope of this article to address the strategies by which people satisfy these other motives, although they are likely related to one another (Gregg, Hepper, & Sedikides, 2009; Sedikides & Strube, 1997).

[2] Because data for both studies were collected online, we first inspected and cleaned the data for missing, suspicious, or seemingly careless responses (e.g., selecting the same response option for every item in a scale) and for respondents who completed the study in less than 10 minutes. This procedure resulted in the removal of five participants from Study 1 (1.4%) and two participants from Study 2 (0.5%). The sample sizes reported exclude these participants.

[3] Item parceling can be considered appropriate, valid, and desirable if the latent factor is shown to be unidimensional (Bandalos, 2002). Our latent factors were obtained from exploratory factor analysis (strategy families) and validated internally consistent scales (personality), supporting this assumption (Kline, 2005).

Table 1

Items and Factor Loadings for Each Self-Enhancement and Self-Protection Factor

	Rotated Factor Loadings			
Factor and Items	F1	F2	F3	F4
Defensiveness				
1. Revising very little for a test, or going out the night before an exam or appraisal at work, so that if you do poorly, it would not mean you are incompetent	**.63**	-.22	.04	.05
2. When you do poorly at something, thinking hard about the situation and feedback until you find something wrong with it and can discount it	**.60**	-.02	-.10	.06
3. When you do poorly at something, thinking the situation or test was uninformative/inaccurate	**.59**	.07	-.04	-.06
4. Revising very little for a test, or going out the night before an exam or appraisal at work, so that if you do well, it would mean you must have very high ability	**.58**	-.14	.12	.02
5. When you do poorly at something, thinking it was due to luck	**.56**	-.14	-.02	-.08
6. Believing you have control over chance events	**.55**	-.15	.05	.12
7. Leaving work until the last minute (and often not getting it done) to avoid the implications of doing poorly	**.54**	-.12	-.12	.09
8. When you do poorly at something, thinking it was due to the situation, not your ability	**.53**	-.04	.03	.00
9. When you do poorly at something, playing down the importance of that ability or area of life	**.52**	.01	.09	.04
10. Associating yourself with people who are successful – but not more successful than you	**.46**	.19	.11	-.04
11. Putting down or criticizing groups that you don't belong to	**.46**	.20	-.08	-.15
12. Defining your moral standards to fit your actions	**.42**	.11	.05	-.11

13. Forging friendships with people who are not quite as high as you in ability or achievement	**.41**	.15	.16	-.08
14. Telling other people that you expect to do even more badly than you really expect to do	**.41**	.21	-.30	-.10
15. Thinking that your weaknesses and flaws are common, but your skills and abilities are rare	**.41**	.00	.08	.15
16. Working out the kind of person you are by examining your intentions, but working out others only by their behavior	**.41**	.16	-.01	.14
17. When a group you are part of does well, thinking that you contributed to the success more than other members	**.40**	.20	.27	-.16
18. Thinking that groups you belong to are generally much better than groups you don't belong to	**.39**	.24	.09	-.05

Positivity Embracement

1. When you achieve success, thinking it says a lot about you	-.06	**.60**	.13	.06
2. When you achieve success, thinking it was due to your ability	-.18	**.55**	.15	.10
3. When you achieve success, playing up the importance of that ability or area of life	.21	**.50**	.08	.07
4. Spending time with people who think highly of you, say good things about you, and make you feel good about yourself	-.03	**.48**	.08	.21
5. Asking for feedback when you expect a positive answer	.15	**.48**	-.17	.06
6. Choosing to take on particular tasks because you know you are likely to do well in them	-.01	**.42**	.02	.17
7. Ensuring that you convey the best or most desirable aspects of yourself to new people through your behavior	.10	**.41**	-.05	.03
8. Avoiding spending time with people who think badly of you, criticize you, or make you feel bad about yourself	-.13	**.41**	-.01	.01
9. Remembering for a long time the good things that people say about you	.03	**.40**	.08	.19

10. Emphasizing your good qualities and/or successes, but not your weaknesses and/or failures, when talking to new people	.02	**.40**	.25	.10

Favorable Construals

1. Thinking of yourself as generally possessing positive traits or abilities to a greater extent than most people	.13	.24	**.50**	-.03
2. Getting over the experience of negative feedback quickly	.06	-.14	**.50**	.23
3. Believing you are more likely than most people to be happy and successful in the future	.21	.09	**.43**	.22
4. When someone says something ambiguous about you, interpreting it as positive	.24	-.01	**.43**	.12
5. Believing that you are changing, growing, and improving as a person more than others are	.10	.24	**.40**	.09
6. When you do poorly at something, thinking it only applies to specific aspects of your ability, not you as a person	-.01	.11	**.36**	.12

Self-Affirming Reflections

1. In times of stress, thinking about your positive close relationships and loved ones	.02	.02	-.11	**.70**
2. In times of stress, reminding yourself of your values and what matters to you	-.03	.02	.01	**.66**
3. Remembering hardships that you had to overcome in order to be really successful	-.08	.26	-.03	**.50**
4. Thinking about how you have grown and improved over time	-.13	.24	.12	**.47**
5. Thinking about how things could have been much worse than they are	-.01	.11	.06	**.46**
6. When you do poorly at something, reminding yourself of your other strengths and abilities	-.03	.11	.30	**.42**

Note. Several items included a brief everyday example of the behavior in question. The examples are omitted here to save space; wording is available upon request.

Table 2

Descriptive Statistics and Intercorrelations between Self-Enhancement and Self-Protection Strategies and Personality Variables

	Correlations							Study 1			Study 2		
	1.	2.	3.	4.	5.	6.	7.	Mean	SD	Alpha	Mean	SD	Alpha
1. Defensiveness	—	.33**	.39**	.07				2.89	0.74	.86	2.87	0.68	.83
2. Positivity Embracement	.42**	—	.40**	.43**				4.08	0.71	.78	4.10	0.73	.78
3. Favorable Construals	.38**	.42**	—	.43**				3.37	0.87	.74	3.40	0.84	.69
4. Self-Affirming Reflections	.08	.42**	.48**	—				4.04	0.88	.76	4.08	0.82	.68
5. Promotion Focus	.01	.44**	.37**	.46**	—			—	—	—	5.26	1.00	.84
6. Prevention Focus	.17**	.11*	-.11*	-.07	.02	—		—	—	—	4.29	0.92	.63
7. Self-esteem	-.15*	.22**	.45**	.45**	.45**	-.37**	—	—	—	—	3.13	0.61	.90
8. Narcissism	.29**	.35**	.42**	.18**	.30**	-.09	.36**	—	—	—	5.24	3.68	.82

Notes. Correlations between mean scores for each factor in Study 1 (N = 345) are presented above the diagonal. Correlations between strategies

and personality variables in Study 2 (N = 416) are presented below the diagonal. For strategies, scales varied from 1 (*not at all characteristic of*

me) to 6 (*very characteristic of me*).

*p < .05, **p < .001.

Table 3

Unique Associations between Self-Enhancement and Self-Protection Strategies and

Personality Variables in Structural Equation Models (Study 2)

Predictor	Defensiveness	Strategy		
		Positivity Embracement	Favorable Construals	Self-Affirming Reflections
Regulatory Focus				
Promotion	.01	.58**	.48**	.57**
Prevention	.15*	.15*	-.18*	-.12*
Self-Views				
Self-esteem	-.35**	.10	.38**	.53**
Narcissism	.45**	.39**	.42**	.03

Note. In each model, the two personality predictors were allowed to correlate freely, as were the four strategy factors. Coefficients are standardized regression weight estimates. $^{*}p < .05,\ ^{**}p < .001.$
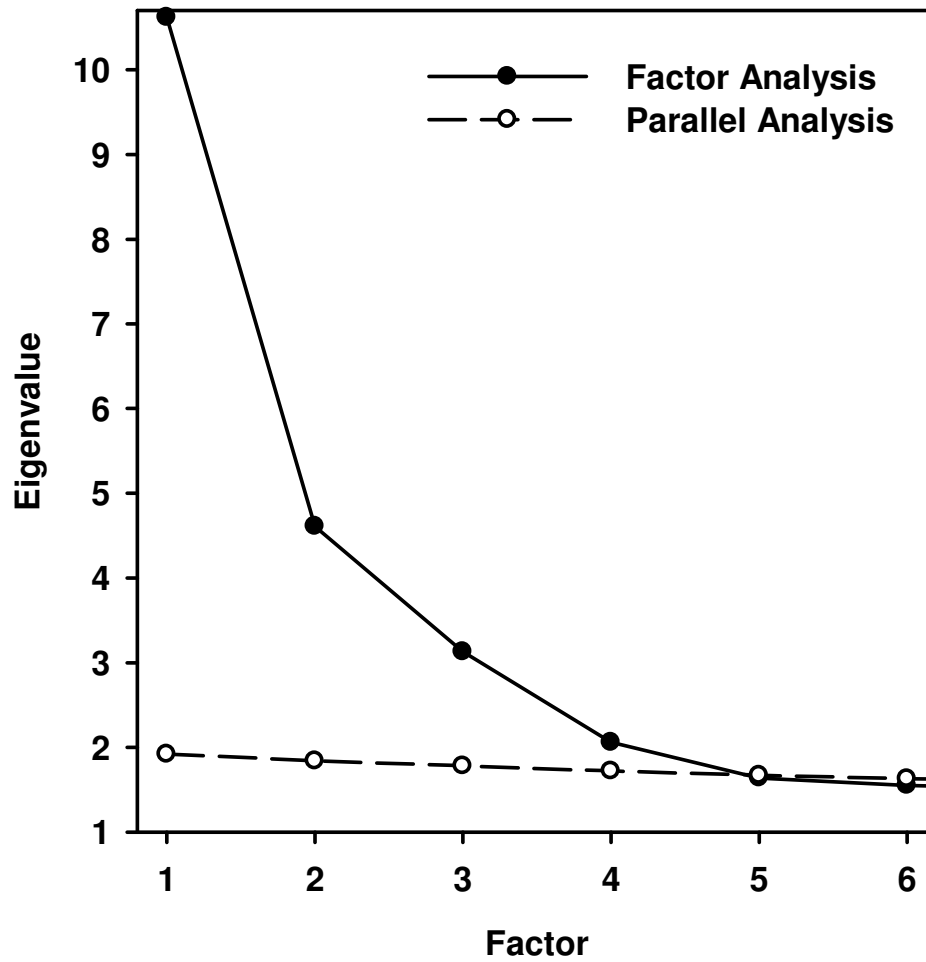
Figure 1. Parallel analysis of Maximum Likelihood Factor Analysis in Study 1. Critical

eigenvalues for observed and parallel analyses were as follows: 2.06 and 1.72 respectively for

Factor 4, and 1.64 and 1.67 respectively for Factor 5.