NARCISSISM AND SELF-ENHANCEMENT

by

Eric Kuelker

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in
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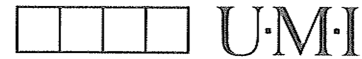

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ERIC KUELKER

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ABSTRACT

The characteristics of narcissistic personality disorder include a sense of entitlement, grandiosity, and feelings of superiority to others. The sense of superiority to others has parallels to self-enhancement, where the self is seen in a more positive light than one's peers. The purpose of the present study was to examine the relationship between narcissism and self-enhancement, as operationalized by positive comparison of the self to others. Positive self-other comparison was expected to show a positive correlation to mental health. A positive correlation was also hypothesized between mental health and narcissism, as measured by the Narcissistic Personality Inventory (Raskin & Hall, 1981), with the exception of the Entitlement/Exploitiveness factor (Emmons, 1984), which was expected to show a negative correlation to mental health. 402 university students responded to questionnaires which assessed self-other comparison, narcissism, self-esteem, social desirability, depression, and psychological distress. Factor analysis revealed that narcissism, self-esteem, and

accepting positive traits as self-descriptive were positively correlated to each other. Only the latter two scales were negatively correlated to psychological distress. Entitlement/Exploitiveness was negatively correlated to denying negative traits about oneself and to social desirability. Negative Trait Denial was positively correlated to social desirability and uncorrelated to accepting positive traits. Canonical correlation revealed Entitlement/Exploitiveness was positively correlated to psychological distress. The results reveal that narcissism is linked only to accepting positive traits, not denying negative ones.

INTRODUCTION

Overview

The concept of narcissism, which includes intense self-love, self-absorption, and grandiosity, has a cultural history dating to Ovid, and a psychoanalytic history dating to Freud. Much theoretical speculation based on clinical observation has been advanced about narcissism. Despite the age of the concept, quantitative research in narcissism has begun only in the last decade.

The results of studies on the most widely researched measure of narcissism, the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1981), indicates that narcissism is a multidimensional construct with factors exhibiting contrary correlations to self-esteem and depression (Emmons, 1984). The factor of Entitlement/Exploitiveness (E/E) is associated with low self-esteem, depression, and poor adjustment. The other factors on the scale have correlates that include aggression, exhibitionism, self-esteem and negative relationships to depression.

The features of grandiosity and self-importance in the criteria for narcissistic personality disorder in DSM-III-R (APA, 1987) illustrate the sense of superiority in narcissism. A more muted sense of superiority also appears in the literature on what has been termed the self-enhancing bias (Zuckerman, 1979), where the self is evaluated in a more positive and less negative light than one's peers. This phenomenon appears in a variety of areas such as attributions of responsibility for personal success or failure on a task, predictions of personal future, evaluation of traits and abilities in comparison to one's peers, comparisons of norm adherence to one's peers, and estimates of consensus for one's opinions or behaviours. This research on self-enhancing bias will be reviewed in detail.

The relations between narcissism and self-enhancement will then be explored. First, narcissism and the self-enhancing bias have an element of superiority which is common to both. Second, the positive correlation of some factors of narcissism to self-esteem and the negative correlation to depression

is similar to the association of these dimensions of mental health to the self-enhancing bias. Finally, a form of narcissism about one's cognitive powers is hypothesized to be central to the self-enhancing bias (Paulhus & Reid, 1991). This research has examined these hypothesized relationships.

Narcissism

Characteristics of Narcissism

Despite the long cultural and psychoanalytic history of the concept of narcissism, narcissistic personality disorder (NPD) was not a formal diagnosis until DSM-III appeared in 1980 (American Psychiatric Association, 1980). The diagnostic criteria, as stated in DSM-III-R, are that NPD is "a pervasive pattern of grandiosity...lack of empathy, and hypersensitivity to the evaluation of others" with at least five of nine characteristics being identifiable (American Psychiatric Association, 1987). These are that the person with NPD:

1) reacts to criticism with feelings of rage, shame, humiliation;

2) is interpersonally exploitative; using others for their own ends;
3) has an exaggerated sense of self-importance;
4) believes their problems are unique, and can be understood only by other special people;
5) is preoccupied with fantasies of unlimited success, power, brilliance, beauty, or true love;
6) has a sense of entitlement, absurd expectation of very favourable treatment;
7) is exhibitionistic, requires constant attention and admiration;
8) lack of empathy or recognition of other's feelings;
9) preoccupied with feelings of envy (APA, 1987, pp. 349-351).

Siomopoulos (1988) lists associated features of narcissism mentioned in the literature, but not in DSM III-R. The narcissist may show both overidealization and devaluation of others. Strangely enough, self-effacement or low self-esteem may be present. Another possible symptom of NPD is an expectation of superempathic understanding from others of how the narcissist thinks or feels. The narcissist cannot love

others deeply. Other associated features may include a deficient social conscience or absence of genuine morality. Narcissistic elation may occur, and at other times its opposite, extreme mortification, may occur. The narcissist's sense of perfection may even glorify obvious shortcomings as evidence of his or her uniqueness. Peculiarities of thought and language similar to transient psychotic symptoms may occur, especially after rejections by over-valued others. Finally, there may be a sense of chronic, inner emptiness, as well as hypochondriacal preoccupations and fear of illness (Akhtar & Thomson, 1982; Siomopoulos, 1988). DSM-III (APA, 1980) lists intensity and lability of mood and affect as a criteria for NPD, however this criteria was dropped when DSM-III was revised. In turn, DSM-III-R added the criteria of believing that one's problems were unique, and preoccupation with envy to the criteria listed in DSM-III. Most of the above features illustrate the intense self-absorption and sense of personal superiority, uniqueness, and entitlement in the narcissistic personality.

Etiological Theories of Narcissism

There is lively debate within and between psychoanalysis and social learning theory on the etiology and development of NPD. Otto Kernberg and Heinz Kohut are the chief psychoanalytic theorists in the area of narcissism. Kernberg (1975) maintains that narcissism is inevitable in child development, and the quality of the mother-child relationship determines whether development is fixated at this narcissistic stage or continues onward. If the relationship to the mother is filled with frustration and rage, then pathological object relationships arise. Out of narcissistic rage at insensitive parents and also as a defence to the pathological object relations, the child will invest libido in his or her grandiose self. The child remains fixated on the grandiose self, and does not develop further (Kernberg, 1975; Loewenstein, 1977; Russell, 1985).

Kohut (1971) believes there are two independent lines of self-love and object-love with idealized images in both. The self-love line contains a normal narcissistic image of the child's grandiose self.

Correct parental mirroring of the child fosters the diminution of the grandiose self as the child becomes aware of his or her limitations. The object-love line has an idealized image of the parents which usually forms the idealized superego. Like Kernberg, Kohut believes that it is the quality of the relationship with the parents that determines whether the child will remain fixated in a narcissistic state upon these idealized images (Kohut, 1971; Millon, 1981; Russell, 1985).

Social learning theory proposes that personality and pathology is largely learned from the social environment. Thus, if children are raised in a family environment that absurdly overvalues them, they will have an inflated self-image (Millon, 1981). Moreover, one might argue, as Lasch (1978) has, that people who grow up in a narcissistic culture will tend toward narcissism.

Empirical Research on Narcissism

Difficulties in Measuring Narcissism

The empirical research on NPD is scant, although it has been written about extensively from the

psychoanalytic perspective. The empirical research has focused almost exclusively on developing and validating paper and pencil measures of narcissism. One difficulty is that the measurement of narcissism by paper and pencil self-reports has tapped various constructs of narcissism, leading to a lack of standardization. DSM-III, clinicians' and personality researchers' opinions, and factor analysis of personality inventories have all been used as sources of features of narcissism. The use of DSM-III in scale construction provides some potential for standardization of features and agreement on a common construct. However, the use of clinicians' and personality researchers' judgements in selecting items from personality inventories implies that varying constructs of narcissism are measured since these people may have uneven exposure to narcissism and divergent theoretical backgrounds. Factor analysis also yields a grouping of traits which have been labelled as narcissism by researchers (Wink, 1991). These factor analyses have been derived according to the responses of psychiatric patients, few of whom are

narcissistic (Morey, Waugh, & Blashfield, 1985). This grouping labelled as narcissism may vary according to the characteristics of the sample, and is not abstract enough to permit easy comparison to DSM-III.

An example of the diversity in scales that is produced by these varying constructs and methodologies is provided by Wink (1991) in his analysis of six MMPI scales of narcissism. Of the 15 possible pairings between any two of these six narcissism scales, there were nine instances where the pair of scales had no items in common. This illustrates that the definitions of narcissism used in the various scales are divergent, suggesting that some scales may lack construct validity. Scales which are either based on DSM-III (or DSM-III-R) or constructed on a sample of narcissists who are clinically diagnosed according to DSM-III provide more consistent descriptions of narcissism than scales constructed with other techniques such as item selection by personality researchers.

Unfortunately, the paucity of research on most of these scales prevents assessing which measure has the most validity in measuring narcissism. Construct

validity could be measured by testing a scale's diagnostic power in a clinical sample. Another approach to validition would be to discover the personality correlates of the scale, and whether they are congruent with the concept of narcissism. The lack of research also prevents our knowing whether paper and pencil scales can validly measure narcissism, or whether they arouse sufficient defensiveness in a narcissistic person to render them invalid (Gunderson, Ronningstam, & Bodkin, 1990).

A second difficulty in the measurement of narcissism, other than establishing the validity of paper and pencil scales, is the role of certain psychoanalytic assumptions in current attempts to measure narcissism. Paper and pencil scales are constructed (Raskin & Hall, 1981) and used as measures of narcissism on the basis of the psychoanalytic belief that narcissism exists as a continuum in the normal population, and that the extreme is pathological (Kernberg, 1975; Masterson, 1981). This assumes that a measure developed at the lower end of the continuum in a normal population will be a valid and sufficient

measure of narcissism at the upper end. It also assumes narcissism only changes quantitatively, and not qualitatively as one moves across the continuum. Neither assumption has been clearly tested.

Narcissism Scales

Bearing these issues in mind, the research that has been carried out will be reported, first for the less researched published scales, the Morey et al. (1985) narcissism scale from the Minnesota Multiphasic Personality Inventory, the Wink and Gough (1990) narcissism scales from the MMPI and the California Personality Inventory, the Raskin and Novacek (1989) MMPI scale, the Narcissistic Personality Disorder Scale (NPDS; Solomon, 1982), the Millon Clinical Multiaxial Inventory (MCMI) Narcissism subscale (Millon, 1983), the O'Brien Multiphasic Narcissism Inventory, OMNI (O'Brien, 1987), and the Narcissism-Projective (N-P; Shulman & Ferguson, 1988). The findings from the most widely researched and validated measure of narcissism, the NPI, will then be reported. The less researched scales are subject to the difficulties of varying

definitions due to their method of construction. Furthermore, they have received very little validation as measures of narcissism, even at the level of determining personality correlates congruent with narcissism in a normal population. Therefore, only brief consideration will be given these scales.

Less researched scales. The Morey et al. (1985) narcissism scale was developed using item selection by clinicians with refinement by psychometric procedures on the MMPI responses of 475 patients in a general psychiatric population. It has a reliability estimate of .77, but has received no further direct validation.

Wink and Gough (1990) developed two narcissism scales by selecting items from the MMPI and CPI according to the DSM-III criteria for narcissistic personality disorder. The scales were refined by internal consistency criteria on the responses of 375 normal adults. Correlations between the scales with no overlapping items was .71, with internal reliabilities of 0.72 (MMPI), and 0.81 (CPI), with the latter having a test-retest correlation of 0.71 over five years. The correlations with observers ratings of narcissism were

0.30 for the MMPI scale, 0.49 for the CPI scale. Comparisons with the spouse's ratings on the Adjective Check List (ACL; Gough & Heilbrun, 1983) supported the scales as a measure of narcissism.

A Narcissistic Personality Disorder Scale (NPDS; Solomon, 1982) was constructed by contrasting responses on the MMPI of 20 patients diagnosed by clinicians according to unspecified criteria as having a narcissistic personality disorder to 20 carefully screened non-narcissistic persons. A 19 item scale was derived, which was cross-validated to a second group of 76 narcissistic and non-narcissistic patients. The scale diagnosed 13% as false negatives, 14% as false positives, and 86% accurately. The NPDS was further validated on college samples and shows negative correlations with measures of self-esteem (r = -0.53, p < .001), and positive correlations to depression (r = 0.44, p < .001) (Watson, Taylor, & Morris, 1987).

A second narcissism inventory constructed on a clinical population is the Millon Clinical Multiaxial Inventory (MCMI) Narcissism subscale (Millon, 1983). It is a 43 item scale constructed by selecting items

congruent with the author's theory of psychopathology and with DSM-III, and by refining the item set empirically. Its reliability as estimated by Kuder-Richardson 20 was found to be .81, and test-retest reliabilities are reported as .81 and .85 over one month. These reliabilities are attenuated slightly by the patients being in active psychotherapy. Internal consistency estimates dropped to .66 in an undergraduate population (Auerbach, 1984). Classification rates of 40% valid positives, 3% false positives, and 94% correct classification of narcissistic and non-narcissistic overall are reported for the scale on its' cross-validation sample of 256 psychiatric patients (Millon, 1983). It is important to realize that the estimate of correct classification is inflated by the low prevalence of narcissism (6%) in the cross-validation sample.

The O'Brien Multiphasic Narcissism Inventory, OMNI (O'Brien, 1987) was constructed on the basis of Alice Miller's theory of the narcissistically abused personality. The responses of 230 students to the 75 item scale were subjected to principal axes factor

analysis of the squared multiple correlations. The three factors had Cronbach alpha estimates of .70 to .75, and correlations of greater than .55 with neuroticism. The OMNI yielded a similar factorial structure for normals and clinically defined narcissists, with the narcissists scoring significantly higher on the three subscales than normals (O'Brien, 1988).

Shulman and Ferguson (1988) developed the only non-objective narcissism test, the Narcissism-Projective (N-P). It consists of responses to two Thematic Apperception Test cards and reports of the subject's earliest memories, which are coded according to the DSM-III criteria for narcissism. Clinicians' blind ratings of narcissism in students are in 85% agreement with the N-P, even with a 10 month delay between the administration of the N-P and the ratings made by the clinicians.

The Narcissistic Personality Inventory. Most of the empirical research on narcissism scales has focused on the validation of one scale, the Narcissistic Personality Inventory (Raskin & Hall, 1979) or NPI.

The NPI was constructed by writing forced dichotomous choice items that reflect the characteristics of NPD as defined in DSM-III. The initial item pool was pruned by statistical item analysis, selecting 80, and then 54 items that distinguished high scoring from low scoring subjects in an university population (Raskin & Hall, 1981). Various validity tests have been carried out on the scale. Raskin and Hall (1981) found a reliability coefficient of 0.72 on alternate forms of the NPI over an eight week delay. Auerbach (1984) obtained a coefficient alpha of 0.85 for the scale.

Emmons (1984) carried out a principal components analysis on the NPI, factoring phi coefficients with an oblique rotation. He found four components with an average correlation of .32 which he labelled: Exploitiveness/Entitlement (E/E), Leadership/Authority (L/A), Superiority/Arrogance (S/A), and Self-Absorption/Self-Admiration (S/S). This factor structure accounts for 70% of the variance and is very stable, being replicated by principal axes factoring with oblique rotation with nearly identical results on 362 university students (Emmons, 1987).

Raskin and Terry (1988) carried out principal components analysis with tetrachoric coefficients and a weighted promax oblique rotation on the NPI. Data was obtained from 1,018 university students responses. They psychometrically culled the scale and dropped the number of items to 40. The correlation between the 54 item and 40 item scale is 0.98, and the internal consistency of the 40 item scale as measured by the Guttman lambda 3 (alpha) is 0.83. This revised scale is as sound psychometrically as the old version of the NPI.

Raskin and Terry (1988) found that a seven factor solution accounted for 52% of the variance. They labelled the seven factors Authority, Exhibitionism, Superiority, Vanity, Exploitativeness, Entitlement, and Self-Sufficiency. In comparison to Emmons's (1984; 1987) factor solutions to the NPI, the Authority factor consists of items from the Leadership/Authority factor, and the Superiority and Vanity factors consist of items from Self-absorption/Self-admiration. The Entitlement factor is largely composed of items from Entitlement/Exploitiveness, but Exploitiveness draws

four of its five items from Leadership/Authority. Self-Sufficiency and Exhibitionism have no clear predecessors as factors on the four factor solution.

The psychometric reliability and validity studies demonstrate a fairly consistent set of personality traits which correlate with the total score on the NPI. Characteristics appearing from observational and/or self-reports include exhibitionism, independence, aggression, extraversion, self-centeredness (Emmons, 1984; Raskin & Terry, 1988), autonomy (Mullins & Kopelman, 1988; Raskin & Terry, 1988), dominance (Carroll, 1987; Emmons, 1984; Raskin & Terry, 1988), high self-esteem (Emmons, 1984; Watson, Taylor & Morris, 1987), autocratic tendencies (Raskin & Terry, 1988), rebelliousness and authority problems (Raskin & Novacek, 1989; Raskin & Terry, 1988), need for achievement (Emmons, 1984; Mullins & Kopelman, 1988; Raskin & Terry, 1988), assertiveness (Watson McKinney, Hawkins, & Morris, 1988; Raskin & Terry, 1988), and social imperturbability (Biscardi & Schill, 1985; Emmons, 1984; Raskin & Novacek, 1989). Negative correlations were observed to depression (Raskin &

Novacek, 1989; Watson et al., 1987), social anxiety (Raskin & Novacek, 1989), and empathy (Biscardi & Schill, 1985; Watson, Grisham, Trotter, & Biderman, 1984; Watson & Morris, 1991).

The general construct of narcissism as measured by the NPI was validated by comparisons (Raskin & Novacek, 1989) to the Minnesota Multiphasic Personality Inventory (MMPI). The highest scorers on the NPI had elevations on the Mania scale and the Psychopathic Deviate scale, with profiles indicating that these were the two highest scales, and an average elevation of T = 65 on the F scale, indicating psychological disturbance. Negative correlations appeared between high NPI scores and Depression (-.36), Psychasthenia (-.34), Repression (-.40), Ego Control (-.43), and Social Introversion (-.60). Furthermore, the Raskin and Terry (1988) factors of Exploitiveness, Entitlement, and Exhibitionism have stronger correlations with the General Maladjustment scale of the MMPI (.20, .19, and .16 respectively) indicating they have more potential, or actual, serious psychological disturbance. Raskin and Terry's (1988) other factors of Superiority,

Vanity, Self-sufficiency, and Authority were less strongly correlated with the scale of General Maladjustment.

The results from the Raskin and Novacek (1989) study indicate that Exploitiveness and Entitlement, which appear on both Emmons'(1987) and Raskin and Terry's (1988) factor solutions, are more correlated with psychological disturbance. This is consistent with previous findings that the Exploitiveness/Entitlement (E/E) factor in the four factor NPI solution (Emmons, 1984) is related to suspiciousness, tenseness, anxiety, and neuroticism, and is unrelated to self-esteem. When the four factor structure was replicated (Emmons, 1987) E/E was most strongly correlated with intensity and lability of mood and affect, which was one of the criteria for NPD in DSM-III. A negative relationship between the E/E factor and three different empathy scales has been detected (Watson et. al., 1984). Positive relationships of E/E with a need for power (Carroll, 1989), superiority, goal instability, personal distress, anxiety, and depression have been found, as

well as negative relationships to assertiveness and perspective taking (Watson et al., 1988; Watson et al., 1987). Summing all the evidence, this factor can be considered to be tapping the more maladaptive aspects of narcissism. The other three factors in the four factor solution (Emmons, 1984) were correlated with self-esteem and lack of depression, and have been considered to measure adaptive narcissism because of their correlations with mental health indices.

A number of groups appear more narcissistic than others. Bodybuilders show significantly higher narcissistic traits as measured by the NPI (Carroll, 1989) which Lasch (1979) had hypothesized. First born individuals have been found to have higher narcissism scores than last borns (Joubert, 1989). This study, as well as several others (Carroll, 1987, 1989; Watson, et al., 1984) found greater narcissism among males. This finding is not invariant, as other studies have found no gender difference (Auerbach, 1984; Raskin & Hall, 1981; Raskin & Novacek, 1989; Raskin & Shaw, 1988). Two studies have examined this result in more detail, looking at sex roles, rather than simply the gender

distinction. Both found that males and individuals with stereotypically masculine sex roles had higher levels of adaptive narcissism (Carroll, 1989; Watson, Taylor, & Morris, 1987).

Raskin and Novacek (1989) developed a 42 item scale which is a variant of the NPI by correlating the MMPI to the NPI, and retaining the MMPI items that showed a significant correlation to the total NPI. The scale has an alpha internal consistency coefficient of .65, and a correlation of .79 with the forty item NPI.

Various studies have correlated the narcissism scales reviewed above with each other. The NPI correlation with Wink & Gough's (1990) scales was 0.67 (MMPI scale) and 0.72 (CPI scale). The NPI correlation was 0.47 with observers' ratings of narcissism, while the MMPI and CPI scales correlated .30 and .49 respectively. The observers were personality assessors who had watched the subjects participating in groups in various activities such as playing charades and engaging in discussion.

Shulman and Ferguson (1988) found positive correlations between the NPI, the N-P, and a

clinician's rating of narcissism. Auerbach (1984) found a significant correlation ($r = 0.55$, $p < .001$) between the NPI and the Narcissistic scale on the MCMI. This was replicated by Prifitera and Ryan (1984) in a clinical population, $r = 0.66$, $p < .001$, but this study is biased by 98% of the subjects being male. Both correlations are not large enough to indicate that the two scales are parallel forms.

The correlations of the NPI with three other measures that purport to measure narcissism are poor. The Margolis-Thomas Measure of Narcissism (M-T), the Narcissistic Personality Disorder Scale (NPDS), the Narcissism-Hypersensitivity subscale of MMPI Scale 5, and Masculinity-Femininity (M-F) all intercorrelated at an average of $r=.42$, but the three correlated on average with the NPI at $r=-.03$ (Mullins & Kopelman, 1988; cf. Solomon, 1982). The above results should be interpreted in light of the fact that the M-T, NPDS, and M-F MMPI scale are all very short and have few validity tests (Mullins & Kopelman, 1988). The low correlation of the NPI with the NPDS is consistent with

previous findings, indicating that the two measure largely different constructs (Watson et. al., 1984).

The existence of two constructs of narcissism has recently been empirically validated (Wink, 1991). The two constructs have been labeled covert and overt narcissism. Various personality features have been measured with spouse report, self-report, and personality assessor reports which correlate with covert and overt narcissism. Covert narcissism has unique features of emotionality, discontentment, anxiety, bitterness and other features associated with internality and introversion. The narcissistic fantasies are generally concealed until close contact is made with the person. Covert narcissism shares features of conceit, demandingness, bossiness, intolerance, self-indulgence and self-expression with overt narcissism. Overt narcissism is distinct from covert narcissism in characteristics of exhibitionism, aggression, power orientation, egotism and self-dramatization.

In terms of pathology, overt narcissism shows inconsistent and weak correlations with measures of

psychological integration and emotional health, possibly as a result of the need for admiration and aggressiveness at others' expense which is likely to result in impairing of relationships. Covert narcissism has clear negative correlations to emotional well-being, adjustment, and functioning, and also is marked by vulnerability to difficulties.

Overt narcissism shows interesting parallels to high scorers on the NPI. Both share features of exhibitionism, aggression, egotism, and self-dramatization (Raskin & Terry, 1988; Wink, 1991). The link is seen most clearly in examining Wink's (1991) measure of overt narcissism. One of the three scales that make up the overt factor is the Raskin and Novacek (1989) MMPI narcissism scale, which is a variant of the NPI.

Covert narcissism has parallels to the E/E scale on the NPI. Positive relationships to pessimism, anxiety, emotionality, and psychological distress are observed in both covert narcissism (Wink, 1991) and Entitlement and Exploitiveness (Emmons, 1984; 1987; Watson et. al., 1988; Watson et. al., 1987). These

findings indicate the possible presence of two constructs or dimensions of narcissism.

The review of the research into the various narcissism scales indicates that the NPI is the most well-validated measure of narcissism. It was constructed with reference to the most accepted definition of narcissism at the time, namely the criteria for narcissism in DSM-III. The weak point in research on the NPI is the lack of research on the scale with clinically defined samples. If such research were to be carried out, it may indicate that narcissism is qualitatively, and not just quantitatively, different at the level of a pathological personality disorder. The NPI has been evaluated in a number of studies that correlate it with observers' and spouses' ratings of narcissism, and personality traits associated with narcissism (Wink & Gough, 1990). The other narcissism scales are less well developed and the NPI is presently the scale of choice for measuring narcissism.

Narcissism in general shares an element of superiority with the tendency to see the self in a

positive light that has been observed in social psychology. Before the relationships between narcissism and self-enhancement can be delineated, it is necessary to have a clear overview of the occurrence and explanations for self-enhancement.

Self-Enhancement

Definition

The tendency to see the self in a positive light is evident in several areas of research. This is variously labelled the self-enhancing bias, self-enhancement, self-serving bias, self-inflation, and positive illusion (Taylor & Brown, 1988). All the terms include the phenomenon in which the self is evaluated in a more positive and less negative light than one's peers. The term "positive illusion" (Taylor & Brown, 1988) is broader, and includes an exaggerated sense of control over one's environment, and a positive view of the self that occurs without reference to other people. An overly positive view of the self has been found in studies examining attributions for personal outcomes on tasks (Zuckerman, 1979), prophecies about

one's personal future (Weinstein, 1980), comparisons of traits and abilities of the self to the peer group (Dunning, Meyerowitz, & Holzberg, 1989), comparisons to the peer group (Codol, 1975), and estimates of consensus for one's beliefs or practices (Goethals, 1986). The change in positive views of the self from receiving clear feedback will be examined, and then possible explanations for the phenomenon of self-enhancement will be explored. Examining this evidence will aid in understanding the link between self-enhancement to narcissism.

Overly Positive Self-Attributions for Personal Outcomes

The finding that subjects have overly positive views of themselves emerged first in research on individuals' attributions for their personal success or failure on a task. Subjects frequently deny responsibility for failure and claim responsibility for success (Bradley, 1978). As members of groups, respondents tend to take more personal credit for the success of the group than they assign to the other

members of the group. This is reversed if the group fails in its task. In this case group members tend to assign more responsibility to the other group members than to themselves (Zuckerman, 1979). This finding consistently occurs in heterogeneous subject populations in sport settings (Mullen & Riordan, 1988), skill-oriented task performance (Zuckerman, 1979), role playing of teacher-student interactions (Arkin, Cooper, & Kolditz, 1980), and performance of small groups on problem-solving tasks (Bradley, 1978; Ross & Sicoly, 1979).

Unrealistic Optimism about One's Future

The second data source that indicates the tendency to see the self in an overly positive light is research on self-congratulatory prophecies. Even with actuarial tables, students significantly overestimate the occurrence of positive events and underestimate the occurrence of negative events happening to them (Alloy & Ahrens, 1987; Weinstein, 1980). In a marketing exercise, both students in management and experienced managers overestimated their businesses' growth rate

upon manufacturing a different product, even with cautions to be realistic (Larwood & Whittaker, 1977).

These optimistic predictions have been studied most thoroughly in relation to people's expectations about their health. Students considered that they had below average chances of contracting 34 out of 45 health related disorders (Weinstein, 1982). This result had been obtained previously, with subjects also feeling that they were healthier and had fewer illnesses per year than the average person (Larwood, 1978). Sexually active females considered they were less likely to become pregnant than the average female at their university, or of the same age, or of childbearing age in America. These are comparison groups that included sexually inactive females (Burger & Burns, 1988; cf. Whitley & Hern, 1991). Subjects not only see themselves, but also their family members and closest friend as equally unlikely to experience victimization (Perloff & Fetzer, 1986).

The illusion of invulnerability is strongest when comparisons are made to either a vague, ill-defined person such as "the average college student" or an

acquaintance of the subject's choice (Perloff & Fetzer, 1986). Generally, there is a failure to consider that other individuals may also have factors which work in their favour (Weinstein & Lachendro, 1982). Perloff and Fetzer (1986) found that if subjects predict the vulnerability to victimization of their friends then those friends with the highest risk factors are chosen for prediction. The authors concluded that people actively engage in downward comparisons which permit them to see themselves as relatively invulnerable. Active downward comparisons occur even after a serious illness has been contracted. In one study, 80% of breast cancer patients stated they were doing much or somewhat better than other women with the same disease. In open and closed questions, patients compared themselves to women who were not equal but worse off physically (Wood, Taylor, & Lichtman, 1985) and "manufactured a norm that other women were worse off than they were." (Taylor, 1983, p. 1166)

Overly Positive Comparisons of Traits and Abilities

When individuals compare themselves to others on certain personality traits and abilities, a consistent self-inflating bias emerges again as it did in prophecies of personal future. Eighty-eight percent of 81 American students believed they were safer than the average driver in the same study, and 93% believed they were more skilful. Intriguingly, these effects were replicated in a similar study in Sweden, although the number of drivers placing themselves above the mean was less (Svenson, 1981). These positive self-views of driving skill exist even after one has been responsible for an accident (Preston & Harris, 1965).

Self-inflation occurs on harder to define dimensions, such as intelligence (Larwood & Whittaker, 1977), ethical behaviour (Brenner & Molander, 1977), coping with cancer (Taylor & Lobel, 1989), and fairness (Messick, Bloom, Boldizar, & Samuelson, 1985). Subjects who generated lists of fair and unfair behaviours persistently associated themselves with fair behaviours, and others with unfair behaviours.

Furthermore, when subjects reported the fair behaviours they and others performed, they rated their own behaviours as more fair than the behaviours of others. Conversely, unfair behaviours the subjects said they performed were less unfair than the unfair behaviours of others. The subjects never stated they performed illegal or counter-normative acts, which were listed for others (Liebrand, Messick, & Wolters, 1986; Messick et al., 1985).

Self-inflation also occurs in evaluation of social skill. Non-depressed subjects rated themselves as more socially skilled in activities such as initiating conversations, joking, and sharing feelings than the average student at their university (Ahrens, Zeiss, & Kanfer, 1988). On rankings of various traits, subjects stated that desirable traits (many which occur in social interaction) were more characteristic of themselves than of the average college student. Not surprisingly, undesirable traits were seen as less characteristic of the self than of the average college student (Alicke, 1985; Campbell, 1986; Tabachnick, Crocker, & Alloy, 1983). This inflation was confirmed

in a social interaction study. Non-depressed subjects rated themselves as more socially skilled on 17 dimensions in group interactions than independent observers of the groups did (Lewinsohn, Mischel, Chaplin & Barton, 1980).

One of the most striking examples of self-inflated comparison is based on the 800,000 students who write the SAT yearly. Seventy percent rated themselves as above average in leadership ability. In "ability to get along with others" none of the 800,000 placed themselves below average, 60% put themselves in the top 10%, and 25% put themselves in the top 1% (Myers, 1987).

Overly Normative Comparisons to the Group

The tendency to present oneself as superior to one's peers on personality traits is more complex than described. Subjects state not only that they are stronger in positive traits than average as discussed above, but that they adhere more closely to valued norms than their reference group. There is a puzzling finding that subjects will state that even though there

is a group norm to which all are expected to conform, they conform to that norm more than the average member of their group (Codol, 1975). Furthermore, the more desirable the norm or trait is, the more individuals state this norm characterizes them more than most group members. Thus, both conformity to and individuation from the group are accomplished simultaneously. This has been labelled the PIP effect (Primus Inter Pares, or first among equals) by Codol (1975). Since individuals present as more in conformity with the group norm than the average member of the group, this can be seen as a form of self-enhancement. The PIP effect is different from other forms of self-enhancement by measuring adherence to a norm in comparison to the peer group, rather than only making comparisons to the peer group, as discussed above, or by estimating the number of one's peers that perform the same behaviour (Goethals, 1986).

The PIP effect is not a form of self-enhancement where one is seen as more positively than others and others are simply seen accurately. In a length estimation task one of three confederates was 100%

accurate throughout the entire experiment. Naive subjects assigned themselves the rank of most accurate subject in the task 37% of the time (when they actually never were), a trend that increased with trials. Simple self-enhancement would predict the most accurate confederate would be assigned the rank of most accurate person on trials where subjects did not claim that position for themselves. However, the most accurate subject was just as likely to be rated the most inaccurate person of the four, as the most accurate one. The author concluded that this evidences a systematic down-grading of others, beyond the needs of simple self-enhancement (Codol, 1975). This can be explained by downward comparison where people can increase their sense of well-being through comparison with disadvantaged others. The others may be actively derogated to appear disadvantaged to the person just so that the person can increase their sense of well being (Wills, 1981) by enhancing themselves above their peers.

Overly Positive Consensus Estimates

We have examined how self-enhancement can occur by believing that one's behaviour is closer to a desired group norm than the behaviour of the average member of the group. A related form of self-enhancement in conforming to the group is to inflate the size of the group that holds to one's norm. This inflation, called the false consensus effect (Ross, Greene, & House, 1977) is the tendency of subjects to overestimate the percentage of peers who act similarly or hold the same beliefs as themselves.

Meta-analytic reviews (Mullen, Atkins, Champion, Edwards, Hardy, Story, & Vanderklok, 1985; Mullen & Hu, 1988) found that tests of the hypothesis that subjects overestimate consensus for their behaviours were highly significant and of moderate magnitude. The magnitude of overestimation of consensus increases for undesirable behaviours, such as high fear (Suls & Wan, 1987), or undesirable health behaviours (Suls, Wan, & Sanders, 1988).

Individuation from the group occurs also in estimates of consensus. When people are members of a

majority group, they tend to underestimate the size of their own majority, making it appear that their opinions or behaviours are more unique and individual than they actually are, a phenomenon labelled the false uniqueness effect (Suls & Wan, 1987). A meta-analytic review revealed not only the consistency of the effect, but that it increased in magnitude as the difference in size between the minority and majority group increased (Mullen & Hu, 1988) emphasizing the tendency of people to see themselves as unique. People thus see their strengths as unique, and their weaknesses as common.

This review of the estimates of one's peer group confirm the consistent tendency of people to see themselves in a positive light that was observed in the formation of attributions after a task (Zuckerman, 1979), predictions of personal future (Weinstein, 1980), comparisons of traits to one's peers (Dunning et al., 1989), and comparisons to one's peer group (Codol, 1975). Research has focused not only on the pervasiveness of self-enhancement, but its change as a result of external or objective feedback.

Self-Enhancement and Clear Feedback

Self-enhancement relative to others is not only consistent, but may persist even in the face of external, disconfirming, or cautionary feedback. If clear feedback is given, such as providing group members with information as to whether they had been in the majority in a decision, the amount of dissent, and whether the decision was correct or not, subjects still make self-serving attributions for their performance (Schlenker & Miller, 1977). Students will positively estimate the occurrence of events to themselves even with accurate data in the form of actuarial tables available (Alloy & Ahrens, 1987; Weinstein, 1980) or with cautions to be realistic (Larwood & Whittaker, 1977). Attempts to reduce unrealistic optimism about health by having students adopt the perspective of another student, or providing detailed information about several other students had only a modest effect (Weinstein & Lachendro, 1982). Unrealistic optimism was only reduced significantly when subjects were given accurate health information about other students (Weinstein, 1983).

An example of the resistance of self-enhancement to disconfirmation arose from interviews in hospitals of 50 drivers injured in accidents. Police records indicated 34 of the drivers had caused their own accidents. However, the accident group had nearly identical high self-judgements of driving skill to a matched control group (Preston & Harris, 1965). In other examples of resistance to objective information, subjects fail to use, or ignore, actual consensus information in estimating consensus for their opinions or behaviours (Goethals, 1986; Mullen, et al., 1985). Subjects also systematically ignore negative feedback about their performance (Schlenker & Miller, 1977), even searching out information which falsifies the negative feedback and supports a positive self-evaluation (Pyszczynski, Greenberg, & Holt, 1985; Pyszczynski, Greenberg, & LaPrelle, 1985). Finally, people will enhance themselves in direct comparisons to a specific other person, even though they have indirectly admitted elsewhere that the other person is superior to them on the comparison dimension (DeVellis, Blalock, Holt, Renner, Blanchard, & Klotz, 1991).

The general lack of change in people's self-enhancement even with feedback that disconfirms it indicates again not only the pervasiveness of self-enhancement, but its consistency and strength. Various explanations have been proposed for the strength and existence of the self-enhancing bias, and an examination of these explanations and their supporting data may further our understanding of self-enhancement and its connection to narcissism.

Theoretical Explanations of Self-Enhancement

The explanations for self-enhancement have fallen into two viewpoints, the first one being that people are motivated to protect and enhance their self-esteem (Bradley, 1978; Sicoly & Ross, 1977). The second viewpoint is that the self-serving bias is a result of cognitive processes (Miller & Ross, 1975). The cognitive viewpoint was originally formulated as a comprehensive alternate explanation to motivational accounts for the self-serving bias in attributions

(Miller & Ross, 1975).[1] Subsequently, distinct cognitive and motivational explanations have been formulated to account for positive self-other comparisons (Dunning et al., 1989) and the false consensus effect (Ross et al., 1977; Marks & Miller, 1987) with the result that the two viewpoints have competed as explanations (Mullen & Hu, 1988) leading to controversy (Ross & Fletcher, 1985). These opposing explanations have led to experiments and analyses designed to support the cognitive viewpoint in opposition to the motivational viewpoint (Mullen et al., 1985) or the motivational viewpoint against the cognitive viewpoint (Goethals, 1986; Miller, 1976) or crucial tests between the two (Mullen & Hu, 1988; Mullen & Riordan, 1988). The results have led some to argue that the explanations are empirically indistinguishable, since cognitive explanations can

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[1] The polarization between cognition and motivation that was proposed by Bradley (1978) and Miller and Ross (1975) was at variance to some previous views. Shapiro (1965) proposed that cognition and personality were inextricably connected, with a person's cognitive style having a formative influence on their personality. This contrasts with the cognition-motivation debate (cf. Tetlock & Levi, 1982), insofar as a motivation to protect and enhance self-esteem is seen as a part of personality.

also be formulated for most of the evidence for a motivated bias in attributions (Ross & Fletcher, 1985; Tetlock & Levi, 1982). As a result, some have argued that both motivational and cognitive mechanisms could operate in the self-serving bias (Dunning et al., 1989) with experiments designed to assess the relative influence of the two (Kunda, 1987). Before examining these recent syntheses and recognition that these viewpoints need not be polar opposites, the motivation and cognitive explanations will be examined separately.

Motivational Explanations

One explanation for the self-enhancing bias is that people are motivated to enhance themselves to both protect and increase their private self-esteem (Sicoly & Ross, 1977) or public esteem (Bradley, 1978; cf. Marks & Miller, 1987; Zuckerman, 1979). An implication of the motivation to enhance private self-esteem is that individuals will increase their self-enhancement as they become more ego-involved (Snyder, Stephan, & Rosenfield, 1978). Miller (1976) found greater attributions of responsibility for successful

outcomes as the subject was more ego-involved, even though the ego-involvement manipulation occurred after the task. The ego-involvement was implemented by telling subjects that they had high or low scores on either a poorly validated test, or a well-validated test that correlated with desirable outcomes. Kunda (1987) also obtained increased self-enhancement as subjects were more ego-involved by increasing the threat to the subject. In this instance, ego-involvement was manipulated by informing subjects that their health habits were associated with varying degrees of illness severity. When the person received the information that their health habits frequently led to serious illness, they showed a greater disbelief in that information than if they had been told their health habits were associated with mild illness. Rosenfeld (1990) found that private self-esteem was more associated with self-enhancing attributions than public self-esteem. Attempts to gain public esteem were minimized by having subjects form attributions after a task while connected to a bogus lie-detector. Subjects in this condition, where mostly private self-

esteem operated, made more self-serving attributions after success than subjects who made attributions on paper and pencil scales, where both private and public esteem can operate. A result indicating public esteem does play a role in self-enhancement can occur when a supportive audience is present after success on a task. This increases the motivation to self-enhance and results in more self-serving attributions from high self-esteem subjects (Schlenker, Weigold, & Hallam, 1990).

The motivation to protect and increase public esteem has also been invoked to explain studies that have not found a self-serving bias. Bradley (1978) notes that performance could be publicly and objectively evaluated in these studies. The possibility of public disconfirmation of self-serving attributions would be embarrassing, therefore esteem needs would best be met by making modest, rather than self-serving, attributions in public. Separate studies confirm that the possibility of public disconfirmation of one's attributions or abilities reduces self-enhancement compared to having no possible public

disconfirmation (de Vries & van Knippenberg, 1987; Miller & Schlenker, 1985).

The reduction of self-enhancement when public disconfirmation may occur raises the issue of social desirability and its hypothesized components of self-deception and impression management. Self-deception arises when the person actually believes his or her overly positive self-reports (Sackeim & Gur, 1978). Impression management occurs when the person deliberately dissembles in their self-presentation (Millham & Kellog, 1980; Paulhus, 1984). Both processes appear involved under certain conditions of self-enhancement. Self-deception may be identical to many of the instances of self-enhancement cited above where people seem to sincerely believe their positive self-evaluations as indicated by their non-modification with external or disconfirming feedback. Impression management is indicated when subjects reduce their self-enhancing evaluations under conditions of public evaluation. Impression management may be activated only in situations of public evaluation with possible disconfirmation, since responding anonymously leads to

more self-enhancement (de Vries & van Knippenberg, 1987; Miller & Schlenker, 1985).

Cognitive Explanations

The interpretation that self-enhancement is a result of a motivation to protect and enhance either public or private self-esteem has been challenged by an information processing paradigm. This explanation argues that the optimistic views of the self are due only to cognitive processes, whether they are rational (Marks & Miller, 1987) or contain shortcomings (Nisbett & Ross, 1980). One flaw or shortcut in cognition is the representativeness heuristic (Kahneman & Tversky, 1972), where people judge the probability of an event by the degree to which it resembles its larger population of events, rather than calculating the actual probability of the event. For example, people judge that the sequence of coin tosses HHTHTTTH is more likely to occur than TTTTTTTT. Both sequences have an equal probability of occurring, but the first one resembles more closely the larger population of eight coin toss sequences. This large population has a vast

number of sequences which are a mix of H and T. A second shortcut is the availability heuristic, where people judge frequency or probability by the ease of which relevant examples are remembered (Tversky & Kahneman, 1973) with their availability increased by the vividness of the example (Nisbett & Ross, 1980). To illustrate, people overestimate the probability of dying in airplane accidents, events which are easily remembered due to their drama and extensive media coverage. The availability heuristic has been applied to explain the overestimates of consensus (Marks & Miller, 1987; Mullen & Hu, 1988).

Other information processing explanations have been advanced. Nisbett and Ross (1980) discuss the possibility that a person's environment exposes them to largely positive information from significant others. The positive estimations of one's ability may be partly a result of a person assimilating the positive information surrounding them. Mullen et al. (1985) offered a similar hypothesis for the overestimation of consensus, that it could be from a non-motivational, unintentional distortion by selectively exposing

oneself to those with whose opinions were similar to ones own and assimilating their information, which matches one's own beliefs. Miller and Ross (1975) offer four separate information processing explanations for the self-enhancing attributions of subjects after success on a task. The first is based on the covariation principle, that an effect is attributed to the cause with which it covaries over time. Second, people expect success more than failure, having intervened to produce success and avoid failure. Third, people may not understand the concept of contingency, judging the strength of a relationship based on the instances where two variables co-occur, rather than when they do not. A final variable is that people differ in the degree of complexity they observe in the environment. Subjects who are not cognitively complex will attribute more responsibility for success to themselves by not perceiving moderating variables.

The information processing paradigm offers several alternative explanations to a motivational paradigm to account for the phenomenon of self-enhancement. For example, information processing explanations are able

to predict findings in the estimates of consensus that motivational explanations cannot (Marks & Miller, 1987; Mullen & Hu, 1988). However, if cognitive processes or biases result in self-serving estimates of oneself, then receiving accurate information about one's peer group, or one's performance, should eliminate the self-serving estimates. The accurate information should result in accurate estimates of one's peers or performance (Goethals, 1986). The resistance of subjects to incorporate accurate or disconfirming feedback appears to be a significant problem with the information processing view and suggests that some motivational factors may have a powerful influence. The incomplete and competing explanations from information processing and motivational frameworks have resulted in attempts at synthesizing the two.

Syntheses of Motivational and Cognitive Theories of Self-Enhancement

Greenwald (1980) hypothesizes that various cognitive biases function to maintain and organize knowledge within the self. He defines the self, or

ego, as an organization of knowledge, and argues that the survival of the ego depends on its maintenance of the knowledge structure. A substantial revision to the knowledge framework of the self would require a significant amount of energy, and dissolution of the knowledge structure would mean the dissolution of the self. Given these negative consequences, he considers that the self is motivated to maintain its organization of knowledge through three cognitive biases, one of which he called beneffectance. Beneffectance is the tendency to credit oneself for success and to minimize responsibility for failure, which is the self-serving attribution pattern discussed above. The second cognitive bias is egocentricity where the self is perceived as being more important than it is by the tendency to overestimate control and to organize memory around the self. The final cognitive bias is conservatism where the person is predisposed to retain knowledge structures by confirming previously held judgements. Since previous knowledge is selectively evaluated to appear true, the person has a sense of

infallibility. Greenwald argues that the three biases cooperate to contribute to self-esteem.

Nisbett and Ross (1980) propose an integration of cognitive and motivational factors on the assumption that exchanging similar opinions and receiving positive feedback from others is pleasant. The person is thus motivated to associate with those who have similar beliefs and who will give the person positive appraisals of his or her behaviour. As a result, the information the person receives from their environment creates and supports a positive view of the self.

Kunda (1987) provides a synthesis where cognitive operations are used in the service of motivational ends. Motivational forces select not only the evidence to be considered, but also the cognitive process to be used for particular situations. The author's theory that motivational processes are foundational to self-serving opinions was supported by experiments which indicated that motivational, but not cognitive, factors were a necessary condition for the formation of self-serving concepts (Kunda, 1987).

The essential role of motivational factors in self-enhancement is also indicated by the lack of alteration of self-serving beliefs in the face of disconfirming evidence. If self-serving beliefs were only the result of information processing, then disconfirming evidence should change the self-serving belief since contrary information is being processed. The lack of change that occurs when disconfirming evidence is available indicates people are motivated to see themselves positively.

The finding that self-enhancement is not purely a result of cognitive processes, but is significantly influenced by motivation has an important implication. When Miller and Ross (1975) formulated a "non-motivated information processing analysis" (p. 213) for self-serving biases in attribution they hypothesized that the personality variables that had been observed to influence the pattern of attribution were not connected to a motivation to protect and enhance self-esteem. Rather, they thought that the individual differences that were observed were from differential performance expectancies, or differential concerns over the

covariation between behaviour and outcome. The logical implication from Miller and Ross' position is that self-enhancement cannot be a personality variable in itself, since it is a non-motivated information processing phenomenon. Since self-enhancement is not a personality variable in the Miller and Ross framework, they would predict that the connection between self-enhancement and various personality variables such as narcissism would be null or weak. However, because self-enhancement has been shown to be notably influenced by a motivation to protect and enhance self-esteem, which is a personality variable, then a significant connection between self-enhancement and personality variables such as narcissism can be posited. This connection is also possible because both narcissism (Kernberg, 1975) and self-enhancement (Svenson, 1981) exist as continuous variables in the normal population.

Links between Narcissism and Self-Enhancing Bias

The existence of both narcissism and self-enhancement as aspects of personality allows for

consideration of the links between the two. The strongest link between narcissism and self-enhancement is the common element of superiority. Superiority, and its related characteristics of grandiosity and self-importance, emerged quite clearly in the description of the narcissistic personality (APA, 1980). Narcissistic people consider themselves entitled to special treatment by others and will exploit them in order to obtain it. Furthermore, there is marked grandiosity, fantasies of unlimited wealth, brilliance and beauty. These fantasies strongly suggest superiority. If one considered others equally beautiful and talented, then one is simply equalizing oneself to others, a concept quite distant from the overall construct of narcissism. The feature that is most telling of superiority is the exaggerated sense of self-importance. Superiority also appears in self-enhancement, which is defined by people thinking that compared to their peers, they have more responsibility for success, and more positive futures and traits than their peers, and adhere closer to valued norms than their peer group.

The second parallel between narcissism and self-enhancement is that it was recently proposed that a form of "cognitive narcissism" is central to the construct of enhancement (Paulhus & Reid, 1991). This cognitive narcissism was seen in items with the highest loadings on the factor of enhancement. These items displayed an inflated confidence in one's cognitive powers and influence.

The final parallel to be reviewed in the upcoming section involves mental health. Three of four factors on the NPI have positive correlations to self-esteem and negative correlations to depression. The same pattern exists for self-enhancement (Taylor & Brown, 1988). The review below examines the evidence that dysphoric, clinically depressed individuals, and people with low self-esteem have a realistic, rather than self-enhancing view of themselves. Considering these similarities, one might speculate that narcissism will correlate with the high end of a distribution of motivated self-inflation and superiority that is present in the normal population. The constructs are not expected to corroborate perfectly, since there are

two dimensions of narcissism, covert and overt, and some factors of narcissism are correlated to depression and low self-esteem, which is contrary to the correlations observed for self-enhancement to these variables.

Narcissism, Self-Enhancement, and Mental Health

An interesting connection between a motivation to self-enhance and other personality variables is also observed in a group which does not hold a self-serving bias. Individuals who are dysphoric, which is mildly depressed, or who are clinically depressed, are accurate rather than self-serving, or even self-denigrating, in their estimation of themselves. These results will be reviewed in an attempt to further explain the conjunction of narcissism, self-serving bias and mental health.

Depressive Realism

Depressive realism refers to the tendency of depressed people to display less of the self-enhancing bias than non-depressed people. People who are

depressed are less likely to see the self in a more positive and less negative light than their peers (Sweeney, Anderson, & Bailey, 1986), but are realistic instead (Lewinsohn et al., 1980).

Two caveats must be issued before the results from studies in the field of depressive realism are reviewed. First, the majority of the studies to be cited used undergraduate students defined as depressed by scores of nine or above on the Beck Depression Inventory (BDI; Beck, 1978) with the majority of individuals in the range of 9-15 on the BDI (e.g., Campbell, 1986). Researchers point out that these subjects can be considered as mildly depressed (Campbell, 1986; Dunning & Story, 1991) and that scores at this level on the BDI do not indicate the presence of the clinical syndrome of depression (Alloy & Ahrens, 1987; Benassi & Mahler, 1985). Some researchers (Ahrens et al., 1988) including Beck (Kendall, Hollon, Beck, Hammen, & Ingram, 1987) recommend that the term "dysphoric" be used for subjects scoring in this range. This recommendation will be followed for this paper, although other researchers have used the term

"depressed" for subjects largely in the range of 9-15 on the BDI (Alloy & Ahrens, 1987; Benassi & Mahler, 1985; Campbell, 1986; Dunning & Story, 1991).

Terminology aside, the caveat is that the phenomenon of depressive realism has been studied most extensively in undergraduate populations with subjects who are dysphoric. Depressive realism has been observed in clinically depressed patients (Lewinsohn et. al., 1980; Raps et. al. 1982) but more extensive replication of the results in clinical samples is necessary.

A second caveat in depressive realism research is that it is assumed that depressed and non-depressed people have roughly the same experiences in the various aspects of their lives, an assumption labelled "naive realism" (Dobson & Franche, 1989). Naive realism assumes that dysphoric and non-dysphoric people have similar attributes, life histories, and daily events in their lives (Dunning & Story, 1991). Therefore, any variations in the estimation of the self to peers are labelled cognitive illusion, since it is assumed that the person has the same experiences as their peers.

Recent research indicates that dysphoric subjects may be different from normals (Dunning & Story, 1991), and thus the assumption that the two groups have similar experiences may be invalid. The study found that the predictions of dysphoric people about events in their lives were more pessimistic than normals' predictions about real life events. However, the dysphorics' predictions were not pessimistic enough because the dysphorics' futures turned out worse than even they had anticipated. The authors concluded dysphoric people are overly optimistic about their individual futures, and only appear realistic when compared to non-dysphoric people. Replication is needed since the findings are inconsistent with other studies demonstrating accuracy in clinically depressed subjects (Lewinsohn et. al., 1980), or even depressive distortion (Dobson & Franche, 1989).

Keeping the cautions in mind, depressive realism occurs fairly consistently. It was first observed when it was found that dysphoric individuals accurately judge the degree of their control over probabilistic outcomes, whereas non-depressed people overestimate

their degree of control (Alloy & Abramson, 1979). Dysphoric people exhibit differences to non-dysphoric people in areas other than differential estimates of control. Differences exist in attributional pattern (Sweeney et al., 1986), predictions for the future (Alloy & Ahrens, 1987), comparisons of traits (Ahrens, Zeiss, & Kanfer, 1988), and estimates of opinions relative to the group (Campbell, 1986).

In a meta-analytic review of 104 studies with nearly 15,000 subjects (Sweeney et al., 1986), several attributional patterns were associated with depression, usually mild depression as defined by scores above 16 on the Beck Depression Inventory (Beck, 1978). When negative events occur, depressed and dysphoric subjects make more attributions overall to internal, stable, and global causes than normals. Furthermore, increasing depression is associated with more internal, stable, and global attributions. The magnitude of the effect size correlating the composite attribution measure after negative events to depression was moderate (.27) according to Cohen's (1988) criteria. When positive events occur, dysphorics form attributions to more

external, unstable, and specific causes than normals, but this association is weaker than the pattern for negative events. The effect size of the composite attribution measure to depression was small (.15) by Cohen's criteria. The overall dysphoric attribution pattern is opposite to normals, who make externalized attributions for negative outcomes, but internalized attributions for positive ones. The reviewers conclude that dysphorics see good and bad events occurring to them as originating equally from both internal and external causes. Non-dysphoric individuals judge good events as originating from internal causes, and bad events from external causes (Raps, Peterson, Reinhard, Abramson, & Seligman, 1982).

This attributional style is specific to the dysphoric person's own actions and not the actions of others. This is similar to the attributions of non-dysphoric people for negative outcomes to others (Sweeney, Schaeffer, & Golin, 1982; cf. Alloy, Albright, & Clements, 1987). Also, "depressive" attributions seem not to be characteristic of most other types of psychopathology (Raps et al. 1982).

Depressive realism also extends to predictions about the future, trait comparisons, and consensus estimates. Dysphoric students make accurate, unbiased predictions of their future academic outcome, whereas non-dysphoric people overestimate their probability of success (Alloy & Ahrens, 1987). In trait comparisons, dysphoric individuals evaluate themselves as being no more or less socially skilled than others (Ahrens et al., 1988). For judgements of social competence in group interaction, normals and even psychiatric controls rate themselves more positively than observers do. Clinically depressed people judge themselves accurately, compared to hidden observers' ratings of them (Lewinsohn et al., 1980). This effect diminishes with decreasing levels of depression (Gotlib & Meltzer, 1987). In other studies, dysphoric subjects saw themselves as sometimes worse or sometimes better than the average student on both positive and negative attributes (Campbell, 1986; Tabachnick et al., 1983). Depressive realism occurs even in estimation of consensus. Dysphoric students are less likely to

display inflated consensus for their opinions than non-dysphoric students (Campbell, 1986).

To summarize, dysphoric people are generally realistic in their attributions for responsibility after success or failure, predictions about their personal future, comparisons of their traits and abilities to others, and estimates of consensus for their opinions. This contrasts with normal people, who have self-serving views in all these areas.

Low Self-Esteem Realism

The finding of depressive realism, instead of pessimism, is paralleled in the study of self-esteem. In a provocative review, Baumeister, Tice & Hutton (1989) propose that individuals who are normatively low in self-esteem present in a neutral, intermediate fashion rather than a self-derogatory fashion on self-esteem scales. They endorse the items at the midpoints of the scale, rather than the negative, self-derogatory items at the lower end of the scale. Low (or, more accurately, medium) self-esteem subjects display a self-protective bias in how they present themselves to

others, casting themselves in a realistic light and avoiding embarrassment. Low self-esteem people focus on remedying weakness and minimizing risk. They tend to also be slow and cautious in claiming desirable traits.

The cautious, self-protective style of low self-esteem subjects contrasts with high self-esteem subjects who demonstrate a self-enhancing, aggrandizing bias in self-presentation. High self-esteem subjects will readily place themselves in a positive light. They will accept responsibility for the success of a project prior to its completion. Furthermore, they will take risks in self-presentation, cultivate their positive qualities, and claim desirable traits These differences in self-presentation observed on self-esteem scales occur also in experimental paradigms (Schlenker et al., 1990). When people face increasingly demanding evaluations by others, such as needing to make a good self-presentation in public, high self-esteem subjects are more egotistical in their attributions after a task. Low self-esteem subjects become less egotistical in attributions as the pressure

to make a good self-presentation increases. The authors consider these results indicate high self-esteem people have a self-enhancing self-presentational style, where low self-esteem people are self-protective. These self-presentation differences are seen as motivationally influenced (Schlenker et al., 1990), or even based on motivational differences (Baumiester et al., 1989) with high self-esteem subjects motivated to enhance themselves and low self-esteem subjects not.

Narcissism and Mental Health

To summarize, dysphoria, depression, and low self-esteem are all linked with a lack of positive self-evaluation and positive self-presentation. Conversely, it appears that an inflated sense of the self is linked with lack of depression, and high self-esteem. This conclusion is supported by three of the four factors on the NPI, which display positive correlations to self-esteem, and negative correlations to depression and anxiety (Emmons, 1984; Watson et. al., 1988; Watson et. al., 1987; Watson & Morris, 1991). Self-inflation is a

basic aspect of narcissism, and these correlations are not surprising, given the relationship of self-enhancement to depression and self-esteem.

However, the relationship of narcissism to mental health is not uniform. Narcissism does exist as a pathological personality disorder involving poor mental health. This may be best illustrated by the factor of Entitlement/Exploitiveness, which has positive relationships to depression, personal distress, and anxiety, and negative relationships to self-esteem (Emmons, 1984; Watson et. al., 1988; Watson et. al., 1987). Entitlement/Exploitiveness may measure more pathology than any other factor of the NPI, since it shows the highest correlation with the scale developed on a population of pathological narcissists, the NPDS (Emmons, 1987; Watson et. al., 1984). Narcissism, at least in the range measured by the NPI, has co-occurring relationships to mental health from the dimension of self-inflation, and psychological distress from the dimension of pathology. It is quite feasible that measures of more pathological narcissism than what

the NPI measures will not display the correlation to mental health, since the pathology is more severe.

Positive Illusions and Mental Health

The research reviewed indicates well-functioning individuals have inaccurate estimates of their skill, abilities, and normativeness compared to their peer group. These overly positive, inaccurate biases in self-estimation are labelled positive illusions (Taylor & Brown, 1988). These positive illusions will be explored not only for the correlation to mental health reviewed above, but also for their possible role in maintaining and promoting it. Taylor, Collins, Skokan, & Aspinwall (1989) do not define a positive illusion as a denial or repression of negative information. Both of these two defenses alter the perception of reality by ignoring or suppressing parts of reality. Rather, a positive illusion does not disregard reality, but interprets it in the best possible light.

Three lines of evidence illustrate that positive illusions are strongly linked with and serve to maintain mental health. This is in contrast to some

earlier views on mental health, which had stressed that accurate contact with, and observation of the surrounding environment was an integral part of healthy functioning (Taylor & Brown, 1988). The first linkage is that these positive illusions are held only by psychologically healthy, non-depressed people. Second, positive illusions facilitate healthy social and work-related functioning. Finally, positive illusions are hypothesized to aid adaptation in the face of, and after, powerful threats to the individual by assisting in the development of a sense of meaning, mastery, and self-enhancement for the individual. It is important to realize that the relationship between positive illusions and mental health may be a repetition of the link between self-esteem and mental health (e.g. Pearlin & Schooler, 1978; Shamir, 1986; Winefield & Tiggemann, 1990). Positive illusions, at least in the form of self-enhancement on traits and abilities, are intimately connected with self-esteem (Pelham & Swann, 1989). Therefore, the link of positive illusions to healthy functioning may be the same link self-esteem has to the latter.

The association of positive illusions with the absence of depression is the first of the three lines of evidence suggesting that these biases are associated with mental health. It now appears those who are most accurate in their perceptions of the environment as well as in their perceptions of their skills and functioning are those who are either dysphoric or depressed, which is not considered optimal functioning. As depression remits, the positive bias reappears, indicating again the link between mental health and positive biases (Lewinsohn et al., 1980).

The favourable interpretation of reality in positive illusions seems to facilitate daily functioning, providing the second line of evidence for the link between positive illusions and adaptive functioning. A recent review (Taylor & Brown, 1988) found positive illusions in several different domains correlated with happiness, caring for others, and productive work. In contrast, repression is associated with a significant loss of both positive and negative emotion, and with less productivity, happiness, and resilience to stress (Taylor et al., 1989).

The third line of evidence suggesting that positive illusions are associated with psychological health is that they are hypothesized to be necessary for adaptive functioning in the face of serious adversity (Taylor & Brown, 1988). Taylor (1983; Taylor, Lichtman, & Wood, 1984) describes the role of positive illusions in adapting to a severe personal adversity or tragedy, such as a diagnosis of cancer. In intensive interviews with 78 breast cancer victims, Taylor (1983) found positive illusions existed in three themes: a search for meaning or cause of the cancer, a sense of mastery over it, and an effort to enhance self-esteem. More of the women (95%) searched for a cause for their cancer than did their husbands (63%). The sense of mastery occurred when women (67%) felt they had some control over the course or recurrence of their cancer, while some of the rest thought the doctors did. This sense of control was enacted through various strategies such as meditation or imaging, diets, acquiring information, and controlling drug side-effects.

The third theme of adjustment to threat, after meaning and mastery, was enhancement of self-esteem, which has been observed previously (Wills, 1981). The majority of women interviewed said the changes in their lives since cancer were only positive, and that they were well-adjusted at present, even better adjusted than during the illness or before the cancer was diagnosed (Taylor, 1983). These results have been further replicated. Individuals threatened by physical illness will compare themselves to less fortunate others in an effort to increase or preserve their self-esteem (Taylor, Buunk, & Aspinwall, 1990; Taylor & Lobel, 1989; Wills, 1981). Over 90% of cancer patients interviewed (Taylor, 1983) or surveyed (Taylor, Falke, Shoptaw, & Lichtman, 1986) considered they were coping better, and in better health than other people with cancer. If a person is disadvantaged in significant ways, they will carefully select the dimension on which they evaluate themselves to others so as to enhance themselves (Taylor et al., 1990; Taylor et al., 1983). A subject will directly say they are coping better than another person with the same disease even if the

comparison target person is coping better by the subject's indirect admission (DeVellis et al., 1991). The tendency for physically threatened people to compare themselves to less advantaged others may also result in imaginary comparison targets being constructed (Wood et al., 1985). The selection of disadvantaged people for comparison, construction of hypothetical people, and denial of the superior coping of others suggests the need to enhance oneself determines how comparisons will be made (Taylor, 1983; Taylor, Lichtman & Wood, 1984). This is similar to Kunda's (1987) hypotheses that motivational forces to self-enhance select the cognitive process to be used for particular situations.

Taylor (1983) noted that specific cognitions or illusions, whatever their validity, serve to maintain the broader themes of mastery, meaning, and self-esteem under conditions of threat. The content of the specific cognition is thus not as important as the maintenance of the larger theme. This is exemplified by people having multiple causal attributions about their cancer, or making multiple self-enhancing

comparisons. This motivation to preserve the larger theme by having multiple cognitions serve the theme, or replacing deficient cognitions is possibly the same motivational basis for self-enhancing comparisons, attributions, and prophecies reviewed above. In summary, a motivation to preserve and maintain self-esteem by self-enhancement appears in both the presence and absence of threat.

Summary and Hypotheses

The tendency to see the self in a more positive light than one's peers emerges in both narcissism and social cognition. Superiority appears as a feature of narcissism, not merely in its definition in DSM-III, but also in the personality traits correlated to the most researched narcissism inventory, the NPI. Superiority also appears when people compare themselves to others. They persistently see themselves more positively than their peers, even with disconfirming or contrary evidence available. The common element of superiority is the first link between narcissism and self-enhancement. The second link is that a form of

cognitive narcissism, or exaggerated confidence in one's thinking abiilities, has recently been proposed to be central to the concept of enhancement (Paulhus & Reid, 1991). Finally, narcissism has some similar links to self-enhancement in the domain of mental health. Self-enhancement is correlated to high self-esteem, and lack of dysphoria or depression, as are some of the factors on the NPI (Emmons, 1984). The NPI has, as the larger construct of narcissism does, links to pathology, depression, and low self-esteem. The similarities between narcissism and self-enhancement indicate that narcissism may be strongly correlated to an extreme of self-enhancement. However, the correlations of narcissism to pathology indicate that it is not consistently linked to mental health, as self-enhancement is.

Several hypotheses can be derived from the literature review and theories of the relationship between narcissism and self-enhancement. The first hypothesis is that there will be a positive correlation between narcissism, as measured by the NPI, and self-enhancement. Second, self-enhancement is predicted to

be positively correlated with self-esteem, since both are strongly linked with a self-enhancing presentational style, and self-esteem is positively correlated with some factors on the NPI. Third, the phenomenon of depressive realism predicts that there will be a negative association between self-enhancement and level of depression. Self-enhancement will include both overestimation and acceptance of positive traits, and underestimation and denial of negative traits relative to others.

The positive correlations of the Entitlement and Exploitiveness components of narcissism to depression result in subsidiary hypotheses on the assumption that they have similar relationships to other scales. To begin, the negative association between self-enhancement and depression predicts a similar negative or weak correlation between Entitlement and Exploitiveness and self-enhancement. Furthermore, positive correlations between depression, Entitlement, Exploitiveness, and psychological distress are hypothesized. Psychological distress includes a number of symptoms of psychopathology, such as paranoid

ideation, psychoticism, depression and anxiety, and is measured by scales such as the Symptom Check List 90-R (Derogatis, 1983). Entitlement and Exploitiveness factors are more strongly correlated with psychopathology than the other NPI factors (Emmons, 1984).

A possible confound is the presence of a response bias resulting from social desirability, since subjects' responses on the self-enhancement scale may be from attempts to appear more favourable to the experimenter, rather than their genuine self-appraisal. Recent factor analysis of social desirability scales indicates that there are three factors which appear, instead of two as was previously thought (Paulhus & Reid, 1991). The first factor is composed of items from lie scales (Paulhus, 1984; Sackeim & Gur, 1979) and scores on this factor increase with public administration compared to anonymous administration, indicating greater impression management (Lautenschlager & Flaherty, 1990; Paulhus, 1984).

The two remaining factors originate from self-deception, and both deal with true but psychologically

threatening items (Paulhus, 1984). One factor consists of enhancement items where the person claims positive characteristics for themself. The second factor is composed of denial items in which the subject denies negative behaviours or thoughts (Paulhus & Reid, 1991). Both factors are positively associated with mental health, measured by self-esteem and denial of symptoms of distress (Linden, Paulhus, & Dobson, 1986; Roth & Ingram, 1985; Sackeim, 1983; Sackeim & Gur, 1978; Sackeim & Gur, 1979). The association with mental health is stronger for the enhancement items than the denial items of self-deception, although the denial items are still significantly correlated with mental health (Paulhus & Reid, 1991; Roth, Snyder, & Pace, 1986).

It is plausible that there is an association between the self-deception enhancement factor and the larger construct of self-enhancement. It appears that the two are closely related processes since both deal with self-enhancement, and have similar correlations to mental health. However, a distinguishing feature between the two is that self-deception enhancement

inquires about psychologically threatening behaviors, whereas self-enhancement does not. The psychological threat in self-deception enhancement is at least a possible confound in the degree to which it measures self-enhancement. It is also quite plausible that the psychological threat component in self-deception enhancement means that it measures a noticeably different construct from self-enhancement.

Therefore, it is hypothesized that there will be a negative correlation between self-deception, especially the enhancement items, and psychological distress which includes depression. Previous research also reports modest negative correlations between impression management and psychological distress (Linden, Paulhus, & Dobson, 1986; Sackeim & Gur, 1978; Sackeim & Gur, 1979), a correlation which is expected to replicate. Since the two scales are correlated, and it has been found that partialling out the variance shared by the scales can affect their correlations with other scales (Flett, Blankstein, Pliner, & Bator, 1988), it is hypothesized that the negative correlation between the

impression management scale and psychological distress will disappear once self-deception is accounted for.

To date, the existence of the self-enhancing bias has frequently been inferred from subjects' attributions after a discrete event, or from subjects' prophecies about the occurrence of future events. Using multiple scaled trait or ability comparisons may remove variance from a particular event and would yield more finely graded, diverse data. Therefore, for the purposes of this study self-enhancement was measured by self-other comparisons. Self-other comparisons are an important measure of the construct of self-enhancement (Taylor, 1983). Self-enhancement includes an overly positive view of the self, an exaggerated sense of control over one's environment, unrealistically positive predictions of one's future (Taylor & Brown, 1988) and self-serving attributions for outcomes on tasks (Ross & Sicoly, 1979). Self-enhancement has been measured by self-other comparisons, but the correlations to different measures of self-enhancement is unknown and assessing self-enhancement by one mode

permits valid conclusions to be drawn only about that particular mode of measurement.

METHOD

Subjects

402 subjects were recruited from the Introductory Psychology subject pool to participate for course credit. Sex, age, years of residence in North America, and English as first language were assessed due to the possibility of gender and cross-cultural differences (Carroll, 1987; 1989; Stevenson, Lee, Chen, Lummis, Stigler, Fan, & Ge, 1990; Svenson, 1981).

Materials

Narcissistic Personality Inventory (NPI)

The revised 40 item version of the NPI (Raskin & Terry, 1988; Appendix A) was administered, which samples the characteristics of NPD as defined in DSM-III. The internal consistency of the scale is .83, and alternate form reliability over eight weeks is .72 (Raskin & Hall, 1981; Raskin & Terry, 1988). Given the divergent factor structure of the NPI found in previous research (Emmons, 1987; Raskin & Terry, 1988), the factor structure of the NPI was examined by a principal

components factor analysis in this study. High scorers on the NPI have been found to be dominant, extroverted, exhibitionistic, aggressive, impulsive, self-centred, self-satisfied and non-conforming; they have also been found to be low on abasement, deference, and social anxiety, providing evidence of the construct validity of the NPI (Raskin & Terry, 1988).

Self-Other Comparison Inventory (SOCI)

For the purpose of the present research a measure of self-enhancement was developed that involves comparison of positive and negative traits and abilities. Forty scales with positive and negative items were created, with 21 points on the scale (Appendix B). The large number of points on the scale was necessary because previous research (Dunning et al., 1989) indicated responses on some self-other comparison dimensions were highly skewed and a scale with five or seven points may have had nearly all subjects circling the most extreme response. Some items on the SOCI were drawn from previous research on social comparison, such as driving skill and safety

(Svenson, 1981), intelligence (Larwood & Whittaker, 1977), ability to get along with others (Myers, 1987) various dimensions of social skill (Lewinsohn et. al., 1980), and ethical behaviour (Brenner and Molander, 1977). The other items were created by the author and were drawn from aspects of a person's emotional, mental, volitional, physical and interpersonal functioning. The scales were arranged in random order of positive and negative items to minimize the possibility of response sets. The inclusion of positive and negative items also helps to reduce the presence of response sets, as well as measuring self-enhancement more diversely. Previous research has not investigated self-other comparison with negative characteristics and its correlates to mental health. The internal consistency and factor structure of the scale were investigated as part of the study.

Beck Depression Inventory (BDI)

To measure depression, the Beck Depression Inventory (Beck, 1978; Appendix C) was utilized. It has a test-retest reliability coefficient of 0.90 and

an internal consistency correlation of 0.86. It was originally developed for clinical samples, but is valid in college populations for detecting both state and trait depressions (Bumberry, Oliver, & McClure, 1978; Hammen, 1980; Zimmerman, 1986).

Symptom Check List 90-R (SCL-90-R)

The Symptom Check-List 90-R (Appendix D) is a 90 item, paper-and-pencil measure of psychological disturbance (Derogatis, 1983). Subjects respond to items indicative of distress experienced recently[2] (e.g., "A lump in your throat", "Trouble concentrating") on a five point scale ranging from "Not at all" to "Extremely" based on the previous seven days. It has nine primary symptom dimensions; Somatization, Obsessive-Compulsive, Interpersonal-Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. These

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[2] The version of the SCL-90-R made available to the author had been modified previously without his being aware of the change from the standard form. The modification was to ask subjects to state how they had felt in the past month, instead of the past week. Therefore, results in this study with the SCL-90-R may be different from those obtained with the correct stem where the timeframe is a week.

symptom dimensions demonstrate high convergent validity to conceptually similar MMPI scales. The correlations to the MMPI scales which are most similar in content, or measurement of symptoms, range from r= .50 to r= .75, showing good construct validity (Derogatis, Rickels, & Rock, 1976). Test-retest reliability is 0.94, and internal consistency is 0.95 (Derogatis, 1983; Edwards, Yarvis, Mueller, Zingale, & Wagman, 1978).

The SCL-90 has been re-analyzed to examine the stability of the original nine factor solution, and 12 (Evenson, Holland, Mehta, & Yasin, 1980) to five correlated factor solutions (Cyr & Atkinson, 1986) have been derived, the latter with more stringent item to factor inclusion criteria. This instability in factor structure casts some doubt on the exact multi-dimensional nature of the SCL-90-R, and other facts point to its unidimensionality. For example, much of the variance in the SCL-90-R is explained by the first unrotated factor and there is significant correlations among factors and items that load on multiple factors (Cyr, McKenna-Foley, & Peacock, 1985). Thus, it should

be seen more as a measure of general psychological distress than a measure of separate dimensions of psychopathology. This still is quite adequate for the purposes of this study, since separate dimensions of pathology were not examined. Rather, the high test-retest reliability, internal consistency, and its frequent use in clinical research commend it for use as a paper and pencil measure of psychological distress or disturbance.

Rosenberg Self-Esteem Scale (RSES)

The Rosenberg Self-Esteem Scale (Rosenberg, 1965; Appendix E) is a 10 item paper-and-pencil measure of self-esteem. Subjects respond on a four point scale from strongly agree to strongly disagree to items which indicate evaluation of oneself (e.g. I feel that I have a number of good qualities). A Guttman scale reproducibility coefficient of 0.92 has been obtained (Rosenberg, 1965) as well as a test-retest correlation of 0.85 over a two-week delay (Silber & Tippett, 1965). Rosenberg (1965) utilized Guttman scaling in the construction of the scale in order to formulate an

unidimensional scale of global self-esteem, an approach which is unique among self-esteem scale constructers (Wylie, 1974). Factor analysis supports the unidimensionality of the scale (O'Brien, 1985), and various studies have cross-validated its construct validity (Wylie, 1974). Its brevity and reliability make it useful as a global measure of self-esteem.

Balanced Inventory of Desirable Responding (BIDR-3)

The Balanced Inventory of Desirable Responding (Paulhus, 1984; Appendix F) is a modification of the Self-Deception Questionnaire (SDQ) and Other-Deception Questionnaire (ODQ) developed by Sackeim and Gur (1978; 1979). The SDQ consists of 20 items negatively keyed and judged universally true but psychologically threatening according to psychoanalytic theory. The ODQ consists of 20 items that are positively keyed and culled from various lie scales. The items ask about the performance of socially desirable, but infrequent behaviours. On both scales, subjects respond on a seven point scale, but only responses to the two more

extreme points on the scale (i.e. a 6 or 7) are scored. Cronbach alpha scores were not reported for the SDQ and ODQ scales, but a test-retest reliability of .81 at 4 to 10 week intervals was reported for the SDQ. High scorers on the SDQ have been experimentally shown to engage in self-deception (Gur & Sackeim, 1979).

Paulhus (1984) demonstrated by factor analysis that the SDQ and ODQ were solid markers of the two major factors in social desirability research, self-deception and impression management respectively. Other social desirability scales such as the Marlowe-Crowne and MMPI Lie scale load on both factors, and are thus confounded. However, since the scales are negatively and positively keyed, respectively, nay-saying and acquiescence biases could have contributed to their factorial independence (Nederhof, 1985; Paulhus, 1989). Paulhus (1984) therefore constructed the BIDR (Appendix F) by (a) equalizing the number of denial and attribution items on each scale to 10 each, (b) changing all questions to statements (c) all statements were worded as trait affirmations which could be desirable or undesirable traits. Thus

modified, the self-deception and impression management scales have Cronbach alpha's of 0.79 and 0.74 respectively (Linden, Paulhus, & Dobson, 1986).

Recent factor analysis (Paulhus & Reid, 1991) indicates that though the impression management scale is factorially stable, the self-deception scale splits into enhancement and denial items. The denial items show a stronger correlation to impression management than the enhancement items do. There are also differing correlations from the enhancement and denial items to mental health. Both enhancement and denial items are positively related to mental health, but the enhancement items show a stronger relationship to mental health than the denial items.

Procedure

A pretest was conducted on the entire questionnaire package, with 10 subjects tested in turn and interviewed privately with a series of questions by the experimenter regarding their speculations as to the study's hypotheses (Appendix G). None of the 10 subjects formulated any hypotheses as to the purpose of

the study that were close to the actual hypotheses or purposes of the study.

Subsequently, 402 subjects from the Introductory Psychology subject pool participated in the study for course credit. The subjects were tested in groups of approximately 50, completing a packet of the above questionnaires. Upon completion of the questionnaires, subjects had the opportunity to pick up a written debriefing statement (Appendix H). The data from 2 subjects was discarded since over half of their questionnaires were incomplete. The resultant sample consisted of 198 males and 202 females. The mean age of the subjects was 19.9 with a standard deviation of 3.9, and a range of 17 to 44. There were 23 subjects who had resided in Canada for five years or less.

RESULTS

Individual Scales

Narcissistic Personality Inventory

A principal component factor analysis was carried out on the NPI in an attempt to replicate either the four factor structure, or seven factor structure found previously. The use of a Pearson correlation coefficient for the dichotomous (true/false) data from the NPI was justified by the finding that of the 40 items on the NPI, only six items had endorsement splits more extreme than 80/20 and only three had endorsement splits more extreme than 85/15. Pearson correlations are very similar to tetrachoric correlation with endorsement rates less extreme than 85/15. Inspection of the resulting scree plot from the principal component analysis showed that there was a single general factor, with an eigenvalue of 5.25, accounting for 13% of the variance. Of the 40 items, 35 loaded significantly on the general factor.

Although a single factor is indicated by these data, an Entitlement and Exploitiveness scale was constructed, since this study had specific hypotheses

pertaining to the factor's differential correlations to the rest of the NPI items. However, the 40 item version of the NPI used in this study was refined (Raskin & Terry, 1988) from the 54 items in Raskin and Hall's (1981) original scale. Seven of the eight items in Emmon's (1987) Entitlement/Exploitiveness (E/E) factor of the larger scale were available from the shortened version of the NPI used here. These items are numbers 34, 35, 45, 46, 48, 59 and 60 in Appendix A. Another scale for the NPI was constructed by unweighted addition of all of the items on the NPI not used in the E/E factor.

The NPI total score had a Cronbach alpha value of .80 in this study when all items were included. The alpha value of the E/E scale was .53, and the rest of the items had an alpha value of .78. A sex difference was found on the NPI. Men scored significantly higher on the total scale (M = 15.38, SD = 6.02) than women (M = 12.85, SD = 6.1), t (388) = -4.05, p<.0001. In parallel, males also scored higher on E/E (M = 2.02) than women (M = 1.37), t (399) = -4.4, p<.0001, and on

a summation of all other items, males (M = 13.34), women (M = 11.44), t (388) = -3.46, p<.0006.

Self-Enhancing Bias

If people place themselves above, below, or at the mean according to their actual ability on the SOCI scales, then a mean of 50 is expected if people see themselves accurately relative to their peers. Grouping the responses from all subjects should result in an approximately normal distribution, assuming that traits and abilities are normally distributed in the population. If people think that traits or abilities are not normally distributed in the population, as in a highly peaked, skewed distribution, then they should also recognize that the majority of people have the trait or ability to approximately the same degree. Subjects should still be able to compare themselves to the average student at the university, who represents the majority of their peers. Consistent variations from the mean, represented by the average student, would still indicated self-denigration or self-

enhancement, even if the underlying trait is not normally distributed in strength.

On socially desirable items such as "Intelligence", means higher than 50 indicate subjects see themselves favorably in comparison to others on average, while means below 50 indicate that subjects see themselves relatively unfavorably in comparison to the "average" other. Responses to negative items such as "Heartlessness" were reflected so that means above 50 also reveal self-enhancement, and means below 50 indicate self-denigration. On 36 of the 40 self-enhancement scales the mean was significantly greater than 50, with the value of p exceeding .0001 in all cases. Two were non-significantly different from 50, "Consciousness of environmental issues" (M = 52.3), t (400) = -2.16, p<.03 (insignificant with Bonferroni's correction of alpha = .00125), and "Moodiness" (M = 48.8), t (399) = 1.03, p<.30. "Musical talent" was significantly below 50 (M = 38.8), t (400) = 7.89, p<.0001, and The final item was "Pride", which was originally scored as a negative trait (M = 33.5), t (396) = 17.09, p<.0001. When the

scores on all 40 items were summed, only 9 of 399 subjects rated themselves as below average overall. The subject with the most negative self-view overall rated himself at the 43.5 percentile.

Sex differences emerged on 16 self-enhancement items using Bonferroni's correction for 40 _t_ tests, setting alpha to .00125. Men saw themselves as having more "Physical attractiveness", "Intelligence", "Physical Health", "Pride", and "Skill as a driver" than women did; and they saw themselves as lower than women in "Naivete", and "Gullibility". Women reported having more "Generosity", "Musical talent", and "Skill in dealing with children" than men. Conversely, they saw themselves with less "Greed", "Insensitivity", "Selfishness", "Tendency to lie", "Vindictiveness", and "Heartlessness" than men.

The 40 SOCI items were subjected to principal factor analysis with varimax rotation for all subjects, and for males and females separately. Neither multicollinearity or singularity was present, as indicated by the highest squared multiple correlation being .700 for "Safety as a driver" for females.

A two factor solution was chosen because a third factor showed significant instability between males and females. A two factor varimax rotation produced factors in which 88% of the items overlapped on their respective factors for males and females. Factor 1 included 16 items loading greater than .30, while Factor 2 had 14 items loading greater than .30. The total amount of the variance explained by the two factors on all subjects was 23% All items exhibited significant loadings on only one factor. An orthogonal rotation was retained when promax rotation resulted in a correlation of r=.03 between the two factors. The squared multiple correlations of the variables with the first factor was .90, and .88 for the second factor. Scales for the factors were constructed by adding items which loaded more than .30 on their factors when all subjects were included. This unweighted addition of items on each of the two scales yielded a correlation between the scales of r=.07. The first factor or scale, called "Positive Trait Acceptance" (PTA) was an acceptance of positive traits and attributes. The second factor, "Negative Trait Denial" (NTD), was a

consistent denial of negative traits or attributes. The items on the scales are listed in Appendix I.

Cronbach alpha for male subjects was .86 for Positive Trait Acceptance, and .82 for Negative Trait Denial. On females, the respective values were .82 and .78. When males and females were combined, the Cronbach alpha value was .84 for Positive Trait Acceptance and .81 for Negative Trait Denial.

A sex difference was found between males and females on both factors. For the factor Positive Trait Acceptance, the mean for males (M = 68.7%) was higher than that for females (M = 65.5%), t (385) = -3.17, $p<.0015$. The orthogonal effect occurred with the factor Negative Trait Denial, where the mean for females (M = 65.5%) (reflected scores) was higher than that for males (M = 59.9%), t (370) = 4.35, $p<.0001$ by .45 of a standard deviation. These results are consistent with the gender differences on the individual items constituting the scales. Differences also occurred between more recent and longer residents of North America. Individuals who had lived in North America for 5 years or less showed less of a

self-enhancing bias on Positive Trait Acceptance (M = 60.0) than those who had lived in North America for a longer time period (M = 67.4), t (398) = -3.47, p<.0006.

Beck Depression Inventory

The Beck Depression Inventory had an alpha value of .82 which is acceptable reliability for usage. Since the majority of previous research on depressive realism used the total scale score, the same technique was followed for this study. Sex differences did not occur on this scale.

Symptom Check-List 90 (Revised)

The SCL-90-R displayed high reliability with an alpha value of .97. A single total scale score was used since the SCL-90-R is more of a measure of general psychological distress than a measure of separate dimensions of psychopathology (Cyr, McKenna-Foley, & Peacock, 1985). Also, a general measurement of psychological distress such as the General Severity Index was adequate for the purposes of this study since

no hypotheses as to the specific nature of psychological distress were advanced. Sex differences did not occur on this scale.

Rosenberg Self-Esteem Scale

The use of the Rosenberg self-esteem scale was vitiated by its alpha value of .88, which is impressive considering the brevity (10 items) of the scale. The unidimensionality of the scale permits the usage of a single total score for the scale. In a parallel result to the Positive Trait Acceptance factor, recent immigrants scored lower (M = 28.3) than long-term residents (M = 31.9), t (398) = -3.89, $p<.0006$ on the Rosenberg self-esteem scale. Sex differences did not occur on this scale.

Balanced Inventory of Desirable Responding-3

The BIDR items are rated on seven point scales, but were scored, as suggested by Paulhus (1984; cf. Sackeim & Gur, 1979) in a dichotomous fashion with only extreme responses receiving a point and other responses receiving no points. Specifically, a response of one

or two (Not True) to a psychologically threatening item received a point. Conversely, a score of six or seven (Very True) to an enhancing item received a point. The BIDR-3 was subjected to principal components factor analysis using Pearson correlation coefficients. These coefficients are usable since six of the 40 items had endorsement splits more extreme than 85/15. Pearson correlations are very similar to tetrachoric correlation with endorsement rates less extreme than 85/15. An inspection of the scree plot revealed 3 components, accounting for 11.6%, 5.4%, and 5.1% of the variance, respectively. The components were rotated with a promax solution, and items which loaded more than .30 on a factor were examined. The first factor of 14 items consisted of 13 items from Paulhus & Reid's (1991) Impression Management (IM) scale of the BIDR-3. The second factor of 11 items consisted of 8 items from the Self-Deception Denial (SDD) scale, and the third factor of eight items consisted of seven items from the Self-Deception Enhancement (SDE) scale (Paulhus & Reid, 1991).

Items on the factors were added in unweighted fashion to derive a scale score for each factor. The first factor score correlated .93 with the 20 item IM scale. The second factor score correlated .88 with the SDD scale, and the third factor score correlated .85 with the SDE scale. Since the factorial structure closely replicates the structure found by Paulhus and Reid (1991), their scale scoring was adopted for simplicity and comparability of results and is given in Appendix F. Reliability analysis revealed the IM scale had a Cronbach alpha value of .80, the SDD scale had an alpha value of .63, and the SDE scale had an alpha value of .54.

A difference was found between males and females on the IM and SDD scales. Women scored significantly higher on the IM scale (M = 7.86) than men (M = 6.00), t (400) = 5.54, p<.0001 by .56 of a standard deviation. This was repeated on the SDD scale, where women again scored significantly higher (M = 5.05) than men (M = 3.91), t (400) = 6.13, p<.0001, by .62 of a standard deviation.

Scale Correlations

Correlations of All Scales

The intercorrelations of all scales are displayed in Table 1. The correlations between Positive Trait

TABLE 1

Means, Standard Deviations, and Inter-Correlations of All Scales.

		M	SD	2	3	4	5	6	7	8	9	10
1	PTA	66.9	9.9	.07	.51*	-.38*	-.33*	.09	.09	.32*	.02	.42*
2	NTD	63.0	11.5	---	.12	-.17*	-.18*	.45*	.35*	.25*	-.29*	-.08
3	RSE	31.5	5.12		---	-.59*	-.56*	.08	.23*	.33*	.00	.43*
4	BDI	10.2	6.40			---	.73*	-.20*	-.27*	-.26*	.16	-.13
5	SCL	62.4	45.6				---	-.18*	-.28*	-.26*	.14	-.12
6	IM	7.0	3.44					---	.46*	.31*	-.26*	-.11
7	SDD	4.5	1.95						---	.24*	-.26*	-.12
8	SDE	4.5	1.82							---	-.08	.13
9	E/E	1.6	1.48								---	.40*
10	NPO	12.2	5.25									---

*Correlations greater than .16 are significant at .05 by Bonferroni's correction.
Scale abbreviations are PTA (Positive Trait Acceptance), NTD (Negative Trait Denial), RSE (Rosenberg Self-Esteem), BDI (Beck Depression Inventory), SCL (Symptom Check-List), IM (Impression Management), SDD (Self-Deception Denial), SDE (Self-Deception Enhancement), E/E (Entitlement/Exploitiveness), NPO (Other NPI items).

Acceptance and the pathology scales was tested to see whether they were significantly different from the correlation of Negative Trait Denial to the pathology scales by using the *r* to *z* test (McNemar, 1962). The correlations were significantly different ($p<.01$), with all *z*'s > 2.83.

Regression onto Depression

As hypothesized, impression management and self-deception had negative correlations to both measures of psychological distress. The correlations of impression management to psychological distress may have been a result of its positive correlation to self-deception, which also showed negative correlations to psychological distress measures. The correlation of impression management to psychological distress as measured by the BDI was examined by partialling out the variance shared from the self-deception scales. This was accomplished by regressing the three scales onto depression. Negative Trait Denial was also added as a predictor due to its similarity to Impression

Management. The results of this regression are reported in Table 2.

Table 2

Regression of Social Desirability and Negative Trait Denial onto Depression

Variable	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Probability
SDE	-0.651	0.174	-0.188	0.0002
SDD	-0.589	0.178	-0.179	0.001
IM	-0.051	0.106	-0.028	0.6
NTD	-0.003	0.002	-0.076	0.15

Adjusted R-squared = 0.11 F value = 12.82 Probability 0.001

Factor Analysis of Scales

The correlations were further clarified by applying a principal component analysis to the scale scores, since inspection of the correlation matrix reveals pairs of scales with highly similar correlation patterns. The scree plot of eigenvalues revealed that there were three factors, accounting for 64% of the total variance. The three factors were rotated by a promax procedure, since the first and second factors correlated at -.37. The first and third factors

correlated at -.17, and the second and third factors correlated at -.07. The loadings of the items on a factor structure derived by correlations is reported in Table 3.

Table 3

Loadings of all Scales on an Oblique

Three Factor Structure

Positive Trait Acceptance	-.55*	.26	.58*
Negative Trait Denial	-.20	.71*	-.17
Self-Esteem	-.79*	.28	.47*
Impression Management	-.18	.82*	-.11
Self-Deception Denial	-.34	.68*	-.18
Self-Deception Enhancement	-.33	.60*	.31
Beck Depression Inventory	.89*	-.30	-.07
Symptom Check List	.88*	-.29	-.06
NPI other items	-.22	-.07	.86*
Entitlement/Exploitiveness	.24	-.39*	.63*

*Loadings above 35 are marked with an asterisk.

It is clear that the first factor represents reports of psychological distress and low self-esteem, with only depression and psychological distress showing

positive loadings. Positive Trait Acceptance and self-esteem also function in quite a similar fashion, loading negatively on the first factor, with very close weights on the second, and positively on the third. The second factor represents a denial of negative traits, impression management, and both self-deceptive enhancement and denial, and is negatively correlated to the first factor by the self-deception scales. Interestingly, Entitlement/Exploitiveness shows a negative correlation with denial of negative traits, self-esteem, and social desirability. The third factor is slightly more complex. Positive Trait Acceptance, and the NPI components all load positively, indicating an acceptance of a positive view of the self. However, Entitlement/Exploitiveness individually has zero correlations to self-esteem or Positive Trait Acceptance. The loading of E/E on this factor is a result of its correlation with the other NPI items, which do correlate with PTA and self-esteem.

Canonical Correlation of Narcissism Scales to other Scales

Since it was hypothesized that E/E in comparison to other NPI factors had different relationships to the remaining scales, a least squares canonical correlation with redundancy analysis was run to ascertain the extent and nature of these differences. The first set of variables in the canonical correlation was the E/E factor, and the remaining NPI items. The second set of variables was the remaining scales of social desirability, self-enhancement, self-esteem, and pathology.

Each scale was missing less than 9% of its data and deletion of these cases by the statistical package were not problematic when correlations between two variables were calculated. However, deletion of subjects with any missing data resulted in the loss of 119 of the 400 subjects in the canonical correlation. Missing data for the Self-Esteem scale, the Impression Management scale, and the Self-Deception Enhancement and Self-Deception Denial scales, had the mean of the scale substituted. On the 14 items from the SOCI

scales which had data missing from more than two subjects the mean of the particular scale was substituted. The 14 items with two or less missing values had the mean of these scales substituted for the missing values. Missing values on the Entitlement/Exploitiveness factor, and the remaining items on the NPI, were replaced by the mean of that factor. The SCL-90 was partitioned into 8 sections, of approximately equal size, of consecutive items and missing data was replaced with the mean of the subsection. The results of the canonical correlation are presented in Table 4.

The first canonical correlation was .54 (29% of the variance); the second was .36 (13% of the variance). The first canonical variate is defined strongly by the other items on the NPI, since they correlated .99 with the canonical variate, while E/E items correlated .28. The other scales that correlate strongest with the first root are PTA and self-esteem.

The reverse pattern was obtained for the second canonical variate, which is defined by E/E since it correlates -.96 and the other NPI items correlate only

Table 4

Structure and Standardized Canonical Coefficients Between Narcissism Scales and All Other Scales.

	First variate		Second variate	
	Structure	Standardized	Structure	Standardized
Narcissism set				
NPI other items	.99*	1.04	.12	.30
Entitlement/Exploitiveness	.28	-.13	.96*	-1.08
% Variance		47.9%		52.1%
Redundancy		14.6%		5.9%
Other scales				
Positive Trait Acceptance	.78*	.52	-.27	.06
Self-Esteem	.80*	.76	-.37*	-.04
Negative Trait Denial	-.08	-.04	-.80*	.53
Impression Management	-.15	-.12	-.68*	.23
Self-Deception Enhancement	.23	.03	-.34*	-.03
Self-Deception Denial	-.16	-.24	-.65*	.26
Symptom Check List	-.26	.14	.52*	-.06
Beck Depression Inventory	-.29	.16	.60*	-.35
% Variance		20.6%		6.3%
Redundancy		6.3%		3.3%
Canonical Correlation	.54*		.36*	

*Loadings above .30 are significant (Tabachnik & Fidell, 1989).

-.12. The remaining scales with notable correlations are NTD, IM, and SDD all which indicate that a lack of denial of negative traits is characteristic of high scorers on E/E. Significant correlations were also observed to depression and psychological distress indicating a positive relationship of the two to E/E.

DISCUSSION

Narcissism

Entitlement and Exploitiveness

The link to pathology in narcissism emerges most clearly in previous research from the items comprising the Entitlement/Exploitiveness factor of the NPI. As hypothesized, the positive relationship between psychological distress and Entitlement/Exploitiveness was replicated. This is illustrated by the second canonical variate, which was defined almost exclusively by E/E on the criterion side. Depression and symptomatology had significant correlations (.60 and .52 respectively) to the second variate only. These results should be interpreted with some qualification. The first order correlations from E/E to BDI and SCL were .16 and .14 respectively, which is quite a modest effect size. However, E/E had the only positive correlations among all the variables to the pathology scales. All other variables had negative correlations to pathology. E/E thus was contrasted in the canonical correlation to variables which had the opposite sign of correlation to pathology. If some variables had

positive relationships to pathology, as E/E did, then the relationship between E/E and pathology may have been less in the canonical correlation. The relationship of E/E to pathology no longer would be distinctive on the basis of its sign, since other variables would have the same sign of correlation to pathology.

An interesting aspect of E/E is its negative correlations to denial and impression management. Denial and impression management are measured here by the scales Negative Trait Denial, Self-Deceptive Denial and Impression Management (simple correlations of -.29, -.26 and -.26 respectively). Several hypotheses can be advanced to explain this finding, underlining that further research will be needed to clarify it. One possibility is that individuals who deny negative traits and/or are concerned with making a good impression will also deny the slightly distasteful sentiments characteristic of items in the E/E factor, such as "I will never be satisfied until I get all that I deserve." This explanation is similar to that of Watson and Morris's (1991) observation that E/E may

have an slightly antisocial nature, as suggested here, and that social desirability scales may in part measure desirable sociality.

This raises the issue of what E/E actually measures. If E/E has a slightly antisocial nature, it is an important question whether E/E measures antisocial personality disorder. However, some of the items on the NPI which appear to measure characteristics of sociopathy such as impulsivity (Item 24 in Appendix A) and persuasiveness or charm (Items 27 and 56) are not part of the E/E factor. Only one item, "I find it easy to manipulate people" (Item 34) reflects the sociopath's manipulation and persuasiveness. This item can also be interpreted as reflecting exploitiveness or an orientation to power, as Item 48 does. Other items on E/E show a clear sense of entitlement to respect (Item 35), reward (Item 46), special treatment (Item 45), and attention (Item 59) from others.

A second explanation for the negative relationship of E/E to the social desirability scales is that individuals high in E/E tend to exploit, and

presume special treatment from others, suggesting that they care little about them. Since relationships mean little to narcissists strong in E/E, they will not be concerned about managing a good impression, or denying negative qualities in front of others. On a conceptual level, individuals characterized more by other facets of narcissism, such as Leadership or Authority (NPI factors) may be more concerned about having a favourable appearance to others, since they wish to lead them. Self-admiration, superiority and other components of narcissism will conceptually have no clear relationship to impression management, or denial of negative aspects, since these components do not have a clear bearing on interpersonal relationships. Self-admiration and superiority may not be verbalized, and thus have little impact on others. If they are verbalized they may be construed as strong self-confidence and the narcissist may possibly be respected for those traits. Alternatively, these qualities may be distasteful to others if verbalized which may damage relationships.

These varied explanations for the negative correlation of E/E to Negative Trait Denial and the social desirability scales need further exploration. It is interesting that only E/E displays the negative correlations to Negative Trait Denial and the social desirability scales, and that the items on the NPI other than E/E have null correlations to these scales.

Other Dimensions of Narcissism

The items on the NPI other than the E/E factor had distinctly different patterns of correlations to the scales in this study compared to the E/E items. This is most clearly illustrated by the canonical correlation, where the non E/E items were correlated only to self-esteem and Positive Trait Acceptance. These connections illustrate the positive view of the self that is inherent in all three variables. The E/E items correlated to pathology and social desirability alone. The distinctness in the correlation pattern of E/E to all scales in comparison to the non E/E items correlations to all scales is quite difficult to account for in view of the the factor analysis of the

NPI. The scree plot of factors suggested only one factor was present in the NPI. A further complication is that correcting for the attenuation in the correlation between the two NPI scales by the reliability of the scales being less than unity results in an estimated correlation of .90 between the two NPI scales. Two considerations may account for the puzzle of distinct correlation patterns from E/E to other scales and non-E/E items to other scales, even though the E/E and non E/E scales are correlated to each other. The first consideration is that canonical correlation extracts orthogonal variates. Second, the low internal consistency of E/E may not have permitted it to emerge as a distinct factor in this factor analysis from the remaining NPI items, especially since the factors in Emmons (1987) solution intercorrelate at approximately .40.

The dissimilarity of the scale correlations of the non E/E items on the NPI to the E/E items is at least consistent with previous research (Watson et al., 1987). This distinction suggests that there are two

distinguishable elements or aspects of narcissism, which will be explored below.

Two Aspects of Narcissism

The characteristics of covert and overt narcissism described previously have parallels to the dimensions of narcissism in this study. Overt narcissism shows an interesting match to most items on the NPI except for the Entitlement and Exploitiveness items. Overt narcissism has the self-aggrandizing, self-dramatizing traits necessary to obtain high scores on Positive Trait Acceptance and self-esteem. The null correlations of overt narcissism with psychological health and adjustment (Wink, 1991) is the same pattern found in this study between the non E/E items on the NPI and adjustment.

Covert narcissism also shows a parallel to narcissistic traits defined by the E/E scale in this study. Positive relationships to pessimism and psychological distress are observed in both covert narcissism (Wink, 1991) and E/E, in this study and other studies (Emmons, 1984; Watson et. al., 1988;

Watson et. al., 1987). A difficulty in matching E/E narcissism to covert narcissism is the trait of defensiveness noted in the latter. This trait would seem to produce a denial of negative traits and impression management. The significant lack of these in E/E narcissism is problematic in equating it to covert narcissism. A possible explanation is that interpersonal defensiveness is a separate process from impression management and denial of negative aspects. A second possibility is that the negative association of Negative Trait Denial to pathology and the related E/E factor is stronger than the tendency of defensive covert narcissists to deny negative aspects about themselves. Obviously, further research will be needed on this specific issue, as well as to validate the larger general hypothesis of the matching of overt narcissism to extreme self-enhancement, and covert narcissism to E/E narcissistic traits.

Self-Enhancing Bias

Differences in Self-Other Comparison

Subjects' reports that they possessed more of positive traits or abilities and less of negative traits or abilities than the average person in their peer group emerged clearly for nearly all scales and nearly all subjects. These dual tendencies were defined previously as the self-enhancing bias and were measured in this study by self-other comparisons. It is remarkable that only 9 of 400 subjects had generally negative views of themselves, and that these nine subjects placed themselves above the 40th percentile. This finding corroborates previous research on the pervasiveness and strength of the self-enhancing bias in attributions (Sweeney et al., 1986).

Social psychology has not investigated the differentiation between self-enhancement from an acceptance of positive traits, abilities, and outcomes and a denial of negative traits, abilities, or outcomes. Instead, it has referred to both aspects of self-enhancement as positive illusion (Taylor & Brown, 1988) without drawing distinctions between the two.

Research on the enhancement and denial components of social desirability scales (Paulhus and Reid, 1991) found that the two components correlated, and had positive correlations to mental health, although of different strength. One difficulty with this finding is that the self-deception scales contain psychologically threatening items, which could act as a confound in measuring enhancement and denial.

The results from the present study are different in indicating that there is a sharp distinction between enhancement and denial. Furthermore, both components exhibit quite distinctive correlations to other dimensions of personality. In this study Positive Trait Acceptance correlated only .07 with Negative Trait Denial, an dissimilarity that was observed in the correlations of the two scales to the other scales in the study. In fact, the only scale that the two aspects of self-enhancement show a similar correlation to is Self-Deceptive Enhancement, which correlates with an absolute value of approximately .30 to every scale, excepting the narcissism scales, in the study.

The separateness of the types of self-enhancement is relevant to the mental health promoting aspects of positive illusion proposed previously (Taylor & Brown, 1988). It appears that the forms of positive illusion are differently related to mental health, a distinction which will naturally need to be investigated further. This distinction has emerged from recent work on social desirability scales (Paulhus & Reid, 1991), which also indicates that the components of enhancement and denial in self-deception scales exhibit correlations of significantly different strength, though of the same sign, to mental health.

Although self-enhancement had been defined in this study as both accepting positive traits, and denying negative ones, the separateness of the components in factor analysis and correlation patterns raises the issue of whether both actually measure self-enhancement. There are three considerations for retaining them as valid measures of self-enhancement. The first consideration is from logic. In formal logic, denying a negative statement is equal to accepting a positive statement. The analogy here is

that denying negative traits is equivalent to accepting positive ones.

The second consideration arises from the concept of the semantic differential (Osgood, Suci, & Tannenbaum, 1957). The semantic scale for the semantic differential consists of a pair of adjectives which are opposite in meaning. As one moves away from one adjective in the pair, one enters the semantic space occupied by its opposite adjective. The application of this concept to the dimensions of self-enhancement is straightforward. As one moves away from a negative adjective by denying it, then one is presumably moving into the space occupied by the positive adjective(s) which is opposite in meaning to the negative adjective. Therefore, the farther one rates oneself from a negative trait, the closer one is rating oneself to a positive trait, and self-enhancing in that fashion.

The final consideration comes from the relation of enhancement and denial items in other scales. The enhancement and denial items on the Rosenberg Self-Esteem scale correlate quite highly, and have nearly identical loadings on the same factor (Paulhus & Reid,

1991). This indicates that enhancement and denial are very similar in how one evaluates oneself.

Given these theoretical and empirical reasons for considering both Positive Trait Acceptance and Negative Trait Denial as measures of self-enhancement, their separateness defies easy explanation. One explanation that initially appears plausible is the phenomenon of defensiveness, defined by Crowne and Marlowe (1960) as high scores on their social desirability scale. High scores on this scale that co-occur with low scores on an anxiety scale are defined as the repressive coping style (Weinberger, 1990). Both defensiveness and repression are associated with a denial of negative aspects about the self, such as psychological distress or negative traits. This suggests the possibility that defensiveness, repression, or denial may operate independently of enhancement, accounting for the null correlation. Unfortunately for this hypotheses, defensive subjects recall more positive than negative self-descriptors (Millham & Kellogg, 1980), and always focus on their positive personality traits, regardless of whether they had experienced success or failure

(Mischel, Ebbesen, & Zeiss, 1973). This focus on positive personality traits by subjects who demonstrate a strong denial of negative traits about themselves predicts that Positive Trait Acceptance and Negative Trait Denial should be postively correlated, instead of exhibiting the null correlation that they actually do have.

A second possibility suggested earlier (Paulhus & Reid, 1991) to account for the distinction is that self-beliefs are clearly compartmentalized along a positive-negative division (Showers, 1992). The utility of this division is that when under threat, one can turn to and emphasize positive self-beliefs (Baumeister & Tice, 1985; Paulhus & Reid, 1991), which would explain the correlation of enhancement to mental health. Since self-beliefs are compartmentalized along a primary positive/negative division, it could be argued that accessing a positive compartment is unrelated to accessing a negative compartment. The considerations of logic and semantic space discussed previously have a bearing here. Within the framework of those considerations, a self-belief that one is less

heartless and greedy than average would presumably be a positive self-belief, not a negative one. Therefore, a denial of negative traits is in the same compartment as accepting positive ones, and a clear division between the two is not expected.

The methodology of grouping self-beliefs and evaluations of one's roles may provide a resolution to the issue of accepting positive traits and denying negative ones. The research to date (Showers, 1992) has used only positive or negative adjectives as self-descriptors, with the implication that one is accepting those as descriptive of the self in various roles. However, using denials of positive and negative adjectives in addition to the original group of adjectives may indicate whether denying an adjective as self-descriptive (whatever its desirability) operates differently from accepting an adjective as self-descriptive.

Whatever the reason for their independence, the two factors of self-other comparison, Positive Trait Acceptance and Negative Trait Denial, and their correlates will be examined more closely in turn.

Positive Views of the Self

The Positive Trait Acceptance factor and self-esteem function in a similar fashion. The scales exhibit a positive correlation to each other, an estimated correlation of .59 between the latent constructs unattenuated by the unreliability of the measures. Positive Trait Acceptance and self-esteem have very similar correlations with narcissism, on both Entitlement/Exploitiveness and items other than E/E (approximately .01 and .42 respectively), as well as being the two best predictors of non-E/E narcissism in canonical correlation. Both scales have fairly equal correlations to NTD, IM, and SDE (approximately .10, .11, .33 respectively, deviating .03 or less from these values). Finally, Positive Trait Acceptance and self-esteem have the strongest solid negative correlations to depression (-.37, -.59), and psychological distress (-.33, -.56, respectively). Although a third of the variance is shared between the two, they still are separate constructs, since two-thirds of the variance is not explained by the other construct.

Two separate implications from these findings to the current literature emerge. The correlation of self-other comparison on positive traits and self-esteem is consistent with the thesis of Baumeister, Tice and Hutton (1989) that high self-esteem is associated with a self-enhancing, self-aggrandizing bias on self-esteem scales. Individuals who score high on self-esteem claim desirable traits for themselves, enhance their reputations, and draw attention to themselves, a high-payoff strategy socially, despite the risk of failure and disconfirmation of a positive self-presentation. High self-esteem, with its self-enhancing aspect and positive correlation to non-E/E narcissism, may be summarized as a sense that "I am a person of worth, on a superior basis to others." The connection between self-enhancement and self-esteem has also been confirmed by Pelham and Swann (1989).

The correlation between self-esteem and Positive Trait Acceptance is consistent with the link that has been made between positive illusions and mental health (Taylor & Brown, 1988). The implication for theorizing is that the positive illusion-mental health link may be

a reprise of the established connection between high self-esteem and psychological health (e.g. Pearlin & Schooler, 1978; Shamir, 1986; Winefield & Tiggemann, 1990). In fact, it seems the same process of self-enhancement and self-aggrandization underlies both high self-esteem (Baumeister, Tice, & Hutton, 1989) and Positive Trait Acceptance, with considering oneself positively compared to others cited as an example of a positive illusion (Taylor & Brown, 1988). Since Positive Trait Acceptance and self-esteem also share a third of their variance, it is not surprising that positive illusions, measured here by Positive Trait Acceptance, are correlated with mental health.

Negative Trait Denial

An interesting result is that a denial of negative traits, attributes, and behaviours in both the Negative Trait Denial factor and the Self-Deception Denial scale is linked closely to Impression Management. This is illustrated most clearly in all three measures having strong loadings on the second component in the principal component analysis, (.71,

.68, .82 respectively) but also in their similar correlations in the canonical correlation (.80, .65, .68). Another similarity is that women scored higher than men on all three scales. A final parallel is that Negative Trait Denial and Impression Management together demonstrate a very similar correlation pattern to other scales. The two scales exhibited no correlation to self-esteem or the Positive Trait Acceptance factor. Both scales were uncorrelated with depression and psychological distress after the influence of the self-deception scales had been controlled for. This suggests an extension of recent findings that the link with adjustment is stronger for enhancement than denial (Paulhus & Reid, 1991). The present study shows that only enhancement, not denial, is correlated with adjustment. Taken in conjunction, the correlation between Negative Trait Denial and Impression Management indicates a denial of negative traits and attributes is associated with conscious attempts to manage the impression one makes upon others (Paulhus, 1984).

Narcissism and Self-Enhancing Bias

The positive correlation between the Positive Trait Acceptance factor of self-enhancement and the non-E/E items on the NPI supports the hypothesized association between narcissism and self-other comparison. The association is not complete, since there is only 20% overlap in variance between the two scales. The non-E/E items correlate weakly and negatively, however, with the Negative Trait Denial factor. This indicates that some aspects of narcissism in a non-clinical population may be understood as an enhancement of positive aspects of the self. This finding illustrates that superiority, or seeing oneself as better than others, is a common element between narcissism and self-enhancement, as hypothesized. When superiority becomes more extreme it develops into grandiosity, a characteristic of NPD.

Seeing narcissism, as measured by the non-E/E items on the NPI, as connected to enhancement of positive aspects of the self by superiority can also explain the high scores on self-esteem observed with high scores on the non E/E NPI items. A recent review

(Baumeister, Tice, & Hutton, 1989) proposes high scores on self-esteem scales are from a self-enhancing and self-aggrandizing bias. Low scorers on self-esteem scales are unwilling to describe themselves in the highly favourable terms of high scorers, and instead adopt a minimal self-disclosure, self-protective self-presentational style. Both conceptually and empirically, high scorers on the NPI are boastful, dominant, extroverted, and exhibitionistic (Emmons, 1984), which is congruent with the self-enhancing, self-aggrandizing bias of high self-esteem individuals.

The fact that narcissism is a personality disorder might explain the rather puzzling null relationship of narcissism to psychological distress. A simple, but intuitive, model of correlations begins with two sets of inter-correlations observed in this study. The first set of intercorrelations is the positive correlations between narcissism, self-enhancement on positive dimensions, and self-esteem. The second set is that both Positive Trait Acceptance and self-esteem have negative correlations to measures of psychological distress. This is not

unexpected, because both Positive Trait Acceptance and self-esteem have self-enhancing aspects (Pelham & Swann, 1989) and are negatively related to pathology (Pearlin & Schooler, 1978; Taylor & Brown, 1988). Therefore, it is logical for this one model of inter-correlations to conclude that a negative correlation between narcissism and psychological distress would also exist. The negative correlation of narcissism to pathology is expected because of the positive correlation of those items to Positive Trait Acceptance and self-esteem. However, the negative correlation to pathology would only be found for items on the NPI other than the factor Entitlement/Exploitiveness, since positive correlations between E/E and various aspects of psychological distress have been previously observed (Emmons, 1984). The non-significant correlations that were obtained instead for the non-E/E items to psychological distress may occur because these items are derived from characteristics of a personality disorder. Since the items measure an element of pathology, they would not be expected to have negative correlations to psychological distress. Instead, they

would be simultaneously linked to pathology, and to the lack of psychological distress concurrent with self-enhancement on positive aspects, and thus show a null or weak relationship to psychological distress.

Depressive Realism

The correlation between positive illusions and mental health is illustrated by Positive Trait Acceptance showing a negative correlation to level of depression. The negative correlation of depression and self-other comparison is similar to previous research on depressive realism in attributions (Sweeney et al., 1986). The Self-Deceptive Enhancement scale was negatively related to depression as well. This finding can also be explained as depressive realism, since being self-enhancing is negatively correlated to being depressed.

Group Differences

Gender Differences on SEB

An intriguing aspect of self-enhancement that had not emerged in previous research is the differential

response of males and females. Females tended to have a greater denial of negative traits than males on the individual items of the self-enhancement scales. This is demonstrated not only by females having higher NTD scores than males, but also by the higher scores of females relative to males on the IM and SDD scales, which are interpreted as measuring deliberate impression management and self-deception by denial respectively.

Conversely, males tended to display a greater acceptance of positive traits than females, with their mean being .35 of a standard deviation higher than the mean for females. It is also reflected in the higher mean score of males on the NPI (.41 of a standard deviation higher than the mean of females), which has been observed in previous research (Watson, et al., 1984). The analysis of this phenomenon is complex. One possibility is that there is a sex bias in the items comprising the scales, that certain traits and abilities are stereotypically masculine or feminine. Stereotypes about driving skill and safety may have influenced the higher scores found for men than women.

The operation of stereotypes and salience is not clear in all cases though. Physical attractiveness is not a stereotypically masculine concern, but males scored higher than females on that item. Evaluation of the SOCI items is necessary to examine the existence and extent of sex bias in the items.

The lesser endorsement of positive traits and lesser narcissism by females is not due to low self-esteem, since there was not a significant difference between the sexes on self-esteem. The possibility exists that females may have as positive a view of themselves as males do, but express it more by denying the presence of negative traits in themselves than accepting positive traits. Specifically, the tendency may be to appear more virtuous than talented, in the sense of presenting as having fewer negative traits than males but not as many positive traits and abilities. Males are more willing to admit to negative traits, and less inclined to manage their impressions than females, as indicated by their lower score than females on Negative Trait Denial and Impression Management. This tendency could be described as being

more talented than virtuous, at least in comparison to females. It may be that self-enhancement and pride exist equally in both sexes, but is expressed differently in each.

A second explanation for the differences between males and females is that males tend to endorse more extreme positive and negative traits than females. Females are less likely to claim positive traits, and more likely to deny negative traits, exhibiting a minimum disclosure, cautious style in self-presentation.[3] This explanation predicts males will have high scores on Positive Trait Acceptance, and low scores on Negative Trait Denial. This model also predicts a negative correlation between the two SOCI factors because the more extreme acceptance of positive traits (high PTA score) should correlate with a more extreme endorsement or acceptance of negative traits (low NTD scores). This model predicts the opposite pattern of scores for females with their cautious, minimum endorsement approach. It predicts low Positive

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[3] I am indebted to both Gerry Sande and Kate Tunna for pointing this out.

Trait Acceptance scores, and high Negative Trait Denial scores for females, with a corresponding negative correlation between the two. Although the scores on each of the SOCI factors are as predicted for both genders, the nonsignificant correlation is contrary to the predicted negative correlation. It is apparent that either males or females as a group or as individual people do not have a consistently cautious or extreme style in self-other comparison.

Cultural Differences on SEB

Another aspect of self-enhancement that has not been frequently investigated is the finding that recent immigrants displayed less self-enhancement on Positive Trait Acceptance. Furthermore, recent immigrants had significantly lower scores on the Rosenberg self-esteem scale. These results indicate positive self-other comparison may be less strong in other cultures. This interpretation is tempered by the fact that it was recent immigrants who were assessed. The results may also be skewed by selection factors that may have occurred in immigration, as well as stress from the

process of adjusting to living in a new culture. Despite these possible confounds, these findings are concordant with others that children outside of North America (i.e. China) are significantly less self-enhancing in their estimation of mathematical skill than North American children, even though they are superior to North Americans in that skill (Stevenson et. al., 1990).

Clearly, more research would need to be done on a cross-cultural basis to determine the extent to which self-enhancement is a North American phenomenon. It would be highly informative to examine whether self-enhancement is related to mental health in other cultures, as it is here. This area of research could address the issue whether self-enhancement occurs cross-culturally in areas other than estimation of traits and abilities, such as consensus estimates, and attribution formation after success or failure. A related, and interesting avenue of research, would be to measure the rate of change of self-enhancement after individuals have immigrated to North America. It would

be necessary in such research to account for the degree of acculturation that the immigrants undergo.

Symptomatology

Although narcissism and self-enhancement were the major areas of interest in this study, an interesting pattern of correlations emerged between depression and psychological symptomatology which deserves attention even though a relationship had not been hypothesized. Depression and total psychological symptomatology had a high correlation, and highly similar correlation patterns with the other scales, the largest deviation in the correlation pattern being .05. This can be accounted for in part by both scales measuring depression, but when the SCL was split into a scale that measured depression, and one that did not, a high correlation between the BDI and both scales appeared, with the correlations being different only by $r = .03$.

A correlation of .72 between the BDI and the items on the SCL-90-R that do not measure depression is fairly problematic and can best be understood by examining two opposing assumptions in turn. The first

assumption is that the SCL-90-R lacks discriminant validity from the BDI and that it essentially measures only depression. This entails that the items other than those measuring depression are either insensitive or invalid. If that were the case, then those items as a group would display a poor or even null correlation to the BDI, since the responses to those items are essentially random numbers. The presence of a strong correlation renders such an assumption untenable. Furthermore, the validation studies on the SCL-90-R indicate that it does reliably measure forms of psychological distress other than depression (Derogatis, Rickels & Rock, 1976). One can then assume that the SCL-90-R does have discriminant validity to the BDI.

The second assumption is that the SCL-90-R validly measures diverse psychological problems such as psychotic and paranoid ideation. If such items did not necessarily co-occur with depression in an undergraduate population, then they should display both markedly less correlation with the BDI, and more variation to the BDI in its correlation pattern.

However, the strong correlation that is observed raises the possibility that in undergraduate populations depression is a very strong correlate to poor mental health, whatever the manifestations of the latter are. This hypothesis is very similar to the concept of demoralization (Link & Dohrenwend, 1980), which consists of low self-esteem, hopelessness-helplessness, anxiety, and sadness. Demoralization is supposed to co-occur with psychiatric disorders, as well as chronic illness, stressful life events, and being socially marginalized. The SCL-90 is presumed to measure demoralization, and demonstrates an unattenuated correlation above .70 to other measures of depression and well-being.

Research Considerations

Limitations of the Current Research

One of the most notable limitations to the research presented is the lack of reference to a clinically defined population of narcissists. Several implications arise as to the validity of the research. To begin, the NPI has not been validated in a clinical

population in its construction. There may be important aspects of narcissism that occur in a clinical population that are not included in the NPI. Conversely, the NPI may have items or factors that are not representative of a clinical population of individuals with NPD. The lack of validation of the NPI on a clinical population extends beyond scale construction. The NPI has not been tested for its diagnostic accuracy, factor structure, or personality correlates on a clinical sample, all of which are important if not crucial to establishing the validity of a scale measuring a specific component of psychopathology. This forces the current study to define narcissistic in terms of scores on a paper and pencil measure that has not been validated by reference to diagnostic decisions from skilled clinicians.

The absence of validation of the NPI to a diagnosed population raises the possibility of poor discriminant validity to borderline and antisocial personality disorder (Gunderson, et al., 1990; Ronningstam & Gunderson, 1990). These disorders share features such as emotional intensity, aggressiveness,

and lack of empathy with NPD and establishing a differential diagnoses can be difficult. Furthermore, in clinical practice self-report inventories have evoked defensive responses due to their bluntness. Their validity is also lowered by the fact that narcissistic people do not have the realistic self-assessment necessary to give honest answers to the inventories.

The lack of reference to a clinical population in this research limits the conclusions that can be drawn to a non-clinical population. The research would have to be repeated with a clinical sample to ensure that the findings and conclusions drawn from this study are also valid for clinically diagnosed narcissists. Narcissism may be more complex in a clinical population, as implied by the distinction between covert and overt narcissism (Wink, 1991). An indication of the differential nature of narcissism in a clinical population is that the NPDS scale, one of the marker scales for covert narcissism, was constructed by contrasting the responses of clinical narcissists to normal subjects on the MMPI. This may

indicate that overt narcissism is infrequent in clinical populations, vis-a-vis its occurrence in non-clinical populations.

Directions of Future Research

One of the most pressing issues for future research will be to validate the NPI on a clinically diagnosed sample of individuals with NPD. This assessment will include the factorial structure, comprehensiveness of the items in sampling narcissistic symptoms, and diagnostic accuracy rates mentioned previously. A possibility to be explored is that individuals with NPD who present for therapy have suffered a narcissistic insult that has caused sufficient emotional distress and negative symptomatology to motivate the individual to seek therapy. Those who do not present for therapy may be relatively well-functioning, and exhibit different characteristics to those in therapy. This hypothesis accounts for both the distinction between overt and covert narcissism, and the indication that covert narcissistic traits are more common in a clinical

sample. To test this hypothesis, both clinical and non-clinical samples would need to be diagnosed for the presence of narcissistic individuals, who would then be compared.

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Appendix A

Narcissistic Personality Inventory

INSTRUCTIONS: In each of the following pairs of attitudes, choose the one that you **MOST AGREE** with. Mark your answer by recording **EITHER A or B** on the IBM answer sheet. Only mark **ONE ANSWER** for each attitude pair on the IBM sheet, and please **DO NOT** skip any items.

22. A I have a natural talent for influencing people.
    B I am not good at influencing people.

23. A Modesty doesn't become me.
    B I am essentially a modest person.

24. A I would do almost anything on a dare.
    B I tend to be a fairly cautious person.

25. A When people compliment me I sometimes get embarrassed.
    B I know that I am good because everybody keeps telling me so.

26. A The thought of ruling the world frightens the hell out of me.
    B If I ruled the world it would be a better place.

27. A I can usually talk my way out of anything.
    B I try to accept the consequences of my behaviour.

28. A I prefer to blend in with the crowd.
    B I like to be the centre of attention.

29. A I will be a success.
    B I am not too concerned about success.

30. A I am no better or worse than most people.
    B I think I am a special person.

31. A I am not sure if I would make a good leader.
    B I see myself as a good leader.

32. A I am assertive.
    B I wish I were more assertive.

33. A I like having authority over other people.
    B I don't mind following orders.

34. A I find it easy to manipulate people.
    B I don't like it when I find myself manipulating people.

35. A I insist upon getting the respect that is due me.
    B I usually get the respect that I deserve.

36. A I don't particularly like to show off my body.
    B I like to show off my body.

37. A I can read people like a book.
    B People are sometimes hard to understand.

38. A If I feel competent I am willing to take responsibility for making decisions.
    B I like to take responsibility for making decisions.

39. A I just want to be reasonably happy.
    B I want to amount to something in the eyes of the world.

40. A My body is nothing special.
    B I like to look at my body.

41. A I try not to show off.
    B I will usually show off if I get the chance.

42. A I always know what I am doing.
    B Sometimes I am not sure of what I am doing.

43. A I sometimes depend on people to get things done.
    B I rarely depend on anyone else to get things done.

44. A Sometimes I tell good stories.
    B Everybody likes to hear my stories.

45. A I expect a great deal from other people.
    B I like to do things for other people.

46. A I will never be satisfied until I get all that I deserve.
    B I take my satisfactions as they come.

47. A Compliments embarrass me.
    B I like to be complimented.

48. A I have a strong will to power.
    B Power for its own sake doesn't interest me.

49. A I don't care about new fads and fashions.
    B I like to start new fads and fashions.

50. A I like to look at myself in the mirror.
    B I am not particularly interested in looking at myself in the mirror.

51. A I really like to be the centre of attention.
    B It makes me uncomfortable to be the centre of attention.

52. A I can live my life in any way I want to.
    B People can't always live their lives in terms of what they want.

53. A Being an authority doesn't mean that much for me.
    B People always seem to recognize my authority.

54. A I would prefer to be a leader.
    B It makes little difference to me whether I am a leader or not.

55. A I am going to be a great person.
    B I hope I am going to be successful.

56. A People sometimes believe what I tell them.
    B I can make anybody believe anything I want them to.

57. A I am a born leader.
    B Leadership is a quality that takes a long time to develop.

58. A I wish someone would someday write my biography.
    B I don't like people to pry into my life for any reason.

59. A I get upset when people don't notice how I look when I go out in public.
    B I don't mind blending in with the crowd when I go out in public.

60. A I am more capable than other people.
    B There is a lot that I can learn from other people.

61. A I am much like everybody else.
    B I am an extraordinary person.

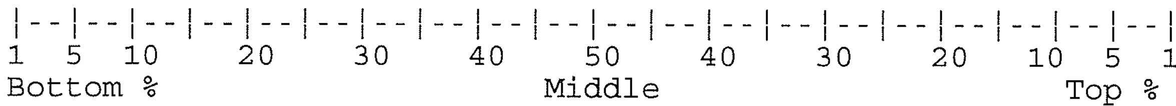
Entitlement and Exploitiveness items are items 34, 35, 45, 46, 48, 59 and 60.

Appendix B

Self-Other Comparison Inventory

Instructions

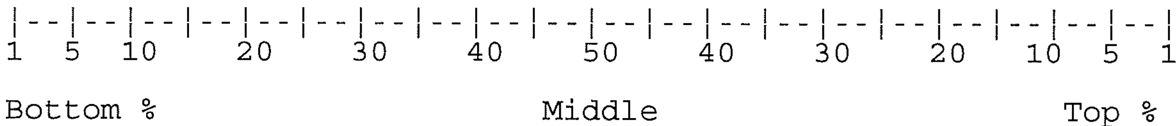
These scales ask how you compare your abilities and traits to other people's. On the scales below, please mark how you feel you rank on the ability indicated, compared to the average student at the U. of M. The scales are in percents, so circle the mark on the scale that you feel is closest to your trait or ability. For example, if I felt I was more witty than most, that my wit was in the top 25 percent, it would look like:



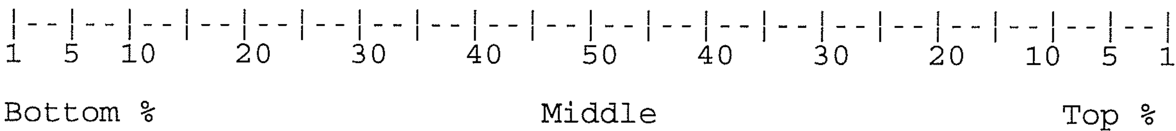
The mark would be placed at the same place on the scale if I felt I was more cruel than most, that my cruelty was in the top 25%.

Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

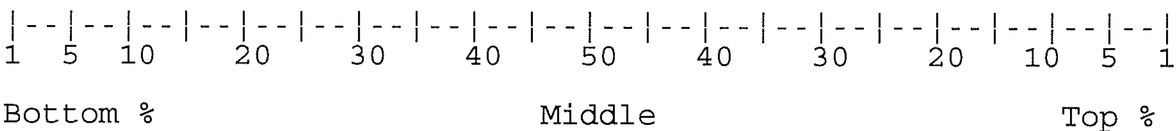
1. Safety as a driver.



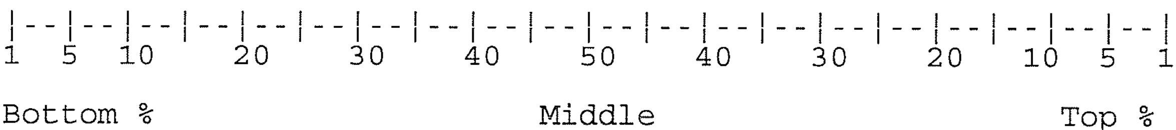
2. Physical attractiveness.



3. Greed.

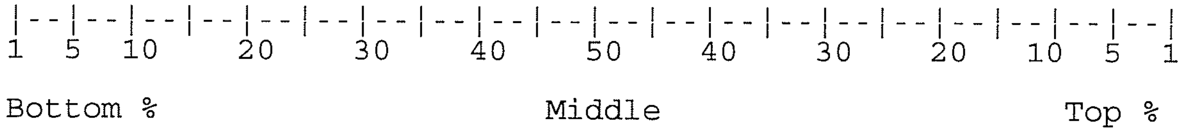


4. Tolerance toward minority groups.

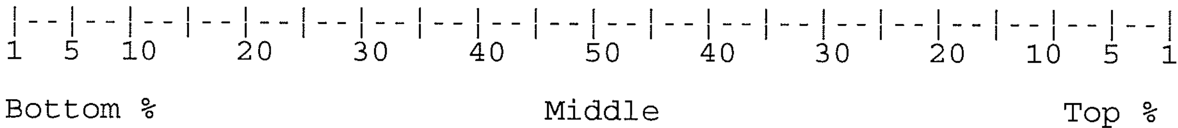


Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

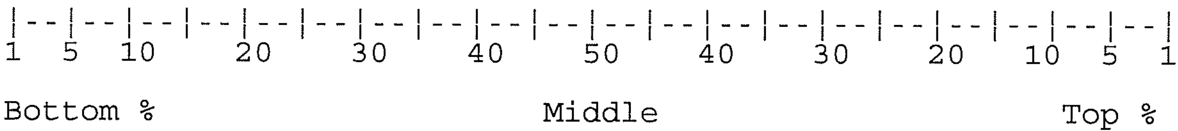
5. Insensitivity.



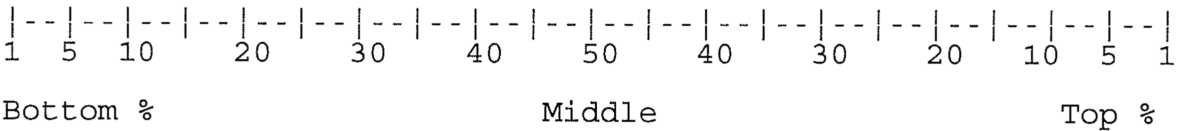
6. Selfishness.



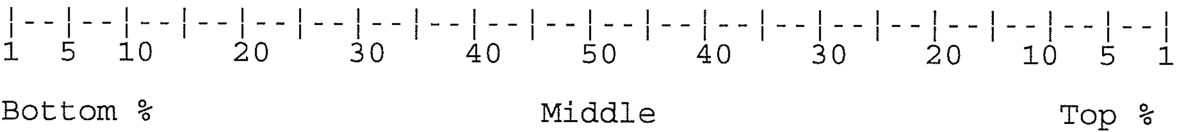
7. Intelligence.



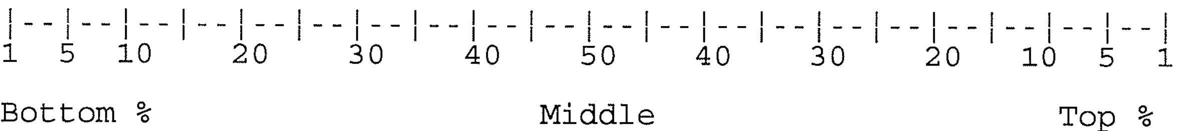
8. Tendency to lie.



9. Physical health.

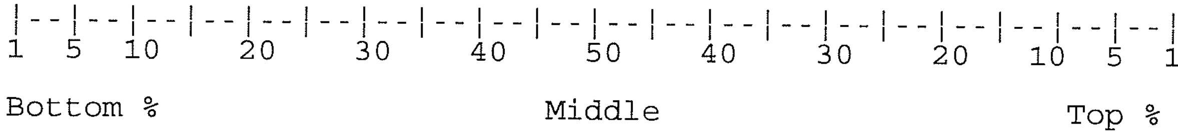


10. Ability to get along with others.

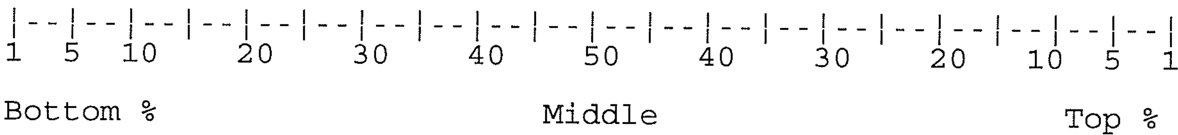


Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

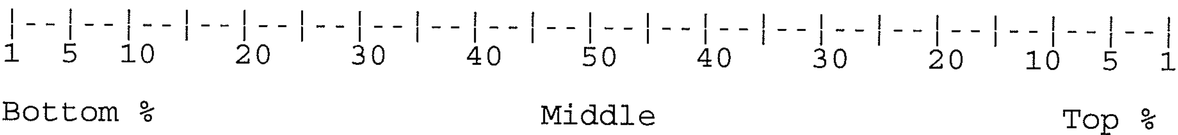
11. Pride.



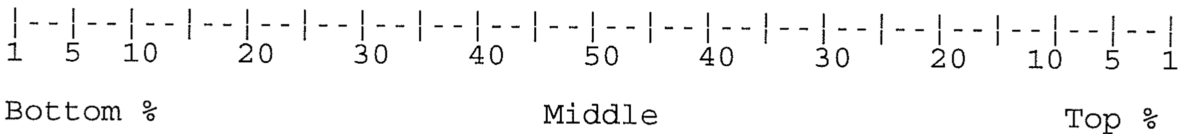
12. Irrationality.



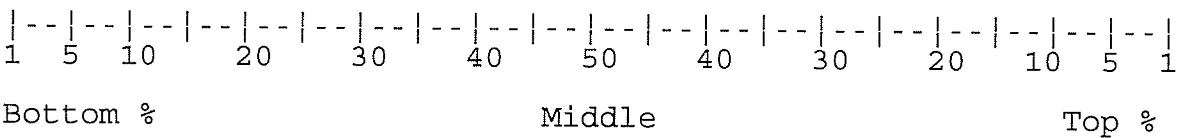
13. Conversational skills.



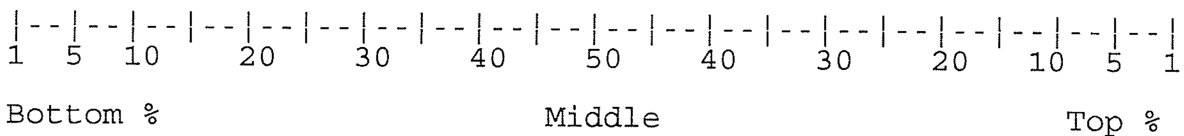
14. Athletic ability



15. Likability.

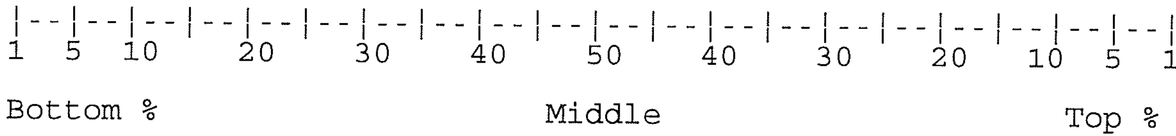


16. Cowardice.

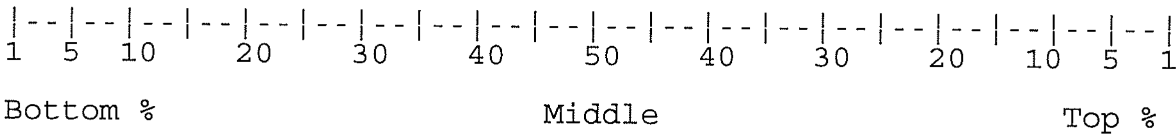


Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

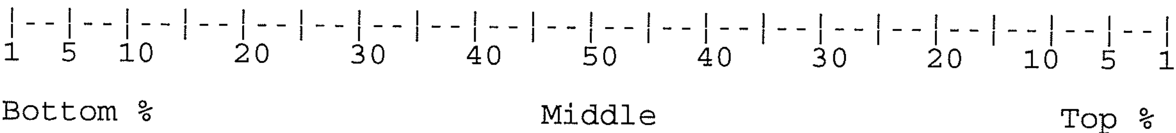
17. Determination.



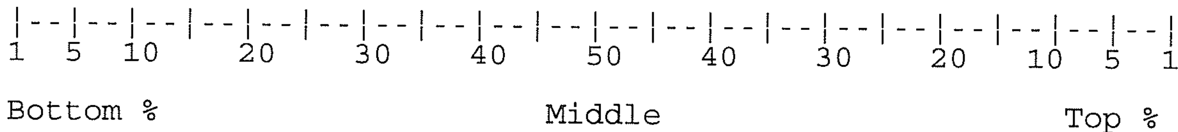
18. Naivete.



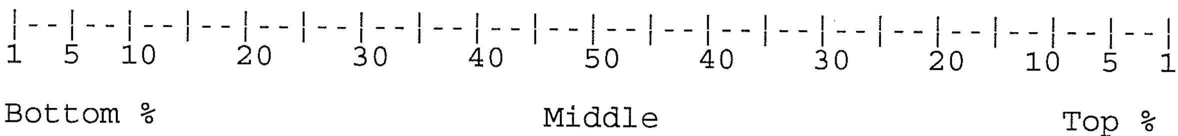
19. Vindictiveness.



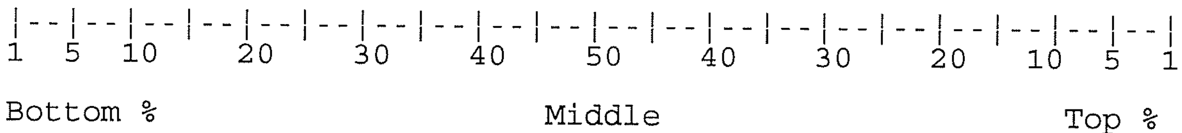
20. Tendency to gossip.



21. Laziness.

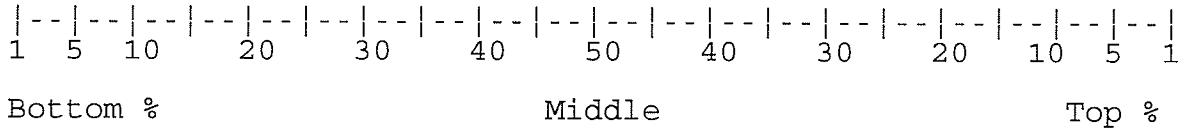


22. Consciousness of environmental issues.

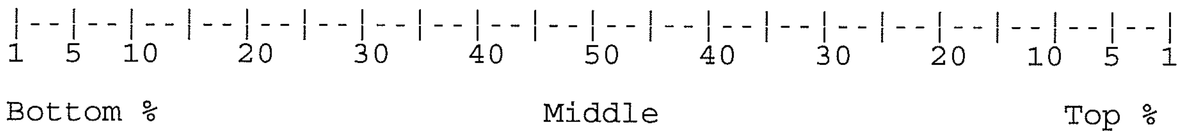


Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

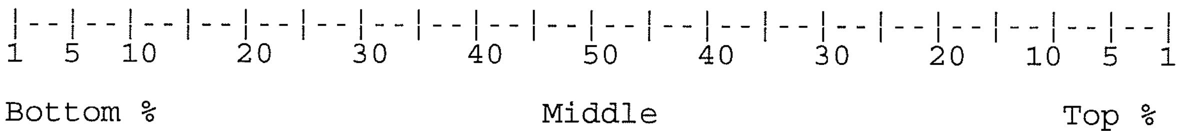
23. Generosity.



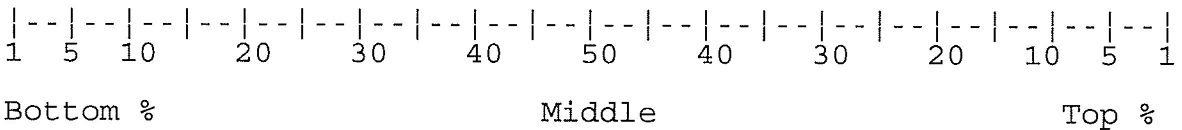
24. Gullibility.



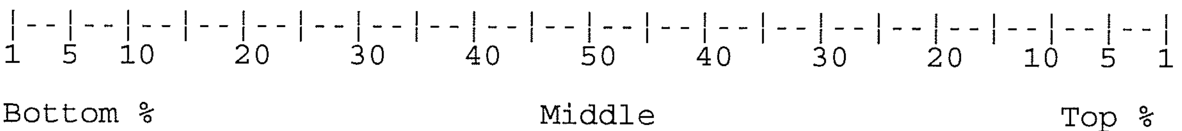
25. Musical talent.



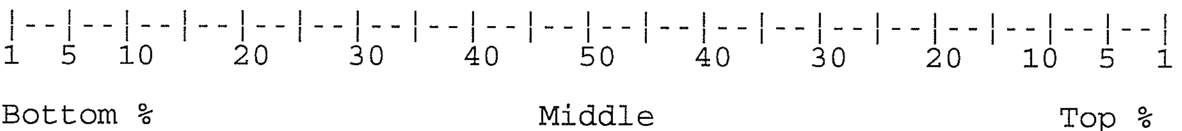
26. Moodiness.



27. Skill as a driver.

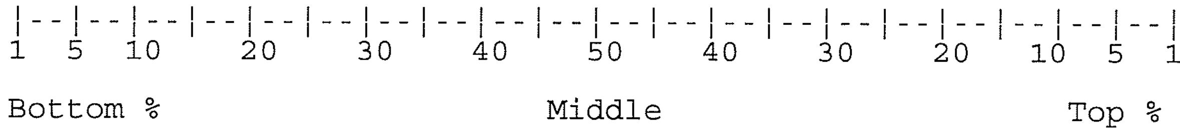


28. Narrow-mindedness.

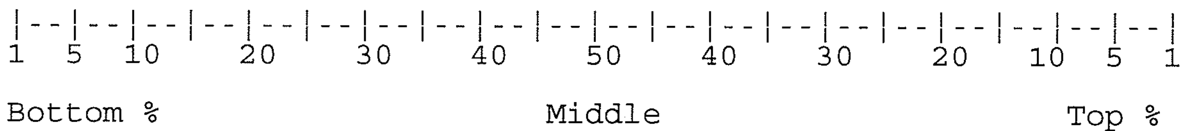


Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

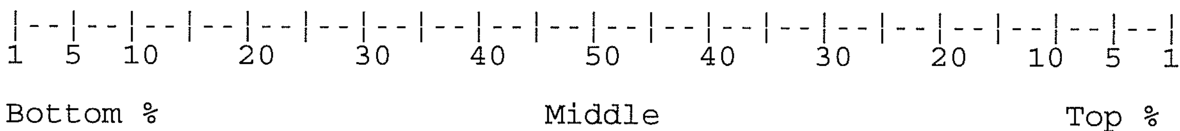
29. Mental health.



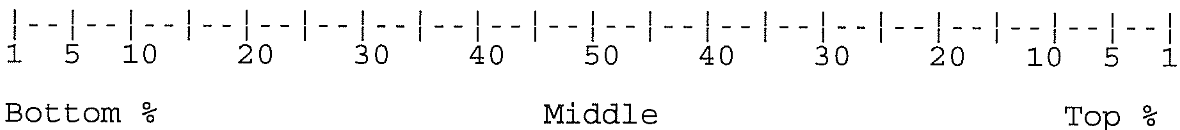
30. Self-control.



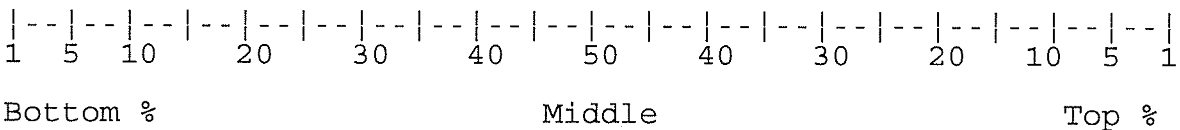
31. Ability as a student.



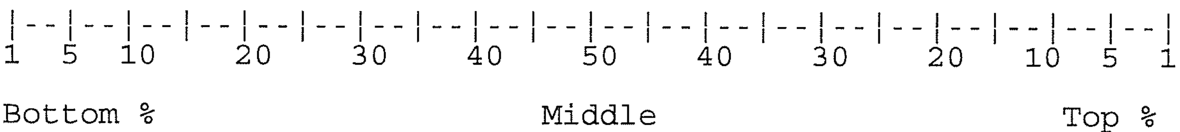
32. Predisposition to sexism.



33. Dislike of family members.

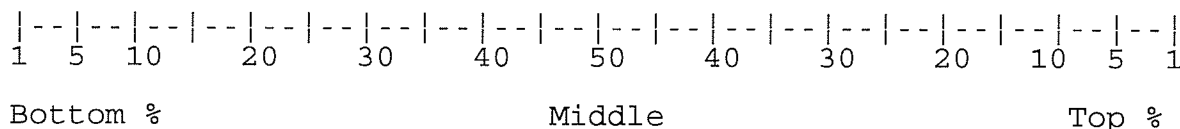


34. Unreliability.

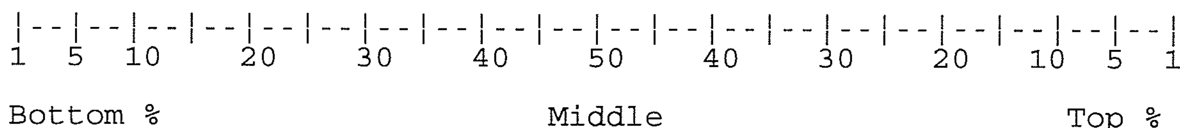


Compared to the average student at the University of Manitoba, please rate, by circling a mark on the scale, your:

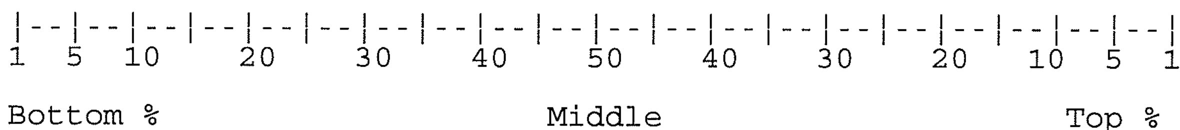
35. Skill in dealing with children.



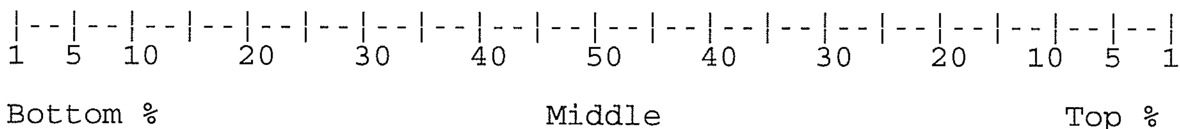
36. Heartlessness.



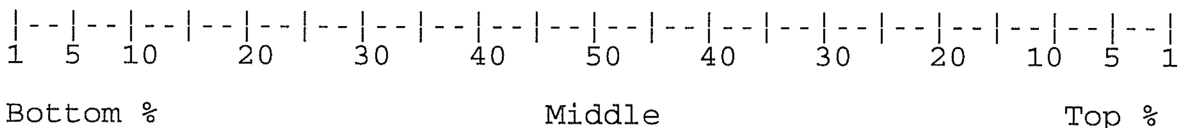
37. Clumsiness.



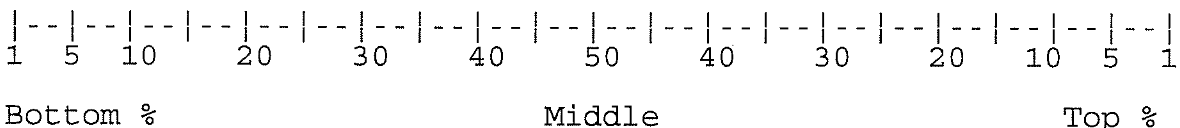
38. Skill at your work.



39. Musical taste.



40. Tendency to interrupt others.



Appendix C

Beck Depression Inventory

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Record on the IBM answer sheet the number that corresponds to the statement you picked. If several statements in the group seem to apply equally well, record each one on the IBM answer sheet. Be sure to read all the statements in each group before making your choice.

1. A I do not feel sad.
   B I feel sad.
   C I am sad all the time and I can't snap out of it.
   D I am so sad or unhappy that I can't stand it.

2. A I am not particularly discouraged about the future
   B I feel discouraged about the future.
   C I feel I have nothing to look forward to.
   D I feel that the future is hopeless and that things cannot improve.

3. A I do not feel like a failure.
   B I feel I have failed more than the average person.
   C As I look back on my life, all I can see is a lot of failures.
   D I feel I am a complete failure as a person.

4. A I get as much satisfaction out of things as I used to.
   B I don't enjoy things the way I used to.
   C I don't get real satisfaction out of anything anymore.
   D I am dissatisfied or bored with everything.

5. A I don't feel particularly guilty.
   B I feel guilty a good part of the time.
   C I feel quite guilty most of the time.
   D I feel guilty all of the time.

6. A I don't feel I am being punished.
   B I feel I may be punished.
   C I expect to be punished.
   D I feel I am being punished.

7. A I don't feel disappointed with myself.
   B I am disappointed in myself.
   C I am disgusted with myself.
   D I hate myself.

8. A I don't feel I am any worse than anybody else.
   B I am critical of myself for my weaknesses or mistakes.
   C I blame myself all the time for my faults.
   D I blame myself for everything bad that happens.

9. A I don't have any thoughts of killing myself.
   B I have thoughts of killing myself, but I would not carry them out.
   C I would like to kill myself.
   D I would kill myself if I had the chance.

10. A I don't cry anymore than usual.
    B I cry more now than I used to.
    C I cry all the time now.
    D I used to be able to cry, but now I can't cry even though I want to.

11. A I am no more irritated now than I ever am.
    B I get annoyed or irritated more easily than I used to.
    C I feel irritated all the time now.
    D I don't get irritated at all by the things that used to irritate me.

12. A I have not lost interest in other people.
    B I am less interested in other people than I used to be.
    C I have lost most of my interest in other people.
    D I have lost all of my interest in other people.

13. A I make decisions about as well as I ever could.
    B I put off making decisions more than I used to.
    C I have greater difficulty in making decisions than before.
    D I can't make decisions at all anymore.

14. A I don't feel I look any worse than I used to.
    B I am worried that I am looking old or unattractive.
    C I feel that there are permanent changes in my appearance that make me look unattractive.
    D I believe that I look ugly.

15. A I can work about as well as before.
    B It takes an extra effort to get started at doing something.
    C I have to push myself very hard to do anything.
    D I can't do any work at all.

16. A I can sleep as well as usual.
    B I don't sleep as well as I used to.
    C I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
    D I wake up several hours earlier than I used to and cannot get back to sleep.

17. A I don't get more tired than usual.
    B I get tired more easily than I used to.
    C I get tired from doing almost anything.
    D I am too tired to do anything.

18. A My appetite is not worse than usual.
    B My appetite is not as good as it used to be.
    C My appetite is much worse now.
    D I have no appetite at all anymore.

19. A I haven't lost much weight, if any, lately.
    B I have lost more than 5 pounds.
    C I have lost more than 10 pounds.
    D I have lost more than 15 pounds.

20. A I am no more worried about my health than usual.
    B I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
    C I am very worried about physical problems and it is hard to think of much else.
    D I am so worried about my physical problems that I cannot think about anything else.

21. A I have not noticed any recent change in my interest in sex.
    B I am less interested in sex than I used to be.
    C I am much less interested in sex now.
    D I have lost interest in sex completely.

Appendix D

Symptom Check-List 90-R

Below are a list of problems and complaints that people sometimes have. Please read each one carefully. After you have done so, record on the IBM sheet the response that best describes HOW MUCH THAT PROBLEM HAS BOTHERED YOU DURING THE PAST ONE MONTH. Indicate one number for each problem and do not skip any items.

A Not at all.
B A little bit
C Moderately
D Quite a bit
E Extremely

HOW MUCH WERE YOU BOTHERED BY (for the last month):

62. Headaches.

63. Nervousness or shakiness inside.

64. Unwanted thoughts, words, or ideas that won't leave your mind.

65. Faintness or dizziness.

66. Loss of sexual interest or pleasure.

67. Feeling critical of others.

68. The idea that someone else can control your thoughts.

69. Feeling others are to blame for most of your troubles.

70. Trouble remembering things.

71. Worried about sloppiness or carelessness.

72. Feeling easily annoyed or irritated.

73. Pains in heart or chest.

74. Feeling afraid in open spaces or on the streets.

75. Feeling low in energy or slowed down.

76. Thoughts of ending your life.

77. Hearing voices that other people do not hear.

78. Trembling.

HOW MUCH WERE YOU BOTHERED BY (for the last month):

A Not at all.
B A little bit
C Moderately
D Quite a bit
E Extremely

79. Feeling that most people cannot be trusted.

80. Poor appetite.

81. Crying easily.

82. Feeling shy or uneasy with the opposite sex.

83. Feeling of being trapped or caught.

84. Suddenly scared for no reason.

85. Temper outbursts that you could not control.

86. Feeling afraid to go out of your house alone.

87. Blaming yourself for things.

88. Pains in your lower back.

89. Feeling blocked in getting things done.

90. Feeling lonely.

91. Feeling blue.

92. Worrying too much about things.

93. Feeling no interest in things.

94. Feeling fearful.

95. Your feelings being easily hurt.

96. Other people being aware of your private thoughts.

97. Feeling others do not understand you or are unsympathetic.

98. Feeling that people are unfriendly or dislike you.

99. Having to do things very slowly to insure correctness.

HOW MUCH WERE YOU BOTHERED BY (for the last month):

A Not at all.
B A little bit
C Moderately
D Quite a bit
E Extremely

100. Heart pounding or racing.

101. Nausea or upset stomach.

102. Feeling inferior to others.

103. Soreness of your muscles.

104. Feeling that you are watched or talked about by others.

105. Trouble falling asleep.

106. Having to check and double-check what you do.

107. Difficulty making decisions.

108. Feeling afraid to travel on buses, subways, or trains.

109. Trouble getting your breath.

110. Hot or cold spells.

111. Having to avoid certain things, places, or activities because they frighten you.

112. Your mind goes blank.

113. Numbness or tingling in parts of your body.

114. A lump in your throat.

115. Feeling hopeless about the future.

116. Trouble concentrating.

117. Feeling weak in parts of your body.

118. Feeling tense, keyed up.

119. Heavy feelings in arms or legs.

HOW MUCH WERE YOU BOTHERED BY (for the last month):

A Not at all.
B A little bit
C Moderately
D Quite a bit
E Extremely

120. Thoughts of death or dying.

121. Overeating.

122. Feeling uneasy when people are watching or talking about you.

123. Having thoughts that are not your own.

124. Having urges to beat, injure, or harm someone.

125. Awakening in the early morning.

126. Having to repeat the same actions such as touching, counting, or washing.

127. Sleep that is restless or disturbed.

128. Having urges to break or smash things.

129. Having ideas or beliefs that others do not share.

130. Feeling very self-conscious with others.

131. Feeling uneasy in crowds, such as shopping or at a movie.

132. Feeling everything is an effort.

133. Spells of terror or panic.

134. Feeling uncomfortable about eating or drinking in public.

135. Getting into frequent arguments.

136. Feeling nervous when you are left alone.

137. Others not giving you proper credit for your achievements.

138. Feeling lonely even when you are with people.

HOW MUCH WERE YOU BOTHERED BY (for the last month):

A Not at all.
B A little bit
C Moderately
D Quite a bit
E Extremely

139. Feeling so restless that you couldn't sit still.

140. Feelings of worthlessness.

141. Feeling that familiar things are strange or unreal.

142. Shouting or throwing things.

143. Feeling afraid that you will faint in public.

144. Feeling that people will take advantage of you if you let them.

145. Having thoughts about sex that bother you a lot.

146. The idea that you should be punished for your sins.

147. Feeling pushed to get things done.

148. The idea that something serious is wrong with your body.

149. Never feeling close to another person.

150. Feelings of guilt.

151. The idea that something is wrong with your mind.

Appendix E

Rosenberg Self-esteem Scale

INSTRUCTIONS: Below are a number of statements as to how you may feel about yourself. Please read each one carefully and record on this sheet how much you agree or disagree with each statement, using the four point scale below. Only mark **ONE ANSWER** for each statement on this sheet, and please **DO NOT** skip any items.

A Strongly Agree   B Agree   C Disagree   D Strongly Disagree

___ 1. I feel that I am a person of worth, at least on an equal basis with others.

___ 2. I feel that I have a number of good qualities.

___ 3. All in all, I am inclined to feel that I am a failure.

___ 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 take a positive attitude toward myself.

___ 7. On the whole, I am satisfied with myself.

___ 8. I wish I could have more respect for myself.

___ 9. I certainly feel useless at times.

___ 10. At times I think that I am no good at all.

Appendix F

Balanced Inventory of Desirable Responding-3

Not True Very True

+--------+--------+--------+--------+--------+--------+

1 2 3 4 5 6 7

Using the above scale as a guide, write a number beside each statement to indicate how much you agree with it.

____ 1. I always throw my litter into waste baskets on the street.

____ 2. I have received too much change from a salesperson without telling him (her).

____ 3. When I hear people talking privately I avoid listening.

____ 4. I have taken things that didn't belong to me.

____ 5. I sometimes tell lies if I have to.

____ 6. I always keep my promises, no matter how inconvenient it might be to do so.

____ 7. I have taken sick leave from work or school even though I wasn't really sick.

____ 8. I like to gossip about other people's business.

____ 9. I have done things that I don't tell other people about.

____ 10. I say only good things about my friends behind their backs.

____ 11. I sometimes put off until tomorrow what I should do

today.

_____ 12. I always declare everything at customs.

_____ 13. I have some pretty awful habits

_____ 14. I always tell the truth.

_____ 15. I am sometimes late for appointments.

_____ 16. I always obey traffic laws even if I'm unlikely to get caught.

_____ 17. When I was a child I obeyed my parents.

_____ 18. I sometimes pick my nose.

_____ 19. I am always polite to others including my friends and family.

_____ 20. I have never cheated on a test or assignment in any way.

_____ 21. I have sometimes hated one or both of my parents.

_____ 22. I am always free of guilt.

_____ 23. Seeing any attractive person of the opposite sex makes me think about having sex.

_____ 24. I have sometimes felt like I wanted to kill someone.

_____ 25. I could easily quit any of my bad habits if I wanted to.

_____ 26. I always accept criticism if it is accurate.

_____ 27. I have felt physically attracted to at least one person of the same sex.

_____ 28. I have felt joy over someone else's failure.

_____ 29. I always return a favour without hesitation.

_____ 30. It's alright with me if some people happen to dislike me.

_____ 31. I'm not interested in knowing what other people really think of me.

_____ 32. My parents only punished me when I really deserved it.

_____ 33. I sometimes get jealous over the good fortune of others.

_____ 34. My parents always loved me no matter what I did.

_____ 35. I often have sexual fantasies.

_____ 36. I have always been certain that I am not homosexual.

_____ 37. I have always been confident about my ability as a lover.

_____ 38. I usually enjoy my bowel movements very much.

_____ 39. At times I have wanted to rape or be raped by someone.

_____ 40. I have thought of committing suicide to get back at someone.

Scale Composition

Impression Management consists of items 1 to 20

Self-Deception Enhancement consists of items 22, 25, 26, 29, 30, 31, 32, 34, 36, 37.

Self-Deception Denial consists of items 21, 23, 24, 27, 28, 33, 35, 38, 39 , 40.

Appendix G

Post-experimental Interview of Pre-test.

1. Did you have difficulty following any instructions, or answering any questions?

   If so, which instructions or questions did you have trouble with?

2. What is your opinion as to what the study was about?

3. When did you form your opinion as to the purpose of the study?

4. How did your opinion as to the purpose of the study influence your answers?

5. What questions do you think should have been asked on the questionnaire that were not?

6. How did you feel about the questionnaire as you were filling it out? (Probe if needed, i.e. annoyed, interested).

7. Are there any other comments or opinions that you would like to make?

Appendix H

Debriefing Statement

I would like to thank you for participating in this experiment, and the time you have spent in filling out forms. As I stated before, this experiment was interested in how people compare themselves to others on various dimensions, and how their emotional health and moods affect these comparisons.

Previous research in social psychology had found that normal, or well-functioning, individuals saw themselves in a positive light. Mildly depressed individuals see themselves in an accurate, rather than a positive, or even negative, light. This research was an attempt to replicate and extend that finding.

A second purpose of this research was to examine individuals who have extremely positive views of themselves in some areas. These questionnaires will help us understand how positive their views of themselves are, and how this is linked with their overall emotional health. The strength of the relationship between highly positive views of the self, and emotional and mental health, is not well known. Some individuals with very positive views of themselves appear to function quite well, while others do not.

You may have notice that the questionnaires that assessed mental and emotional health asked about the severity of your depression, anxiety, and thinking about suicide. If you feel

seriously depressed, highly anxious, or have been thinking about suicide, please contact Counselling Services. It is on the fourth floor of the UMSU building, and the phone number is 474-8592. Counselling is free for University of Manitoba students, and there are clinical psychologists and other therapists available to talk to about your feelings if you want to.

Since this study runs for several sessions, it would be very beneficial if you not discuss the study with others. To aid the purity of the research, I ask that you recycle, or dispose of this debriefing statement. If you are interested in the general results of this study, they will be available when it has been completed, and the data analyzed. You can pick up a short copy of the results at room P207 of the Duff Roblin building, in the Psychology wing. Again, I thank you for your time.

Eric Kuelker

Appendix I

Variables and their loadings on the 2 factor solution to the Self-Enhancement Scale.

FACTOR 1: Positive Trait Acceptance		LOADING
Var15	Likability	71
Var10	Ability to get along with others	59
Var38	Skill at your work	56
Var31	Ability as a student	56
Var17	Determination	56
Var11	Pride	54
Var7	Intelligence	54
Var2	Physical attractiveness	53
Var13	Conversational skills	53
Var9	Physical health	51
Var27	Skill as a driver	50
Var14	Athletic ability	50
Var30	Self-control	48
Var29	Mental health	48
Var1	Safety as a driver	40
Var23	Generosity	30
FACTOR 2: Negative Trait Denial		
Var3	Greed	67
Var6	Selfishness	65
Var19	Vindictiveness	57
Var36	Heartlessness	56

Var28	Narrow-mindedness	54
Var8	Tendency to lie	52
Var5	Insensitivity	50
Var12	Irrationality	49
Var20	Tendency to gossip	47
Var34	Unreliability	40
Var32	Predisposition to sexism	38
Var40	Tendency to interrupt others	37
Var21	Laziness	36
Var26	Moodiness	34