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THE THEORY OF OBJECTIVE SELF-AWARENESS: A REFINEMENT AND  
EXTENSION OF ITS BASIC PROPOSITIONS WITH AN EMPHASIS ON THE  
PROCESS AND OUTCOME OF SELF-EVALUATION

*City University of New York*

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by

ANNE BARBARA AXELROD

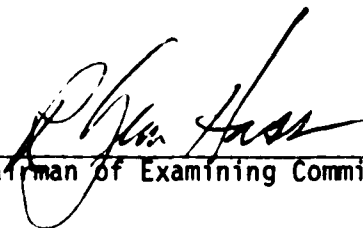
A dissertation submitted to the Graduate Faculty in Psychology  
in partial fulfillment of the requirements for the degree  
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## Abstract

### THE THEORY OF OBJECTIVE SELF-AWARENESS: A REFINEMENT AND EXTENSION OF ITS BASIC PROPOSITIONS WITH AN EMPHASIS ON THE PROCESS AND OUTCOME OF SELF-EVALUATION

by

Anne Barbara Axelrod

Advisor: Professor Glen Hass

The process of self-evaluation, of central importance to the theory of self-awareness, has been neglected in research which has tested implications of the theory. The present paper sought to examine this process, and in so doing, the theory has been elaborated and extended.

As a first step, the self was defined as being multifaceted, comprised of a public-self aspect and a private-self aspect (Buss, 1980; Froming and Walker, in press; Froming, Walker and Lopyan, in press). The private concept of self was defined as one's knowledge as to who he or she is based upon one's previous experiences. The public concept of self was described as the manner in which the person believes he or she appears to others. It was further suggested, based upon several recent studies in this area (Froming and Walker, in press; Froming, Walker and Lopyan, in press), that different self-awareness manipulations, because they influence the psychological perspective of the individual, focus attention on different self-aspects. Specifically, mirrors direct one's attention to the private concept of self, whereas TV cameras and audiences direct one's attention to the public concept of self. It was next

proposed that the perceptual unit of comparison employed for the purpose of self-evaluation differs as a function of psychological perspective. Whereas private self-awareness was proposed to promote the salience of a perceptual unit comprised of one's real-self and a personal-self standard, public self-awareness was proposed to promote the salience of a perceptual unit comprised of one's real-self and a social-self standard. This differential salience of perceptual units was the most fundamental, and critical, aspect of the self-evaluation process suggested to function when attention was self-directed. In order to demonstrate that these perceptual units were actually being experienced by the self-focused person, a study was designed in which subjects were exposed to both a personal-self standard and a social-self standard simultaneously. If attention was directed toward the private-self aspect one effect was predicted; if attention was directed toward the public-self aspect the opposite effect was predicted.

The design of the study was a 2(Type of Self-Awareness) x 2(Magnitude of Self-Awareness) x 2(Type of Feedback) between group factorial, in which subjects were either publicly (TV camera) or privately (mirror) informed that they had surpassed either a social-self standard or a personal-self standard, but not the other standard (personal or social) under high and low levels of self-awareness. It was suggested that if one were focusing upon a perceptual unit comprised of one's real-self and a social-self standard, one's subsequent self-evaluation and level of self-esteem would be a function of whether or not the real-self surpassed this social-self standard. If one had surpassed the social standard self-esteem was expected to increase; if one had not surpassed this standard self-esteem was expected to decrease. In essence, we were

working backward from the effect to determine the process, to determine the structure of the perceptual unit one was experiencing. In a similar vein, if one were focusing upon a perceptual unit comprised of one's real-self and a personal-self standard, one's subsequent level of self-esteem would be a function of whether or not the real-self had surpassed this personal standard.

The results supported the predictions derived from the theory's elaboration and extension. When subjects were privately self-aware, self-evaluation was found to be a function of the relationship between their real-self and the personal standard. When they had surpassed this standard self-esteem increased even though they had not surpassed the social standard. When they had not surpassed the personal standard self-esteem decreased even though they had exceeded the social standard. Subjects who were publicly self-aware responded in precisely the opposite manner. A behavioral measure of approach tendencies yielded results consistent with the self-esteem measure. Thus, the results of this investigation provide compelling support to the proposition that different self-focusing manipulations promote the salience of different self-aspects, and that self-evaluation is a function of the relationship between one's real-self and the salient standard on the concept of self focused on. It was further demonstrated that self-focused individuals do not necessarily compare their real-self to ideal-self standards (Duval and Wicklund, 1972; Ickes, Wicklund and Ferris, 1973; Wicklund, 1975). And, because ideals are not focused on, self-awareness cannot be thought of as "most often" leading to the perception of a negative discrepancy, or as "typically" engendering a state of discomfort (Wicklund, 1975; Wicklund and Hormuth, 1981). Finally, there is every reason to believe



that positive as well as negative within-self discrepancies possess motivational properties.

TO

My mother, who nurtured the body  
so that the mind might create;

My sister, Noreen, whose love and  
encouragement I so greatly  
depended upon;

My friend, Pat, for her daily  
pilgrimage through the valley  
of despair;

And, my mentor, Glen, for his  
considerable guidance in the  
formulation and execution of the  
ideas herein presented.

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## INTRODUCTION

As early as the sixteenth century philosophers were writing about the unique nature and existence of the soul or mind. Descartes was perhaps one of the first to speak of the existence of innate ideas, an example of which would be one's knowledge of self (Boring, 1950). The emergence of psychology in the nineteenth century continued in this tradition. It wasn't until the early 1900's, however, that the notion of a reflexive self appeared in the writings of psychologists and sociologists (Cooley, 1902; James, 1910; Mead, 1934). The following years brought forth an abundance of literature on the development of self, the structure of self, the process of self knowledge, and the experience of self-evaluation. The study of self, however, was plagued with problems, most of which were associated with its elusive nature. While many psychologists, unable to determine its boundaries, labeled it an empty construct and abandoned its study, others persisted in their efforts to measure it. The years did not produce the progress that was expected (Wylie, 1961, 1974). In spite of the intrinsic interest this area of study engendered, and the potential explanatory power it promised, self-concept research began to dwindle proportionately. With the introduction of self-awareness theory (Duval and Wicklund, 1972) came a renewed interest in the self and, particularly, the effects of self-focused attention.

Duval and Wicklund (1972) and numerous other contributors to the area of self-awareness have empirically established the self as a reflexive entity (Hass, 1979). It has also been demonstrated that the conse-

quences of attention directed toward the self differs from attention directed toward the environment (Wicklund, 1975; Buss and Scheier, 1976; Duval, 1976; Carver, 1979; Buss, 1980; Carver and Scheier, 1981a). Furthermore, there is now evidence demonstrating the existence of a disposition toward self-focusing (Fenigstein, Scheier and Buss, 1975). A substantial body of research on this dispositional tendency has indicated that the behavioral consequences of this trait duplicates that of experimentally induced state self-awareness (Buss and Scheier, 1976; Scheier, 1976; Scheier and Carver, 1977; Carver and Scheier, 1978; Brockner, 1979a; Buss, 1980; Scheier, 1980). What has been less clearly delineated in the literature is the process of self-evaluation, the process believed to be evoked by the self-aware state and to motivate subsequent behaviors. Instead research has focused upon such topics as the attitude-behavior relationship (Froming and Walker, in press), social facilitation (Wicklund and Duval, 1971), conformity (Froming and Carver, in press), deindividuation (Diener, 1979; Diener and Wallbom, 1976), the perception of internal affective states (Carver and Blaney, 1977; Fenigstein and Carver, 1978; Scheier, Carver and Gibbons, 1979; Pennebaker, 1980), and attribution (Duval and Wicklund, 1973; Bell, Wicklund, Manko and Larkin, 1976; Buss and Scheier, 1976; Duval and Hensley, 1976). Studies examining the effects of self-focused attention on self-evaluation are considerably less conspicuous (Ickes, Wicklund and Ferris, 1973; Davis and Brock, 1975; Hull and Levy, 1979; Fenigstein, 1979; Brockner and Wallnau, in press). Furthermore, based upon the advances that have been made in the area of self-awareness during the past ten years, many of the conclusions reached with reference to the self-evaluation process must now be reconsidered.

It was this process, the process of self-evaluation engaged during the self-aware state, that the present paper and the research conducted sought to examine and elucidate. As a point of departure the most central assumptions of the theory (Duval and Wicklund, 1972) are reviewed in Part I of this paper. Each assumption is stated and subsequent research pertinent to the premise examined. In addition, modifications of the theory are proposed where the research evidence seems to suggest a need for conceptual elaboration.

According to the theory of self-awareness self-evaluation processes, solely the property of the objective state, are automatically engaged when attention is focused on the self. Self-evaluation is conceptualized as a comparison between one's own standing on the salient self-dimension and a "standard of correctness" on that dimension; an ideal standard in most instances. The suggestion has been put forth by the present writer that the assumption of the ideal-self comparison be reexamined. A revision is proposed which notes the existence of two broad self-aspects: the public-self and the private-self. Based upon the most recent theory and research in this area (Froming, 1978; Diener and Srull, 1979; Buss, 1980; Scheier and Carver, 1980a, 1981; Froming and Walker, in press; Froming, Walker and Lopyan, in press) it is proposed that attention directed toward each of these separate self-aspects leads to self-evaluation with reference to different self-standards. Focusing upon the private-self leads to self-evaluation with reference to one of several personal-self standards; standards defined as "should-be's." It is further suggested that a person has at his or her disposal a variety of "should-be's" or personal standards for each self-dimension of importance to his or her self-concept. One's personal standard at a



particular moment in time may be defined in terms of one's typical standing on the self-dimension focused upon (one's typical-self standard), in terms of the average performance or ability of a relevant social group or person (one's referent-self standard), in terms of an aspiration level (one's committed-self standard), or in terms of an ideal (one's ideal-self standard). It is further proposed that when one's private-self is focused upon, one's typical-self standard will most often be accessed for the purpose of self-evaluation. That is, one's real-self will be compared to that position on the relevant self-dimension the person has most often occupied in the past.

When attention is focused upon the public-self, the individual is believed to adopt a comparison standard which he or she believes represents that of others in the situation; the person focuses upon the salient social-self standard. In effect, the individual sees himself or herself as a social object and attempts to determine how he or she is being evaluated by those observing the performance or ability in question. Under other circumstances the person may simply try to determine the most appropriate standard for behavior. Having in this manner defined the self, several issues pertinent to the relationship between self-focused attention and self-evaluation are examined in the remainder of Part I.

The first such issue reviewed concerns the differential effects of self-focusing stimuli. Self-awareness theory indicates that self-awareness may be generated by any stimulus in the surrounding environment which reminds the person of his or her object status (Duval and Wicklund, 1972; Wicklund, 1975). It has been assumed by past researchers in this area that the various manipulations have equivalent effects in

that all serve to pull attention away from the environment and toward the self. A number of recent studies, however, appear to indicate that these manipulations may differ in the psychological states they initiate; in fact, some stimuli may direct attention to the private-self aspect and others to the public-self aspect (Froming and Walker, in press; Froming, Walker and Lopyan, in press). Froming, Walker and Lopyan (in press), for instance, obtained subjects' personal attitudes toward punishment in addition to their perceptions of how others felt about its use in the learning process. In two experiments these investigators reported that a mirror focused attention upon the private-self whereas an audience focused attention upon the public-self. A primary purpose of the present study was the replication of the effects observed by Froming, et. al. in the domain of attitudinal consistency to the more general process of self-evaluation.

A second issue examined in Part I is the nature of the affective consequences associated with the state of self-awareness. In most instances the affect associated with self-focused attention is assumed by theorists and researchers to be negative (Duval and Wicklund, 1972; Wicklund, 1975; Archer, 1980; Wicklund and Hormuth, 1981). The reason one apparently experiences negative affect is because one has focused upon a perceptual unit comprised of the real-self and the ideal-self (Ickes, Wicklund and Ferris, 1973). Contrary to this line of reasoning, it is proposed by the present writer that standards other than ideals may be utilized for the purpose of determining self-worth. The standard employed in the self-evaluation process will be that standard made salient by the situation confronting the individual. Several studies in the literature have already demonstrated the importance of considering sali-

ency, although this was not the purpose at the time. Carver (cited in Wicklund, 1975), for instance, demonstrated that individuals need not compare to an ideal. Less than ideal-self standards were made salient by marking each of several self-dimensions with an X in the middle, purportedly representing the position of an average individual. Both a mirror and a no-mirror group rated their real-self higher than this standard, the effect being enhanced in the mirror condition. Wicklund (1975), commenting on this study, noted the important role of salience:

This is potentially an extremely important study, for it suggests that standards of correctness function as such only to the degree that the person attends to them. If attention is drawn to alternative standards, whether higher or lower, the degree of positive or negative affect in objective self-awareness can be altered considerably. (p. 247)

Since the salient standard need not surpass one's real-self, the discrepancy perceived and the affect experienced need not be negative.

A third issue examined relates to the behavioral consequences of self-focused attention. Duval and Wicklund (1972) suggest that the awareness of a negative discrepancy is a precondition for self-evaluation and, further, that only negative discrepancies have motivational properties; that is, only negative affect influences behavior. In direct contrast to this assumption, it is proposed by the present writer that positive as well as negative affective states have behavioral consequences. In effect, positive discrepancies and affect may lead to approach tendencies just as negative discrepancies and affect have been demonstrated to result in avoidance tendencies.

In Part II a model of the self-awareness process, based upon the literatures of two major areas--self-awareness theory and self-evaluation theory--is offered for consideration. This revised model, referred to as the interactionist approach to self-focused attention, suggests that the

person, the situation, and the Person x Situation interaction have a significant influence upon the antecedents, the process, and the consequences of self-directed attention. Theoretical support for the model is provided through an examination of some of the variables in each category likely to have an impact upon the self-awareness process. The ideas presented in this section are not intended to represent a new theory. The original theory, as will be demonstrated, is considered to be a basic statement of the self-awareness phenomenon. What is being attempted is simply an extension of the theory based upon the research that has been conducted during the ten years since the theory's introduction, an extension emphasizing the importance of an interactionist approach.

Part III presents the design and results of an experiment testing hypotheses derived from the proposed revisions to the theory. This research was predicated upon the premise that the self is multifaceted, and that different self-focusing stimuli present within one's environment will influence which aspect of the self is attended to, as well as the self-standard employed in the self-evaluation process. The most stringent test of this proposition would be to create a situation in which personal and social-self standards are equally salient or available to the person in his or her quest for self-evaluation. As Scheier and Carver (1981) suggest:

In order to separate the influence that public and private aspects of the self have on behavior, it is necessary to examine situations in which the influence of these two self-aspects ought to differ from one another. At a minimum, this means that situations must be created in which one aspect of self would be expected to have an impact on behavior, but the other aspect would not....

Even more compelling, however, would be cases in which both public and private aspects of self would be expected to influ-

ence behavior, but would be expected to do so in opposing ways. Under these circumstances, increased focus on the private self should have one impact, compared to conditions of low self-focus. And compared to the same control condition, increased focus on the public-self should have a discriminantly different impact. (p. 197)

The direction suggested by Scheier and Carver was precisely that which was employed in the present study, with but one exception. Rather than comparing the two types of self-awareness to a common control group, two low self-awareness conditions were established. It was believed that although these two conditions might be psychologically equivalent, this assumption required testing. Thus, for methodological purposes two separate low self-focusing manipulations were introduced. It was suggested that if the mere presence of a public self-focusing manipulation brought upon some degree of self-awareness, then the results obtained in this low self-focus condition should differ from those obtained in a condition ostensibly absent of all manipulations.

A situation was created in which subjects were exposed to a personal and a social-self standard simultaneously. If subjects were focusing upon the social standard one effect was predicted; if they were focusing upon the personal standard another, different, effect was predicted. In this manner it was thought that the precise perceptual unit subjects were employing for the purpose of self-evaluation in the self-aware state could be ascertained. Generally speaking, subjects confronting their mirror image were expected to focus upon their personal standard for the purpose of self-evaluation; those exposed to a TV camera and implied audience were expected to focus upon their social standard for this purpose.

In an attempt to overcome some of the limitations inherent in previous studies, several conditions had to be met. Firstly, situations

had to be created which were identical except for their public versus private nature. The most informative study to date with reference to the relationship between self-awareness and self-evaluation (Diener and Srull, 1979), and the study upon which the design of the present experiment is based, tentatively concluded that self-awareness leads to a reliance upon social-self standards. A careful examination of this study suggested to the present investigator that the results were due largely to the predominantly social nature of the environment within which subjects were embedded. Diener and Srull required subjects to make a series of perceptual judgments. Each subject estimated the number of dots on a slide and determined the range of performance they would consider personally acceptable. After twelve slides had been presented the experimenter took a booklet from her assistant, purportedly representing the subject's performance on each trial, and proceeded to review this data with the subject. For each trial the subject was provided with three scores: 1) his or her own performance level on that slide, 2) his or her standard for success, and 3) a social standard for success. Self-awareness was manipulated by means of a TV image and a voice recording. Six feedback conditions were created by having subjects' performance surpass one of the following patterns of standards: 1) both standards, 2) neither standard, 3) the personal standard but not the social standard, 4) the social standard but not the personal standard, 5) the personal standard only, no information provided regarding the social standard, and 6) the social standard only, no information provided regarding the personal standard.

Diener and Srull report a significant main effect for feedback and a significant interaction, as predicted, between feedback and level

of self-awareness. Self-awareness had no effect when subjects surpassed both or neither standard: when they surpassed both they rewarded themselves the most; when they surpassed neither they rewarded themselves the least. The reported interaction is of particular interest. Diener and Srull found that when self-aware subjects surpassed the social but not the personal standard they rewarded themselves more than when they had surpassed the personal standard but not the social standard. In a similar vein, when subjects surpassed the social standard and were provided with no information regarding the personal standard they rewarded themselves more than when they had surpassed the personal standard with no information provided about the social standard. Satisfaction ratings paralleled those of amount of reward taken. Diener and Srull suggest that "it would appear that self-aware persons take on a social perspective of themselves in a social situation and judge their performance from this external vantage point." It does appear as though self-aware subjects in this study were more influenced by the social standard. There seems to be, however, an explanation for the predominance of this standard, an explanation based upon the types of manipulations employed in the study. There was the TV image of the subject, a private self-focusing manipulation; there was a voice recording, a public self-focusing manipulation; and, there was the presence of an evaluative experimenter, another public self-focusing manipulation. On balance the public nature of this environment outweighed its private nature. Diener and Srull also suggest that their findings might have been due to the primarily public atmosphere: "...it is possible that the self-awareness manipulation combined with the interaction of the two experimenters induced public self-awareness." The present study sought

to correct this problem. Creating situations which were identical except for their public versus private nature presented somewhat of a problem. In an effort to create this critical condition, a computer was programmed in such a way that subjects were able to complete the entire experimental procedure without the aid or feedback of an experimenter. Private self-awareness was enhanced with the mirror stimulus; public self-awareness was enhanced through the use of a TV camera coupled with false feedback pertaining to an evaluative experimenter.

A second condition that had to be met relates to the issue of the standard of correctness employed by the self-focused person, a standard largely assumed to represent one's ideal on the self-dimension focused upon. In order to ascertain whether other standards might be accessed when attention is self-directed conditions were created which included an ideal but did not make this standard salient.

A third condition required the establishment of a personal-self standard (the typical-self standard). Since it was proposed that this particular standard is based upon one's past experience on the self-dimension being attended to, and it is difficult to determine one's history on a specific dimension within the confines of the experimental setting, a suggestion offered by Duval and Wicklund (1972) was followed:

The application of the theory assumes a certain knowledge of the individual's standards of correctness, for the direction that discrepancy reduction will take cannot be known unless the standard on the relevant dimension is located....

Is there some way to ascertain that just one standard predominates in a particular setting? We can rely upon our intuition about people in the situations where we look at them, we can ask them directly for their standards, and we can attempt to instill new (or at least uniform) standards into them. The latter approach should generally be the most powerful and reliable.... Perhaps the purest test of the theory would involve creating a new dimension, on which the subject could have no value system, and impart a single value to him. (pp. 218-219)



A history was, therefore, created on the bogus self-dimension of perceptual logic and a personal-self standard established through the use of "practice trials."

A fourth condition required the establishment of a social-self standard. Much like one's personal standard, one's perception of the social standard is difficult to ascertain. For this reason a social standard was provided to subjects in the form of a computer prediction. Although there is no objective evidence supporting the belief that the computer prediction would be perceived by subjects as indicative of a social standard, it was assumed that to this particular sample of subjects a computer analysis of their performance would, at the very least, represent an external standard or criterion against which they might evaluate their performance. It was thought that when attention was focused upon the public-self aspect, this external criterion would be transformed into a social standard. That is, subjects would be more likely to believe that the audience was employing the computer's prediction than their average performance (personal standard) in the evaluation of their performance. It seems reasonable to suggest that an audience which included an experimenter would be perceived by subjects as employing an "expected" standard, the computer prediction, a standard that seems to possess a certain type of external validity.

Lastly, it was essential that the self-dimension focused upon be of importance to the individual. Darley and Goethals (1980) suggest that ability-linked tasks are especially related to feelings of self-worth.

Because an individual is normally socialized into the value system of his culture, performing poorly on an ability linked performance task is potentially threatening to the self-esteem

of the performer, and if his performance is observed, it is also potentially threatening in that it can cause the witnessing group to lower their regard for him. In other words, a performer can lower his own self-esteem and lose face by doing poorly on an ability-linked task. (p. 17)

Based upon Darley and Goethal's reasoning, and the notion that intelligence should be of importance to a population of college students, a task was employed which purportedly measured one's intellectual ability on the bogus self-dimension of perceptual logic.

Having met the required conditions, a study was conducted in an attempt to test some of the revisions proposed in this paper. The design of the study was a  $2 \times 2 \times 2$  factorial with three manipulated variables: 1) Type of Self-Awareness, 2) Magnitude of Self-Awareness, and 3) Type of Feedback. Subjects were required to make a series of six perceptual judgments (practice trials) intended to generate a personal standard. They were then provided with systematically varied bogus feedback concerning the relationship between their typical practice score (the personal standard), their actual performance on the bogus measure of perceptual logic (the real-self), and the level of performance they were expected to achieve based upon the computer's analysis of the practice trials (the social standard). Feedback was transmitted to subjects under conditions intended to promote high and low levels of public and private self-awareness. Subjects were randomly assigned to one of the following eight conditions: 1) low private self-awareness, surpassed social standard not personal standard, 2) high private self-awareness, surpassed social not personal standard, 3) low public self-awareness, surpassed social standard not personal standard, 4) high public self-awareness, surpassed social not personal standard, 5) low private self-awareness, surpassed personal not social standard, 6) high private self-awareness,

surpassed personal not social standard, 7) low public self-awareness, surpassed personal not social standard, and 8) high public self-awareness, surpassed personal not social standard.

It was proposed that the state of self-awareness may be either public or private and that the stimuli in one's environment play an important role in determining direction of attention. When publicly self-focused one's self-picture is dependent upon the perceived relationship between the real-self at the moment and the salient social-self standard. When privately self-focused, on the other hand, one's self-picture is said to be dependent upon the relationship between the real-self and the salient personal-self standard. The key to a better understanding of the self-awareness phenomenon and its consequences seems to rest upon a clearer conceptualization of this comparison to standard process, a process not easily demonstrated. That is, there is no simple method of linking internal processes such as "comparison to standard" to external or observable entities or responses; in effect, we must infer the process from the response. In the present study, this internal comparison is inferred from subjects' responses to several dependent measures (i.e., change in self-esteem, general satisfaction, specific satisfaction, approach-avoidance behavior, performance rating). For example, if a subject's level of self-esteem is found to increase when attention is self-directed, we can infer that she is focusing upon a positive discrepancy. A positive discrepancy is created when one's real-self has surpassed the salient standard. In this particular study two standards have been provided with experimental salience (that is, two standards are equally available for accessing): a personal standard and a social standard. Only one of these standards, however, has been

surpassed. It follows then that if self-esteem has increased, the subject is focusing upon a standard she has surpassed. In a similar vein, if self-esteem has decreased, the subject is focusing upon a negative discrepancy. In this instance we can infer that she is focusing upon a standard she has not surpassed. Thus, a three-way interaction between Type of Self-Awareness, Magnitude of Self-Awareness, and Type of Feedback was predicted. Specifically, private self-awareness was expected to promote attention to the private-self aspect and personal standards. If one has surpassed the salient standard the several dependent measures should increase, reflecting a positive discrepancy. If one has not surpassed the personal standard these same response measures should decrease, reflecting a negative discrepancy. In contrast, public self-awareness was expected to direct attention to the salient social-self standard. In this instance subjects should compare their real-self to the social standard. If they have surpassed this standard the several response measures should reflect a positive discrepancy. If they have not surpassed the social standard, however, response measures should indicate a negative discrepancy. The discrepancy perceived and the affect experienced was predicted to be more apparent in the high magnitude of self-awareness conditions compared to those conditions wherein it was low. In fact, because attention to standards was expected to be low in the low self-awareness conditions, the difference in self-evaluation in these cells, although similar to the pattern of responses expected in the high self-awareness cells, may not attain statistical significance.

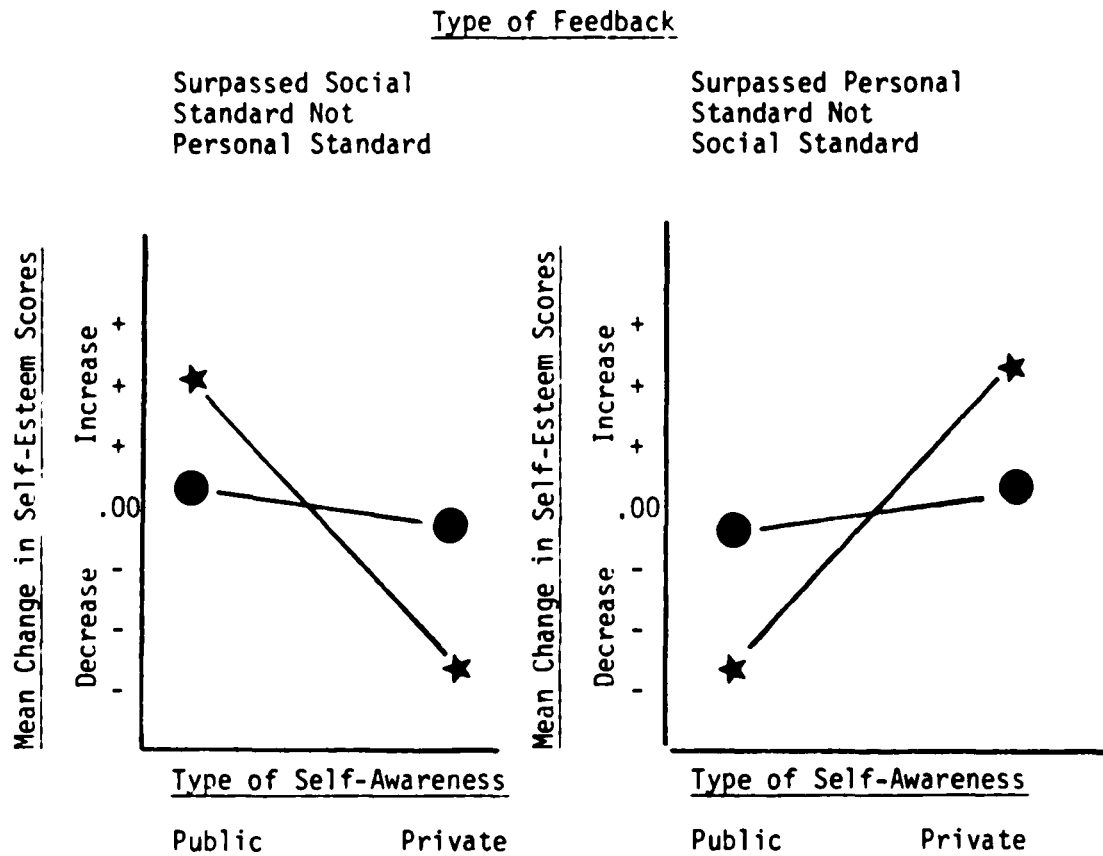
In light of evidence which suggests that self-evaluation is the outcome of attention that is self-focused and not the outcome of atten-

tion focused on the environment (Duval and Wicklund, 1972), the results obtained in the high self-awareness conditions are of particular interest. In fact, most of the revisions that have been offered in this paper involve the consequences of attention that is self-focused. For this reason the high self-awareness conditions will be examined in a separate simple effects analysis.

The clearest test of the proposition that private self-awareness focuses attention on personal standards and public self-awareness focuses attention on social standards would be to contrast those cells in which high public and high private self-awareness were manipulated and the relative position of the self-standards was held constant. In this comparison a Type of Feedback x Type of Self-Awareness interaction is predicted such that (a) when subjects have surpassed the social standard but not the personal standard, public self-awareness will create positive discrepancies and private self-awareness will create negative discrepancies, and (b) when subjects have surpassed the personal standard but not the social standard, public self-awareness will create negative discrepancies and private self-awareness will create positive discrepancies. Lastly, in a three-way analysis of variance only the third order interaction is expected to attain statistical significance; no main effects or second-order interactions are expected. The following figure represents the predicted interaction for the change in self-esteem measure.

Figure 1

The Predicted Mean Change in Self-Esteem Scores by Feedback Condition as a Function of Type of Self-Awareness and Magnitude of Self-Awareness



Note: ★ High Self-Awareness; ● Low Self-Awareness

PART I

THE THEORY OF OBJECTIVE SELF-AWARENESS:  
A REVIEW AND EXTENSION

## CHAPTER I

### THE REFLEXIVE SELF

It has been observed that whereas all animal life has consciousness, man alone has the ability to take himself as the object; is able to describe, evaluate, and respond to this object self. It was Cooley (1902), James (1910), and Mead (1934), who introduced and set the stage for thinking of the self as both the subject and object of one's thoughts. Cooley (1902), typically credited as the first symbolic interactionist, viewed the self as I, me, my and mine, and introduced the term "looking-glass self." An individual, according to Cooley, comes to know and understand himself by observing how others see him. One's self-concept is a reflection of one's perception of how one appears to others. James (1910) also viewed the self as reflexive:

Whatever I may be thinking of, I am always at the same time more or less aware of myself, of my personal existence. At the same time it is I who am aware, so that the total self of me, being as it were duplex, partly known and partly knower, partly object and partly subject, must have two aspects discriminated in it, of which for shortness we may call one the Me and the other the I. (p. 177)

Mead (1934) suggested, like Cooley, that the self-concept is a function of social interaction. It arises out of a concern about what others think of us. In order to react as one is supposed to react, the individual develops a picture of the "generalized other" and responds as this other would respond. According to Mead there are many selves. In fact, there are selves corresponding to all our social roles. He further suggested that not all others have an influence on the self: "the individ-



ual experiences himself as such, not directly, but only indirectly, from the particular standpoint of other individuals of the same social group, or from the generalized standpoint of the social group as a whole to which he belongs."

More recently Rosenberg (1979) has restated the concept of a reflexive-self: "...man alone can stand outside himself, describe himself, judge himself, condemn himself; man alone can feel pride, shame, guilt." It is this self, the self that is the object of its own attention, that the theory of self-awareness focuses upon.

The theory of self-awareness as formulated by Duval and Wicklund (1972) addresses itself to the nature of self-awareness, its determinants, and its consequences. According to the theory, consciousness is viewed as dichotomous, in that it can be directed either toward the self or the environment. Objective self-awareness is defined as the state of consciousness that is focused exclusively on the self. In this state the self is taken as the object. When consciousness is directed away from the self, toward the environment, a state of subjective self-awareness is said to exist.

Duval and Wicklund propose that awareness or attention at any given moment can be wholly directed toward the self or wholly directed toward the environment. The direction of attention is a function of the complex of stimuli present in the person's field at any given moment. These stimuli can be classified into two mutually exclusive and competing categories: stimuli which remind the person of his or her object status, and stimuli which serve to pull attention away from the self. The former class of stimuli lead to the objective state, whereas the latter lead to the subjective state, the more common state of awareness.

Although consciousness cannot be focused on both the self and the environment simultaneously, it can oscillate between the two states very quickly.

...we allowed that attention could oscillate, however rapidly, between the self and the nonself, and this allows one to speak in terms of 'increased' or 'decreased' objective self-awareness. An increase simply means an increment in the proportion of time spent in self-focus. (Wicklund, 1975, p. 234)

It seems rather well documented, both theoretically and empirically (Duval and Wicklund, 1972; Wicklund, 1975; Hass, 1979; Pennebaker and Lightner, 1980), that the self is indeed a reflexive entity and that attention shifts from self to environment. What is far from clear, however, is what this self reflects upon. What is this object self? Since the major focus of this paper is the process and outcome of self-evaluation--when and how people evaluate their worth--it seems entirely appropriate to begin with a definition of what is being evaluated.

#### What is This Object Self?

The idea that one should define concepts central to their particular research interests is more easily stated than accomplished. The fact is there are some who question whether or not the self actually exists. As late as 1961, Lowe, in his review of the mass of research which had examined the self within the preceding ten years, was still asking whether the self was a fact of nature or an artifact:

If something is measured does it exist? If the answer is yes, we must still be aware that we may not fully understand what we are measuring? (p. 327)

Again in 1973 Epstein began his review of the self-concept with the question "is there a need for a self-concept in psychology?" The answer to this question is still yes and no depending upon the school of psychology one's ideas fit best within. From the behaviorist viewpoint

the self is thought to be an artificial notion. As Epstein notes: "one can neither see a self-concept, nor touch it, and no one has succeeded yet in adequately defining it as a hypothetical construct."

Despite the obvious skepticism in the field, most theorists and researchers believe the concept of self is a necessary explanatory construct. The problem then becomes one of definition. Unfortunately, as Wylie (1974) points out, many psychologists bypass this necessary step:

Despite the relative lack of refinement and elaboration of purportedly scientific personality theories invoking self-referent constructs, it has recently become widely fashionable and acceptable to write about such hypothetical constructs as the self-concept and self-esteem without seriously attempting to define terms and without referring the assertions to any particular theory. In such writings many behavior influencing properties are attributed to the self-concept. (p. 316)

Fortunately or not there are many who do define the self. I say fortunately or not because, despite the immense interest in the area, there exists confusion and inconsistency regarding the definition of the self. Rosenberg (1979) accurately describes the state of the theory when he notes,

...we are as far as ever from agreeing on what it [self-concept] is, let alone on how to measure it. In fact, in a scientific field generally undistinguished by the precision of its terminology, the 'self' stands as a concept foremost in the ranks of confusion. (p. 5)

To say that this research area exudes chaos would not be an understatement.

### The Many Definitions of the Self

To realize the great interest in the self-concept is simply to note the variety of definitions it has been given and the vast number of philosophers, sociologists, and psychologists who, for at least the

past 80 years, have chosen to consider, theorize, and research the concept. If we consider Lowe's (1961) suggestion, perhaps we might conclude that the state of the art with regard to the self-concept is not in as much chaos as it would seem:

The task is not that of discovering the 'true self,' but instead of constructing those notions which increase understanding of human nature. Just as the number of inventions is potentially unlimited, so there need be no limit on the number of constructions put upon the self. (p. 333)

Lowe enumerates six different ways in which the self has been used in psychology: 1) the knowing self--its function is to know reality; 2) the self as motivator--here the person is believed to be motivated by self-assertion or self-realization; 3) the humanistic self--the self which experiences itself; 4) the self as organizer--this is the self as ego, the internal frame of reference; 5) the self as pacifier--this self is seen as an adjustment mechanism; and 6) the self as social agent--this view suggests that behavioral consistency is a function of environmental similarity. Lowe (1961) maintains:

From these different conceptions of the self, we can choose the one that best fits our theoretical frame of reference. But which conception is chosen seems to depend more upon faith than upon logic, and the choice of one conception must of necessity deny other constructs. (p. 334)

Whether one views this state as chaotic or the best of all impossible worlds, the fact remains that the self is very far from being a universally defined concept. The definition of the self theorists generally offer is a function of the school of psychology they represent and the specific area within that school they choose to investigate. Sociologists, for instance, emphasize the self as a social object (Cooley, 1902; Mead, 1934; Hilgard, 1949). Hilgard (1949) referred to an "inferred self" which was thought to be the product of interpersonal

influences. According to Hilgard "the self, as a social product, has full meaning only when expressed in social interaction." Clinical psychologists, on the other hand, appear to stress the personal or internal nature of the self and its function with reference to adjustment and healthy functioning (Horney, 1937, 1945, 1950; Maslow, 1954; Allport, 1955). Horney (1950), for instance, emphasizes the growth tendencies inherent in what she refers to as the "real-self." Maslow (1954) writes about "self-actualization." Allport (1955) refers to a "proprium:"

We not only know things, but we know (i.e., are acquainted with) the empirical features of our own proprium. It is I who have bodily sensations, I who recognize my self-identity from day to day; I who note and reflect upon my self-assertion, self-extension, my own rationalizations, as well as upon my interests and strivings. (pp. 31-32)

In direct contrast to the sociological and clinical views of the self are the cognitive psychologists who view the self as an information processing system. In fact, this view of self has become increasingly popular during the past few years. The emphasis for these investigators is the self as an organizing agent (Markus, 1977; Rogers, Kuiper and Kirker, 1977; Bandura, 1978; Carver, 1979; Carver and Scheier, 1981a). Markus (1977) refers to schemata, and suggests they represent cognitive generalizations about the self. Rogers, Kuiper and Kirker (1977) stress the "active agent" role of the self and define the self as,

...an abstract representation of past experience with personal data. Phenomenologically, it is a kind of vague idea about who the person thinks he or she is. It probably develops to help the person keep track of the vast amounts of self-relevant information encountered over a lifetime. (p. 677)

According to Rogers, et. al., one of the main functions of the self is

that of helping individuals process information.

The central aspect of self-reference is that the self acts as a background or setting against which incoming data are interpreted or coded. This process involves an interaction between the previous experience of the individual...and incoming material. (p. 678)

In a similar vein, Bandura (1978), a proponent of social learning theory, suggests that "...the self refers to cognitive structures that provide reference mechanisms and to a set of subfunctions for the perception, evaluation, and regulation of behavior." Also emphasizing the cognitive nature of the self is Carver (1979), who compares his model of social cognition to the cybernetic feedback unit referred to as TOTE. The TOTE unit is characterized by three mechanisms or operations which are activated in an orderly sequence. Similar to Duval and Wicklund's (1972) proposal, Carver suggests the existence of a dichotomy between self-focus and environmental-focus. When self-focused, attention can be directed toward internal perceptual events, one's present or past physical behavior, one's attitudes or "...encoded bits of information that have been gleaned from previous focus on the environment."

Lastly, there are a group of personality and social psychologists who combine the cognitive aspects of the self with an affective and motivational component (Lowe, 1961; Secord and Backman, 1965; Epstein, 1973; Rosenberg, 1979; Buss, 1980). Lowe (1961) views the self as an "...artifact which is invented to explain experience." From this perspective he defines the self which he believes to be the most useful:

Such a construction combines the self of ego-involvement with the self of feeling. It is a self which is existential not to experience itself, but to mediate encounter between the organism and what is beyond. (p. 334)

Secord and Backman (1965) define the self as consisting of a "...set of cognitions and feelings an individual holds toward himself." Similarly, Epstein (1973) suggests that the self-concept is simply a "self-theory." He contends that the self "...is a theory that the individual has constructed about himself as an experiencing, functioning individual, and it is part of a broader theory which he holds with respect to his entire range of significant experience." According to Epstein the self-theory has several functions: 1) to optimize the pleasure-pain balance over one's life; 2) to facilitate self-esteem maintenance; 3) to organize one's experiences in able to cope effectively. He further distinguishes between three subsystems of this empirical self: 1) the body self, 2) the inferred self, and 3) the moral self. The inferred self, he notes "...represents the bulk of the self-theory." It is the person's psychological self and includes "...cognitions, conscious and unconscious, that relate to his abilities, traits, wishes, fears and other motivational and emotional dispositions." And, Rosenberg (1979) refers to the self-concept as "...the totality of the individual's thoughts and feelings with reference to himself as an object." He defines the self as:

...an object of perception and reflection, including the emotional response to that perception and reflection. It is a product of 'self-objectification,' requiring the individual to stand outside himself as a detached object of observation. (p. 8)

In summary, some theorists stress the self as a social object (Cooley, 1902; Mead, 1934; Hilgard, 1949), whereas others emphasize its personal nature (Horney, 1950; Maslow, 1954; Allport, 1955). Some theorists focus upon its affective nature (Duval and Wicklund, 1972), others on its information processing or cognitive nature (Rogers,

Kuiper and Kirker, 1977; Bandura, 1978; Carver, 1979). Still others approach the self-concept in a broad enough fashion to encompass all of these foci (Secord and Backman, 1965; Epstein, 1973; Rosenberg, 1979; Buss, 1980).

### A New Self Definition

So now we are experts on what others mean when they refer to the self. To say that this only represents a sprinkling of the number of views on, and definitions of, the self would be nothing less than the most severe of understatement. Where does this leave the present author? Above all else this paper is about the self--its structure, process and behavioral effects. How can one predict anything about a concept, nonetheless how this concept comes into being, if agreement cannot be found as to what exactly it is? Having decided that none of the current definitions were entirely satisfactory, Lowe's (1961) suggestion was recalled, and a new definition offered for consideration.

Choosing to relate as much as possible to past theorizing on the self, the self herein described will be referred to as the "reflexive-self," and captures within its definition most characteristics attributed to the self in the past. The self is thought to be cognitive in that it can reflect; it is an affective self in that it can "feel" pride and shame; it is a personal self in that it is partly private; it is a social self in that other people can have an influence on its very composition and temporary fluctuations; and, it is an evaluative self in that self-reflection automatically engages self-questioning and evaluation.



### The Multilevel Study of the Self

Having broadly defined the self in the previous section, a second issue relating to the self raises its head. Now that we have outlined its basic parameters, how shall we study it? One can examine and investigate the self at three distinct but overlapping levels. One can concentrate upon its structure--its components so to speak. At a second level we can examine the self as process--how we come to understand and evaluate our self. At yet a third level we ask questions pertaining to the relationship between self and behavior. I am of the opinion that one must first gain an understanding of the first level--the structure of self--before one can begin to grasp the intricacies found at the second and third levels. In light of this belief, the structure of the self as envisioned by this author will first be offered for consideration. In later chapters the second and third levels of analysis will be examined.

### The Structure of the Self

The reflexive-self is a cognitive structure which reflects the individual's picture of himself or herself. In attempting to be more specific we can further distinguish between two components of the reflexive-self: 1) the real-self, and 2) the concept of self. When a person reflects upon some aspect of the self--some self-dimension--what is it that he or she envisions? It is herein proposed that an individual can usually distinguish between two points; one point representing the real-self and the other point the concept of self. It should be noted that one point is not necessarily higher or lower than the other point and, in fact, the two components of the reflexive-self may coincide.

### The real-self

The real-self is that point on the self-dimension the person believes he or she momentarily occupies. For instance, on the self-dimension of physical attractiveness a woman can, at any given moment, look at her reflection and take note of her appearance. The real-self is, in a sense, a matter of fact (although a highly subjective fact at that). On the self-dimension of intelligence a student may allow that a single test grade momentarily represent his or her real-self. The real-self may be flexible or not depending upon the self-dimension focused upon. Physical attractiveness is an example of a self-dimension upon which the real-self may vary a great deal from situation to situation; race lies at the other extreme, in that it is highly stable.

### The concept of self

The concept of self, also a point on the self-dimension under scrutiny, exists on two planes. Which plane will be focused upon is dependent upon both individual dispositional tendencies and factors within the immediate situation. That this concept of self exists on different planes was first suggested by Turner (1968) and is supported by the similar observation of several recent investigators in the area of self-focused attention (Fenigstein, Scheier and Buss, 1975; Buss, 1980; Scheier and Carver, 1981; Froming, Walker and Lopyan, in press). Turner (1968) noted the existence of "two sorts of self-as-object." One self-as-object is highly situational, whereas the other reputedly has a more enduring quality. According to Turner the former represents "...passing images of self arising and changing in every relationship the individual enters." The latter, he suggests, is an

"...often more vague but much more vital sense of self as the real and lasting 'I-myself.' " He refers to the situation specific self as the "self-image" and the enduring self as the "self-conception." The two planes of the concept of self envisioned by the present author are conceptually similar to the two sorts of self-as-object Turner speaks of.

The two planes of the concept of self are referred to in the pages of this paper as the private concept of self and the public concept of self. Attention directed toward each of these distinct selves leads to quite different self-pictures, different self-evaluative responses, and different behavioral consequences. At any given moment the concept of self might be primarily public or primarily private. Rosenberg (1979) also comments on this distinction and notes, "...the self-concept may consist primarily of a social exterior or a psychological interior." Turner's (1968) description of the "self-conception" is also similar to the private concept of self. He describes one's self-conception as being relatively resistant to change, as exhibiting "...a strain toward coherency, and is felt as inescapable fact by the individual." The private concept of self can only be experienced by the individual and includes points of reference regarding one's abilities, personality traits, attitudes and various other self-related dimensions. The private concept of self is essentially one's knowledge about who he or she is based upon past experiences and ongoing relationships. A person's concept of self on the trait dimension of intelligence, for example, is a product of a lifetime of experiences and reinforcements. It is created, occasionally reviewed, and perhaps amended upward or downward. For all practical purposes the points of

reference making up the private concept of self can be thought of as being part of a very solid foundation. The points can change but the process is a slow one.

The private-self aspect, as it will be referred to in the remainder of this paper, is defined as being comprised of two reference points: the real-self and a point on the private concept of self. When one focuses upon the private-self aspect, a comparison between one's real-self and one's private concept of self ensues.

The public concept of self, like the private concept of self, can only be experienced by the individual. It is based upon the beliefs the individual momentarily holds concerning his or her observable features (the most obvious such features being one's physical appearance and social behavior) or unobservable attributes. It is simply the manner in which the person believes he or she is coming across to others. This is in direct contrast to Buss (1980) who suggests that one's public-self only includes observable features, "...the externals of appearance and behavior that are open to inspection." Unlike the private concept of self, the public concept of self is relatively unstable. It is defined by the situation one is momentarily confronting. As the situation changes, so does one's public concept of self. Turner's (1968) description of the "self-image" corresponds closely to the concept of self herein defined:

The self-image may change from moment to moment. There may indeed be multiple self-images simultaneously in effect, when the individual is aware that his behavior at a given moment looks different to his son, his mother, and his wife. (p. 94)

The public-self aspect, like the private-self aspect, is defined as consisting of two points: the real-self and a reference point on the public concept of self.

## CHAPTER II

### THE CONDITIONS LEADING TO OBJECTIVE SELF-AWARENESS

According to Duval and Wicklund (1972) subjective self-awareness is the primary state. "In order that the person become objectively self-aware, it is necessary to create conditions that remind him of his status as an object in the world." Which dimension will become salient [on this undifferentiated-self] is a function of prior experience with another person, the chronic importance of certain dimensions, or the situational context. Among the numerous stimuli which have been employed to create self-awareness in the laboratory are mirrors (Wicklund and Duval, 1971; Duval and Wicklund, 1972; Carver, 1974, 1975; Buss and Scheier, 1976; Scheier and Carver, 1977; Gibbons, 1978), tape recordings (Wicklund and Duval, 1971; Duval and Wicklund, 1972; Ickes, Wicklund and Ferris, 1973), TV cameras (Davis and Brock, 1975, Wicklund, 1975; Duval, 1976; Geller and Shaver, 1976), and other individuals (Carver and Scheier, 1978; Brockner and Hulton, 1978; Froming and Walker, in press; Froming, Walker and Lopyan, in press). In addition, the individual's own unique or distinctive behavior is believed to heighten self-awareness (Storms and McCaul, 1976).

The great majority of studies within the area of self-focused attention have employed a mirror to manipulate focus of attention. According to Wicklund (1975), "the mirror does more than stimulate attention toward one's face, for as soon as the face, or any other reflection of the self, receives attention, attention will then shift to

whatever self related dimension is most salient." This is in contrast to a recent revision of the theory formulated by Buss (1980). Buss suggests that a mirror, especially a large three-sided mirror, focuses attention upon one's observable physical characteristics and behaviors, and not upon some other non-observable characteristic or self-dimension. [This particular aspect of the theory will be explored further in Part II of this paper.]

One of the earlier criticisms of self-awareness theory addressed the question of the validity of the stimuli used to enhance self-focus. As Carver and Scheier (1978) pointed out "what evidence is there to indicate that a camera or mirror actually does lead to increased awareness of self?" In an attempt to validate the mirror manipulation of self-awareness, they tested the hypothesis that the presence of a mirror would increase the number of self-focus sentence completions on the Exner (1973) Self-Focus Sentence Completion Blank (SFSC). This measure, originally designed as a measure of egocentricity, consists of 30 sentence completions; the responses are scored as indicative of self-focus, external world focus, ambivalent response, or none of these foci. Presence or absence of a mirror and high and low self-consciousness, as measured by the Self-Consciousness Scale (Fenigstein, Scheier and Buss, 1975), served as the independent variables. Carver and Scheier found that mirror presence led to significantly more self-focus responses than did the absence of a mirror. Carver and Scheier also examined the effects of an audience on self-focused attention. Although the realization of others in the immediate environment is not a direct reflection of oneself, such as a mirror would provide, awareness of others' attention upon some aspect of the self is believed to heighten self-

focus. Once again more self-focus sentence completions were made by subjects in the presence of an audience than by those who were alone.

Another category of stimuli capable of engaging the self-aware state are those characteristics of individuals which make them stand out or appear unique to themselves on a particular self-dimension; some characteristic of the individual acts as a fairly constant reminder of his or her object status. As with other self-focusing stimuli, theorists maintain that the individual tends to make self-evaluations which, in most instances, are negative, leading to feelings of inadequacy and loss of control (Storms and McCaul, 1976). Although this class of stimuli has been less well researched than many others mentioned, exacerbation theory seems to address this issue. Storms and McCaul suggest that behaviors which characterize exacerbation cycles may initiate a state of self-awareness.

Insomnia, stuttering, or sexual impotence, for example, are unusual behaviors both in terms of their general infrequency in the population, and perhaps in terms of their infrequency in the past life of the individual himself. This perceived distinctiveness, whether real or not, should produce objective self-awareness. (p. 149)

To this point we have examined those manipulations most often employed in the laboratory: mirrors, TV cameras, and audiences. Recent research has sought to extend the type of self-focusing stimuli capable of eliciting self-awareness and a distinction has recently been proposed between internal and external stimuli. Fenigstein and Carver (1978), for example, sought to include indicators of autonomic arousal among these stimuli. They reasoned that "the throb of a nagging pain or the pounding heart or flushed face that are characteristic of a strong emotion would seem to be examples of internal stimuli that draw

the attention of the person who is experiencing them." They found that hearing one's own heartbeat led subjects to make significantly more self-attributions than did hearing irrelevant noise. It appears that the salience of an internal aspect of the self is as powerful an influence on self-awareness as are the external stimuli previously mentioned. More recent studies provide further support for this proposition. Wegner and Giuliano (1980) found that arousal (measured by heartbeat) induced self-focus. Moderate general arousal subjects inserted significantly more first person pronouns into five sentence completions than did low general arousal subjects. And, Pennebaker and Lightner (1980) report that increased attention to internal cues resulted in greater perceptions of fatigue.

#### The Differential Effects of Self-Focusing Stimuli

Duval and Wicklund (1972) propose that self-awareness might be generated by any stimulus in the surrounding environment that reminds the person of his or her object status in the world. These stimuli were largely believed to have an equivalent effect, the effect being self-focused attention. The study most often referred to in support of this equivalence was conducted by Scheier, Fenigstein and Buss (1974). In two studies male subjects were required to act as teachers in a learning paradigm which required that they administer shock to a female confederate learner. As predicted the introduction of a mirror as well as an audience led to decreased levels of shock. Scheier, et. al. concluded that these two manipulations had an equivalent effect upon behavior. A closer examination of this study, however, suggests that the results were due, not to the equivalence of the two manipulations but, to the



equivalence of the standards which they made salient. The personal standard these male teacher-subjects held probably dictated non-aggressiveness toward women. When self-awareness was created by means of a mirror, attention was focused upon a personal standard of non-aggressiveness. If we define the social standard as the subject's perception of what others in the situation are likely to think about aggression against women, we can see that this standard, too, probably dictated non-aggressiveness. Even if one were inclined to aggress in this type of situation, one would hardly do so in the presence of an audience maintaining, as they were instructed to do, frequent eye contact.

Recent research in this area has suggested that the various manipulations may differ in the psychological states they initiate. It has been proposed by some that mirrors are likely to promote attention to the private-self aspect and bring personal standards into focus; audiences, TV cameras, and voice recordings, on the other hand, are likely to make a person cognizant of himself or herself as a social object, and bring social standards to the forefront of attention (Buss, 1980; Scheier and Carver, 1980a; Froming and Walker, in press; Froming, Walker and Lopyan, in press). When a person's attention is focused upon the private-self, self-evaluation should be based upon a comparison of one's real-self with the salient personal-self standard. When a person's awareness of self as a social object is focused upon, there should be a concomitant increase in concern with what others are thinking, and the comparison should be between one's real-self and the salient social-self standard.

A review of the self-awareness literature reveals that the great

majority of studies in this area have employed a mixture of self-focusing stimuli. Some investigators, in an effort to create higher levels of self-awareness, and believing that the various stimuli have an additive effect on the state, have employed more than one type of stimulus in a single condition (Duval and Wicklund, 1972; Diener and Wallbom, 1976). The most often used combinations reported in the literature are the use of a mirror and TV camera (Geller and Shaver, 1976; Brockner, 1979a, Exp. 1) and the use of a mirror coupled with an audience (Liebling and Shaver, 1973; Scheier, Fenigstein and Buss, 1974; Innes and Young, 1975; Davis and Brock, 1975, Exp. 1; Brockner and Hulton, 1978). And, several studies, ostensibly employing a single manipulation (usually a mirror), have unintentionally confounded this private manipulation with a public self-focusing manipulation in the form of an experimenter present throughout the experimental procedure. In some instances the experimenter could be seen taking notes, in others he could be observed through a clear observation window, and in still others, he was simply present within the experimental setting (Innes and Young, 1975; Buss and Scheier, 1976; Brockner and Hulton, 1978; Brockner, 1979a, 1979b; Fenigstein, 1979; Scheier and Carver, 1980a; Scheier, Carver and Gibbons, in press; Brockner and Wallnau, in press). In all of these studies the experimenter may have played an unintended role in the self-awareness process: the role of an evaluative audience. Shrauger and Schoeneman (1979) comment on just this type of situation in their review of the effects of feedback on self-evaluation.

The factors that most limit the interpretation of these manipulated feedback studies are the demand characteristics of the situation in which changes in self-perception are assessed. Invariably the appraisal of changes in self-

evaluation was made in the presence of an evaluator or experimenter. (p. 564)

#### Recent Revisions

Three recent studies provide compelling evidence for both the differential effects of self-focusing stimuli and the distinction being made between public and private self-aspects (Scheier and Carver, 1980a; Froming and Walker, in press; Froming, Walker and Lopyan, in press). These three studies will be reviewed in depth because they alone, to the best of this author's knowledge, allowed for the controlled manipulation of public and private self-awareness.

The first study to examine the public-private distinction between self-aspects and their relationship to self-awareness manipulations was conducted by Scheier and Carver (1980a). In two studies these investigators examined the relationship between state self-awareness and dissonance theory. In the typical dissonance study a discrepancy is created between a subject's pre-existing attitude and the subsequent performance of a behavior relative to that attitude. The theory maintains that the individual will attempt to reduce the perceived discrepancy by altering his or her original attitude or the perception of his or her behavior. Which cognition will be altered in the service of tension reduction is, in part, a function of the strength of the salient cognitions. In effect, the less resistant element will change in the direction of the stronger element, thereby reducing the discrepancy. Previous dissonance studies, carried out under the auspices of objective self-awareness research, had indicated that when self-focused, individuals tend to bring their prior attitudes into line with their discrepant behaviors. Scheier and Carver suggested that this effect was due to the

timing of the self-awareness manipulation. Inducing self-awareness during the initial attitude measurement should strengthen that cognition's resistance to change resulting in an alteration of the cognitions pertaining to the counterattitudinal behavior; introducing the manipulation during the counterattitudinal behavior would make that cognition resistant to change, thereby increasing the likelihood of a shift in one's initial attitude.

In the first of two studies Scheier and Carver manipulated self-focus with the aid of a mirror. One's perceived choice in writing the counterattitudinal essay was also varied. They found a non-significant tendency ( $p < .07$ ) for subjects in the choice no-mirror condition to shift their attitudes more than the no choice subjects, which Scheier and Carver suggested established "...the existence of the normal dissonance effect." Choice-no mirror subjects (control) were also reported to differ from the two choice-mirror groups in the amount of attitude change exhibited, although in actuality only the post-measure mirror condition yielded a significant difference. In other words, the greatest attitude change was apparent in the low self-awareness group. Attitude change was minimal in the presence of a mirror, and the two mirror groups did not differ significantly from one another. The timing of the self-awareness manipulation was irrelevant, the effect was the same; prior attitudes were relatively resistant to change.

In an attempt to explain the failure of the resistance to change as a function of self-awareness hypothesis, Scheier and Carver brought to bear a line of reasoning that had, to this point in time, only been implicitly suggested in the self-consciousness literature; different self-focusing manipulations may direct attention to different self-

aspects. Specifically, they suggested that stimuli such as mirrors may draw attention to the private-self aspect; TV cameras and audiences, on the other hand, may cause people to focus on the public-self aspect. In order to test this assumption a second experiment was conducted in which four experimental groups were formed: 1) no choice-control, 2) choice-control, 3) choice-mirror, and 4) choice-TV camera. As predicted, the TV camera facilitated counterattitudinal responses to a post-questionnaire, whereas the mirror inhibited this effect. TV camera subjects tended to reduce the discrepancy between their initial attitude and the counterattitudinal behavior by changing their prior attitudes. Those confronted with the mirror reduced the perceived discrepancy by perceiving their behavior as less counterattitudinal. The choice-mirror and the choice-TV camera groups differed significantly from one another. The choice-mirror and the choice-control, however, did not differ significantly. Scheier and Carver concluded:

We argued above that the cognitive element to which the person attended most would be the element most resistant to change. We further assumed that different self-awareness manipulations would render salient quite different cognitive elements. ...the overall pattern of results was quite consistent with our reasoning. (p. 398)

Scheier and Carver have indeed demonstrated the differential effects of the two manipulations. Their results, however, were not strong enough to conclude that the different elements became "resistant to change." The proposition advanced in the present paper is that the different self-awareness manipulations make different aspects of the self salient. Focusing upon the salient self-aspect brings either personal or social-self standards into perspective. [The issue of standards will be discussed in greater detail in the following chapter.] These standards

may not necessarily become more resistant to change but, rather, individuals may be more likely to take note of and react in accordance with these standards. The elements of the perceptual unit may not become resistant; individuals may simply be more "true" to that element or standard they are momentarily focused upon.

A second study supporting the non-equivalence of the various self-focusing manipulations was conducted by Froming and Walker (in press). Unlike the Scheier, Fenigstein and Buss (1974) study, in which subjects' public and private attitudes could be thought of as similar, Froming and Walker employed a situation in which one's personal and social attitudes were expected to differ. Specifically, they proposed that an audience would promote compliance because "public attitudes toward compliance may be thought of as an individual's expectancy about the probable attitudes of others in the conformity situation." The presence of a mirror, on the other hand, was expected to focus one's attention upon private attitudes. Due to the diversity of private attitudes held toward compliance, the mirror, they predicted, would not lead to conformity. As expected, the presence of an audience led to an increase in compliance, whereas the mirror led to a slight, but not significant, decrease in compliance when compared to the control group. The fact that there was no significant difference between the mirror and the control group can probably be explained by the fact that actual attitudes were not measured.

A second study conducted by Froming and Walker was essentially a replication of the first with one important difference; public as well as private attitudes toward the use of punishment were ascertained prior to the experimental manipulation. Froming and Walker identified people

who believed that "most other people" held attitudes differing from their own; the perceived public attitude was different than one's private attitude or the social standard differed from the personal standard. In support of the distinction between public and private aspects of the self and the differential effects of self-focusing manipulations, they found that subjects confronting a mirror administered lower shock intensities than did subjects in a control group. In effect, subjects facing a mirror appear to have relied upon their pre-existing attitudes. Those confronting an evaluative audience relied upon the public attitude they attributed to that audience. Once again there appears to be evidence which supports the notion that the different manipulations lead to different behavioral effects. More importantly, however, is the finding that these manipulations seem to make different self-aspects and standards salient. It would appear that the aspect of the self made salient and the standard focused upon is an important variable in determining whether one acts in accordance with prior attitudes.

The final study examining the differential effects of self-focusing stimuli was conducted by Froming, Walker and Lopyan (in press). Froming, et. al. obtained subjects' personal attitudes toward punishment as well as their perceptions as to how others felt about its use in the learning process. They hypothesized that mirrors would focus attention on the private-self aspect whereas audiences would focus attention on the public-self aspect and the prevailing societal expectation. Two experiments yielded results consistent with this prediction. Subjects in the first experiment opposed the use of punishment but believed others favored its use. Thus, these subjects held personal standards against punishment but believed the social standard was one that favored

its use. Consistent with the prediction that mirrors focus attention upon the private-self aspect, subjects confronting a mirror delivered significantly less shock in a learning paradigm than did subjects in a control group. Furthermore, the presence of an audience led to an increase in the amount of shock administered.

Subjects selected to participate in the second experiment favored the use of punishment but believed others opposed its use. Thus, these subjects held a personal standard in favor of punishment but defined the social standard as one that opposed its use. As predicted, subjects confronting a mirror delivered significantly more shock to a learner confederate than did those in a control group. When an audience was present, on the other hand, subjects delivered significantly less shock. This study further demonstrates the differential effects these manipulations appear to have upon the reported relationship between attitudes and behaviors.

Taken together the preceding three investigations (Scheier and Carver, 1980a; Froming and Walker, in press; Froming, Walker and Lopyan, in press) demonstrate that the attitude-behavior relationship is in great part a function of which self-aspect is focused upon and which standard is made salient. When the private-self is focused upon it seems that personal attitudes take precedence, the effect being consistency between internalized attitudes and behaviors. When the public-self aspect is focused upon societal expectations become the salient element in the perceptual unit, the effect being inconsistency between internalized attitudes and behaviors but consistency between societal expectations and behaviors.



## CHAPTER III

### THE ISSUE OF STANDARDS

It has been demonstrated that self-awareness leads to an increased focus on the self or self-referencing (Davis and Brock, 1975; Geller and Shaver, 1976; Carver and Scheier, 1978; Hass, 1979). But exactly what is being referenced? According to self-awareness theory the self is compared, on whatever dimension is most salient at the moment, with an internal standard of correctness.

The notion of self-evaluation with reference to some standard is not a new idea. Long ago James (1910) noted that people compare themselves with an internalized "ideal judge." Pettigrew (1967) wrote about "referent individuals" and "reference groups." More recently researchers have suggested that individuals may have a variety of standards they can access in the service of self-evaluation. Rosenberg (1979) refers to an "idealized image," a "committed image," and a "moral image." He suggests that "without undergoing the slightest physical transformation, we are metamorphosed from the weakest to the strongest person simply by shifting our basis for comparison." Turner's (1968) description of the self-concept contains a highly select organization of evaluative standards, including what the individual is like at his or her highest level, what he or she is striving toward, and what he or she potentially could be. He defines the self-conception as a "vitally felt idea of what I am like in my best moments, of what I am striving toward and have some encouragement to believe I may actually

achieve, or of what I can do when the situation supplies incentive for unqualified effort."

Self-awareness theory conceptualizes self-evaluation as a comparison between one's own standing on a salient self-dimension and a "standard of correctness" on that self-dimension. To date there are conceptual difficulties relating to the definition and the source of this standard. Research has indicated that the standard may correspond to an ideal-self (Ickes, Wicklund and Ferris, 1973), it may arise from perceptions of normative behavior (Duval and Wicklund, 1972), it may coincide with an expert's opinion (Carver, 1974), or it may arise from the person's categorization of the impinging situation (Scheier, 1980, personal communication). Duval and Wicklund (1972), for instance, suggest that this standard represents an ideal: "a person might carry around a model of a perfect square, which he has probably seen on occasion, or he might carry around a conception of the perfect woman, for which he has no basis in physical reality." Ickes, Wicklund and Ferris (1973) also refer to this standard in terms of one's aspirations or ideals. They note that "since self-evaluation can be conceptualized as a comparison of one's present condition on any dimension with his aspiration in regard to that dimension, it follows that objective self-awareness will lead the individual to notice real-ideal discrepancies...." What seems painfully apparent in the literature is the lack of consensus which exists as to what is being compared to what in the self-evaluation process posited by self-awareness theory. The question thus remains, what exactly is a standard?

The Unlikelihood of the Self-Ideal Comparison

Before an attempt is made to delineate what is being compared to what in the self-evaluation process, it might prove to be more expedient to first determine what is probably not being compared. The position taken in this paper is that ideal-self standards are not usually referenced for the purpose of self-evaluation. The basis for this assumption comes largely from the psychoanalytic and personality literatures. The favorability of an individual's self-picture is widely held to be an important determinant of positive psychological functioning (Shrauger and Terbovic, 1976). Researchers and theorists in these disciplines suggest that self-ideal comparisons are an unhealthy way of determining one's value as a person (Horney, 1945, 1950; Rogers, 1950; Turner, 1968; Menaker, 1977). Horney (1945), for instance, suggests the neurotic replaces the real-self with an ideal, the result being self-hatred. The ideal-self, according to Horney, becomes the standard against which one's real-self, or actual being, is measured and "...the actual being is such an embarrassing sight when viewed from the perspective of a godlike perfection that he cannot but despise it." In reference to alienation and neurosis Horney distinguishes between a real-self and something resembling a moral-self. She describes alienation as a move away from the real-self. The neurotic, she maintains, desires to mold himself into something he is not. "He feels what he should feel, wishes what he should wish, likes what he should like."

In a similar vein, Rogers (1950) indicates that successful adjustment is due, in part, to the acceptance of realistic standards. He suggests that through successful therapy the client changes in three general ways:

He perceives himself as a more adequate person...He permits more experiential data to enter awareness, and thus achieves a more realistic appraisal of himself, his relationships, and his environment. He tends to place the basis of standards within himself, recognizing that the 'goodness' or 'badness' of any experience or perceptual object is not something inherent in that object, but is a value placed on it by himself. (p. 437)

He further suggests that as the client begins to accept his self, he tends to "...perceive his standards as being based upon his own experience, rather than on the attitudes and desires of others."

Turner (1968) also indicates that an acceptance of ideals as one's measure of worth leads to pathology:

No doubt the persistence of childhood confusion between ideal and actuality, so that the ideals solidify into an ideal self which makes it impossible for the individual to come to terms with reality while retaining self-respect, is a component of some personality pathologies. But a crucial part of normal development is the fading away of any pure ideal picture of the self, and emergence of focal importance of the reality-edited self-conception. (p. 98)

Rosenberg (1979) too comments on the unlikelihood of the self-ideal comparison. He points out that "were each of us to judge himself by the standards of the idealized image, feelings of inadequacy would be universal." Thus, it is not that the ideal-self has no place in self-evaluation but, rather, it is not the most common standard one employs. Rosenberg (1979) suggests that we can all imagine an ideal, but its excessive use as a standard of self-worth is a symptom of neurosis.

Every human being has the gift and curse of imagination, the uniquely human power to imagine himself as other than he is. What differentiates the neurotic from the normal, then, is not the creation of an idealized image but the pathological consequences of neurotic idealization. (p. 40)

Furthermore, there is some question in the area of self-concept research as to whether real-ideal measures actually reflect one's self-

picture. Wylie (1974) suggests:

The most seriously and frequently occurring scoring difficulties in the area of self-concept research seem to be those associated with two-part indices, for example self-ideal discrepancies supposedly indicative of self-regard....Such two-part indices have been widely used without sufficient prior exploration of questions which are highly pertinent to their possible interpretation in terms of the construct which they purport to index. (pp. 88-89)

What all these theorists seem to agree upon is that self-ideal comparisons are an unhealthy mode of self-evaluation leading to feelings of dissatisfaction with self and, in the extreme, psychopathology. Surely people are more self-assured than the self-ideal comparison process would have us believe.

#### Is There But "One Truth?"

Self-awareness theory requires revision. It appears that past formulations have placed an unwarranted degree of importance on ideal standards. Self-awareness may not necessarily heighten the salience of ideals, may not lead to self-ideal comparisons, and may not necessarily lead to negative affect and the avoidance of self-referents. Self-dimensions are multifaceted, comprised of a variety of different standards, and the self-focused person may direct his or her attention to any of these standards, thereby altering the string of consequences posited to accompany the objective state. Scheier and Carver (1980a) comment on this very issue:

A reasonable criticism of previous work on self-focus is the seeming failure to devote much thought to the many differentiations within the 'self.' All acknowledge that the self is complex and multifaceted, but in making specific predictions, theorists have often avoided dealing with these complexities by assuming that certain aspects of the behavioral context will make some specific, predictable aspect of the self salient..., in some situations at least, several quite different self-aspects could easily be salient. (p. 404)

Noting the Existence of Personal  
and Social Standards

A redefinition of the standard of correctness employed in self-evaluation is herein proposed based upon a small amount of research and a great deal of speculation. In agreement with recent researchers in the field (Fenigstein, Scheier and Buss, 1975; Diener and Srull, 1979; Buss, 1980; Scheier and Carver, 1980a; Froming and Walker, in press; Froming, Walker and Lopyan, in press), two aspects of the self are proposed to exist: the private-self aspect and the public-self aspect. The standard that is accessed for the purpose of self-evaluation is, in part, a function of the self-aspect focused upon. When attention is focused on the private-self aspect one of several personal standards will become salient. When attention is focused on the public-self one of several possible social standards will become salient. In each instance the salient standard will be compared to the real-self. Buss (1980) offers an example of the distinction being made here between personal and social-self standards. Although Buss refers to standards as public and private, the present writer prefers to make a distinction between states of self-awareness, self-aspects, and the actual standards that are accessed in the process of self-evaluation. Self-aspects and states of self-awareness are referred to as public and private, whereas the corresponding standards are referred to as social and personal.

Another, perhaps obvious, example of a difference between public and private standards concerns honesty. When others are watching, most people do not cheat, even if there is no penalty for getting caught. They simply do not wish to be observed committing a dishonest act. But when no one is watching, as in the honor system for examinations, those who refrain from cheating do so because of private scruples - internal standards concerning one's own intrinsic honesty. (p. 105)

### Personal Standards

Most researchers and theorists will agree that standards are crucial to the self-evaluation process; there can be no evaluation without a standard. Bandura (1978) maintains:

Simply observing variations in one's performance yields some relevant information, but such data, in themselves, do not provide any basis for personal reactions. Behavior produces self-reactions through a judgmental function that includes several subsidiary processes. Whether a given performance will be regarded as commendable or dissatisfying depends upon the personal standards against which it is evaluated. (p. 349)

Rosenberg (1979) also comments on the importance of standards and notes, "no one can see himself as bad or good, admirable or contemptible, except with reference to the standards he has set for himself." In spite of the importance of personal standards, research which adequately defines and examines this construct is rare. In an attempt to rectify this situation, a definition of the personal standard accessed when attention is focused on the private-self aspect is provided for consideration.

Much as the real-self can be defined as what "is," a personal standard can be defined as what "should be." Furthermore, an individual has a variety of "should-be's" or personal standards for each self-dimension of some importance to his or her self-picture. One's personal standard at a particular moment may be defined in terms of one's typical standing on the self-dimension focused upon, one's "typical-self;" it may be defined in terms of the average of a relevant social group, one's "referent-self;" in terms of an aspiration level, one's "committed-self;" or in terms of one's ideal, one's "ideal-self."

The typical-self is based upon one's personal past experience on a given self-dimension and corresponds to the comparison standard Thibaut and Kelley (1959) refer to when they suggest people evaluate

themselves according to their own past performance. It is similar to the "extant self" standard Rosenberg (1979) refers to when he notes "...it is undeniably the case that people do draw conclusions about how smart, kind, generous, or musically talented they are in considerable part on the basis of observing their own actions and it's outcomes." It is the "self-standard" subjects in the Diener and Srull (1979) study were required to estimate. And, it is the standard Bandura (1978) refers to when he notes "one's previous behavior is continuously used as the reference against which ongoing performance is judged." Although the typical-self is amenable to change, at any given moment a standard does exist against which one's real-self may be judged. The dimension of physical attractiveness can be used to illustrate and clarify the characteristics of the typical-self. The typical-self on the physical attractiveness dimension is simply how the person perceives himself or herself as usually appearing; what he or she typically looks like from day to day. Unlike many other basic self-dimensions, the physical attractiveness dimension tends to be somewhat flexible. In addition to broad changes caused, in part, by the aging process, the typical-self on this dimension is also subject to short term fluctuations. One's usual appearance when one wakes in the morning is probably different than one's appearance when one goes out for the evening. These short term changes in the typical-self can even be due to periodic changes in one's hair style or hair color. Upon gazing in a mirror, it is not uncommon for people to note that they look better or worse than usual. Carver and Scheier (1981b) offer a similar example of what is herein being referred to as the typical-self standard:

Most people have a mental representation of how they ought to



look in the morning as they leave for work. This representation is a composite of cultural norms and people's memories of what they typically look like (i.e., most people do not expect to leave for work looking like Cary Grant or Sophia Loren). Further, it is not unusual for people to check on their appearance before leaving, by looking in a mirror. In so doing, one observes one's reflected image (input function) and compares it to the stored representation. (pp. 110-111)

In a similar vein, one might perceive his or her performance on a test to be better or worse than usual. As another example, a baseball player being interviewed on the evening news was heard to comment "I know that I'm a better player than I showed today." Everybody, in other words, has a sense of the usual. All these examples point to a comparison standard that is not beyond one's reach, a standard representing a person's most typical position on the self-dimension under examination, a typical-self standard.

Although the typical-self is assumed to be the personal-self standard most commonly accessed, some aspect of the situation one is confronted with can render another personal-self standard salient. For instance, the person may focus upon the ideal-self standard. The ideal-self is that self the person would most like to be, whether it is realistically attainable or not. It is the "godlike perfection" Horney (1945) speaks of. And, it is that picture of self so often referred to and made salient in objective self-awareness research.

Some individuals probably employ the ideal-self standard across situations. These are the people who always seem to feel inferior. People with very low levels of self-esteem probably employ this standard when attention is focused on the private-self aspect. Other individuals may occasionally access this standard. In instances such as this the ideal-self is probably brought to the forefront of awareness by some aspect of the immediately impinging situation. The mass media is cer-

tainly capable of eliciting this standard. We are often confronted with those labeled as the most brilliant, most beautiful, most wealthy, most capable. Certainly we come into contact with people in all areas that possess abilities that far exceed our own and, in fact, that may represent our very own self-ideals. In the field of sports we find the strongest, the fastest, the most muscular; in the field of entertainment we are confronted with the funniest, the most talented, the most fluent, the wittiest. In summary, the mass media can quite easily bring forth an ideal-self standard, should a particular self-dimension become momentarily salient. But again, the ideal-self must be made apparent. The more common response to attention focused on the private-self is a comparison between one's real-self and one's typical-self standard.

Another personal-self standard residing within the private-self aspect is the referent-self standard. This standard can be thought of as representing the average position of a significant reference person or reference group on the salient self-dimension. One may at times compare one's ability with that of a significant group or significant individual. For example, I quite often these days find myself comparing the ability I am demonstrating in the thinking about and writing of this paper (my real-self) with the ability of others who have preceded me in this endeavor (referent-self). At times I believe my real-self has exceeded this referent-self standard and I register delight. Unfortunately, at other times, the outcome of this comparison is less cheerful. As another example, I can examine the self-standards I possess with reference to religiosity. To be sure, this dimension is not central to my global feelings of worth. Yet, during high holy days my referent-self standard takes precedence over my typical-self standard. I have often

thought, at these times, that I might profit spiritually from behaving in a more traditionally religious manner as many of my friends and relatives seem to be doing. In effect, at these times, I fall short of this referent-self standard, and find myself engaging in religious activities in which I normally would not (e.g., attending services).

The final personal-self standard one can access in the service of self-evaluation is referred to as the committed-self standard and is similar to the standard known as one's level of aspiration. This standard represents the self-picture "...that we take seriously, not simply one that is pleasurable to contemplate (Rosenberg, 1979)." Rosenberg suggests that the reason people do not drown themselves in self-contempt "...is to be found in the fact that they compare their achievement with their committed, not their idealized, images - committed images which may well be within their reach." Buss (1980) also offers an example of this committed-self standard:

A golfer may play alone and try for a lower score than she has ever achieved. A dieter may try to slim down to a weight he finds desirable. These private norms concern only one person, and how well he or she meets them affects self-esteem.  
(pp. 122-123)

Once again, the typical-self standard is believed to be the standard most commonly accessed in the process of self-evaluation, but certain situations may trigger the appearance of the committed-self standard. New Year's Eve is certainly one such occasion; a person reflects upon their real-self and promises to better this self. In effect, the person is comparing his or her real-self on this day to a committed-self standard which he or she believes is or ought to be attainable.

### Social Standards

A basic premise of many, if not most, self theories is that the self-concept is in great part a reflection of others' views of oneself (Cooley, 1902; Mead, 1934; Argyle and Kendon, 1967; Vallacher, 1980). Vallacher (1980), for example, suggests "if you reflect on your physical attractiveness,...this is because other people in your past have evaluated you in terms of your looks, and you have adopted their criteria as your own." Argyle and Kendon (1967), in their review of social interaction, note: "one of the special features of social interaction is that interactors are open to observation by the others present and are concerned about the perceptions and attitudes that others have of them." In a similar vein, Fenigstein (1979) maintains, "...when we attend to ourselves in social situations, it is the social-self that is focused on."

Social standards, as defined in this paper, become salient when the public-self aspect is focused upon. The public-self aspect is similar to the private-self aspect in that several standards can be accessed. Unlike the private-self, however, the social standard accessed is a function of the surrounding context, and relies upon the social cues within this context for definition. In effect, the individual is inclined to see himself or herself through the eyes of those in his or her immediate environment (real, implied or imagined). In agreement with Feshbach (1978), the situation refers to "...the immediate social and physical environmental stimuli to which the organism responds and adapts." This position is in direct contrast to that of Duval and Wicklund (1972) who note: "...self awareness will have no motivational consequences due to discrepancies between the individual's present state and the standard of correctness imposed by others, unless, of course, the person adopts those

standards as his own." This "adoption" process is precisely what the present writer suggests transpires when attention is focused on the public-self aspect.

When attention is directed toward the public-self the individual adopts a standard which he or she believes is held by the significant others in the situation. In effect, the person sees himself as a social object and evaluates his self in accordance with the perceived external criterion. Buss (1980) suggests that when "...people are publicly self-focused they are concerned about how their appearance and behavior are interpreted by onlookers." The position taken in this paper is that people are concerned about their observable appearance and behaviors as well as nonapparent or unobservable self-attributes. There seems to be a second-guessing process going on, with the individual attempting to guess how he or she is being received or evaluated by those observing or interacting with him or her. This "best-guess" assumption is supported by Turner (1968), who has written about person conceptions and their relationship to the self-conception (a concept similar to what has been called the social standard in this paper).

Gesture interpretations are normally based in considerable part upon an idea or 'picture' of the gesturer. It is difficult to interpret a person's gestures confidently unless one knows something about him....Normally a gesture is perceived as the action of a particular kind of person. The kinds of response gestures and interpretations for which ego is prepared vary according to the kind of person he thinks the potential responder to be. (p. 96)

The self-evaluation process one is engaged in when attention is focused upon the public-self aspect is similar to what Secord and Backman (1965) refer to as the "interpersonal system." They describe this system or unit as "...an aspect of the self concept of an individ-

ual, his interpretation of his behavior relevant to that aspect, and his perception of how another person behaves toward him with respect to that aspect." Morse and Gergen (1970) also comment on the issue of social standards:

It also seems clear that people are often concerned with their personal attractiveness and general value as human beings. They may frequently compare themselves with others in their immediate environment...to judge their own personal worth. Thus, for example, to find oneself disheveled when those around are tastefully dressed may be humiliating. Or, for the typical student to discover that he has obtained the highest score in the class may boost his self-esteem. (p. 148)

And finally Buss (1980) writes about the relationship between social standards and self-evaluation:

Most standards are of course public; winning a tennis match, getting good grades, attaining a professional degree, winning an election....Success or failure is seen by others, and self-esteem is elevated or depressed by literal or metaphorical cheers or boos. (p. 123)

Whether personal or social standards are most often focused upon has not been established. In fact, the question has not, as yet, been experimentally addressed. The answer would seem to be at least partially dependent upon individual differences; both individual dispositional tendencies as well as the frequency with which one finds himself or herself in public versus private situations.

#### The Definition of the Social Standard

It has been proposed that when a person becomes publicly self-aware, a comparison is made between his or her real-self and the salient social standard. The question arises as to how one determines the definition of this standard. Unlike personal standards, which we carry with us across situations, social standards are, in large part, a function of the situation. I say in large part because the definition of

the social standard is provided by the individual; therefore, the qualities or attributes the person brings with him, and the unique manner in which he structures the world, are critical to this defining process. Rosenberg (1965) has noted that "the attitudes and feelings of others toward us are never available to us in immediate experience, but, rather, reach us through the sieve of our own perceptual mechanisms and defenses."

What is of particular importance with respect to our public concept of self is not the actual response of others' in the situation, but, rather, our perception of this response: our perception of the social standard. A person's self-evaluation, then, when publicly self-focused, is a function of what he imagines others think of him. You obviously can't "see" yourself from another's viewpoint, but you can infer their conception of you on the salient self-dimension from the social cues in the situation.

It seems that the construct of schema is useful here. Fiske and Linville (1980) refer to schemata as "reasonable guesses" where the available information is ambiguous or incomplete. In support of this idea Kahneman and Tversky (1973) have demonstrated that people can and do make predictions and evaluations about others on the basis of very sketchy information. Postulating an internal process such as the ability to define the social standard is not as unscientific as it might at first seem. Vallacher's (1980) equation of the self with a computer program, in fact, supports just this type of reasoning. She suggests:

If a computer, a mere hunk of metal, can operate on the basis of 'internal' programs, selectively encoding and systematically transforming raw data, then surely it is not unscientific to suggest that a human being can selectively encode and systematically transform environmental events in accordance with inter-

nal programs....Some of the more intriguing human 'programs' involve the selection and transformation of data concerning the self. (p. 4)

Pettigrew (1967) brought together relevant research in the areas of psychology and sociology in his formulation of self-evaluation theory. He postulated two basic tenets: the first, that "human beings learn about themselves by comparing themselves to others," and second, "the process of social evaluation leads to positive, neutral, or negative self-ratings which are relative to the standards set by the individuals employed for comparison." These assumptions or propositions laid down in 1967 certainly ring a familiar bell. The first tenet is again being proposed in the context of self-awareness theory in the form of a proposition regarding the definition of the social standard. The second tenet, the major focus of this paper, is only being slightly modified. Yes, evaluation against a social standard can lead to positive, negative or neutral self-evaluation, but, in the context of self-awareness theory the standards against which one evaluates himself are not necessarily set by those others in the situation; these standards are inferred, based upon the best guess of the publicly self-aware person.

It seems apparent that the characteristics the person brings into the situation, and the unique properties of the situation itself, including the others in that situation, have a profound influence on a person's feelings of self and behaviors related to these self-conceptions. This is by no means a new idea. Mead (1934) and Cooley (1902) emphasized the influence of the responses of others in shaping one's self-picture. Cooley's (1902) discussion of the looking-glass self notes this relationship. "A self-idea of this sort seems to have three principle elements: the imagination of our appearance to the other person; the imagination



of his judgment of that appearance, and some sort of self-feeling, such as pride or mortification." We imagine the self-picture we are relating, determine how this self is being judged, and experience the corresponding affect. If the self-picture we are relating is perceived by us to be evaluated positively, we feel good; if it seems that it is being evaluated negatively, we feel bad.

### The Accuracy of the Best Guess

It has been proposed that the social-self standard represents one's best guess as to how he or she is being perceived within a particular social context. The reason one has to guess at the impression one is conveying is that direct feedback is rare under everyday circumstances. Shrauger and Schoeneman (1979) comment on just this issue:

Although norms regarding the evaluation of other people's behavior probably vary widely across different subcultures and situations, strong sanctions are often maintained against making direct appraisals, particularly when they are negative....To understand the real impact of others' opinions, one must determine how frequently such opinions are communicated directly in people's everyday social interactions. Who gives evaluations? On what dimensions? Under what circumstances? How often and how explicitly? (pp. 565-566)

The notion that our self-picture is a function of our beliefs as to how we are perceived by significant others does not imply that this perception need be accurate. Research, in fact, has indicated that although one's picture of self is moderately to strongly associated with how one assumes others perceive them (Shrauger and Schoeneman, 1979), it is only weakly related to how others actually perceive them. And, how people believe others will perceive them is, once again, only weakly related with how others actually do perceive them. That it is the perception of, and not the actual response of others that influences

one's self-picture has been demonstrated by Miyamoto and Dornbush (1967). They report that an individual's perception of others' response is more closely related to one's self-conception than the other's actual attitude or response. Shrauger and Schoeneman (1979) also concluded that people do not accurately perceive others' opinions of them. And Edwards and Klockars (1981) concluded their recent study with the comment:

Without some kind of feedback from the others, individuals can form only vague impressions of how they are perceived by the others....If the individuals have no awareness of how others actually perceive them, they cannot be expected to predict these perceptions accurately. (p. 250)

The point is, the social standard perceived by the self-focused person need not be an accurate assessment of others' evaluation. Incorrect guesses are just as valid and provide just as much necessary information as do correct guesses. Both constitute the perceived social standard.

There are two factors which might have an influence upon the definition of the social standard, or upon its accurate assessment: the familiarity of others in the social context, or, to a lesser degree, one's similarity to them. It would appear that the greater the degree of familiarity with those in the situation, the greater will be the likelihood of an accurate assessment of their views. As noted previously, most studies to date have demonstrated that perceived others' self-evaluations are only weakly related to others' actual evaluations. One exception to this finding is reported by Edwards and Klockars (1981). They noted that most past studies had employed "significant others" that were a part of the subject's peer group. The inclusion in one's peer group, however, does not guarantee interaction or evaluative feedback between persons. Edwards and Klockars sampled married couples to insure that the others studied were, in fact, significant to the subject. They

found that in this case perceived and actual evaluations were significantly correlated.

In summary, it appears that people do seem to use their perception of what others think of them in developing a self-picture. In other words, they do seem to employ a social-self standard, or a reasonable guess, in the process of self-evaluation. This guess, however, is not usually correct. The fact that it is inaccurate, however, does not lessen its importance as a standard in the process of self-evaluation.

#### What is the Best Guess Based Upon?

It has been proposed that in public situations a person's reflexive-self or momentary picture of self is dependent upon the standard others possess on the salient self-dimension. The real-self is compared to the social-self standard, resulting in either positive or negative self-evaluation. The questions the person is faced with are: "How does this person see me?" "What does he expect?" "How am I measuring up?" The question that must now be addressed is how the person comes to answer these questions. What is the best-guess based upon?

Part of the answer as to how one defines the social standard lies in those characteristics the person brings with him into the situation. Shrauger and Schoeneman (1979) indicate:

Although it is likely that people differ in their interpretation of others' feedback, particularly if that feedback is not explicit, these differences have not been explored extensively. People may disagree about what cues from others constitute an evaluation. And even when cues have been identified people may differ in the inferences or conclusions they draw from these cues.... (p. 566)

Vallacher (1980) notes, "...the child becomes sensitive not just to the explicit evaluations of the self...but to the subtle evaluations conveyed by others' tone of voice, gestures, and causal comments." And,

the interpretation of these cues would seem to be highly dependent upon individual differences. One such individual difference variable would seem to be one's level of self-esteem. It was suggested previously that low self-esteem persons probably employ an ideal standard when attention is focused on the private concept of self. In a similar vein, it seems likely that these low self-esteem individuals would also employ a social standard which typically exceeded their own real-self on the salient self-dimension.

The person's preconceived stereotypes regarding both the situation and others within the situation are also, no doubt, important factors in the process of defining the social standard. The first question the person probably asks is "What type of other am I confronting?" To answer this question the person can first look to the obvious social categories (e.g., race, sex, occupation). Hamilton (1979) suggests this type of categorization "increases our ability to anticipate what a particular member of that group is like and how he is likely to behave." Categorization of this kind allows the self-aware person to make certain inferences about the person he or she is confronting, including how he or she is likely to be evaluated. Sex, age, race, occupation, and the type of clothing the other is wearing are all highly salient cues which are often used to predict who the person is, and what he is likely to be thinking. As people are categorized, certain schemata are probably brought to the forefront of awareness. This may result in the person realizing characteristics of the other that are not a part of the immediate stimulus field, including the other's probable placement on the salient self-dimension of the perceiver.

In summary, it seems reasonable to suggest that the definition

of the social-self standard involves a two-step process which is highly influenced by those characteristics we bring with us to the interaction. First the person is categorized; we apply what we know about similar people and similar situations. Next we determine the standard this particular category of people have been known to possess in the past on the salient self-dimension. Thus, if we meet a person in a particular social context, we can draw upon what we know of the situation, and/or what we know of this type of person in our determination of the social-self standard.

#### The Differences Between Objective Self-Awareness

##### Theory and Social Comparison Theory

In agreement with the position taken by Buss (1980) regarding the importance of others' views of oneself with respect to self-evaluation, it has been suggested that when attention is directed to the public-self aspect, social cues are critical in determining perceptions and feelings of individual worth. Some support for the significance of others comes from the literature on social comparison. Festinger (1954) believed that people have a constant need to evaluate themselves, both their abilities and their opinions. In the absence of objective measures the individual is said to compare himself or herself with significant others in the environment.

Although the greatest support for the existence of social-self standards comes from the social comparison literature, the comparison processes postulated are not equivalent. Social comparison theory suggests that one can evaluate one's abilities with reference to two standards: physical reality (e.g., climbing a mountain) or social reality

(i.e., comparison with other people). With reference to social reality, the theory further suggests that since the goal is accurate assessment, we choose to compare with similar others (Festinger, 1954; Radloff, 1966). There are two basic differences between social comparison theory and the present emphasis upon the importance of standards in the self-evaluation process.

The first difference between the two theories is simply that social comparison does not address itself to the issue of personal standards. In fact, Darley and Goethals (1980) suggest that "generally ability evaluation is social in nature in that people can only evaluate their own abilities by comparing them with the abilities of others." Quite obviously this is neither suggested by the theory of objective self-awareness nor by the present author. In contrast, it has been proposed that although others are employed in an effort to determine the social standard, others are not always necessary to the larger process of self-evaluation, as in the case of private self-awareness. Secondly, Festinger's theory of social comparison addresses itself largely to the question of how individuals choose comparison others from a pool of available others. He postulates a drive for self-evaluation of abilities and opinions. In most instances, he maintains, the drive can only be met by comparison with referent others. The central assumption of the theory is that people choose to compare with similar others. In contrast to this assumption, the present author has outlined a process whereby the person is not choosing to compare; self-evaluation is the automatic outcome of self-focused attention. In essence, the social standard against which the person evaluates his or her abilities and opinions is imposed rather than chosen.

Research Supporting the Distinction Between  
Personal and Social Standards

It has been proposed that private self-awareness initiates a self-evaluative process involving comparison to personal standards and that public self-awareness initiates a comparison to social standards. This proposition has gained some support from recent studies examining the differential effects of self-focusing stimuli on the relationship between attitudes and behavior (Froming and Walker, in press; Froming, Walker and Lopyan, in press). Research directly bearing upon the issue of personal and social standards and their relationship to a person's feelings of self-worth, however, is relatively scarce. In fact, Diener and Srull (1979) appear to be the only investigators to have examined this relationship. An earlier study by Ickes, Wicklund and Ferris (1973) explored the effect of self-awareness on self-esteem, but at that time little was known about the distinction between public and private self-focusing.

Although direct support for the personal-self standard/social-self standard distinction is scarce, studies can be cited which, if examined closely and reinterpreted in accordance with the state of the theory today, do provide some support for this notion. On the pages to follow research from within and outside the self-awareness literature will be critically reviewed in an effort to establish support for a single principle: self-awareness leads to a comparison of the real-self with the salient standard, and that standard saliency is, in large part, a function of the immediate situation.

### The Self-Evaluation Literature

Five studies which might be classified as self-evaluation studies, pertaining to the relationship between standards and self-evaluation, were found in the literature. Three of these studies examined the relationship between self-awareness and self-evaluation (Ickes, Wicklund and Ferris, 1973; Carver, cited in Wicklund, 1975; Diener and Srull, 1979). The remaining two studies come from areas outside self-awareness theory (Morse and Gergen, 1970; Seta and Hassan, 1980).

The first study in the self-awareness literature to examine the relationship between self-focused attention and self-evaluation was conducted by Ickes, Wicklund and Ferris (1973). The purpose of this study was to determine the effects of self-focusing upon an individual's self-esteem. Self-esteem was defined as being composed of "...the numerous discrepancies and absence of discrepancies on self-related dimensions." Having in this manner defined the construct, Ickes, et. al. predicted that self-focused attention would result in temporarily impaired esteem. They suggested that,

...the mere awareness of the self can lower self-esteem, and that new information or the presence of others for comparison is not crucial. It is only assumed that self-criticism, hence lowered self-evaluation, is engendered when attention is turned inward, hence, onto the self. (p. 204)

In the first experiment reported Ickes, et. al. required subjects to rate their ideal-self on 17 bipolar adjective scales. Shortly thereafter subjects were exposed to the self-awareness manipulation and were once again required to rate themselves, this time with reference to their real-self. As the theory would predict (Duval and Wicklund, 1972), self-focused attention increased the discrepancy between real-self and ideal-self ratings. This finding, however, does not necessarily verify



the assumption of comparison to ideals. When an individual is requested to identify his or her real-self and then ideal-self, it is implicitly being pointed out that one has not met this ideal. In effect, the ideal standard was provided artificial saliency. Had the ideal not been salient, subjects may have attended to other standards, and a decrease in self-esteem may not have been the outcome. Wicklund (1975) has commented on the extent to which the ideal has been made salient in most studies examining the relationship between self-awareness and self-esteem: "...subjects are asked to examine the extent to which they fall short of their aspirations on traits such as intelligence."

The second study reported by Ickes, et. al. required subjects to first report their real-self and then their ideal-self. It should be noted, however, that subjects were aware of the fact that they would be filling out this measure twice, once in reference to their real-self and again in reference to their ideal-self. Therefore, the ideal-self standard was again made salient within the situation. As might be expected, self-aware subjects experienced a decrease in self-esteem.

The third study reported by Ickes, et. al. appears to demonstrate a reliance upon what has herein been referred to as the referent-self standard. In this study subjects were provided with false feedback regarding the trait of "urgency." In the positive feedback condition subjects were told the following:

Oh, you made over 100 - almost 103. That's one of the best scores I've seen all week. Not many people score that high.  
(pp. 213-214)

Given this type of highly successful performance feedback, it is little wonder that these investigators found a significant positivity effect for self-awareness in the positive feedback condition. It would appear

that subjects compared their real-self to the salient referent-self standard, noted a positive discrepancy, and experienced positive affect.

A study conducted by Carver (cited in Wicklund, 1975) also supports the proposition that individuals will employ the most salient standard on the self-dimension focused upon. Carver substituted what he refers to as "low ideals" by marking several self-dimensions with an X in the middle purportedly representing the position of the average individual on that dimension. Both a mirror and a no-mirror group rated the real-self higher than this average standard, though this effect was significantly enhanced in the self-aware condition. Just as the ideal-self was made salient in the Ickes, et. al. study, the referent-self standard was made salient in this study. Few would argue with the assumption that most individuals believe they are above average on self-dimensions that are central to their self-concept (Rosenberg, 1979). The natural response would be to rate oneself as better than average which, in fact, all subjects in this study did.

A study conducted by Morse and Gergen (1970), if interpreted in accordance with the principles of self-awareness theory, lends support to the importance of social-self standards when the public aspect of self is focused upon. Half the subjects in this study encountered a socially desirable person (Mr. Clean) and half encountered a socially undesirable person (Mr. Dirty). Based upon the principles of social comparison theory these authors predicted that the former group would experience a decrease in self-esteem whereas the latter, those confronting Mr. Dirty, would experience an increase in self-esteem. Attention was also paid to the similarity between the subject and the accomplice--Mr. Dirty or Mr. Clean. Morse and Gergen predicted that

there would be a greater change in self-esteem, the greater the degree of difference between the two individuals.

Addressing the issue of similarity first, Morse and Gergen found that, contrary to their prediction, subjects rated as similar in appearance to the accomplice demonstrated an increase in self-esteem; those rated as dissimilar, however, underwent a decrease in self-esteem. They suggested the following to account for this unexpected finding:

When another is seen to be similar to self, he places a stamp of legitimacy on one's conduct or appearance. Interpersonal support of this sort may be particularly important in circumstances...in which public appraisal is highly salient. Encountering an individual whose characteristics differ from one's own may initiate a process of self-questioning and doubt. (p. 154)

Actually, this explanation comes quite close to the one offered in this paper. Similar subjects, confronted with another individual, an individual also seeking employment, were placed in a highly evaluative environment, an environment that might be seen as leading to self-focused attention. In this situation it would be quite natural to compare yourself with the other, as social comparison theory would predict. It is also highly likely that one would attempt to determine how he or she was being evaluated by this other. After all, these two people are in the "same boat:" both are seeking employment. Confronted with a similar other, the social standard would probably be guessed to be similar to one's real-self in this context; the real-self, the way the person is dressed and appears, has been rated to be very similar to that of the accomplice. And, the accomplice's appearance in this situation probably represents the social-self standard. At the very least, the subject probably feels he has met the requirements of dress. As Morse and Gergen suggest, his appearance has been legitimized, no doubt leading to

a positive self-feeling. In contrast, confronting a dissimilar other probably leads to a discrepancy on the self-dimension of appearance or dress; a discrepancy between one's real-self and the salient social-self standard. It would seem that, in this instance, there would be some doubt in the subject's mind as to what the appropriate dress requirements actually were. Subjects may have simply adopted the confederate's standard, the salient social-self standard. The subject, not meeting this requirement, may have experienced a negative discrepancy and, hence, lowered self-esteem. Interestingly, Duval and Wicklund also cite this study as one that supports their theory, but as supporting it in an entirely different manner.

The result [with respect to similarity/dissimilarity] makes perfectly good sense according to an analysis of deindividuation within the context of objective self-awareness theory.

....If a person blends completely into his background, he cannot stand out physically, and it follows that objective self awareness will be less frequent....If someone is in the presence of similar others, it is difficult for him to view himself as a distinct individual, relative to the case when he is surrounded by people radically different from himself....Extending this line of thought to the Morse-Gergen experiment, it is reasonable that the subjects in the presence of a dissimilar other were objectively self-aware a good part of the time - hence their lowered self-esteem, and it is also consistent that those who confronted a similar other were relatively less objectively self aware - thus higher self-esteem. (p. 28)

In contrast to this analysis, the research conducted since the time of this statement allows one to confidently suggest that all subjects in the Morse and Gergen study were publicly self-aware. These subjects, all applying for the same position in a competitive situation, could not have possibly thought of themselves as part of the woodwork; they could not have been subjectively self-aware. It is far more likely that they were actively seeking out similarities as well as differences so that their own appropriateness for the job could be more precisely

determined.

Setting aside the variable of similarity, Morse and Gergen also report that the presence of Mr. Clean produced a significant decrease in self-esteem; in contrast, Mr. Dirty produced an increase in self-esteem. Again we can employ the concept of the salient social-self standard. Mr. Clean may have represented a social standard higher than the subject's real-self, hence, lowered self-evaluation. Mr. Dirty, on the other hand, may have elicited a social standard lower than the subject's real-self, hence, positive self-evaluation.

In summary, this study lends indirect support to the suggestion that when publicly self-focused one's feelings of self-worth are a function of the salient social standard. A clearer test of this assumption would, of course, require a precise knowledge of how subjects actually did define the social standard.

A study by Seta and Hassan (1980 - Exp. I), although not examining self-awareness directly, also provides support for the proposed distinction between personal and social standards. These investigators sought to determine the effects of positive and negative feedback on performance in the presence and absence of an audience. In effect they varied self-awareness, since the presence of an audience is believed to engender the self-aware state. Seta and Hassan report a significant Audience x Feedback interaction. In the failure/low success condition subjects working alone performed better than those confronting an audience. In the success condition, on the other hand, performance did not differ as a function of audience presence. If we examine these results in accordance with the assumptions underlying self-awareness theory, it appears that some failure subjects experienced a negative discrepancy

and negative affect, and this affect seems to have influenced their performance. Specifically, a negative discrepancy was only experienced in the presence of an audience. The audience seems to have increased the salience of the social standard. When there was no audience present the discrepancy may have been less clear or, for that matter, nonexistent. This explanation is supported by the fact that actual performance was highest for the failure-alone group. Perhaps failure subjects, in general, were trying harder to improve their performance. Those working privately were able to achieve this goal. In contrast, the anxiety experienced by the audience group debilitated performance. The debilitating effects of working in front of an audience were also apparent in the success conditions where performance was reported to be worse in the presence of the audience (although not significantly), and also worse than the performance in the failure-alone group.

Seta and Hassan conducted a second study (1980 - Exp. II) in an attempt to determine whether the audience's awareness of subjects' prior success or failure had an influence upon performance. This study varied both feedback (positive and negative) and audience condition (alone, aware audience, unaware audience). Seta and Hassan found that failure subjects, working alone or in the presence of an aware audience, performed better than those working before an unaware audience. Success subjects, on the other hand, performed better in the presence of an unaware audience than in the presence of an aware audience. In the aware audience condition success subjects performed worse than failure subjects, although this effect was not significant. In the unaware condition this pattern of results was reversed. History of success-failure had no effect on the performance of subjects working alone. With reference to

subjects' expectations, Seta and Hassan report that the expectations of success for failure subjects were lower on Task 2 (47%) than the expectations of success for success subjects (65%). Failure subjects, in effect, expected to do worse than success subjects. It should be noted that failure subjects were told that they had performed in the 10th percentile, whereas success subjects were told that they had performed in the 90th percentile. Thus, failure subjects' expectations on Task 2 were higher, and success subjects' expectations were lower. Looking at these results from another direction, it can be seen that failure subjects expected to perform better on Task 2 than they did on Task 1. If we conceptualize their ranking on Task 1 as their typical-self standard, and their expectation on Task 2 as their real-self, we can see that a positive discrepancy exists for these subjects. There is also, however, a negative discrepancy since they expect to perform in the 47th percentile, which is below average (the social-self standard). In the aware audience condition, these two self-standards are available for referencing. In effect, the subject is expecting to surpass the personal-self standard but not the social-self standard. Interestingly, the result is relatively high performance. If we trace the process back one step, we might consider the possibility that surpassing the personal standard was producing sufficient positive affect to counter the negative affect produced by not surpassing the social standard. In the unaware audience condition, subjects expected to fall short of the social standard. Furthermore, this was the only standard the audience could be employing if they were to evaluate the subject. In this condition performance was reportedly the lowest.

With reference to the high success condition, the opposite effect was apparent. These subjects expected to surpass the social-self standard but not their previous performance which was purportedly at the 90th percentile. In terms of self-awareness theory, their previous performance might be considered their typical-self standard. In the aware audience condition performance was significantly worse than in the unaware audience condition.

It would appear that the individual does seem to put himself or herself in the place of the audience, and looks at his or her performance from their perspective. When there is only one standard against which to judge that performance, that standard is employed, and evaluation and affect follow accordingly. When there are two possible standards that might be referenced, it appears that one's personal standard may take precedence over the prevailing social standard. Compared to the alone condition, failure-aware audience subjects performed better and success-aware audience subjects performed worse. Subjects may have thought the audience would employ their performance on Task 1 as the standard against which to judge subsequent performance, rather than the average score. Seta and Hassan conclude:

...a subject's performance is differentially affected by aware and unaware audiences, presumably because performance can be judged according to different criteria. An aware audience subject can be judged relative to both a personal (his/her own prior performance) and a social (other individual's performance) criterion. But an unaware audience subject can only be judged socially (relative to other individual's accomplishment).  
(p. 75)

The Seta and Hassan study suggests that personal standards may take precedence over social standards when the two are operating within the same situation. The self as observer, perceiving both standards,



seems to place greater evaluative strength on the personal standard. When the self as observer sees but one standard, this is the standard against which he seems to evaluate his real-self.

The major premise of the present paper is that individuals will rely upon personal standards when attention is focused upon the private-self, and on social standards when attention is focused upon the public-self. This premise is contrary to the findings of a study recently conducted by Diener and Srull (1979) in which they concluded that self-awareness promotes attention to social standards for the purpose of self-evaluation. A closer examination of this study will demonstrate that the results obtained by Diener and Srull are not as diametrically opposed to this author's premise as one might initially believe.

Diener and Srull attempted to clarify the relationship between personal and social standards and self-evaluation. Subjects were required to make a series of perceptual judgments, each of which required that they estimate the number of dots that appeared on a screen, and determine the range of performance they would consider acceptable. After twelve slides had been presented, the experimenter proceeded to review the subject's performance with him. For each trial the subject was provided with three scores: 1) his or her own performance level on that slide (real-self), 2) his or her standard for success, and 3) a social standard for success. Self-awareness was manipulated by means of a TV image and a voice recording. Six feedback conditions were created by having subjects' performance (real-self) surpass one of the following patterns of performance: 1) both standards, 2) neither standard, 3) the personal standard but not the social standard, 4) the social standard but not the personal standard, 5) the social standard, no information

provided regarding the personal standard, and 6) the personal standard, no information provided regarding the social standard.

Diener and Srull found a significant main effect for feedback and a significant interaction, as expected, between feedback condition and level of self-awareness. Self-awareness had no effect when subjects surpassed both or neither standard; when they surpassed both they rewarded themselves most (6.81, 6.78), and when they surpassed neither they rewarded themselves least (.38, .98). The reported interaction is of particular interest to the issue of standards and self-evaluation. Looking first at the self-aware conditions, Diener and Srull found that when subjects surpassed the social standard but not the personal standard, they rewarded themselves more (5.75) than when they had surpassed the personal standard but not the social standard (3.44). In a similar vein, when subjects surpassed the social standard and were provided with no information regarding the personal standard, they rewarded themselves more (6.73) than when they surpassed the personal standard with no information provided about the social standard (4.15). Satisfaction ratings paralleled those of the amount of reward taken. It would appear that self-aware subjects were relying upon social standards for the purpose of determining their level of reward and satisfaction. In fact, Diener and Srull suggest just this:

Several different measures all pointed to the fact that self-aware subjects were more concerned with their social selves and felt more pressure to comply with the social standard,... It would appear that self-aware persons take on a social perspective of themselves in a social situation and judge their performance from this external vantage point. (p. 419)

It does seem as though self-aware subjects were more affected by the social standard. There seems to be, however, another more striking

reason for the apparent dominance of the social standard among self-focused subjects. This alternative explanation rests upon the belief that there were actually two types of self-awareness manipulations present in this study. As has previously been demonstrated, mirrors focus attention upon the private-self, whereas TV cameras and audiences focus attention upon the public-self. Interestingly, the intentional use of an audience as a self-awareness manipulation is relatively rare in the literature. Wicklund (1975) in concluding his review of the self-awareness literature noted:

...virtually no research has been reported here that has used an audience as the source of objective self-awareness. The reason is simple. The subject's inferences about what is desirable from the standpoint of others can easily create experimental demand properties, and we have preferred to avoid these problems as best as possible by using impersonal stimuli to bring about self-focused attention. (p. 267)

The intentional use of an audience is rare in the literature; the use of an implicit audience is not. An audience has often been present in the person of an evaluative experimenter. The Diener and Srull study is one such example of this implied audience situation.

The Diener and Srull study employed three distinct self-focus manipulations: 1) the subject's own image, a private self-awareness manipulation; 2) a recording of the subject repeating his or her name, a public self-awareness manipulation; and 3) the presence of an evaluative experimenter and an assistant recording responses and making calculations, another public self-awareness manipulation. On balance, it seems that the public nature of the situation was clearly apparent to self-focused subjects and, to a lesser degree, non-self-aware subjects. That the public or social nature of the situation was salient is supported by responses to the question asked regarding concern with the

personal standard versus how one appeared to others. Non-self-aware, compared to self-aware subjects, were more concerned with the personal standard, and less concerned with the social standard. Further, self-aware subjects reported feeling less freedom in choice of reward level, a factor thought to be associated with public self-awareness, indicating less control or more constraints placed upon them by the situation. Clearly, subjects perceived the situation as a public one, thereby increasing the salience of the social-self standard.

Let us return, once again, to the results in the self-aware conditions of this study, this time examining the levels of reward taken when one standard was salient as opposed to when two standards were salient. It appears that when both standards were present, subjects took both into account. This is supported by the finding that when subjects surpassed both standards, they rewarded themselves most; when they had surpassed one but not the other standard, or when they had surpassed one with no information provided about the other, level of reward was the lowest. In fact, in the self-aware conditions, which we have defined as social in nature, the level of reward and ratings of satisfaction fell in exactly the direction one would predict. From the highest reward taken to the least, the conditions fell in the following order: surpassed both (6.81), surpassed social only (6.73), surpassed social but not personal (5.75), surpassed personal only (4.15), surpassed personal not social (3.44), and surpassed neither standard (.88). These mean reward levels seem to indicate that the social standard was being focused upon by these subjects. But, in addition, these means indicate that individuals have more than one standard to access when attention is focused on the self. Diener and Srull have

demonstrated that at least two are operative: a personal standard and a social standard. Further, it appears that subjects confronted with two standards took both of these into account. Diener and Srull suggest:

...all subjects took both standards into account, but simply shifted the relative weight placed on them. When one compares the cells in which only one standard was given with the comparable surpassed-one-but-not-the-other cells, it can be seen that the former are higher for every comparison. This indicates that the standard that was given less weight nevertheless had a definite effect. The fact that the two surpass-both-standard cells have higher values than all others also indicates that one standard was never ignored completely. (p. 420)

The results reported for subject responses in the non-self-aware conditions are not as easily explained. Just as subjects appeared to have been focusing upon social standards when self-aware, non-self-aware subjects appear to have been focusing upon personal standards. Why should subjects who, for all practical purposes, are subjectively self-aware (listening to distracting sounds) focus upon personal standards? Diener and Srull offer the following interpretation:

The procedure used in the present study, ..presented standards in such a way that they were explicit and easily comparable. Thus, attention to the two types of standards was likely to be high in both self-aware and non-self-aware conditions. However, the viewpoint or perspective of the subject was likely to change across the two conditions. The self-aware person was likely to see himself or herself as a social object, and this apparently led subjects to weight the social standard more heavily. In the non-self-aware condition, subjects were also likely to be equally aware of both types of standards, but here they gave greater weight to the personal standard, apparently because of their egocentric perspective. (p. 420)

There might be another reason for the apparent reliance upon the personal standard in the non-self-aware cells of this study. The level of reward cell means indicate that subjects rewarded themselves about equally when they had surpassed the personal standard only (6.10) and when they had surpassed both standards (6.73). Furthermore, in the surpassed one but not the other cells, non-self-aware subjects rewarded

themselves more when they had surpassed the personal standard (5.50) than when they had surpassed the social standard (3.65). They also rewarded themselves more when they had surpassed only the personal standard (6.10) than when they had surpassed only the social standard (4.13) and no information was provided regarding the other standard. These subjects are reacting as if they are focusing upon the private-self aspect and personal standards. Perhaps this indicates a pre-existing tendency for subjects to rely upon the personal standard across all 12 trials. When the situation, however, became more public, as when the self-awareness manipulations were introduced, attention was preempted from the predominant standard in this particular situation, the personal standard, to the one that was made salient by the self-awareness manipulations, the social-self standard. This interpretation, if correct, suggests two additional questions: 1) is there a tendency to focus upon personal standards, and 2) is there something unique in this particular situation that increases the likelihood of focusing upon personal standards?

With reference to the tendency to focus upon one's personal standards, recall that the results of the earlier mentioned Seta and Hassan (1980) study led to a similar conclusion. In that study, subjects seemed to have reacted as though an audience, aware of two standards--a personal standard and a social standard--would judge their subsequent performance against their earlier performance, the personal standard. This support, however, is not conclusive evidence for the dominance of personal standards. We should still look to the possible unique characteristics within the Diener and Srull study that may have contributed to a reliance upon personal standards. Subjects were required to perform

a task they were previously unfamiliar with. They were, however, able to practice the task before the actual procedure began. This practice may have provided subjects with a personal-self standard, a typical-self standard. This, in turn, may have increased the likelihood of subjects relying upon their own standards to determine adequate performance. When the situation became more public, however, the social standard became salient and took on a greater role in reward allocation and satisfaction.

In summary, the studies reviewed in this section appear to offer some support for the proposed distinction between personal and social standards. It was suggested that two of these studies were designed in such a way that attention was focused upon the private-self aspect and personal-self standards (Ickes, Wicklund and Ferris, 1973; Carver, cited in Wicklund, 1975), whereas the latter three studies, emphasizing the social nature of the situation, focused attention upon the public-self aspect and the salient social-self standard in the situation (Morse and Gergen, 1970; Diener and Srull, 1979; Seta and Hassan, 1980).

It was demonstrated that individuals will employ the standard most salient within the immediate situation. In the Ickes, et. al. study subjects' attention was focused upon the private-self aspect by means of a mirror, a private self-awareness manipulation. In addition, the ideal-self standard was made explicit. In this context subjects compared their real-self to the ideal-self standard, the result being lowered self-esteem.

In the Carver (cited in Wicklund, 1975) study, subjects appear to have focused upon a referent-self standard, a standard that, by

definition, was probably perceived to be lower than their real-self. In this instance, privately self-focused subjects demonstrated an increase in self-esteem.

The Morse and Gergen study supported the existence of social standards. Subjects exposed to a confederate likely to elicit a social standard higher than their real-self (Mr. Clean) experienced a decrease in self-esteem; those confronting a confederate likely to elicit a social standard lower than their real-self (Mr. Dirty) experienced an increase in self-esteem.

Of the last two studies examined, one came from the self-evaluation literature (Seta and Hassan, 1980) and the other from the objective self-awareness literature (Diener and Srull, 1979). Both studies can be viewed as varying public self-awareness. Seta and Hassan examined audience effects on performance, whereas Diener and Srull, by inadvertently emphasizing the social nature of the situation, examined the effects of public self-awareness on self-evaluation. When attention was focused upon the public-self aspect, either by means of an explicit or implicit audience, subjects appear to have focused upon the standard they believed the audience held; the salient social-self standard. In the Seta and Hassan study public self-awareness seems to have affected performance. In the Diener and Srull study the social nature of the self-aware conditions promoted attention to social standards. When self-aware subjects had surpassed the social standard they rewarded themselves more than when they had surpassed the personal standard. Interestingly, both studies indicate a tendency to focus upon personal standards in the absence of an explicit social standard.



### The Attitude-Behavior Relationship Literature

The research examining the relationship between attitudes and behaviors is noted for its apparent contradictions. Theoretically, as well as intuitively, one would have to postulate a strong association between what one believes and how one acts with reference to this belief. This common sense position, however, is usually not confirmed. In fact, the often reported inconsistency between expressed attitudes and subsequent behaviors have led some theorists to question the usefulness of the concept of attitudes (Ajzen and Fishbein, 1977).

Numerous researchers in this area have suggested the importance of other variables to the attitude-behavior relationship. Among these are Ajzen and Fishbein (1977) who argue that one's attitude alone will not necessarily predict behavior.

...a person's attitude toward an object influences the overall pattern of his responses to the object, but...it need not predict any given action....a single behavior is determined by the intention to perform the behavior in question. A person's intention is in turn a function of his attitude toward performing the behavior and his subjective norm. It follows that a single act is predictable from the attitudes toward that act, provided there is a high correlation between intention and behavior.  
(p. 888)

The point being made by Ajzen and Fishbein is that attitude-behavior consistency can be achieved when one's prior attitude is consistent with one's subsequent behavioral intention. The question then seems to be what factors influence one's intentions. Ajzen and Fishbein suggest that correspondence might be increased by considering four elements: 1) target, 2) action, 3) context, and 4) time.

Recent studies in the area of self-focused attention have supported the notion that one's prior attitude is only one of several factors influencing behavior. By varying the means by which self-awareness

has been induced, thereby varying context, researchers have been able to shed new light on this often illusive, but logical, relationship (Zanna, Olson and Fazio, 1981; Froming and Walker, in press; Froming, Walker and Lopyan, in press). It appears that this relationship is not as chaotic as it once appeared; it is simply more complex. The accurate prediction of behavior from a knowledge of one's prior attitude is heavily dependent upon whether attention is focused upon the private-self or the public-self.

Earlier research in the self-awareness tradition reported that when attitudes and behaviors were perceived by the individual to be inconsistent, attitudes were typically shifted in the direction of the discrepant behavior (Wicklund, 1975). Inconsistency and a shift in behavior was also the general rule of conformity studies and studies employing the forced-compliance paradigm. The reason for the frequently reported shift in behavior is really a simple one when explained in terms of public and private self-awareness. An implicit or explicit audience situation represents a public self-awareness manipulation of the highest order. As suggested earlier, public self-awareness focuses attention upon the public-self and the salient social-self standard. Once the individual defines the social standard, that standard is used in both the process of self-evaluation and in the determination of appropriate behavior. It will be shown that most studies examining compliance behavior have employed an actual or an implied audience and made the social standard very apparent.

Getting back to the point made by Ajzen and Fishbein (1977), it would appear that the direction of attention or the individual's psychological perspective has a significant effect on behavioral intentions.

Most people in our culture, it will be assumed, "intend" to be consistent. In fact, the negative label "hypocrite" is often applied to those found to be otherwise; those who appear to believe what they do not. Thus, most will probably agree that they wish to be consistent; that, in fact, adherence to personal standards is more desirable than non-adherence. Then why are attitudes and behaviors so often found to be inconsistent? The reason is simple: people most often express attitudes and opinions in public. Furthermore, in most social experience, people become aware of others' attitudes and opinions in face-to-face interactions, again, in public. Certainly experiments examining this relationship have stressed the public nature of the situation. When the public or social nature of the situation outweighs its private nature the psychological perspective of the individual is likely to focus attention upon social standards. And, social standards, as defined in this paper, are a function of others' perceived views with reference to the salient self-dimension, be it an attitudinal self-dimension or an ability related dimension.

In summary, it is suggested that private self-awareness will result in consistency. Consistency is achieved when attention is focused upon personal standards because one's prior attitude will be consistent with the behavioral intention; the intention to be sincere or consistent. In contrast, public self-awareness is more likely to result in inconsistency because, in this instance, the person's attention is focused upon the salient social-self standard. If the real-self and the social standard are not equivalent, one will tend to change one's perception of the real-self (prior attitude) in the direction of the social standard. The individual's behavioral intention in

this context, this public context, can be viewed as the same as his intention in the private context, to be consistent with the salient self-standard. It will be demonstrated that the attitude-behavior relationship, although more complex than originally thought, is not as chaotic as many would have us believe. Once again, a single principle will be applied in an attempt to illustrate the importance of distinguishing between different types of standards: self-focused attention leads to a reliance upon the most salient standard and salience is, in large part, a function of the immediate situation.

A number of studies in the self-awareness literature have employed the aggression paradigm, in which a subject-teacher is instructed to deliver some unspecified amount of electric shock to a confederate-learner. The first of these studies was conducted by Scheier, Fenigstein and Buss (1974). These researchers sought to demonstrate the inhibitory effects of self-focused attention upon physical aggression. The study was predicated upon the assumption that the standard of correctness would be one that prescribed non-aggressiveness. To insure this particular standard they employed male teachers and female learners. The only significant effect reported was a main effect for mirror presence or absence; only self-awareness induced by a mirror had the predicted inhibitory effect. Scheier, et. al. suggested that the reason the audience did not have a similar effect on aggressiveness was due to the fact that the subject rarely looked at the audience. In fact, they suggested that subjects were actively avoiding the self-focusing effects of the audience rather than attempting to reduce the discrepancy. There is, however, another, equally plausible, explanation for their inability to achieve a significant reduction in shock intensity in the presence of

the audience. This explanation rests upon the distinction, now acknowledged, regarding public and private-self aspects. When attention was focused upon the private-self, the personal-self standard favoring non-aggressiveness became salient. Attention directed toward this standard resulted in behavior consistent with this standard; less intense levels of shock were administered to the female-learners. When attention was focused upon the public-self by means of the audience, the precise standard subjects may have focused upon is less easily ascertained. In fact, the social standard could have easily been defined in opposing ways: aggressiveness or non-aggressiveness. Those perceiving a standard of non-aggressiveness may have simply attributed that belief to the audience. In contrast, those perceiving a standard of aggressiveness may have thought that what was expected (the social-self standard) was "appropriate behavior" in an experimental setting, appropriateness defined as obedience. Correct behavior in this instance required the delivery of shock for incorrect responses. Although shock intensities ranged from 1 through 10, the means reported suggest that all subjects preferred to administer low levels. The lowest level of shock was delivered by subjects in the mirror present-audience absent condition (1.7). These subjects focused upon but a single possible standard, a personal standard prescribing non-aggressiveness toward women. The highest level of shock was delivered by subjects in the mirror absent-audience absent condition (2.8). These subjects, it appears, were also focusing upon but a single standard, the social standard as defined by the experimenter, a standard that required that they act in accordance with his instructions. In the audience present-mirror absent condition shock intensities fell midway between the other two conditions (2.3).

In this condition subjects had two possible standards at their disposal, two standards which if focused upon led to opposite behaviors; in essence, the effect was compromised.

The second study reported by Scheier, Fenigstein and Buss (1974) demonstrated an inhibition of aggression only under conditions of high eye contact. But, again we can view the results of this study in terms of which of two social standards gained salience. When there was no audience the social standard was probably based upon what subjects believed the experimenter expected; the result was increased aggression. When the audience was present, the social standard was more likely to be based upon the perceived audience standard, especially in light of the fact that the audience was instructed to maintain eye contact. Scheier, et. al. also note the possibility that subjects were focusing upon the imputed standards of the audience: "although such norms were not explicitly built into the design, subjects may have attributed a standard of non aggressive behavior to the audience."

Carver (1974), employing a mirror to focus attention on the self, found that when a standard of favorable aggression was made salient, self-awareness increased aggressive behavior. Although it has been suggested that mirrors focus attention upon personal standards, it appears that subjects in this study were employing social-self standards. This finding can be explained if we examine both the characteristics of the subjects and the particular context within which they were placed. The subjects in this experiment were female whereas the learners were male. In addition, a standard of favorable aggression was made highly salient by the experimenter. It seems reasonable to suggest that one's personal standards with reference to the merits of using pun-

ishment in this situation would be somewhat ambiguous. Unlike the Scheier, Fenigstein and Buss (1974) study, a personal standard of non-aggressiveness was not obvious, since in this instance the victims were male and the teachers female. The norm regarding female aggressiveness against men is less clearly defined than that of male aggressiveness against women. Thus, if subjects were inclined to focus upon personal standards, the clarity of this particular standard is questionable. More important, however, are the characteristics of the situation; the situation was public, a social standard was highly salient, and the male learners were probably perceived as able to endure the shock. All of these factors are likely to promote attention to social self-standards and produce behaviors consistent with these standards.

In a second study Carver (1975) suggested that if attitudes are made salient and they are appropriate to the situation, self-awareness will lead to attitude-behavior consistency. Subjects, pre-tested to ascertain their personal attitudes regarding punishment in learning situations, were assigned to high and low punitiveness groups. Carver found a highly significant Punitiveness x Mirror interaction. Planned comparisons revealed that the high punitiveness-mirror subjects delivered significantly more shock than did the high punitiveness-no mirror control subjects. Thus, facilitation of aggression was demonstrated when subjects were self-aware and attitudes salient. That is, subjects focused upon, and behaved in accordance with, their personal-self standards.

Scheier (1976) sought to extend the findings of Carver (1974, 1975) and Scheier, Fenigstein and Buss (1974) to the domain of affective reactions. He suggested that when affect is strong, as when a person is

angry, the self-aware person's attention will be directed toward that anger rather than toward the salient standard, resulting in greater aggression. Scheier reports a main effect for anger such that angered subjects administered significantly higher levels of shock than non-angered subjects. There was also a significant Mirror x Anger interaction such that the mirror had a weak inhibitory effect on non-angered subjects but a facilitating effect on angered subjects. Simple effects analysis within the Anger x Mirror interaction revealed that the contrast effect between the mirror and no mirror groups within the anger condition was significant; within the non-anger condition this same contrast was not significant. Scheier concluded that self-focus had the intended effect; it increased aggression when affect was salient. When there was no affect, self-awareness had no effect. Furthermore, he suggests:

It is presumably the absence of both a potent affect and a salient standard which accounts for the lack of a self-awareness effect among non-angered subjects.

....In general, self-focused attention increased the aggression level of all angered subjects, regardless of whether they believed that provocation justified aggression or not. Thus, when affect is strong, awareness is directed toward the affect, not the standards, and discrepancy reduction does not occur. (p. 636)

Another interpretation of the findings of this study is possible, an interpretation based upon the belief that different personal standards were being employed by angered and non-angered subjects. Non-angered self-aware subjects focused upon their salient standard. Based upon the results of previous studies it is suggested that this standard probably tended toward non-aggressiveness. Recall that the mean intensity ratings for subjects in the Scheier, Fenigstein and Buss (1974) study were all relatively low. Also, Carver (1975) failed to attain a



significant effect for subjects low in punitiveness. Both of these studies, coupled with the reported tendency in the Scheier experiment for non-angered subjects to aggress less when self-aware than when not self-aware, support the existence of a personal-self standard favoring non-aggressiveness. Angered subjects, rather than focusing upon the salient affect, were also focusing upon a personal-self standard, a standard that became salient as a function of the harassment. It seems possible that these subjects may have accessed a standard akin to "an eye for an eye" in this situation. The learner confederate in this study was really quite obnoxious. Subjects' personal attitudes regarding aggression "even when provoked" may have reflected non-aggressiveness when they filled out a self-report measure privately. When, however, this particular situation presented itself, another personal-self standard became salient, one that suggested an "I'll get even" response. Put in this situation, there are few who would turn the other cheek. It is all too easy to get even with the harasser within the laws of the experimental procedure. The subject simply had to administer a higher level of shock and was, in fact, fully justified by the experimental instructions in doing just that. In summary, it is suggested that self-aware angered subjects were not necessarily attending to the salient affect but, rather, to the personal-self standard made salient by the learner's behavior in this situation.

The notion that one's prior attitude toward aggression will not necessarily be reflected by a global self-report measure, that, in fact, several different standards may exist, is supported by a study conducted by Richardson, Bernstein and Taylor (1979). Noting the contradictory evidence in the literature concerning female aggressiveness, Richardson,

et. al. suggested that aggressiveness might be a function of situational contingencies. They reasoned that "the variability of findings may result from the presence or absence of elements in the experimental situation that evoke conformity to sex role expectations." Although their research does not include the concept of self-focused attention, it is pertinent to this discussion because they, in fact, varied the public versus private nature of the situation.

Female subjects, competing against male opponents in a reaction time task, were assigned to one of three conditions: 1) private-alone, 2) public-in the presence of a passive observer, and 3) public-in the presence of a supportive observer (one who supported retaliative behavior). In the public-passive condition subjects' behavior was expected to conform to their perception of what the observer expected of them, in effect, their perception of the social-self standard--non-aggressiveness. In a similar vein, subjects in the public-supportive condition, knowing that the social standard was aggressiveness were expected to behave more aggressively. Both of these predictions were supported. That is, as provocation increased, subjects in the private situation and those in the public-supportive situation, responded more aggressively than did subjects in the public-passive condition. It appears that subjects in the private condition were attending to a personal standard which dictated an eye for an eye. These subjects were, after all, being shocked themselves at increasing levels of intensity by their male opponent.

Of particular interest to the issue of social standards are the two audience conditions. As noted previously, very few studies in the self-awareness literature employ an audience as a means of heightening

self-focused attention. Furthermore, none to date have experimentally varied the definition of the social standard. Although Richardson, et. al. did not directly manipulate this standard, that it was different in the two groups can hardly be disputed. Subjects in the public-supportive condition were provided with a very explicit social standard favoring retaliation. In contrast, subjects in the public-passive condition were faced with a situation wherein they were required to define what was expected of them. It appears that the social standard these subjects perceived was one dictating passivity. In support of the belief that the standard was defined in this way Richardson, et. al. report that the passive observer was perceived as "nonrevengeful, non-competitive, nonaggressive, and passive." Thus, it appears that subjects in the two public conditions were focusing on the salient social standard; this standard, however, differed as a function of the situation.

In summary, three important points have been established. First, public and private situations have differential effects upon behavior. Second, people appear to possess a variety of personal-self standards that are situation specific; that is, attitudes on an issue or standards that pertain to very specific situations. Thus, intuitive beliefs regarding one's standards must be tempered; people possess attitudes which will not necessarily be tapped by global self-report measures. Third, publicly self-aware individuals employ the imputed beliefs of the audience to define the social-self standard and, once defined, employ this standard for the purpose of self-evaluation.

Of course, the most definitive self-awareness studies employing the aggression paradigm to determine the relationship between attitudes

and behaviors were conducted by Froming and Walker (in press) and Froming, Walker and Lopyan (in press). Since these studies were already described in detail, it will only be noted at this time that when personal and social-self standards are predetermined, and the public and private nature of the situation varied, public self-focus will lead to a reliance upon social standards, and private self-focus will lead to a reliance upon personal standards. In both public and private situations a person's behavior is a function of the salient standard, and consistency between one's self-standards and subsequent behavior can be demonstrated provided we acknowledge the existence of a variety of accessible self-standards.

In their search for attitude-behavior consistency, several investigators have focused upon aspects of the test-taking environment (Snyder and Swann, 1976; Pryor, Gibbons, Wicklund, Fazio and Hood, 1977; Gibbons, 1978). The usual design of these studies requires that the subject complete some sort of attitudinal pre-measure; behavior is subsequently measured and attitude-behavior correlations obtained.

Snyder and Swann (1976) wished to determine the effects of self-monitoring on the attitude-behavior relationship. They suggested that people classified as being high self-monitors, those who are especially attentive to the social aspects of their environment, might be more apt to display inconsistencies between attitudes and behaviors. To test this assumption they varied what they refer to as the self-monitoring environment of subjects while they completed a self-report attitudinal measure. Some subjects were encouraged to take an introspective examination of their attitudes, whereas others examined their attitudes from a social perspective. In effect, subjects in the low self-monitoring environ-

ment focused on the private-self aspect and subjects in the high self-monitoring environment focused on the public-self aspect. As expected, attitudinal consistency was high for those focusing on the private-self and low for those focusing on the public-self.

In three studies Pryor, Gibbons, Wicklund, Fazio and Hood (1977) examined the relationship between pre-tested attitudes and subsequent behaviors. In the first of these studies Pryor, et. al. suggested that the validity of self-report measures might be enhanced by self-focus. As predicted, the predictive validity of a sociability questionnaire was enhanced by the presence of the self-awareness manipulation. Pryor, et. al. concluded that "assuming that a subject's typical level of sociability does not vary erratically in similar first encounter situations such as the one in this study, increasing a person's motivation to comment accurately upon those past behaviors will result automatically in enhanced predictive validity." Rather than concluding that the mirror increased subjects' motivation to comment accurately, it is suggested that subjects were again responding in a manner consistent with the standard they were focusing on, the personal-self standard, the saliency of which was enhanced by the presence of the mirror.

In a second experiment Pryor, et. al. examined the effects of self-awareness on postdictive validity. Male subjects were asked to recall their SAT scores in the presence or absence of a mirror. As predicted, mirror subjects reported their SAT scores more accurately.

In the third study conducted by Pryor, et. al. subjects were given the opportunity to select a task to perform. Later they were asked to indicate their attitudes with respect to each of the tasks they could have chosen. They found that the relationship between behavior and task

rating was stronger for subjects exposed to a mirror. They suggest "the results of the last two studies imply that the self-focused individual is motivated to reconcile self-reports with prior behaviors...." These studies also support the contention that mirrors focus attention on the private aspect of self and personal attitudes. When environmental factors do not pull attention in the direction of social-self standards, people will tend to rely upon personal standards, resulting in behaviors which are more closely associated with these standards.

Noting the evidence in the literature on the relationship between sexual standards and relevant behaviors which suggests that the two entities are often not highly correlated, Gibbons (1978) suggested that self-awareness might increase one's attention to pre-measured personal standards. In the first study cited, the attitudes of male subjects toward erotica were assessed. Subjects were subsequently assigned to either a mirror or no-mirror condition and required to rate their degree of excitability toward, and level of attractiveness of, pictures of nude women. Results indicated that the correlation between pre-tested sexual attitudes and excitability ratings were strong in the mirror condition and weaker in the no-mirror condition. Aside from the reported difference between these groups, these results are interesting in another way. The mirror group evidenced a positive relationship between attitudes and excitability ratings whereas a negative correlation (although not significant) was obtained for the non-self-aware group. The fact that non-self-aware subjects behaved in a manner inconsistent with their personal standards might have been due to the demand characteristics of the situation. Few males holding negative attitudes toward erotica would assume that most other males shared this view.

Thus, when personal standards were not made salient, subjects may have relied upon the social standard as they defined it, thereby leading to the low and, in fact, negative correlation between attitude and behavior. This argument is somewhat supported by the results of an analysis of variance (Self-Awareness x Attitude); non-self-aware subjects reported being more aroused and more anxious than did the self-aware group. Separate analysis on the arousal and anxiety scores revealed that non-self-aware subjects reported being less calm and relaxed. This effect was especially pronounced in the non-self-aware, negative attitude toward erotica condition. Gibbons explains that,

...when subjects transgressed against their sexual attitudes they reported increased anxiety. In this case, the no-mirror subjects transgressed most (especially in the negative-attitude cell), and they also reported the most anxiety. (p. 980)

With reference to the non-self-aware groups, the reported means indicate that positive attitude subjects reported what "appears" to be significantly less anxiety (.54) than negative attitude subjects (1.44). This difference may have been a function of the fact that these negative attitude subjects were focusing on a social-self standard that was, in all probability, perceived as opposed to their own.

In a second study reported by Gibbons (1978) female subjects, pre-tested for sex-guilt, were required to read a passage of erotic and another passage of non-erotic literature, either in the presence or absence of a mirror. The results were consistent with the findings of the first study. The behavioral ratings of self-aware subjects ( $r=.71$ ) were significantly more consistent with sex-guilt scores than were those of non-self-aware subjects ( $r=.02$ ).

The third study cited by Gibbons measured female subjects'

specific attitudes toward obscene literature and later required that they read a passage of erotic literature. Results were consistent with, but weaker than, those reported for the second study. Gibbons, with reference to the results of all three studies concludes: "...for those with relatively well defined standards, self-awareness should increase the influence of these standards by inhibiting behaviors that are inconsistent with them."

In summary, the results of these three studies appear to support the proposition that private self-awareness focuses attention upon personal standards, resulting in greater consistency between pre-measured personal standards and behaviors. But, the fact that behavior was measured in a private situation should not be minimized. The fact that behaviors are most often exhibited in public limits the natural salience of personal standards, particularly with respect to the type of behaviors examined in this study, behaviors that are associated with strong social norms. Is there any doubt that males are applauded for a positive response to attractive nudes or that females are criticized for a similar reaction to pornography?

There is another set of studies in the self-awareness literature that has focused upon the effects of affective states on behavior (Carver and Blaney, 1977; Carver, Blaney and Scheier, 1979; Scheier, Carver and Gibbons, in press). Each of these studies has come to the conclusion that self-awareness focuses one's attention upon one's affect when that affect is made salient. Each assumed that the standard subjects held was one of approach, and when affect was strong, subjects turned their attention away from this standard and toward the affect.



The affect, in turn, influenced subsequent behavior. These studies are included in the attitudinal section of this paper because the possibility exists that subjects were actually attending to standards rather than affect, and that their behavior was a function of the particular standard they focused upon.

Carver and Blaney (1977), classifying subjects as either doubtful or confident with respect to their ability to approach a snake, suggested the following:

1. Confident subjects, when made self-aware, should redirect their attention to their goal and to their behavior in comparison to that goal as they attempt to match the one with the other.
2. Doubtful subjects, when self-aware, should find themselves becoming increasingly aware of their doubts and inadequacies. They should actively avoid focusing on their goal and their behavior because they feel incapable of reducing the discrepancy between the two and thus would find such a comparison aversive. (p. 156)

As predicted, confident subjects approached the snake more than doubtful subjects in the self-aware condition. Under conditions of low self-awareness this difference was not significant. There was also a non-significant tendency for doubtful subjects to approach less when not self-aware; the same tendency was absent among confident subjects. An analysis of amount of attention paid to previous attitudes yielded a marginally significant interaction. Doubtful subjects paid more attention to their attitudes than did confident subjects. With respect to the degree of attention subjects paid to their goal, Carver and Blaney report a highly significant interaction. Confident subjects paid more attention to their goal when self-aware; doubtful subjects reported paying less attention when self-aware. Lastly, when self-aware, doubtful subjects paid less attention to their goal than did confident subjects; reports did not differ when not self-aware (constant heartbeat).

One can view this situation as one in which there exist two distinct standards and in which the saliency of these standards may differ as a function of individual differences. One standard reflects fear the other standard does not. Carver and Blaney hypothesized that "...confident subjects would report having paid greater attention to their behavior and their goal in the accelerating heartbeat condition and the doubtful subjects would report having paid less attention to their behavior and their goal in that condition...." These investigators assume that the "goal" or standard of these two groups is equivalent when, in fact, they can be shown to be quite different. Doubtful subjects may be attending less to the goal of approach but this is not the same as saying they are avoiding their own goal. Both of these groups, faced with a private self-awareness manipulation (accelerated own heartbeat) may be focusing upon their own personal-self standards. Doubtful subjects, focusing upon the discrepancy between their real-self (approach behavior) and their personal standard against this particular behavior, can be thought of as being consistent with their standard. In a similar vein, confident subjects are matching their behavior to a personal standard favoring approach.

It should be noted that these two groups differed in another way: gender composition. The confident group was comprised of an approximately equal number of males and females; in contrast, the doubtful group was almost entirely comprised of females. This factor would seem to further support the distinction between the standards employed. Males in our culture are expected to be fearless especially in a situation such as this where the fear is unfounded; the snake was not poisonous. In contrast, females are not criticized for this type of non-reality based

fear; in fact, this type of behavior is thought by many to reflect femininity. Thus, the cards were stacked in favor of doubtful subjects avoiding the snake and confident subjects approaching the snake. In summary, both doubtful and confident subjects were matching behavior to standards. The salient standard, however, was not necessarily the "goal;" rather, it was one's intention to approach the goal. Both groups responded in a manner consistent with their personal intentions.

Carver, Blaney and Scheier (1979) developed a model to explain approach behavior in a fearful situation. They suggested that self-awareness initially enhances the salience of the goal. If, however, anxiety arises in this type of situation, self-awareness will increase the salience of this anxiety. In support of this model a study was devised in which dispositional anxiety was held constant and both self-focus (mirror) and the subject's expectancy were varied. High self-aware subjects with negative expectancies were expected to withdraw from the approach attempt earlier than those low in self-awareness. In contrast, subjects with positive expectancies (confident subjects) should not withdraw. Once again the approach behavior examined was that of approaching a snake.

Consistent with predictions, self-focus led to an increase in reported anxiety, fear and inadequacy. Behavior, however, was not directly affected by self-focus. Rather, self-focus in conjunction with expectancies influenced behavior. Doubtful subjects only withdrew from the approach attempt, the goal, when self-awareness was enhanced. Once again, it is argued by the present author that the standards of confident versus doubtful subjects were not equivalent and, in fact, both groups of subjects, when attention was self-focused, attempted to bring behav-

iors closer to the standard they were focused on. Confident subjects conformed to a standard of approach, a personal standard which was, in all likelihood, a standard equivalent to the social standard of the experimenter. Doubtful subjects, on the other hand, held a personal standard against this approach behavior. Interestingly, these subjects avoided the task, were true to their personal standard, in spite of the strength of the social standard.

The final study to be discussed which employed this approach paradigm was conducted by Scheier, Carver and Gibbons (in press). These investigators examined the relationship between self-focused attention and affect-based behavior in two studies. The first study employed a mirror to vary state self-awareness. The second study, essentially a replication of the first, varied trait self-awareness.

In the first study snake phobics and non-phobics were requested to approach and pick up a snake. Scheier, et. al. reasoned that for phobics the affect experienced, fear, would be strong; for non-phobics this affect should be weak or nonexistent. They predicted that self-awareness would heighten the fear of phobics, which would cause them to leave the approach sequence. Non-phobics, on the other hand, should attempt to match their behavior with the salient behavioral standard; to approach and hold the snake.

In support of their hypothesis, Scheier, et. al. found that high fear subjects (phobics) reported more anxiety and greater attention to their bodily arousal indicators than did low fear subjects. This reported affect, however, did not differ as a function of the self-awareness manipulation (private self-focusing stimulus). They suggested two possible reasons for this somewhat unexpected finding: 1) the mirror

merely made phobics aware of their fear sooner, or 2) phobics' self-reports were at a psychological ceiling. A  $t$ -test performed for each fear group separately revealed that phobics confronting a mirror withdrew from the approach sequence sooner than those not confronting a mirror. Non-phobics were not significantly influenced by the self-awareness manipulation. —————

————— This design, too, can be viewed as one in which there exist two self-focusing manipulations. The situation was a highly public one, and a social-self standard of approach was made highly salient. There was also a private self-focusing manipulation, a mirror, which tends to focus attention on personal-self standards. In this particular study subjects classified as phobic possessed a personal standard promoting avoidance of snakes. For these subjects, then, a conflict exists between their personal standard and the social standard made explicit by the experimenter. In contrast, non-phobics, by definition, had either no existing personal standard, or a personal standard which might be thought of as encouraging approach behavior. For these subjects there was no conflict. Which standard will gain salience in this situation appears to be dependent upon whether a particular subject has or hasn't a strong personal standard with reference to approaching a snake. All subjects should be willing to attempt the approach sequence due to the salience of the social standard. Phobics, however, would be expected to withdraw from the sequence sooner because, unlike non-phobics, they possess a very strong personal standard, a clear standard against this particular behavior. This is precisely what occurred. Phobics in the presence of a mirror withdrew sooner than those not confronted with a mirror. Among non-phobics the self-awareness manipulation had no

effect because these subjects had no strong personal standard with respect to approaching a snake. The public self-awareness manipulation, however, did have an effect, in that these subjects were more inclined to match their behavior to the salient social standard. Scheier, et. al. conclude:

We began by assuming that strong affective states would have a major impact on behavior, such that awareness of strong affect would override tendencies to match behavior to goals or standards....Self-attentive persons were expected to be more responsive to that strong affect in their subsequent behavior... results...were consistent with this reasoning. (p. 16)

In contrast to this conclusion is the suggestion that this study provides a demonstration of a situation wherein a strong personal standard will override a strong social standard. Rather than supposing that subjects attended to heightened affect, it is possible that they were attending to personal standards. That the social standard was strong and effective in this situation is verified by the fact that the average approach score was "...well beyond the halfway point in the approach sequence." Scheier, et. al. further note,

...there was an overall tendency to behave in accordance with the behavioral standards established by the experimenter. These findings suggest that the behavioral standards that were created were far from trivial. (p. 17)

The second study conducted by Scheier, Carver and Gibbons (in press), a conceptual replication of the first study, varied dispositional self-consciousness. As in the first experiment, behavioral conformity was expected to be high for those subjects classified as high in private self-consciousness when affect was minimal. When affect was strong, however, attention was expected to shift to the affect as the salient aspect of self. This refocusing of attention was expected to make high private self-conscious subjects more responsive to that affect and, in

turn, less responsive to the behavioral standard than those subjects classified as low in private self-consciousness. Groups were formed on the basis of reported fear and subjects were asked to submit to a series of mild or severe shock for the purpose of medical science. In effect, a social standard of approach was made very explicit. High and low fear conditions were created by telling some subjects that the shock would be quite intense and others that it would be mild.

Scheier, et. al. found a significant interaction between self-consciousness and fear. Among high self-conscious subjects, when fear was high volunteering was at its lowest. In contrast, when fear was low volunteering was at its highest. Among low self-conscious subjects the fear manipulation had little effect; the percentage of subjects volunteering was consistently high. It appears that these subjects were attending to the salient social standard. The high self-conscious subjects, on the other hand, appear to have been focusing upon their personal-self standard. When fear was high, a conflict existed for these subjects, a conflict which was absent when fear was low. Thus, for high fear subjects experiencing this conflict the volunteer rate was reported to be 52%; when fear was low and no conflict existed the volunteer rate was 100%.

#### The Deindividuation Literature

Another research area which bears directly upon the issue of standards is that of deindividuation. Objective self-awareness and deindividuation appear to share an implicit link: both theories emphasize the importance of attentional focus. The theory of deindividuation suggests that certain group characteristics tend to draw attention away from the individual as a unique entity and toward the group as a whole.

Diener (1979) indicates that such factors as group cohesiveness, uniformity, group activity and an outward focus of attention, serve to promote deindividuation because self-awareness is minimized. According to Diener:

The deindividuated person is blocked by environmental factors from becoming self-aware and is thus less likely to regulate his or her behavior in reference to personal and social standards...and more likely to react to immediate cues, motivations, and emotions. (p. 1161)

Dipboye (1977) also suggests that deindividuation lowers one's awareness of self and leads to behaviors that would normally be curtailed. He notes that "...a person may not curse when individuated, or given the protection of anonymity, an individual may express intimate feelings normally restrained."

Diener and Wallbom (1976), noting the similarity between the two theories, suggest that "the internal state of deindividuation and lack of self-awareness...seem to be similar states which consist of lack of self-observation and self-evaluation." In a study designed to test the notion that subjective self-awareness and deindividuation are similar states and result in behaviors which might be categorized as antinormative, they found that self-aware compared to non-self-aware subjects cheated significantly less often on an anagram test of intelligence. Thus, subjective self-awareness did seem to lead to anti-normative behavior. But can we conclude from this study that deindividuation leads to a lack of self-awareness and a lack of self-evaluation? Does deindividuation lead to a decreased reliance upon self-standards? Scheier and Carver (1981) also question this assumption:

But does immersion in a group decrease awareness of all facets of self? Or does it differentially lower awareness of a particular self-aspect? Based on a variety of circumstantial



evidence, we have suggested that the experience of deindividuation involves decreased awareness of the private self. (p. 211)

In agreement with Scheier and Carver it is this writer's opinion that deindividuation leads to lowered attention to the private-self aspect. It does not, however, lead to subjective self-awareness, nor are the two states similar. In fact, deindividuation can be viewed as a state wherein self-focused attention is enhanced; that is, attention to the public-self aspect and social-self standards.

Several studies in the deindividuation literature provide some support for the proposed non-equivalence of deindividuation and subjective self-awareness (Diener, Fraser, Beaman and Kelem, 1976; Beaman, Klentz, Diener and Svanum, 1979; Diener, Lusk, DeFour and Flax, 1980). Diener, Fraser, Beaman and Kelem (1976), for instance, found that decreased self-awareness (equated with anonymity) had an influence on the stealing behavior of children in groups but did not influence the behavior of children alone. They report that when Halloween trick-or-treaters were in groups, anonymous children (first child in the group to approach the candy bowl) took more candy than non-anonymous children. Children entering the room alone, on the other hand, whether identified by the experimenter or not, did not take more candy than they were told to take. Why did the anonymity variable only influence the behavior of children entering the situation in groups? Quite possibly, the child entering the room alone, and told not to take more than a single piece of candy, focused upon a personal standard of honesty. In contrast, children entering the room in groups may have had at their disposal two standards concerning honesty. If one assumes that these children were in natural groups (usually friends travel together on this holiday) they

were probably aware of whatever social standard the group possessed regarding this behavior. It seems likely that this standard allowed for more than one piece of candy. In support of this interpretation Diener, et. al. noted the occurrence of modeling effects: "in the great majority of cases (about 86%), the norm-related behavior of the first person who approached the bowl was matched by many of the other group members." The existence of this modeling effect suggests that once a social standard was made salient (by the behavior of the first child to approach the bowl), it was that standard which was attended to and followed.

Beaman, Klentz, Diener and Svanum (1979) also examined the relationship between self-focused attention (mirror) and transgressions by children. In two field studies these researchers observed children's behavior with respect, once again, to taking a specified amount of candy from a bowl on Halloween night. In the first study Beaman, et. al. found a highly significant interaction between self-awareness and anonymity. Children confronting a mirror transgressed less than those not in the presence of a mirror. These children seem to have focused upon a standard of honesty. It is difficult to determine, however, whether this standard was the child's personal standard or the social standard explicitly stated by the experimenter. Interestingly, self-awareness seemed only to have an effect on the behavior of individuated children, those who were asked to state their name and address. These children transgressed significantly less in the presence of the mirror. Self-awareness was also found to enhance the saliency of the peer standard among individuated children. Beaman, et. al. conclude:

...the findings suggest that the modeled behavior provided an additional norm at the time the followers approached the candy

bowl. Carver (1974) has shown that aggression which might normally be considered antinormative, can be facilitated by self-awareness in the laboratory if the salient standard of behavior favors aggressing. Our results in the field support Carver's in suggesting that transgressing can be enhanced by self-awareness (if the model makes salient a transgressing standard). The present results suggest that self-awareness can heighten the salience of norms implicit in the behavior of others, even when these norms are not verbally stated. (p. 1842)

This finding also lends support to the premise that the social standard is defined by the situation. In this study two social standards were available: the experimenter's standard and the peer standard. (The possibility exists that the peer standard was, in this situation, a personal standard--the referent-self standard. The fact that the mirror enhanced the saliency of this standard would support this possibility. However, since the situation was a highly public one, and one most likely to promote the salience of social standards, the peer standard will be referred to as a social standard.) The peer standard, however, seems to have been the stronger of the two.

In the second experiment reported by Beaman, et. al. all children were individuated and an additional variable was added: the presence or absence of an explicitly stated standard. Beaman, et. al. suggested that the children would probably have a standard that it is inappropriate to take too much, and therefore a decrease in the amount of candy taken by no-standard-self-aware subjects was predicted. As before, transgression was reduced in the presence of a mirror when a social standard was made explicit by the experimenter. This result is as expected in light of the fact that during this study each child approached the bowl alone. The mirror, once again, enhanced the salience of a personal standard of honesty. Children in the no-standard condition also took fewer candies when self-focused. Rather than assuming that these

no-standard children had no standard, the present author suggests that they were, in fact, focusing upon a personal standard of honesty. As Beaman, et. al. note, all children are entering the situation with some standard.

The final study to be considered in this section was conducted by Diener, Lusk, DeFour and Flax (1980). These investigators examined the relationship between group size and self-consciousness. In the first study groups of varying size were observed performing a variety of silly or embarrassing acts. Diener, et. al. found that as the size of the group increased, behavioral correlations among subjects decreased. They concluded that "conformity or situational influence effects were greater in small groups, perhaps because in larger groups any particular pair are less likely to be close physically and are less likely to be able to see each other." Although this would certainly account for these findings, there might be another reason for the low correlations found among subjects in larger groups. Based upon the assumption that subjects were publicly self-focused, the explanation of this effect might lie in the clarity of the perceived social standard. If subjects were attempting to define a social standard, its definition would be clearer in the dyad; they had but one other person to examine. In the larger groups individual interpretations of what was required probably differed, therefore, expressed behaviors probably differed.

Diener, et. al. further report that individuals compared to groups of 16 reported a greater degree of self-consciousness, were more concerned about the onlookers, and remembered less about the room within which they performed the tasks. Again, one might interpret these results by considering which group provided subjects with the most

salient social-self standard. Were they attending to the perceived social standard of the group or that of the observers? If we assume that these subjects were publicly self-focused then the salience of these social standards might have been a function of the size of the group compared to the size of the audience. This line of reasoning is supported by reference to the relationship between figure and ground. There were a total of eight observers in this study. Thus, smaller groups were provided with more observers per subject than were larger groups. From a figure-ground perspective, in the group of 16 the salient standard should have been that of the group; in contrast, the dyad should have based their definition of the social standard upon the perceived standard of the onlookers. Subjects evaluating their behavior from the point of view of the audience would be expected to experience a greater degree of self-consciousness. Those evaluating their behavior with reference to others "in the same boat," on the other hand, would be expected to experience less self-consciousness.

In a second experiment Diener, et. al., varying the number of observers rating four-person groups, found that as the number of onlookers increased so did reported self-consciousness. This finding would seem to strengthen the argument advanced above. Public self-awareness promotes attention to the salient social-self standard, and salience in these particular studies is, in part, a function of group size.

In summary, it has been suggested that deindividuation is associated with a state of public self-awareness. The reason deindividuated individuals appear to abandon personal standards is similar to the reason people conform when the majority opinion differs from their own; the situation is public, the public aspect of self is focused upon, and

a social-self standard becomes salient. Public behavior is, in turn, a function of the salient social-self standard. Deindividuated individuals, those in a large group, for instance, may be attending to the perceived social standard of the group.

### The Equity Literature

The last group of studies to be considered comes from the equity literature. Interestingly, this is one of the few areas which systematically examines the effects of different standards upon behavior.

Greenberg (1980) found that division of reward followed the equity standard when subjects perceived themselves responsible for relative performance differences, and that this effect was enhanced by self-awareness. In this study, however, the whole idea of fairness in accordance with performance--the equity standard--was emphasized. But what if another standard were made salient; the standard among some that women should be paid less than men. Greenberg addresses himself to this issue in his discussion.

The present results must be considered limited to situations in which equity is the prevailing norm. If conditions were such that other normative standards predominated, it is unknown whether states of self-focused attention would have exacerbated their occurrence as well. (p. 584)

Another study, conducted by Austin, McGinn and Susmilch (1980), demonstrates the existence of two standards an individual might employ to evaluate rewards relative to performance. As Austin, et. al. note, "when an individual evaluates the rewards he/she is receiving from a relationship, it often will be the case that person's reward differs from that expected on the basis of past rewards for performance on comparable tasks, and/or may differ from the rewards received by others who have performed similarly." The first standard they describe is sim-

ilar to what has been referred to as one's typical-self standard in this paper. The second standard can be thought of as a social-self standard. [If the experimental setting in this particular study had been more private this standard might be considered more of a referent-self standard--one of the personal standards described earlier.] In two studies designed to determine which of these standards dominates in different situations, Austin, et. al. found that both standards had an influence, an additive effect on reward satisfaction. The equity standard (the social-self standard), however, had a greater influence on reward satisfaction. An interpretation of these findings based upon focus of attention would seem to explain this effect. The situation confronting subjects was public and public situations promote attention to social standards. Compared to another performing identical work, the subject was paid relatively more, less or the same as this person, coupled with more, less or the same than he was accustomed to receiving. It seems quite natural to compare rewards with another in this type of situation where inputs were believed to be equivalent. Had no comparison person been available, it seems likely that one's previous rewards would have had more relevance for self-evaluation and satisfaction. Austin, et. al. also note the importance of considering the unique characteristics of the situation:

...our data should not be interpreted to mean that people will never transform their expected rewards into deserved ones... in situations where there are no plausible social comparisons available to evaluate the fairness of rewards individuals may feel that they deserve what they are accustomed to. (pp. 439-440)

CHAPTER IV

COGNITIVE AND AFFECTIVE RESPONSES TO THE  
STATE OF SELF-AWARENESS

According to the theory of objective self-awareness (Duval and Wicklund, 1972; Wicklund, 1975) self-focused attention has significant affective and behavioral consequences that distinguish it from attention that is directed toward the environment. Most importantly, the theory maintains that self-evaluation, solely the property of the objective state, is automatically engaged when attention is focused upon the self. That self-evaluation is the consequence of taking an aspect of the self into account is not at all questioned. In fact, theorizing has generally supported this proposition. Rosenberg (1979), noting this tendency comments:

Almost invariably, to see ourselves in whole or in part is to assess, evaluate, and pass judgment on what we see. We seem scarcely capable of even looking at any of our physical characteristics, dispositions, or social identity elements, without immediately deploring or applauding what we observe. (p. 26)

What is being questioned by the present author is whether the outcome of self-evaluation is ultimately negative. When a standard is made salient by means of self-focused attention, the individual becomes more cognizant of how his or her real-self compares to this standard. The literature suggests that the perceived discrepancy is usually negative, and, as such, the individual will experience negative self-feelings. These self-feelings, in turn, promote attempts at discrepancy reduction or avoidance of the self-focusing stimuli (Duval and Wicklund, 1972;



Carver, 1974, 1975; Wicklund, 1975). Wicklund (1975) has gone as far as to suggest that the perception of this negative discrepancy and the negative affect engendered is "the core behind the theory's application."

An understanding of the affective consequences of self-focused attention is of central concern to both the theory of objective self-awareness and the present author. Duval and Wicklund (1972) originally postulated a state of negative affect associated with self-awareness. The self-aware individual was believed to be always critical of his or her abilities, traits, behaviors and attitudes. To the extent that the self was found to deviate from the proposed standard, a negative discrepancy would be perceived. Some time later, Wicklund (1975), after reviewing the literature that had since developed in the area, and himself finding instances of positive affect (Ickes, Wicklund and Ferris, 1973), slightly softened his outlook on this aspect of the theory. Research had indicated that the state of self-awareness was occasionally desirable. That is, immediately following a success experience, a person may feel positively toward himself. Thus, positive affect can occur as the result of self-focusing under limited conditions. Although Wicklund admitted to the possibility of positive affect, he maintained that this feeling was a fleeting phenomenon, disappearing as the individual increased his standard of correctness to the point of the recent success.

A success experience can often exceed a person's aspirations or standards, and although aspirations will in turn accelerate, there will be at least a fleeting moment during which the person can be characterized as possessing a positive discrepancy. It is presumed here that positive affect will prevail to the degree that conscious attention is turned toward such discrepancies...it is further presumed that positive affect increases with the size of the positive discrepancy. (Wicklund, 1975, p. 237)

In spite of Wicklund's (1975) concession regarding the existence of positive discrepancies, those citing and employing the theory in their research still regularly note the all important role of negative self-evaluation. Archer (1980), for instance, notes that:

In the state of self-awareness, a person is said to compare the actual to the ideal self. This kind of self-evaluation usually leads a person to find the self wanting. After all, ideals are aspirations for the future rather than achievements of the past. Thus, self-awareness is usually a negative state. (p. 192)

Negative discrepancies leading to a state of discomfort are still postulated to be the central motivating force of self-awareness (Wicklund and Hormuth, 1981). This paper has put forth the suggestion that self-ideal comparisons are not the usual perceptual unit perceived by the self-focused person. If the standard does not reflect an ideal then it follows that self-awareness need not lead to negative discrepancies and affect. In light of the fact that the self-awareness phenomenon has become so widely accepted by investigators in so many areas of psychological research, it seems especially important to lay to rest the belief that the objective state engenders negative affect. It is to this end that the remainder of this chapter and the research subsequently conducted are devoted.

Since the theory of self-awareness is foremost a theory of self-evaluation (Wicklund, 1975), and all effects are postulated to be motivated by the individual's "...affective reactions to his degree of completion, goodness or inner consistency," it seems quite important to demonstrate the existence of positive as well as negative discrepancies.

In a significant departure from the Duval and Wicklund (1972) position, Buss (1980) has recently suggested that the outcome of self-

focused attention is, in part, a function of which self-aspect is focused upon. Specifically, focusing upon the public-self will generally, according to Buss, result in discomfort, doubt about one's self, and negative affect. In contrast, focusing upon the private-self may lead to positive, negative or neutral self-feelings. Buss further suggests that private self-awareness leads to a clarification of relevant self-aspects and the intensification of affect. Based upon the Duval and Wicklund (1972) position (but not that of Buss, 1980), this paper suggests that self-evaluation is the automatic outcome of self-focused attention. Self-evaluation is described as a cognitive process in which the individual compares his or her real-self to the salient standard. The degree of positive versus negative affect is primarily a function of the distance between these two cognitions. In a significant departure from both Duval and Wicklund and Buss, this paper argues that self-evaluation need not result in negative self-feelings, nor is this negative state the most common outcome of self-awareness. Rather, the process of self-evaluation may lead to positive, negative or neutral self-feelings depending upon the position of the real-self to that of the salient self-standard. In contrast to Buss who states that "for most of us, acute public self-awareness tends to be an uncomfortable state, often accompanied by social anxiety, lowered self-esteem, or attempts to escape the situation," this author argues that lowered self-esteem is not the predominant response to public self-awareness. As stated earlier, self-evaluation is a function of the salient social standard as perceived and defined by the publicly self-aware individual. Public as well as private self-awareness can lead to positive, negative or neutral self-evaluation and affect.

With respect to private self-awareness, when self-evaluation processes are engaged, the real-self is compared to the salient personal standard. In most instances self-awareness will engage a comparison between one's real-self and one's typical-self standard. There are, of course, circumstances during which one of the other personal standards will become salient, but these instances are far less common. An illustration of the position taken in this paper with reference to personal standards will be useful here. Consider, for a moment, the case of a woman we happen to notice glancing at her reflection in store windows as she walks down the street. Let us try to imagine how she experiences her own physical appearance. In all likelihood this woman possesses an ideal on the dimension of physical beauty much as Duval and Wicklund would suggest. That is, she can no doubt point out or name some person she admires and would, in fact, like to resemble. Every time this woman passes a store window we notice her once again glancing at her reflection. Why is she behaving in this manner? Duval and Wicklund would suggest that because she was experiencing a negative discrepancy, she would attempt to avoid her reflection. How would the theory of self-awareness account for this consistent gazing behavior? The answer is, it cannot. Two possible reasons for this behavior can be offered if one does not rely upon an assumption of a real-self/ideal-self comparison: 1) there is no discrepancy, or 2) there is a positive discrepancy. It is this writer's belief that the comparison process does not involve an ideal-self standard. Rather, one's typical-self has been accessed in this situation; therefore, positive and neutral discrepancies are realistic alternative interpretations of this common occurrence.

The purpose of this section is to demonstrate the common occur-

rence of positive discrepancies and, further, that it is not a "reasonable assumption" that all naturally occurring discrepancies are negative. The existence of positive versus negative discrepancies is a function of the self-standard focused upon. In light of the fact that negative discrepancies and negative affect have been well documented in the literature, this section will concentrate on those studies that have established the existence of positive discrepancies and positive affect.

Blount and Pedersen (1970), interested in the therapeutic effects of self-confrontation techniques on one's concept of self, found that measures of self-concept, self-acceptance, public-self, self-criticality and self-assurance were not significantly influenced by such techniques. There was, however, a tendency for subjects to perceive themselves more favorably after they had seen a video playback of themselves. If we consider the use of video playback as a means by which attention to the private-self might be enhanced, this study lends some support to the existence of naturally occurring positive discrepancies. If subjects had been experiencing a negative discrepancy the effects of viewing this video playback should have been a decrease in self-esteem.

One of the first studies in the self-awareness literature to demonstrate the existence of positive discrepancies was conducted by Duval and Wicklund (1973) in conjunction with their study on the attribution of causality for negative outcomes. They found that subjects took more credit for positive outcomes when self-focused (mirror) than when not self-focused (no mirror). In other words, positive discrepancies were enhanced by the state of self-awareness.

The third experiment reported in the Ickes, Wicklund and Ferris (1973) paper also provides evidence of positive discrepancy enhancement

when self-focused. They report that self-ratings for the trait of sur-gency in the positive feedback condition were enhanced for self-aware subjects.

Wicklund (1975) cites several studies pointing to the existence of a positivity effect which led to the revision in the original theory. Carver, for instance, marking several self-dimensions with an X, purportedly representing the position of the average individual on that dimension, found that subjects in a no-mirror condition rated their real-self higher than this average and that this effect was signifi-cantly enhanced in a mirror condition.

A study by Davis and Brock (1975 - Exp. II) demonstrated that given positive feedback, mirror subjects attributed a greater number of first person pronouns to a foreign language passage than did no mirror subjects. Davis and Brock concluded:

...there are conditions under which objective self-awareness will be aversive and avoided; namely when a person has been led to feel badly about himself. However, when there is no justification for bad feelings over not adhering to a standard, objective self-awareness may be pleasant, increase self-esteem, and not be avoided. (p. 387)

Carver and Scheier (1978), validating the mirror manipulation, had subjects complete the SFSC in the presence and absence of a mirror. Of particular interest is the finding regarding the affective consequences of self-focusing. The SFSC provides criteria for classifying self-focus sentence completions into those that involve negative affect and those that do not. Carver and Scheier found that the mean number of self-focus sentence completions reflecting negative affect made by self-aware and non-self-aware subjects were virtually identical. They concluded that "in this context, self-focus seems not to have been particularly aver-sive." A second experiment, employing an audience manipulation of self-

awareness, also yielded no difference in affect as measured by the SFSC. In fact, they note, "in this case the slight difference was in the direction opposite to that expected."

Fenigstein (1979 - Exp. II), finding that public self-consciousness did not influence reactions in the acceptance condition of a previous study, designed a second study to clarify the effects of positive feedback in social interaction. He suggested that self-focusing, leading to increased concern regarding self-evaluation, leads to a closer examination of "self-relevant evaluation of others" in the interaction. Fenigstein reports that after a negative interview subjects responded more negatively in the presence of a mirror than in its absence. In contrast, following a positive interview there was a tendency toward more positive affect in the mirror condition. Overall, he maintains, "the results suggest that self-attention intensifies the process of self-evaluation, and when self-awareness is low, the importance of self-relevant information from others is reduced." A final conclusion offered by Fenigstein is also of importance to this topic. He suggests a negativity bias "...such that concern over evaluations is particularly focused on the possibility of negative rather than positive feedback." This conclusion is based on the finding that an acceptance condition and a positive evaluation condition in two studies yielded non-significant trends, whereas the respective rejection and negative evaluation conditions yielded the predicted dissatisfaction. He adds, "it would then follow that the salience of negative events such as rejection or criticism is heightened more by self-awareness than the salience of positive events such as acceptance or praise." This conclusion requires some modification. Fenigstein himself notes that the acceptance manipu-

lation in the first study was not as strong as the rejection manipulation. But there is yet another reason for caution. The positive condition of the second study was somewhat of a mixed bag with respect to the self-awareness manipulation; both a mirror and an audience were present. Quite likely the results were not as robust as they might have been due to the variability of the standards made salient by these two types of manipulations.

One further comment is in order with respect to the findings reported by Fenigstein. This comment deals with the nature of social interaction and the relative infrequency of direct negative evaluations. Whereas positive feedback is relatively frequent in social interaction (e.g., "You look great today." "I like your suit."), negative feedback is quite rare (e.g., "You look terrible today." "I hate your suit."). In the Fenigstein study the social nature of the situation was highly salient. Perhaps due to the rarity of negative feedback in our everyday lives, we are particularly sensitive to it. Positive feedback, relatively more frequent, might not have had the same punch and, therefore, not be attended to as vigorously.

Several other studies lend additional support to the proposition that self-focused attention can, and often does, lead to positive self-evaluation and affect. In fact, positive self-evaluation may be the more common outcome of self-awareness. As Rosenberg (1968) states, "...the evidence is consistent in suggesting that, overall, people are more likely to hold favorable than unfavorable opinions of themselves."

Scheier and Carver (1977) found that self-focused attention increased individual's responsiveness to any affective state, whether that affective state was positive (pleasant affect associated with the rating



of nudes) or negative (aversion toward slides depicting disgusting scenes). Hull and Levy (1979) report that self-awareness did not result in consistently negative self-evaluations. In fact, anonymous self-ratings were not influenced by the self-awareness manipulation. Furthermore, they report that self-focusing had no effect on reported mood ratings. Greenberg and Musham (1981) recently demonstrated that individuals may seek out the self-aware state. They suggest that to the degree that people are free of faults on a salient self-dimension, self-focused attention might even be a desirable state. And, Brockner and Wallnau (in press) found that high self-esteem subjects reported no difference in task enjoyment ratings and did not demonstrate an avoidance effect in the presence of a mirror. It may be, as suggested earlier, that lows and highs characteristically attend to different standards when attention is self-directed.

One last study points out the occurrence of positive affect when attention is focused upon the private-self. It should be noted, however, that subjects were psychiatric patients and, therefore, the findings must, of course, be qualified. Braucht (1970) was interested in the therapeutic effects of self-confrontation via videotape. As part of his study subjects completed the Self-Goal-Other Scale, consisting of 15 pairs of bipolar constructs, separated by a 9-point rating scale. This instrument was completed twice, once before and once after the videotape self-confrontation. Of particular interest are the change scores on ratings of perceived-self. Braucht reports no significant difference between the experimental and control groups on this measure. It would appear that self-focusing in this particular situation, and with these particular subjects, was not necessarily unpleasant. Braucht

also notes that the variance of scores was significantly greater in the experimental group, indicating that for these subjects, some gained in perceived-self whereas others apparently lost. If we assume that subjects possess but one standard upon which to focus when attention is directed to the self, then these variance scores cannot be accounted for. If, however, we permit the possibility of a variety of self-standards, then these results begin to make sense. For this population of subjects it appears that self-focused attention led to an awareness of several different perceptual units.

Research examining the state of public self-awareness and the experience of affect is scarce in the form required to provide direct support for the argument advanced in this paper. There are studies to be found, however, which have employed public self-focusing manipulations and indirectly support the existence of positive discrepancies and positive affect when attention is focused on the public-self.

Paivio (1965) reports that a number of studies have indicated that experimenter praise or encouragement results in performance increments just as reproof has been found to lead to performance decrements. And, Davis and Brock (1974, cited in Wicklund, 1975) found that subjects in a positive feedback condition, who were led to believe that they were being observed over a TV monitor, produced a significant increment in the number of first person pronouns they ascribed to a foreign language passage. If we assume that the TV monitor is a stimulus which promotes attention to the public-self aspect, then in this study at least, self-focusing appears not to have been particularly aversive.

A study conducted by Gibbons and Wicklund (1976), demonstrating an avoidance effect, also highlights the importance of considering

saliency when explaining the effects of self-focused attention. In this study male subjects were either accepted or rejected by female confederates. The nature of the situation and the self-awareness manipulation were such that attention was focused on the public-self aspect. Gibbons and Wicklund report that accepted subjects listened to a tape of their own voice longer than did rejected subjects. This study provides substantial support for both the existence and the use of different social-self standards for the purpose of self-evaluation. The social standard in each of the conditions was made quite salient to the subject. The subject either did or did not meet this standard, resulting in either approach or avoidance tendencies.

And, lastly, Carver and Scheier (1978) found that a greater proportion of self-focus sentence completions (SFSC) were made by subjects in the presence of an audience than by subjects who were alone. Further, this state of apparently public self-awareness was not accompanied by the expected negative affect as measured by the SFSC.

What all these studies seem to point out is that the experience of positive within-self discrepancies and positive affect is not as uncommon as the theory of self-awareness would lead us to believe. Whether this positive experience is a fleeting phenomenon is another question, a question that has not been experimentally addressed to date. The studies reviewed have clearly indicated that both public and private self-awareness might lead to positive as well as negative self-feelings.

## CHAPTER V

### THE MOTIVATIONAL CONSEQUENCES OF SELF-FOCUSED ATTENTION

The consequences of self-focused attention are predicated upon the assumption of the perception of a negative discrepancy and the experience of negative affect. According to Duval and Wicklund (1972), the experience of negative affect results in attempts by the individual to either avoid the unpleasant state or reduce the discrepancy. More recent variations of the theory (Carver and Scheier, 1981b) likewise employ the assumption of a negative discrepancy to explain the behavioral consequences of self-focusing. Carver and Scheier draw upon a control systems approach in their explanation of the motivating effects of self-focus. The basic unit of analysis is called the "negative" or "discrepancy-reducing" loop. The essential function of this loop is that of reducing the negative discrepancy between a perceived value and a "standard of comparison." A potential weakness of both the Duval and Wicklund (1972) and the Carver and Scheier (1981b) model is that neither gives credit to the motivational effects of the positive within-self discrepancy.

A recent review of the assumptions underlying the theory of self-awareness (Wicklund and Hormuth, 1981) has once again restated the position that the awareness of a discrepancy is a pre-condition for self-evaluation, the awareness of a negative discrepancy:

The core of the theory is a postulated motivational state that consists of the combination of within-self discrepancy and self-focused attention. If a person falls short of an aspiration...

or conducts any action that is disparate from an ideal or value, the person is said to possess a within-self discrepancy. This discrepancy will be felt to the extent that it is salient and to the extent that the person is self-aware. Thus, a state of discomfort is postulated to be the central motivating condition, and this discomfort is a product of the magnitude of the discrepancy and the presence of self-awareness. (pp. 1029-1030)

Wicklund and Hormuth (1981) also suggest that the amount of negative affect experienced is a function of the size of the discrepancy:

Within the language of the theory, it has proven useful to view the awareness of a discrepancy as a condition of self-evaluation, where the discomfort of the self-evaluation is a function of the size of the discrepancy. If the discrepancy is practically nil, or especially when it is positive, then self-awareness has no motivating properties. For instance, one can then observe no tendency to avoid self-awareness provoking circumstances. (p. 1030)

Wylie (1974) comments on the error in assuming that discrepancies in either direction will necessarily lead to the corresponding affect. "Simply to assume a perfect correspondence between cognitive magnitude of the discrepancy and strength of affective reactions associated with it is unwarranted on both intuitive, conceptual grounds and empirical grounds." The size of the discrepancy alone will not accurately determine one's response to that discrepancy; one must, for instance, take note of the centrality of that dimension to one's global feelings of self.

The second issue addressed in the Wicklund and Hormuth quote is also of concern, in that they state that positive discrepancies haven't any motivational properties. They suggest we will not be able to observe avoidance behaviors; but what about approach behaviors? Greenberg and Musham (1981) have suggested that "someone who performs especially well, or holds to his or her values precisely, would want to focus on that state of success or integrity." I would be inclined to agree with

this statement with one slight modification; one need not perform especially well but, rather, better than the standard upon which one is focusing, for positive affect to be experienced.

It is herein proposed that self-focused attention will quite often lead to the perception of a positive within-self discrepancy. Furthermore, positive as well as negative discrepancies and affective states have motivational properties; positive affect may engender behaviors which might be classified as approach tendencies just as negative affect appears to promote avoidance tendencies.

The simplest and most expedient route out of the self-aware state would be to avoid those stimuli which remind one of his or her object status. Thus, the theory predicts that self-focusing leads to the avoidance of stimuli which cause self-awareness. Several studies purporting to support the existence of the avoidance response also lend support to the existence of positive discrepancies and the tendency to approach those stimuli which remind one of his or her self. Gibbons and Wicklund (1976), for instance, found that rejected subjects listened to a tape of their own voice for a shorter period of time than did accepted subjects. In fact, accepted subjects actually preferred their own voice to that of another's voice; that is, they listened to it for a longer period of time. It would appear that accepted subjects, perceiving a positive discrepancy, actively sought out the state of self-awareness, thereby supporting the proposition that positive affect has motivational properties.

If, as Duval and Wicklund (1972) suggest, self-awareness leads to negative affect, then avoidance of self-referents would be expected when a person focused on himself or herself. An experiment by Rogers,

Kuiper and Kirker (1977) suggests just the opposite effect. Defining the self as "an abstract representation of past experience with personal data" they found that "people-related" information was best encoded and recalled when the individual possessing the information had a personal experience with that information. In other words, if their self-schemata included the particular characteristic they were required to recall, they were better able to recall it. If self-focusing entails a comparison of one's self to an ideal, then it would seem that as each of these adjectives were focused upon, it should have been compared to an ideal on that dimension, and subsequently avoided. This, however, is not what appears to have transpired. The Rogers, et. al. study would seem to suggest that self-focusing, or referencing a particular self-dimension within one's self-schemata, is not particularly aversive nor is it typically avoided. In fact, it appears quite useful and necessary in the processing of personal data.

Bower and Gilligan (1979) conducted a study similar in content to the Rogers, et. al. study. Rather than using simple adjectives, however, these investigators employed adjective-noun phrases. As expected, the self-reference group performed better on a free-recall task and a cued-recall task than did a semantic-reference group and a superficial-reference group. Apparently self-referencing is a powerful encoding device. They also report that within the self-reference group yes responses were recalled better than no responses, and pleasant phrases were recalled better than unpleasant ones. The fact that more pleasant phrases were recalled by the self-reference group is of particular interest since this finding would seem to support the notion that focusing upon positive discrepancies (if, in fact, subjects are self-focused)

has motivational properties. One appears to actively approach positive affect associated with the self.

A recent study conducted by McDonald and Eilenfield (1980) revealed a significant linear relationship between rated physical attractiveness and approach toward self-awareness stimuli. In a naturalistic setting, male and female undergraduates were rated as being low, medium or high on the dimension of physical attractiveness, as they proceeded down a campus walkway. The walkway was bound on both sides by windows capable of reflecting images. Approach-avoidance behavior was measured by the amount of time subjects spent gazing at their mirror images. Attractive individuals were found to gaze at their reflections longer than less attractive individuals. While this study adds little to our understanding of the underlying processes involved in approach-avoidance tendencies, it does suggest that avoidance is not necessarily the preferred outcome of self-focused attention. It would appear that, for at least the more attractive subjects, a negative discrepancy did not exist on the self-dimension they were focusing upon. And, further, that the state they were experiencing was not an aversive one.

The final study to be cited, and the study which provides the greatest support for the existence of positive motivational tendencies, was recently conducted by Greenberg and Musham (1981). These investigators sought to demonstrate that subjects acting in accordance with their personal beliefs would show "...an absolute preference for their mirror images." That is, subjects will not simply avoid less, but actively approach more than subjects responding at a designated baseline.

In a 3 x 3 x 2 factorial design, male and female subjects, pre-measured for their attitudes toward women (traditional, neutral, liber-



al), read aloud into a tape recorder a series of statements reflecting either traditional, neutral or liberal views regarding women. After subjects had finished reading the statements they were led into another room, a room that contained two chairs in the center, back to back. One chair faced a mirror and the other chair faced a non-reflecting wall. Selection of the chair constituted the dependent measure. Approximately one minute later the experimenter returned to the room and asked subjects how interested they would be in hearing the tape they had previously recorded. As predicted, subjects chose the chair facing the mirror most often following attitude-behavior consistency, and avoided this arrangement most often following attitude-behavior inconsistency. Intermediate or mixed tendencies were observed for subjects reading attitudinally neutral material. The results reported for the interest measure paralleled those for the choice of chair. Attitudinally consistent subjects, whether traditional or liberal, expressed a strong desire to hear the tapes. Attitudinally discrepant subjects preferred not to hear these tapes. Those subjects who held neutral attitudes and read neutral statements reported intermediate interest in hearing the tapes.

Greenberg and Musham conclude:

Our finding that subjects approach self-focusing stimuli in the absence of a within-self discrepancy suggests that self-focused attention can be positive - particularly when there is some salient laudable feature of the self about which to contemplate. (p. 198)

These findings lend considerable support to the existence of positive within-self discrepancies, positive motivational tendencies, as well as neutral affective reactions to self-focused attention. Adhering to personal-self standards when attention is focused upon the private-

self aspect appears to promote positive self-feelings and approach tendencies. In contrast, not adhering to personal-self standards appears to promote negative self-feelings and avoidance tendencies. Finally, when a person focuses upon a self-dimension, or an issue, which holds no personal significance, self-awareness appears to lead to a lack of affect in either direction.

PART II

AN INTERACTIONIST APPROACH  
TO THE THEORY OF SELF-AWARENESS

## CHAPTER VI

### THE PERSON AND THE SITUATION

The research reviewed and the conclusions drawn in this paper have drawn heavily from the literatures of two major self areas within the psychological domain: self-concept theory and self-awareness theory. As their respective names suggest, both theories examine self-related phenomenon; their approach to the study of self, however, differs. Self-awareness theory has advanced our understanding regarding those elements in one's perceptual field that promote attention to one's self; what conditions make one aware of the self as an object. Self-concept theory has strived to advance our understanding of what the person feels about this object self. Self-awareness theory has emphasized the importance of situational stimuli while minimizing the influence of individual differences. Self-concept theory, on the other hand, has generally minimized the influence of the situation, viewing the self-concept as a relatively stable entity, thereby maximizing the importance of individual differences. To put it simply, the former theory views the self in terms of state differences, whereas the latter concentrates its efforts upon trait differences. Neither theory, however, has answered the crucial question linking these two areas: when the self is focused upon, what is it that the individual is seeing that is influencing the resultant feeling of pride or disappointment in the self? The major purpose of this paper was the examination of this and related questions relevant to the process of self-evaluation. Do self-focusing stimuli differ in the

effects they have on self-focused attention? What is the composition of the perceptual unit experienced by the individual when the self-evaluation process is engaged? What standard does the person access to determine self-worth? Is there but one standard or are there multiple standards at the individual's disposal? If the person possesses multiple standards, what are the conditions responsible for the salience of one rather than another? Is the outcome of self-evaluation ultimately negative? Must self-esteem decrease when attention is self-directed?

In agreement with Wicklund (1978), who suggests that "...it seems highly likely that important modifications of the theory of self-awareness will lead the theory in the direction of becoming a notion about salience," this author, too, recognizes the unique contribution the eventual understanding of saliency will have to the theory of self-awareness. Understanding saliency, what gives one self-aspect, one perceptual unit, one standard, priority over another in the process of self-evaluation appears to be the key to understanding the consequences of self-focused attention. And saliency, it appears, is probably influenced by the person--one's picture of self, dispositional tendencies, and expectations--the situation--one's immediate stimulus context--and the interaction of the two. Just as certain individual difference variables will probably be found to promote the salience of particular standards across situations, so too will certain situational variables be found to encourage the regulation of our behavior in accordance with particular standards across a wide sample of the population.

The notion that what a person brings to a situation influences his or her behavior in that situation not only makes intuitive sense but has been noted time and again in both the history (Cooley, 1902; Mead,

1934; Lewin, 1935) and recent theory in the field of psychology (Bowers, 1973; Mischel, 1973; Sarason, Smith and Diener, 1975; Endler and Magnusson, 1976; Bem and Funder, 1978; Barker, 1979). Only recently, however, have researchers come to fully understand the implications of this idea for the study of personality and behavior (Sarason, Smith and Diener, 1975). Most writers in the area of personality appear to credit Mischel (1968, 1978) as being the major influence in the stimulation of interest in the Person x Situation interactionist position originally formulated by Lewin (1935). Mischel (1978) suggests that "if human behavior is determined by many interacting variables, both in the person and the environment, then a focus on any one of them is likely to lead to limited predictions and generalizations." A similar suggestion has been put forth by Christie (1978) in his recent review of the research relating personality tests and behavior, in which he concluded that "a major reason for the failure to find many studies that indicate the predictive usefulness of personality measures in social psychological research is that investigators have neglected to take the Person x Situation paradigm seriously enough." Shrauger and Schoeneman (1979), reviewing studies which manipulate feedback and examine its effects on self-evaluation, concluded that several factors influence the extent of changes in self-descriptions including "...discrepancy of feedback from subjects' self-perceptions, favorableness of feedback, characteristics of the evaluators, consensual validation of the judgments given, and attributes of those evaluated." In effect, a combination of person and situation variables are believed to influence self-evaluation. And, Bandura (1978) notes that "to contend that mind creates reality fails to acknowledge that environmental influences partly determine what

people attend to, perceive and think." Epstein (1979) summarizes the general interactionist position and the viewpoint taken in this paper with respect to the importance of the situation, the person, and the Person x Situation interaction, to the understanding of human behavior and, in particular, to the understanding of the self-awareness phenomenon.

...it is assumed that individuals and situations are interdependent. That is, the individual's cognitions and perceptual processes, as much as the objective qualities of the stimulus, determine the meaning of the stimulus....Since behavior never takes place in a vacuum but always occurs in a situational context, it is meaningless to talk about characteristics of an individual's behavior without specifying the situation in which the behavior occurs. To understand and predict behavior, it is, accordingly, just as necessary to have a classification system for situations as for individuals and, most important, to know how individuals interpret different kinds of situations. (p. 1102)

In summary, there is every reason to believe that person variables such as self-consciousness, and situational variables such as the public-private distinction, and, of course, the interaction of the two, will be found to have a significant bearing upon the antecedents, the process, and the consequences of self-focused attention. Thus, the task of future researchers seems to be that of more precisely defining the parameters of the situation, the characteristics of the person, and the interaction of the two, that render one or another standard salient when attention is self-directed and self-evaluative processes engaged. To this end a revised model of the self-awareness process is offered for consideration, which uses as its foundation the principles set down by Duval and Wicklund in 1972, the revisions to the theory suggested by Wicklund in 1975, and the research efforts of the numerous investigators who have made substantial contributions to this area during the past ten years (see references as the contributors are too numerous

to mention here). This model is not meant to represent the final word on this phenomenon, as it is this writer's belief that the theory is still in its infancy with respect to its potential explanatory power. There are still issues which are debated, and critical questions to be answered. Rather, its purpose is to provide the reader with an alternative interpretation of the circumstances engaging the state, the processes evoked by the state, and the response to the state; an interpretation offered only after a careful consideration of the available literature in the areas of self-esteem and self-awareness. It should be noted, in addition to the Duval and Wicklund statement of the theory, and this writer's revised model, is a model recently suggested by Buss (1980). Although Buss maintains his theory is a new theory and attempts to distinguish it from Wicklund's by referring to it as "the theory of self-consciousness," it was derived from the Wicklund model and thus, more closely represents an extension than it does a new theory. And, lastly, in light of the fact that this writer's model diverges from both the Duval and Wicklund (1972) theory and the Buss (1980) theory at several important junctures, all opinions will be provided so that the reader may determine their relative merits. Since Wicklund's theory was examined in some detail in Part I, it will receive only a cursory treatment in this section.



## CHAPTER VII

### THE INTERACTIONIST MODEL

The interactionist approach to self-awareness, as the name suggests, emphasizes the importance of the person, the situation, and the Person x Situation interaction. This emphasis is apparent beginning with the stimuli capable of eliciting the self-aware state, throughout the process of self-evaluation evoked by the state, and ending with the behavioral consequences of the state. This emphasis is in direct contrast to the Wicklund model which, with the exception of self-consciousness, minimizes those characteristics the person brings to and imposes upon the environment. It is, however, consistent with Buss' (1980) revisions to the theory.

That the surrounding situation is important to an understanding of human behavior is well recognized (Bowers, 1973; Mischel, Ebbesen and Zeiss, 1973; Bem and Allen, 1974; Endler and Magnusson, 1976; Feshbach, 1978). In fact, the theory of self-awareness is based upon the premise that shifts in the situation create shifts in focus of attention. Its effects upon the process and outcome of self-evaluation, however, is less clear. The question is posed as to why one can feel fully satisfied with oneself in one situation and completely dissatisfied in another. Rosenberg (1979) gives credit to situational variables: "the situational variability in the self-concept is undeniable; the person feels self-satisfaction at certain times and under certain conditions, self-dissatisfaction at others." Apparently the self-standard one is

employing is shifting from one time to the next. The question then becomes what is causing this shift; the answer is the situation.

Just as the situation must be considered in any discussion of self-evaluation, so must the individual. People entering the identical situation bring with them different ideas as to who they are, and what the situation demands of them. They bring with them a psychological environment so to speak. These self-pictures, dispositions, and expectations have a direct effect on their response to that situation. As Froming and Walker (in press) point out, "many situations are interpretable in a variety of ways and as the interpretation of the situation changes, so do the salient standards." And, Shrauger and Shoeneman (1979) suggest:

Finally, in considering the availability of information from others it is important to recognize that people who are evaluated may help to determine how much evaluative information they receive. Peoples frequency of social interaction, how directly they ask for information, and how much they behave in ways that might elicit others' comments may affect the amount of evaluative feedback received. (p. 566)

#### The Stimuli Engaging the Self-Aware State

The interactionist model begins with an examination of those stimuli capable of eliciting self-focused attention and, as might be expected, suggests that both the person and the situation must be considered. Wylie (1974), too, suggests that more accurate prediction of behavior may have to begin with an acknowledgment of the importance of antecedent variables both within the person and the situation:

It has been suggested that predictions of behavior could be made more accurate by the inclusion of objectively specifiable antecedent factors, including facts about subject's previous experience, subject's objective characteristics, and objectively defined current stimuli.

...it remains to be demonstrated...whether adding objec-

tive measures improves the predictions one could make from either type of measure alone. (pp. 321-322)

Concentrating first on situational influences, it is proposed that certain situations encourage private self-awareness, whereas others encourage public self-awareness (Diener and Srull, 1979; Snyder, 1979; Buss, 1980; Scheier and Carver, 1980a; Froming and Walker, in press; Froming, Walker and Lopyan, in press). Or, put another way, different situations engage different psychological states. Among the situations believed to promote the state of private self-awareness are the following: 1) private situations wherein one's physical appearance becomes apparent (e.g., mirror image, videotape of self, photograph of self), 2) private situations that encourage self-reflection (e.g., writing a diary account, filling out a self-report measure), and 3) private situations offering minimal environmental distractions so that one's self becomes the major focus of attention (e.g., meditation, daydreaming, introspection, closing one's eyes, awareness of internal autonomic activities). In contrast, public self-awareness is only experienced in situations wherein the person believes he or she is being or will be evaluated on some level. This belief may be instilled by: 1) the presence of an audience of one or more, 2) the presence of a TV camera purportedly transmitting or capable of future transmission of the person's image or behavior, 3) imagined or implied future interaction with one or more others, or 4) recording or hearing one's own voice on tape. As each of these public self-focusing situations point out, an audience need not be physically present for it to be an effective stimulus for self-awareness (Paivio, 1965). The person need only believe or imagine that he or she is, may be, or will be evaluated.

As the situation classification suggests, private self-awareness will most often be experienced in private, and public self-awareness will most often be experienced in public. The reverse, however, is not true. That is, private situations will not automatically engage private self-awareness, just as public situations will not automatically engage public self-awareness. Quite obviously, most of our private moments are spent focusing upon some aspect of the environment and not on ourselves. And whether a public situation will focus one's attention upon the public aspect of self is entirely a function of the characteristics and behavior of the others in the situation. Who the audience is, what the audience does and how the audience reacts to the individual is critical in determining focus of attention. The most important factor one must consider when examining the influence of public situations upon self-focusing is whether this public is perceived by the individual to be evaluative.

Several studies in the self-awareness literature suggest that mere presence is not sufficient to focus attention on the self. Froming and Walker (in press), for instance, found no difference in response between subjects confronting a passive audience and a control group. In contrast, subjects confronting an evaluative audience responded in a manner consistent with the salient social-self standard. Further support for the importance of the evaluation factor comes from a study by Froming, Walker and Lopyan (in press). They found that a non-evaluative audience comprised of graduate students did not have the intended effect upon focus of attention. It was only when subjects were told that they were being evaluated as to their effectiveness as teachers that they behaved in accordance with the perceived expectations of the audience.

And, Scheier, Fenigstein and Buss (1974) demonstrated that the presence of an audience heightened self-awareness only when the audience was made salient through frequent eye contact with the individual. Lastly, Diener and Srull (1979), finding that the social standard had more of an influence upon subjects' self-satisfaction, note a possible limitation in their study having to do with the public nature of the experimental task, a limitation which suggests the importance of the evaluation factor. They note, "it is possible that the self-awareness manipulation combined with the interaction of the two experimenters induced public self-awareness." This seems highly likely in that these experimenters were performing activities which could easily have been construed as being evaluative. In summary, an audience, whether actually present or not, must be perceived as evaluative in order that attention be directed to the public aspect of self.

There is one further point worth mentioning. We have suggested that private self-awareness is most often experienced in private, and public self-awareness most often experienced in public. Although this public-private distinction is a useful one, it is obviously not all inclusive. That is, private self-awareness may be experienced in public, as when one's mind wanders off to a self-related dimension in the midst of a crowded party, just as public self-awareness may be experienced in private, as when evaluation is imagined or expected.

A comparison of the interactionist model with Buss' (1980) model of self-consciousness reveals that the two models differ in their classification of those situations (stimuli) engaging public versus private self-awareness. According to Buss, self-induced attention (i.e., day-dreaming), writing a diary account, instructed meditation, and small

mirrors focus attention upon the private-self aspect. With reference to public self-focusing, he distinguishes between two broad classes of inducers: 1) being observed by others or recorded by machines, and 2) non-social perceptual feedback from these recording devices or from a three-sided mirror. Recording devices focus attention on the public-self because, according to Buss, "...you are confronted with an aspect of your social self about which you possess only vague information." This same explanation applies to the large three-sided mirror. Further, Buss includes a photograph or a videotape of oneself as stimuli which provide perceptual feedback and therefore engage public self-awareness.

Quite obviously Buss' model differs in many ways from the model proposed in this paper. For instance, the interactionist model does not distinguish among those objects capable of reflecting an individual's image; that is, all reflections of one's physical appearance are believed to promote private self-awareness (unless, of course, one imagines he or she will be evaluated). Thus, in contrast to Buss, a large three-sided mirror, a photograph and a videotape of self are believed to promote private self-awareness. The reason these physical reflections of self engage private rather than public self-awareness is simply because there is no real, implied or imagined evaluation. The only one evaluating the self, for instance, confronted in the mirror, is the person. If the situation included a sense of evaluation then, of course, focus of attention would be upon the public-self aspect. One last difference between the two approaches concerns the role of self-reports in determining one's focus of attention. Buss suggests that these self-reports promote public self-awareness because "when you fill out a self-report questionnaire, you need to read the questions carefully and perhaps be

careful of how you answer because others will read your replies."

Although this description of one's behavior while filling out a self-report may apply to some, I suggest it is not the most common experience. Rather, the person engaged in this activity will more likely access his or her private-self due to the nature of self-reports, and the situations within which these reports are responded to. Certainly these reports will be examined by others, but in most instances these others are not aware of the person's identity. Under this type of circumstance most individuals are motivated to answer accurately and in order to do that they probably access information residing within the private-self aspect. Should they expect their responses to be made public, to be commented on or associated with them, for instance, they may, as Buss suggests, "be careful" and respond in a manner which really reflects their public-self aspect.

Just as different situations engage different states of self-awareness, individuals differ in their reactions to these situations. In effect, there are individual differences in susceptibility to self-focusing stimuli. In its original form the theory of self-awareness (Duval and Wicklund, 1972) shied away from the study of individual differences. Now, however, there exists general agreement in the field that people differ in the extent to which they habitually attend to themselves (Scheier and Carver, 1981). There is evidence which suggests that there exists a disposition toward or away from self-focusing. That disposition is called self-consciousness. Fenigstein, Scheier and Buss (1975) have developed a measure of this disposition, the Self-Consciousness Scale. They suggest:

Some persons constantly think about themselves, scrutinize their behavior, and mull over their thoughts - to the point

of obsessiveness. At the other extreme are persons whose absence of self-consciousness is so complete that they have no understanding of either their own motives or how they appear to others. (p. 522)

Furthermore, they suggest, "...there may be differences between high and low self-conscious persons in their susceptibility to the effects of a mirror, a camera, or an audience."

Fenigstein, Scheier and Buss have identified two factors: public self-consciousness and private self-consciousness. Private self-consciousness reflects attention toward the personal aspects of self. The person high in private self-consciousness is generally more introspective, and tends to be self-reflective, focusing more on his or her inner feelings, moods and perceptions. The person high in public self-consciousness, on the other hand, is more aware of himself or herself as a social object, and is generally more concerned with his or her appearance and the impression being conveyed to others. Research suggests that the behavioral consequences of private self-consciousness duplicates that of state manipulated self-awareness (Buss and Scheier, 1976; Scheier, 1976; Scheier and Carver, 1977; Carver and Scheier, 1978; Brockner, 1979a, 1979b; Scheier, Carver and Gibbons, 1979; Buss, 1980; Scheier, 1980; Scheier and Carver, 1980a, 1980b).

The question arises as to whether the presence of each of these dispositions acts as a stimulus for self-awareness. The position taken in this paper is that whereas private self-consciousness can, in and of itself, promote the state of private self-awareness, public self-consciousness interacts with the situation in exerting its influence as an antecedent variable. This is somewhat different than Buss' belief that public self-consciousness does not occur unless prompted by a public self-awareness manipulation. According to the interactionist model,



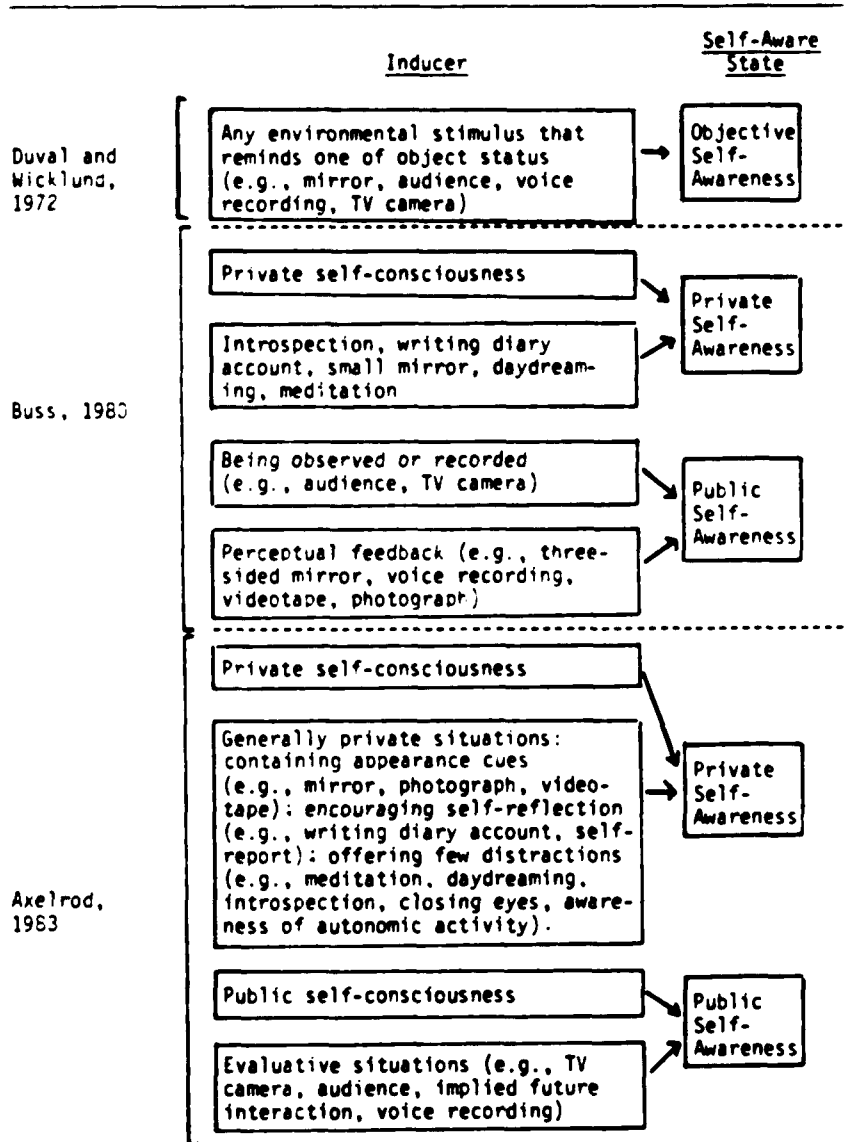
whether a situation is defined as capable of eliciting public self-awareness is entirely a function of the individual's perception of the situation. The person must believe that he or she is being evaluated. This should not be taken as meaning that the situation need actually be evaluative, but only that it is perceived as such. Relating this disposition only to its ability to engage the self-aware state, it may be that these individuals are more susceptible to environmental suggestions pertaining to evaluation. In other words, high publicly self-conscious individuals may perceive more situations as evaluative than those possessing less of this disposition.

Figure 2 depicts the interactionist model as it has been explained to this point. For the sake of clarity, this approach will be compared with that of the Duval and Wicklund (1972) model and the Buss (1980) model in this, and all later illustrations pertaining to the interactionist approach to self-focused attention.

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Figure 2

The Stimuli Eliciting the Self-Aware State: A Comparison of Approaches



Mediating Psychological Processes

In agreement with Duval and Wicklund (1972) attention at any given moment may be directed toward the self or the environment. When attention is directed toward the self, when the person is objectively self-aware, attention is focused upon the reflexive-self. It was proposed that this reflexive-self, the individual's picture of self, has two components: the real-self and the concept of self. The real-self is that point on the salient self-dimension the individual believes he or she momentarily occupies. It is matter of fact so to speak, but a highly subjective fact. The concept of self, also a point on the self-dimension being focused upon, exists on two planes: the public-self aspect and the private-self aspect. Private self-awareness is defined as attention directed toward the private-self aspect. When privately self-focused, a comparison is made between one's real-self and one's private concept of self, and more specifically, one of the personal standards residing within this concept of self (e.g., the typical-self standard, the committed-self standard). Public self-awareness is defined as attention directed toward the public-self. When publicly self-focused a comparison is made between one's real-self and the public concept of self, or, more precisely, one of several social-self standards cued by the situation. Whether publicly or privately self-aware, one's attention is focused upon that self-dimension most salient at the moment; a particular characteristic, attitude, ability, personality disposition or some other dimension of the self becomes apparent to the person. Whereas this position is consistent with that of Duval and Wicklund (1972) it is inconsistent with Buss' (1980) model which suggests that what the person focuses upon is, in part,

a function of the aspect of self to which attention is directed. The domain of private self-awareness includes bodily processes, moods, emotions, motives, fantasies, and, lastly, self-evaluation. In essence, self-evaluation is not the automatic outcome of private self-awareness. One's focus of attention when publicly self-aware depends upon the conditions that produced the state. According to Buss being observed directs attention to some unspecified aspect of one's appearance and style of behaving. In contrast, non-social feedback focuses one's attention upon a specific self-aspect:

The other major cause of public self-awareness is nonsocial feedback from mirrors, photos, and recordings that reveal how you look or sound to others. In contrast to being observed, such perceptual feedback is specific and detailed. You are confronted with a precise perception, usually less attractive and more detailed than the vague image you have been carrying with you. (p. 37)

Thus, public self-awareness invariably leads to self-evaluation, but the evaluation concerns only one's observable features and behavior. In contrast, the interactionist model suggests that one need not focus upon an observable self-dimension; rather, any self-dimension, whether observable or not may gain salience. A mirror, for instance, may provide the individual with a reflection of his or her appearance, but will not necessarily direct one's attention to some aspect of appearance. In agreement with Duval and Wicklund (1972), the mirror simply acts a stimulus which directs attention to some other salient dimension. One's appearance could, of course, be the most salient self-dimension, but it need not necessarily be.

Thus, self-focused attention automatically engages real-self to standard comparison. In contrast to Duval and Wicklund's approach, however, the standard need not approximate an ideal, nor represent

"correct behavior." Rather, the standard focused upon is, once again, a function of the person and the situation. Certain situations encourage us to focus our attention upon personal-self standards, whereas others encourage us to focus our attention upon social-self standards, and neither personal nor social standards need represent one's ideals on a particular self-dimension (see Chapter III). Among the situations believed to direct attention to personal standards are the following:

- 1) private situations in which the self-aware state has been engaged,
  - 2) situations that provide normative support for personal standards, and
  - 3) situations that enhance personal responsibility.
- Among the situations believed to direct attention to social-self standards are:
- 1) situations that include an element of real, imagined or implied evaluation,
  - 2) relatively novel or ambiguous situations, and
  - 3) situations in which there exist strong sanctions against personal standards.

The individual's own unique characteristics and dispositions also influence standard saliency. The person, for instance, with a particularly strong personal standard on some self-dimension is likely to rely upon this standard across situations (public and private). Persons with relatively weak personal standards, on the other hand, may be unduly influenced by social cues and social standards. Or, a person may be disposed to rely upon particular standards whether publicly or privately self aware (e.g., high publicly or privately self-conscious persons, individuals with particularly high or low self-esteem).

In contrast to the interactionist model's emphasis on standards is Buss' (1980) theory of self-consciousness. Buss suggests that the awareness of a standard--personal or social--is not a necessary explanatory concept in the domain of self-awareness. Self-awareness does not

automatically engage self-evaluation. Rather, private self-awareness leads to the clarification of the relevant self-aspect (e.g., mood, emotion, fantasy, etc.) and the intensification of affect (e.g., the angry person becomes angrier). In contrast, public self-awareness "may" lead to a comparison of one's real-self to one's "enduring image" of self with respect to one's physical appearance, voice or particular style of behaving. Buss suggests that his model accounts for behaviors in the self-aware state even in the absence of standards. In contrast to Buss' model, the interactionist model proposes that there is always a standard and that self-awareness automatically engages self-evaluation. We as psychologists may not be able to precisely define this standard but its presence is still assumed. If we are angry, for instance, we do not focus on the anger; we focus on a standard we hold regarding our behavior in the situation that is producing the anger. The affect is not intensified, the behavioral standard merely gains perceptual salience; the anger does not necessarily gain clarity, the self-dimension and the standard regarding that anger gains clarity.

As previously noted, the interactionist model, in contrast to the Duval and Wicklund model, acknowledges the existence of a variety of standards one can access in the course of self-evaluation. The standard need not represent an ideal. Furthermore, in most instances, personal standards will not be accessed in social or public situations. Duval and Wicklund note that "...when the person encounters another and believes that the other is focused on him he will begin to evaluate himself along dimensions that are cued by the situation." Here, the two models agree. Duval and Wicklund, however, suggest that in this type of situation, the person evaluates himself according to a standard

he already possesses. The person, in fact, is entering the situation with this standard, this standard of correct behavior. They maintain:

The individual is not seen by us as using the values of the others as the criteria for his self-evaluation - but he can employ the dimensions that are set off by their presence. The politically conservative person will not necessarily think of his values as incorrect simply because he finds himself in the presence of liberals, but, instead, he will examine the discrepancy between his personal standards of correctness...and carry out his self-evaluation according to the perceived discrepancy between his present opinions and his standards of correct opinions. This all assumes that the individual does not accept the standards of the other as his own standards. Similarly, the college girl who is a radical dresser will not come to evaluate herself in terms of the standards of the Daughters of the American Revolution when she walks into a room full of them, but she will invoke her own standards of correct dress when she imagines that they are evaluating her on the clothing dimension. (p. 8)

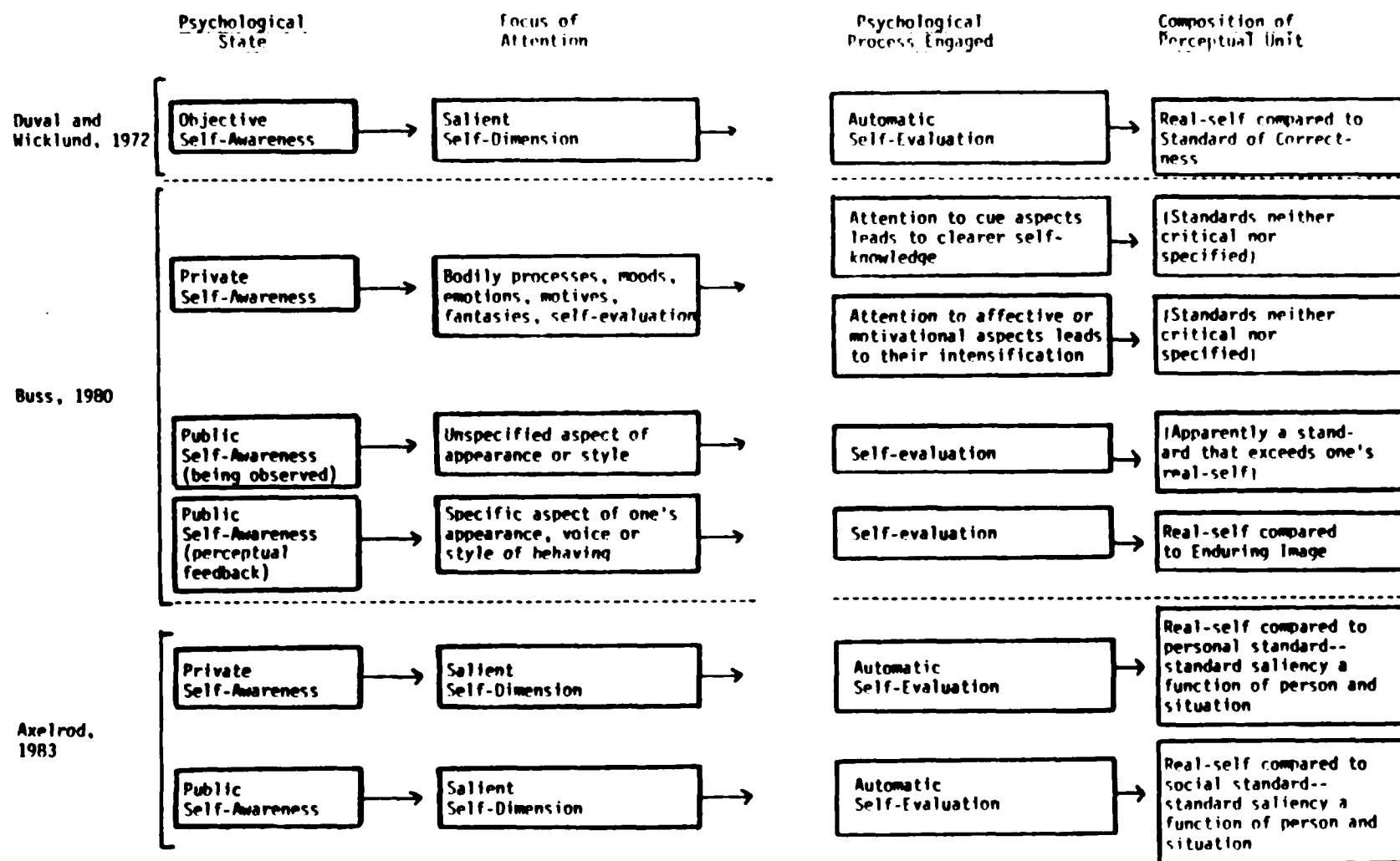
In contrast to the Duval and Wicklund position, the interactionist model suggests that the standard one employs in precisely these types of situations are the standards the person believes the audience holds with respect to the salient self-dimension. In effect, the person "steps outside himself," focuses upon the salient self-dimension, and adopts that standard he or she believes the audience holds with respect to that particular dimension. Thus, the college girl will notice a discrepancy between her real-self and the social standard of the Daughters of the American Revolution, just as the politically conservative individual will fall short of the social standard that dictates a politically liberal view. Of course, in each of these instances, should the person hold strong personal standards regarding the salient self-dimension, then it will be that standard that is employed in the evaluation process. This circumstance, however, is the exception and not the rule. It should be noted that this proposed reliance upon standards cued by the situation, or more particularly the others within

the situation, is not included in Buss' theory. In fact, Buss suggests, as do Duval and Wicklund, that we enter the situation with a standard; in this instance, however, the standard is referred to as one's enduring image. Thus, Buss indicates that "...publicly self-focused people attend to their own appearance and behavior, not to those of the observers." Since Buss suggests that we attend to only our observable features when publicly self-focused this statement makes a great deal of sense. The interactionist model, however, does not limit itself to external self-dimensions, and, as such, maintains that social cues are critical to the self-evaluation process experienced by the publicly self-aware individual. Figure 3 graphically illustrates the position referred to as the interactionist approach to self-awareness with reference to the processes mediating the self-aware state, and contrasts this position with that of Duval and Wicklund (1972) and Buss (1980).



Figure 3

The Psychological Processes Mediating the State of Self-Awareness: A Comparison of Approaches



## Aspects of the Situation and Characteristics of the Person

### Influencing the Saliency of Particular Standards

To this point it has been proposed that certain situations encourage us to regulate our behavior according to personal-self standards, whereas others encourage us to seek out and employ social-self standards. The purpose of this section is to more precisely delineate those parameters of the situation as well as those characteristics of the person, that may influence standard saliency.

#### The situation

The most critical aspect of the situation as it relates to the process of self-awareness is, in general, its public versus its private nature. Whereas public (evaluative) situations most often promote the salience of social standards, private situations (in which the individual becomes self-aware) most often promote the salience of a personal standard.

Although research examining the public-private distinction is scarce in the form required to provide direct support for its differential effects on self-evaluation in the self-aware state, other areas of research have demonstrated that apparently different standards are accessed in public versus private situations. As early as 1957, Argyle demonstrated differences in conformity behavior when opinions were given in public versus when they were given in private. As might be expected, face-to-face interaction led to greater opinion similarity. The equity literature also provides some support for this distinction. Rivera and Tedeschi (1976) report that subjects' public responses to positive inequity differed as a function of the public-private distinction. In public subjects indicated a displeasure for the inequitable distribution

of rewards in their favor. In private, however, they were, according to Rivera and Tedeschi, "secretly pleased." Kidder, Bellettirre and Cohn (1977) report that men and women allocated rewards in a traditional manner in public; that is, men divided rewards equitably and women divided rewards equally between themselves and a less productive partner. In private, however, allocation strategies were reversed for both men and women. Kidder, et. al. attribute this effect to "their being relieved of the burdens of femininity and masculinity, respectively." These results might just have easily been due to their focusing upon personal standards when in private and upon social standards in public. Shrauger and Schoeneman (1979) also comment upon the importance of the public-private nature of the situation, especially as it relates to self-evaluation. They maintain that "when college students feel that evaluations of their performance on a test are going to be made public, for example, they change their self-perception regarding that attitude more than do subjects who feel their responses will be known only to themselves...." And, lastly, Shibutani (1968) provides an interesting example of a behavior which differs dramatically in its self-evaluative consequences when it is exhibited publicly versus privately. He notes that "acute self-consciousness occurs in situations in which a person is completely at the mercy of others, as in the case of a man who had belched loudly at a formal dinner party." As Shibutani notes, self-derogation is the expected outcome in this situation. The situation as perceived by the individual no doubt calls for certain standards of behavior. The party is formal, the people formal, and standards are formal; formal behavior excludes belching. The situation, being highly public, brought into focus the public-self and social-self stand-

ards. But now let us examine the identical behavior in a private situation. The person has just finished a relatively large meal in the privacy of his own home when the behavior in question occurs. Will the natural response in this instance be self-derogation? The behavior is the same but the situation is quite different. If the person becomes self-aware in this instance, it will be the private-self aspect that is focused upon and personal-self standards that are accessed.

It seems apparent that the public-private distinction is a critical one, and one that needs to be considered in future self-awareness research. The question now seems to be, are there specific aspects of the public situation that influence the definition of the social-self standard.

#### Audience characteristics

Since public situations, by definition, include others, the characteristics of these others would seem to have an important influence upon the definition of the social standard and the consequences of self-evaluation. Carver and Scheier (in press) also comment upon the importance of audience characteristics:

...the composition of the audience may provide some obvious cues as to what behavior they would see as desirable. The result would be that different audiences should exert divergent influences on subjects' behavior. (p. 30)

Among the characteristics believed to have an impact upon standard saliency and self-evaluation are the following: 1) the behavior of the audience, 2) the expertise of the audience, 3) one's familiarity with the audience, 4) one's similarity to the audience, and 5) the size of the audience. This list is not meant to exhaust all possible audience influences on standard saliency; it is simply to be thought of as a place

to begin, a point of departure for future researchers in this area.

The actual behavior of the audience must be considered in any discussion of self-awareness. Buss (1980) notes the importance of public scrutiny:

Close public scrutiny, being stared at by another person or closely observed by an audience, is but the high end of a dimension of social attention. At the other end is the absence of attention - being ignored when at least some attention is normally required. (p. 28)

As an example of this scrutiny dimension we can imagine the person at a dinner party relating a personal incident to those in attendance. Close attention to the details of the story should engage the self-aware state, just as expressed boredom will engage the state. In the first instance the individual will probably access a social standard which will generate a positive discrepancy on the self-dimension he or she is momentarily focused upon; the person will probably perceive the audience reaction as favorable. But in the case of perceived boredom, the person will more than likely access a standard he has not surpassed, and in this instance his or her reaction to self-awareness will no doubt be negative.

Closely related to the scrutiny dimension is the actual reaction of the audience to the individual. There can be no mistake as to the meaning of overt evaluative cues such as laughter when applause is expected. In this situation the individual has little trouble defining the social standard; it is all too obvious that he or she has failed to meet it.

Audiences have been studied in a variety of areas outside the area of self-awareness (Festinger, 1954; Zajonc, 1965). This research suggests that the presence of others encourages one to make self-

comparisons relative to the characteristics of the members of that audience. Rosenberg (1979) also comments on the importance of those around us:

...how fast or slow, how smart or dull, attractive or unattractive is he? Such judgments are not made in a vacuum; they are usually based on social comparisons, often with those in the immediate environment. (p. 105)

One audience characteristic that would seem to have an impact upon the definition of the social standard would be their expertise as perceived by the self-focused individual. Buss (1980) notes the relationship between audience status and anxiety:

Adult speakers are usually relaxed when the audience consists of children. Fellow students or colleagues may induce moderate tension in a speaker. But if the audience includes people of higher status...the speaker tends to be shaky and apprehensive...the higher the status of the audience, the more formal the context. And formal occasions because they imply higher standards for socially correct behavior, are more likely to induce social anxiety. (p. 169)

It seems fairly certain that the evaluation of one's abilities in a public situation will be, in part, a function of the perceived abilities (expertise) of the audience. The experience of public self-awareness when in the presence of those of higher expertise will lead to the establishment of a social standard higher than the individual's real-self. Similarly, when in the presence of an audience of lower status, the social standard should be defined as one the individual may surpass.

Another audience characteristic likely to have an impact upon one's definition of the social-self standard is the person's familiarity with the audience. Audience familiarity plays a dual role in the self-awareness process. Firstly, it may determine whether or not the person experiences self-awareness. In general, an audience comprised of strangers or mere acquaintances would seem to be a more potent source of

public self-awareness than one comprised of friends or relatives. A child, for instance, making a blunder at the family dinner table, will be far less likely to become self-aware and experience discomfort in this setting than had the same blunder been committed in the presence of strangers in the school cafeteria. This is not to suggest that the effect of the "stranger" audience will necessarily lead to negative affect; it will simply intensify the likelihood of experiencing the self-aware state.

Audience familiarity may also have an impact upon the definition of the social-self standard. Generally speaking, the more familiar one is with the audience of others they are confronting, the more certain they will be as to the precise standard this audience is employing in their evaluation. Since the social standard is defined as the perceived standard of the audience, the individual is, in effect, more certain as to the definition of the social-self standard. The precise role certainty plays in the process of self-evaluation is, at this time, unknown. However, a reasonable assumption would be that the more certain one is of the social-self standard, the less likely he or she is to employ discrepancy reduction as a means of lessening the affective consequences of the state.

A fourth characteristic likely to have an influence upon the definition of the social standard is the audience's similarity to the self-focused individual. Once again, it seems reasonable to suggest that the more similar the audience is to oneself, the more accurate the assessment of the social-self standard. In fact, if the audience were identical to the person, the perceived social standard and the individual's real-self should coincide.

To date, no research has directly addressed the issue of audience similarity and its influence upon the state of self-awareness. A study cited earlier, however, suggests that similarity is more likely to lead to the existence of a positive discrepancy than a negative discrepancy (Morse and Gergen, 1970). If one is similar to oneself on the salient self-dimension this should suggest to the person that he or she has at least met the prevailing standard. In contrast, confronting a dissimilar other is likely to lead to doubt as to what the social-self standard is.

The final audience characteristic to be mentioned is the size of the audience. The size of the audience also plays a dual role in the process of self-awareness. First one may consider the size of the audience relative to the size of the group to which the individual belongs (see Chapter III). From a figure-ground perspective it is proposed that the social standard of the larger group will be employed in the process of self-evaluation. Thus, should a person become self-focused when he or she is a part of a group, the social standard accessed will not automatically be that of the audience. Only when the audience is comprised of a greater number of individuals than is the person's group will the standard reflect that of the audience.

Audience size may also affect the amount of affect experienced by the self-focused person. Paivio (1965), in his review of audience influences, concludes that "in support of everyday experience, objective evidence indicates that audiences tend generally to be emotionally arousing, the degree of emotionality...being positively related to size and negative reactions of the audience." Buss (1980) also comments on the effects of group size:



We are most conspicuous, most open to close scrutiny, when standing in front of an audience, either lecturing or performing on stage. People unaccustomed to speaking in public may become so intensely self-aware that the feeling spills over into acute social anxiety. (p. 28)

Both Paivio and Buss stress the negative consequences of group size, and, a study noted earlier supports this conclusion (Diener, Lusk, DeFour and Flax, 1980). In agreement with these researchers, a negative discrepancy will no doubt engender a greater degree of negative affect, the greater the number of observers in the situation. However, there is every reason to believe that the affect associated with a positive discrepancy should likewise increase.

The novelty of the situation

Another aspect of the situation which may have an influence upon the type of self-standard accessed is its relative novelty with respect to the individual's life experiences. Confronted with a common type of situation, the individual is likely to access personal standards. In fact, the person may actually possess a personal standard which relates precisely to that situation he or she is confronting. In effect, the person may be less susceptible to social cues. In contrast, when an individual is confronted with a situation for the first time, or when the situation is an ambiguous one, a personal standard of behavior probably does not exist. In essence, the person is at the mercy of others in the situation for a definition of what is considered appropriate to the circumstance. In this instance the person should become highly dependent upon any and all information available and self-evaluation and behavior should reflect an awareness of a social-self standard.

### Situations which encourage adherence to personal standards

One last situational variable believed to have an influence upon standard saliency is the extent to which one or the other standard--personal or social--is supported by others in the situation. Many situations provide the individual with the opportunity of revealing personal beliefs, opinions, aspirations and feelings about self. In effect, the situation provides normative support for expressing one's true views (e.g., a group therapy session, communication of a personal nature between friends/spouses). At the other extreme are situations wherein there exist strong sanctions against the expression of personal information, attitudes, and opinions. The clearest example of this situation would be the position the subject finds himself in in the typical conformity experiment, wherein the subject believes one thing but is confronted with six others purportedly believing the opposite. If the person admits his or her opinion, in this instance, he or she runs the risk of group disapproval.

### The person

As noted previously, people entering a situation bring with them different ideas as to who they are and what the situation demands. Their unique self-picture, their personal dispositional tendencies, and their particular expectations no doubt have a significant impact upon standard saliency and their ultimate response to that situation. The purpose of this section is to describe some of these person variables. Among the variables believed to have an influence upon standard saliency are: 1) dispositional self-consciousness, 2) level of self-esteem, 3) dispositional self-monitoring, 4) one's preconceived stereotypes, 5) the strength and clarity of one's personal-self standards,

6) one's age, and 7) one's gender.

#### Dispositional self-consciousness

One of the most critical person variables exerting an influence upon standard saliency is dispositional self-consciousness. Those individuals high with respect to private self-consciousness should display a tendency to rely upon personal-self standards. These individuals should be relatively consistent in both the attitudinal domain and with respect to their personal self-evaluations. High publicly self-conscious individuals, on the other hand, should display a tendency to rely upon social-self standards. These individuals should display a great deal of variability in both the attitudinal domain and in their own self-evaluations.

Private self-consciousness is defined as the disposition to attend to the private aspects of self. According to Buss (1980) people with a strong disposition toward inner reflection should know themselves very well. Several studies in the self-consciousness literature have demonstrated that high privately self-conscious individuals do seem to be more aware of their internal states (Scheier and Carver, 1977; Turner, 1977; Scheier, Buss and Buss, 1978; Scheier, Carver, Schutz, Wishnick, Glass and Katz, 1978; Scheier, Carver and Gibbons, 1979; Gibbons, Scheier, Carver and Hormuth, in press). Gibbons, Scheier, Carver and Hormuth (in press), for instance, found subjects high in private self-consciousness to be less susceptible to suggestions regarding their taste sensations. High private self-conscious persons have also been found to provide more complete (Turner, 1977), and more accurate self-descriptions (Scheier, Buss and Buss, 1978). More complete

and accurate self-descriptions would be expected if one were continually calling forth the same standards, personal-self standards, rather than relying upon others' standards for self-evaluation. Unlike those classified as high in public self-consciousness, these people should demonstrate a high degree of consistency in both their level of self-esteem and in their behaviors. This is not meant to imply that these self-evaluations will necessarily be high; they will simply vary less across social situations. The effect of others' standards, social standards, on their feelings of worth should be minimal. They look within to determine self-worth rather than to the social cues in the environment. They tend to rely upon their own past achievements, their personal-self standards, and affect and behavior are a function of how the real-self compares to the salient personal-self standard.

Several recent studies in the self-awareness literature provide direct support for the notion that the disposition toward private self-consciousness encourages attention to personal standards. Froming and Carver (in press) report that high private self-conscious persons are more inclined to use their own internal perceptions in making judgments. They found a strong inverse relationship between compliance behavior and private self-consciousness. They concluded: "this finding further reinforces the assumption that internal aspects of the self...are especially salient to persons who are high in private self-consciousness." It also supports the notion that these individuals are less susceptible to the standards set by others. It would be interesting to determine whether these people are unaware of social standards or simply ignore them in the face of strong personal-self standards.

Public self-consciousness implies an uncertainty about one's

appearance, behavior and self. According to Buss (1980), persons high in public self-consciousness seem to require continual reassurance that they are living up to what is expected of them. What is expected of them has been defined by the present writer as the perceived social standard. It would therefore seem that these people are especially cognizant of social standards. In order to determine if they are meeting others' expectations, it is first necessary to determine what these expectations are (or at least what they seem to be). With reference to these individuals Buss notes:

It is not so much a low opinion of their own style and appearance as it is uncertainty. They need assurance from others, feedback about the impression they are making. And their self-observations are repeatedly checked against a standard of social expectations or a stereotyped self-image. (p. 35)

With respect to social standards and self-evaluation Buss suggests:

People high in public self-consciousness continually reflect the group consensus. Public norms are their norms, and success and failure are defined only in terms of group standards. As their identity is largely affiliative, so their performance-based self-esteem derives mainly from success in meeting group (public) standards. (p. 123)

Although the disposition toward public self-consciousness has been less well researched than that of private self-consciousness, the research that has been conducted suggests that these individuals do, in fact, display a tendency to focus upon social-self standards. Fenigstein (1974, cited in Fenigstein, Scheier and Buss, 1975) found that women high in public self-consciousness were more sensitive to group rejection than those low in public self-consciousness. Interestingly, and in support of the proposed distinction among standards, private self-consciousness was unrelated to subjects' response to rejection. Fenigstein (1979) reports that following rejection, high

publicly self-conscious persons were less willing to affiliate with the group which rejected them than were low publicly self-conscious persons. Rejection can be seen as an instance wherein one has not met the salient social standard; acceptance, on the other hand, represents an instance wherein one has met or exceeded this standard. If one is predisposed to rely upon social standards the results of the Fenigstein study make a good deal of sense and further support the distinction between personal and social standards. Scheier (1980), classifying subjects according to their level of public and private self-consciousness, obtained subjects' attitudes toward punishment in a learning situation. Weeks later subjects were required to write essays restating their opinions. Results indicated that for subjects high in public self-consciousness, the mere anticipation of discussing their view was sufficient to cause a moderation in the attitude expressed in the essay. Anticipation of interacting with a disagreeing partner caused a greater, but not significantly different, shift in opinion. And, lastly, Froming and Carver (in press) found that public self-consciousness was positively correlated with compliance behavior.

In summary, individuals high in public self-consciousness, compared to those high in private self-consciousness, should be more sensitive to social-self standards, and exhibit behaviors more consistent with these standards. In contrast, those individuals reported to be high in private self-consciousness should be more attuned to personal standards and exhibit behaviors consistent with these standards. In general, it is suggested that publicly self-conscious persons have a tendency to focus upon the public-self aspect, evaluate their self or behavior with respect to the salient social-self standard, and exhibit

behaviors consistent with these standards. Privately self-conscious persons, in contrast, display a tendency to focus upon the private-self aspect, evaluate their self with respect to the salient personal-self standard, and exhibit behaviors consistent with these standards. This difference in focus of attention will be evidenced in the variability of self-ratings and behaviors exhibited by these two types of individuals. In light of the fact that the social-self standard is likely to vary considerably from one situation to the next, publicly self-conscious persons should demonstrate a great deal of variability in their self-evaluations. In contrast, privately self-conscious individuals, focusing upon standards presumed to possess some amount of stability (especially the typical-self standard) should demonstrate a greater degree of consistency in their attitudes toward self and behaviors associated with their feelings toward self.

#### Level of self-esteem

The literature on self-esteem suggests that individuals with high self-esteem are accustomed to success experiences, whereas those with low self-esteem are accustomed to experiencing failure (McFarlin and Blascovich, 1981). How does one become accustomed to a particular experience such as success or failure? One explanation that might be offered is based upon the differential use of standards in the self-evaluation process; different individuals may be predisposed to employ different standards in the real-self to standard comparison. If one typically focuses upon standards higher than one can achieve, the result should be low self-esteem. In a similar vein, if one typically focuses upon standards that are lower than one's real-self, the result should be high self-esteem. It is herein suggested that individuals high in self-

esteem are accustomed to experiencing success because they, more than others, display a tendency to focus upon realistic standards. These individuals focus upon standards well within their reach, perhaps even the typical-self standard as defined in this paper. With reference to social standards, high self-esteem individuals may define them in such a way that they are usually surpassable. Low self-esteem persons, on the other hand, may be accustomed to experiencing failure because they, more than others, focus upon personal standards beyond their reach, perhaps ideal-self standards. When in the presence of others they may typically credit them with higher expectations (social-standards) than they actually hold, and social-self standards which they themselves are not likely to meet.

An early study in the self-esteem literature provides some support for the differential perception of standards by those high versus low in self-esteem. Coopersmith (1959) conducted a study employing 10 to 12 year olds wherein he measured both their experiential self-esteem and their behavioral self-esteem. Based upon these measures, four groups of subjects were formed: 1) high-high, 2) low-low, 3) high-low, and 4) low-high. The characteristics of the two low experiential self-esteem groups support the notion that lows focus upon negative discrepancies. Both of these groups were found to have greater real-self/ideal-self discrepancy scores than those who were high in experiential self-esteem. With respect to the low-high group Coopersmith suggests:

...it would appear that L-Hs are competing against absolute standards of excellence....Performance is relative to the goal, and the goals of L-Hs are apparently set so high that despite their high level of performance and acceptance by others they see themselves as performing poorly and, as a result, are anxious and hard-driving. (p. 91)



According to Coopersmith children classified as low-low apparently recognize their low status. He suggests that the "relatively large D (Ideal Self) score, evaluated in the context of self and ideal self scores, may indicate either a non-acceptance of their status, or more likely a high verbalized ideal but no behaviors that indicate active striving for this ideal."

It has been proposed that a relationship exists between public self-awareness and self-esteem. Specifically, it was suggested that low self-esteem persons may typically define the social standard higher than their real-self. The low self-esteem person, focusing upon the public-self, appears to see himself or herself as ineffectual from the other's perspective and comes to share this view by focusing upon their imputed standards. High self-esteem individuals, on the other hand, may define the social standard more realistically. In effect, they may enter the situation with the confidence or expectation that they will surpass any standard that presents itself. Shrauger (1972, 1975), too, suggests that a potential determinant of reactions to observation by others may be one's level of self-esteem. He suggests that to the extent people are attentive to themselves in the presence of others, their characteristic mode of self-evaluation should become apparent. This characteristic mode may be the manner in which one typically defines the social-self standard. If an individual typically attributes greatness to others, focusing upon the salient social standard would be expected to lead to negative within-self discrepancies and a state of discomfort. Considering others' attributes as possibly falling anywhere along a self-dimension increases the likelihood of one's experiencing a positive self-feeling.

Shrauger (1972) conducted a study in which he formed groups on the basis of their level of self-esteem and required subjects to perform a task in the presence or absence of an evaluative audience. As a measure of specific self-esteem subjects were asked what percentage of others would do better than they at the task. Shrauger found that high self-esteem individuals thought they would do better, and, in fact, did do better than low self-esteem subjects. This difference in performance, however, only reached significance in the audience condition. Also, low specific self-esteem subjects made a greater number of errors in the presence of an audience than in its absence. Apparently, those entering the situation with the belief that they would do poorly, and confronted with an evaluative audience, were made especially cognizant of a negative discrepancy between what they believed they were capable of achieving (real-self) and the standard held by the audience. The perception of this discrepancy may have led to discomfort or even feelings of anxiety, which may have had a detrimental effect on their performance. It's bad enough having to perform an activity that you feel you are not particularly skilled at, but to have to perform it in front of others must be particularly debilitating.

The results with respect to a measure of general self-esteem were also informative. Low self-esteem subjects, compared to highs, thought they would do worse both before and after the task. These people seem to be entering the situation with a low regard for their abilities. What is especially astonishing is that they have had no previous experience with the task, and, therefore, no way of knowing how well they will do; they simply assume they will do poorly. An analysis of covariance with pre-task estimates as the covariate yielded an

Audience x Self-Esteem interaction. In the presence of an audience high self-esteem subjects evaluated their performance higher than low self-esteem subjects; the two groups did not differ in the no-audience condition. Also, high self-esteem subjects thought they did better in the audience condition than in the no-audience condition; no difference was reported for low self-esteem subjects. In actuality the two groups performed equally well. This may reflect a general tendency on the part of lows to enter situations with a bias in favor of others. That is, if they believe their ability to be generally low, chances are a greater number of others will be credited with superior abilities.

A study by Shrauger and Terbovic (1976) examining self-esteem from another direction is especially relevant to this topic. Shrauger and Terbovic were interested in determining whether differences in self-esteem are specific to an individual's own behavior or whether they reflect a more general process of self-evaluation such that the same process is employed to judge others as well. A prediction based upon the viewpoint advanced in this paper would suggest that low self-esteem persons employ one process to judge themselves and another, quite different, process to judge others. This differential judgment of the abilities of others versus their own is what leads to the negative within-self discrepancies they typically experience when in the presence of others.

Shrauger and Terbovic established a situation in which the identical performance was attributed to the individual or another person. The other person was actually a confederate trained to model the exact manner in which the subject, himself, had performed the task. Subjects' perception of their performance was measured in three ways: 1) their

absolute performance level--the number they felt they had gotten correct, 2) their performance relative to others--a percentage estimate, and 3) degree of satisfaction--the relationship between their perceived performance and their level of aspiration. Shrauger and Terbovic report that high self-esteem persons thought they had gotten more items correct than did low self-esteem persons. High self-esteem individuals also thought that they had performed better than a greater percentage of others than did those low in self-esteem. Of particular interest are the ratings of self compared to others as a function of self-esteem. The ratings of high self-esteem subjects did not differ as a function of who they were rating--themselves or the confederate. In contrast, low self-esteem subjects rated their own performance lower than others' performance for both the number correct and the percentage of people doing better than they. Further support for the differential perception of social standards among high and low self-esteem individuals comes from subjects' estimates of their own performance. Both groups' estimates of performance exceeded actual performance. However, high self-esteem subjects thought they would outperform a greater percentage of people than they actually did. In contrast, low self-esteem subjects tended to see themselves as outperforming fewer people than they actually did. Again, entering identical situations with this bias leads to a higher incidence of negative discrepancies for low self-esteem persons and a higher incidence of positive discrepancies for high self-esteem persons. This particular study, although created and interpreted with respect to concerns other than standards, clearly supports the proposition that people with differing levels of self-esteem may acquire these levels as a result of a chronic tendency to focus upon specific

standards in the self-evaluation process.

Several recent studies examining the relationship between self-esteem and self-awareness provide further support for the differential perception of standards by those with high versus low self-esteem (Brockner and Hulton, 1978; Brockner, 1979a, 1979b; Brockner and Wallnau, in press). Noting the often reported relationship between self-esteem and performance, Brockner and Hulton (1978) suggested that low self-esteem persons may be more self-conscious than those with higher self-esteem, a factor which is likely to make them more susceptible to self-awareness manipulations. This greater susceptibility, coupled with the experience of heightened anxiety, leads to performance detriments. A second, but related, factor contributing to the lowered performance of low self-esteem individuals, based upon the assumption of a finite level of attention, is that these individuals are more self-focused to begin with. Brockner and Hulton suggest that since lows have less attention than highs to devote to a task, their performance suffers in contrast.

Brockner and Hulton required high and low self-esteem subjects to complete a concept formation task under one of three focus of attention conditions: 1) audience present, 2) audience absent, and 3) task focus. They predicted a Self-Esteem x Focus of Attention interaction such that in the audience condition subjects with low self-esteem would perform worse than those with high self-esteem, and as well as subjects with high self-esteem in the task focus condition. In the no-audience control condition lows were expected to perform at a slightly lower level. (It should be noted that the self-awareness manipulation was not clear cut. In the audience condition the subject was seated directly in front of what was described as a one-way mirror and informed

of the presence of an audience. This audience effect was further enhanced by the close proximity of an observing experimenter. In the task focus and no-audience conditions the mirror was absent but the experimenter, described as inattentive, remained in the room.] Although the low self-esteem group reported a higher level of self-consciousness than the high self-esteem group, this difference was not significant. There was, however, a highly significant interaction between self-focus and self-esteem. As predicted, in the audience condition lows performed worse than highs. In the task focus condition this effect was reversed with lows outperforming highs. No difference was observed in the no-audience control condition.

Why should people with low self-esteem be adversely affected by the presence of an audience or by any self-awareness manipulation? Brockner and Hulton suggest that self-awareness causes those with low self-esteem to focus upon their heightened anxiety. Anxiety, in turn, functions to impede performance. An equally plausible explanation for these results, and one that does not assume lows are more prone toward self-consciousness or that lows are focusing upon their anxiety, is that lows and highs are focusing upon different perceptual units. The poorer performance of lows can be accounted for by postulating the existence of a negative discrepancy created by the habitual use of ideal-self standards or excessively high social-self standards. This negative discrepancy creates negative affect, and, perhaps as Brockner and Hulton suggest, anxiety. Thus, the relationship between self-esteem and self-awareness may not be a function of initial degree of self-consciousness or one's susceptibility to certain environmental stimuli, but, rather, simply a function of the standard one typically accesses when attention

is focused on the self.

If low self-esteem people typically experience negative discrepancies, and these negative discrepancies engender negative affect, then the creation of a positive discrepancy accompanied by the presence of positive affect should counter the usual negative effect on performance, and may, in fact, facilitate one's performance. A study by Brockner (1979b) lends some support to this notion. High and low self-esteem subjects received either success or failure feedback in the presence or absence of a self-focusing manipulation. Brockner reports that low self-esteem subjects performed worse than highs in the failure condition but not in the success condition. Highs were unaffected by the feedback. Furthermore, these effects were largely attributable to the results obtained in the self-focus conditions. Further analysis revealed that lows were more anxious than highs only in the self-focus conditions.

This study has rather clear implications for the proposition being made in this paper regarding the importance of standards in the process of self-evaluation. Brockner suggests that lows focus upon their anxiety. It appears equally possible, however, that lows are experiencing anxiety because they, unlike highs, are focusing upon standards they cannot meet. When they focused upon a positive discrepancy, as in the success condition, anxiety was not experienced and performance not affected.

That an individual's level of self-esteem can influence the self-standards focused upon is further supported by a recent study conducted by Brockner and Wallnau (in press). They found that low self-esteem persons avoided a mirror task more than a no-mirror task. In

contrast, high self-esteem subjects tended to choose both tasks about equally. If we assume that the subjects in this study were privately self-focused, these results suggest that lows were focusing upon a negative discrepancy whereas highs were not.

Each of the studies reviewed appear to support the idea that differences in self-esteem may be a function of the standards focused upon when required to evaluate one's self. Individuals with high self-esteem are accustomed to experiencing success because they, in contrast to those with low self-esteem, are employing self-standards that are attainable; self-standards well within their reach. Individuals with low self-esteem, on the other hand, may typically focus upon and employ ideal standards or social standards that are beyond attainment.

#### Dispositional self-monitoring

An individual difference variable which has received considerable attention in recent years, self-monitoring (Snyder, 1979; Snyder and Cantor, 1980; Gabrenya and Arkin, 1980), appears to be related to the state of self-awareness and the differential salience of personal versus social standards. Snyder (1979) has demonstrated that persons characteristically high in self-monitoring display several very distinct behavioral tendencies: they are concerned about the appropriateness of their self-presentation; they attend to social comparison information as cues to appropriate behavior; they are able to control and manipulate self-presentations; they employ this ability in particular environments; and they demonstrate a high degree of cross-situational variability in their behavior.

It has been suggested that high publicly self-conscious persons may have a tendency to focus upon social standards when evaluating their



self and behavior, the result being high cross-situational variability in both feelings of self and behaviors relevant to self. This description of high publicly self-conscious persons bears a strong resemblance to the characteristics Snyder describes as belonging to those characterized as high self-monitors. The difference between these two dispositional tendencies appears to be a functional one. High self-monitors use the information they are able to obtain from a social interaction for their own benefit; to determine appropriate behavior and act accordingly. Persons characteristically high in public self-consciousness, on the other hand, focus on social-self standards in an attempt to evaluate their own self-worth. Although in some situations they may employ these standards to guide their behavior (e.g., conformity situations), they do not necessarily do so in all situations and are perhaps not as adept at manipulating their behavior to guide their self-presentation. Scheier and Carver (1980b) have also commented upon the distinction between these two dispositions:

Public self-consciousness has been found to be relatively independent of the need for approval and to be only moderately related (in a positive direction) to self-monitoring....Apparently public self-consciousness deals only with peoples awareness of how they come across in social contexts. Persons high in public self-consciousness may be aware of the kind of impression they are making, but do little to use this knowledge either to gain the approval of others or to guide their self-presentation. (pp. 248-249)

The above distinction between high self-monitors and those high in self-consciousness suggests that both types of individuals possess the ability to accurately determine the standards held by others in the situation. This particular ability, however, has only been established for high self-monitors. Snyder and Cantor (1980) note that "...not only are high self-monitoring individuals keenly attentive to the actions of

other people, but also they are particularly skilled at interpreting the nonverbal expressive behavior of other individuals to infer correctly their affective experience and emotional states." I would go so far as to suggest that persons classified as high in public self-consciousness are not particularly skilled at accurately defining the standards held by others in the situation, and that this factor might account for the relatively low correlation between the two dispositions. Gabrenya and Arkin (1980) factor analyzed Snyder's self-monitoring scale and found that it was comprised of four relatively unrelated factors: 1) acting ability, 2) social ability, 3) other directedness, and 4) speaking ability. With the exception of other directedness, these factors were all negatively correlated with the social anxiety subscale of the SCS. Consistently low, but positive, correlations have been obtained between the social anxiety and the public self-consciousness subscales of the SCS. The reason for the low correlation between self-consciousness and self-monitoring may be due to the differential experience of anxiety. Recall that it was suggested that publicly self-conscious persons are primarily concerned with how they are being evaluated by others. They may not, however, alter their behavior in a way which might ensure that they were being perceived favorably. In fact, they may be unable to if they are not particularly skilled at defining what is expected of them. Thus, for some of these individuals a negative discrepancy between their real-self and the perceived social standard is likely to be experienced. This negative discrepancy may be linked to social anxiety. High self-monitors, on the other hand, are known to be quite adept at defining social standards. Anxiety is not engendered because they use this knowledge to avoid or reduce negative discrepancies by immediately

moving their real-self in the direction of the standard. Thus, both dispositions appear to focus attention on social self-standards; the difference between the two appears to lie partly in the affective states experienced. Interestingly, the behavioral effects of the two dispositions are similar in those situations wherein the social-self standard is made explicit (Scheier, 1980; Froming and Carver, in press).

Persons classified as low self-monitors display behaviors similar to those described as high in private self-consciousness. Snyder (1979) describes prototypic low self-monitoring individuals as being "...controlled from within by their affective states and attitudes (they express it as they see it) rather than molded and tailored to fit the situation." It seems that low self-monitors are guided by personal standards. In fact, it may be that for these individuals the saliency of personal-self standards overrides that of social-self standards.

Some support for the differential salience of personal and social-self standards among those high and low in self-monitoring is provided by two studies conducted by Snyder and Cantor (1980). In the first study subjects were required to think about a list of 20 positive and negative traits as they applied to their own self-image (group 1) or as they applied to another's image (group 2). They were then required to generate a list of situations wherein each particular trait would be apparent. Subjects in the self-image condition were asked to consider their placement on each trait and write down behaviors indicative of the trait, and situations likely to elicit behaviors related to that trait. Those in the other-image condition were asked to do the same for an imagined person who possessed this trait. They found that low self-monitors in the self-image condition generated a greater number of

relevant behaviors and situations than did the high self-monitors in the self-image condition. In contrast, high self-monitors generated more relevant behaviors and situations in the other-image condition than did low self-monitors. Further, this effect was enhanced for those traits rated as self-relevant by subjects in the self-image condition. The results of a second study paralleled those of the first. Low self-monitors, asked to describe their own self-image, generated a more extensive, informative and vivid description than did highs. When asked to describe the other-image, however, highs provided the more extensive descriptions. These two studies suggest that a predisposition may exist among low self-monitors to focus upon personal-self standards across situations. It will probably be demonstrated that for these individuals the public nature of the situation will not have a significant effect on their response to self-focused attention or public self-awareness. Because they continually focus upon personal standards, their behavior and self-evaluations should remain relatively consistent. High self-monitors, on the other hand, appear to display a tendency to focus upon social-self standards across situations. Compared to lows, their behavior and perhaps their self-evaluation will be found to vary considerably when their attention is directed toward the public-self aspect in various public situations.

#### Preconceived stereotypes

One's preconceived stereotypes are likely to influence the perception of the social-self standard in public situations. In agreement with Mischel (1978), behavioral and self-evaluative differences may be a function of how people categorize a particular environment. Quite

obviously, individuals differ in the manner in which they encode and label situations, leading to differences in perceptions of self. Mischel suggests that "some of the most striking differences between persons may be found, not by studying their responses to the same situation, but by analyzing their selection and construction of stimulus conditions."

An example of a stereotype likely to influence a person's definition of the social standard is the stereotypic perception of men versus women on a vast number of self-dimensions. Wallston and O'Leary (1981), for instance, note the fact that people attribute different behavioral characteristics to account for identical performances by men and women in spite of the proliferation of evidence suggesting that the similarities far outweigh the differences in a variety of domains. They point out that:

...although a number of studies have not found real sex differences in the level of competence exhibited by women and men in specific positions...differences are perceived to exist.

Competent persons are generally rated more favorably than incompetent ones, but when women and men are asked to rate male and female stimulus persons...they typically agree that men are more competent than women. (p. 19)

In a situation, therefore, where women are forced to employ the prevailing salient masculine standard, we might predict that they themselves will come up on the short end of the stick. As women learn to value male and female competency equally, the consequences of comparing oneself to a male standard should become less devastating.

The physical attractiveness literature offers another example of a very prevalent stereotype likely to bias the perception of the social standard. There exists ample evidence which indicates that attractive people are perceived to possess characteristics that differ from those

attributed to less attractive individuals. In fact, the physical attractiveness stereotype has been termed "what is beautiful is good" (Berscheid and Walster, 1974). Thus, in a public situation, confronting a beautiful other is likely to influence one's own self-evaluation on a variety of self-dimensions other than physical attractiveness. In essence, one is likely to attribute a higher social-self standard, thereby increasing the likelihood that the real-self will not surpass this standard, when confronted with attractive individuals.

#### The strength and clarity of personal standards

Another individual difference variable likely to influence the relative saliency of personal versus social standards would be the clarity or strength of one's personal-self standards. To the extent one's personal standard is weak or ambiguous on a particular self-dimension, it is likely that the individual will rely upon social cues or social standards to evaluate one's self. In a similar vein, when personal-self standards are not ambiguous, the person should be more inclined to employ them in the self-evaluation process. Bem (1972) and Wegner (1980) have also commented upon the relationship between self-dimension clarity and one's reliance upon social cues. Bem suggests that "to the extent that external cues are weak, ambiguous, or uninterpretable, the individual is functionally in the same position as an outside observer who must necessarily rely upon those same external cues to infer the individual's internal states." Wegner, too, notes that "it is primarily when people have only vaguely formulated conceptions of their qualities in an area that social feedback about that area is effective." If saliency turns out to be the key to understanding self-awareness, it would then seem that the strength and clarity of one's personal-self

standards will have to be taken into account.

### Age

An individual's age may also have an influence upon the relative saliency of standards. It seems reasonable to suggest that young children do not possess particularly strong personal-self standards, and that adolescents may be particularly concerned with social-self standards. With respect to this age variable, Beaman, Klentz, Diener, and Svanum (1979) found that self-awareness influenced the degree of transgression in older children but not that of younger children. With respect to the differential salience of social standards, Shrauger and Schoeneman (1979) suggest, "...younger people are more susceptible to external influence in developing their self-concept than are older individuals." In a similar vein, Argyle and Kendon (1967) suggest that "adolescents are particularly insecure; they have not crystalized a stable self-image, so that reactions from others may have a more disturbing effect on them than older people."

In summary, when compared to adults, adolescents may be found to rely less upon personal standards in general, or more upon ideal standards; and, more importantly, they may display an exaggerated reliance upon social-self standards. This reliance upon social standards, and insecurity with respect to the appropriateness of one's real-self, may result in a preponderance of negative self-feelings at this age.

### Gender differences

There is some evidence which suggests that women may be more influenced by situational variables or more prone toward employing social-

self standards than men. Lenney (1977) suggests:

...women's self-confidence may not only be influenced by the situational variables but may actually be unduly responsive to them. Consider, for example...that women's self-confidence may be more dependent upon the characteristics of the specific person to whom they compare themselves...the 'problem' for women may in fact be that their self-confidence, far from being consistently low, is instead excessively vulnerable to situational influences. (p. 11)

She further reports that "women's self-confidence is often lower than men's when there are suggestions that their work will be compared with others' or will be evaluated by others." Lastly, she offers a comment which relates directly to the differential responses of women when they appear to focus upon personal standards.

...when women work alone or in situations in which they do not expect their performances to be compared with those of others, their ability estimates are likely to be no lower than men's. However, when women work in situations in which certain social aspects of the environment are emphasized, their estimates are usually lower than men's. (. 3)

It may be found that women are more publicly self-conscious than men, and/or more responsive to social-self standards in public situations. This would certainly account for their lower estimates of self-worth when evaluation is anticipated. For some reason the social standard is perceived as exceeding one's real-self in these instances.

The evidence in the self-awareness literature regarding gender differences is somewhat mixed. In support of the differential perception of social standards are two studies conducted by Diener, Lusk, DeFour and Flax (1980). They found that males reported significantly less self-consciousness after performing embarrassing tasks than did women. Fenigstein, Scheier and Buss (1975), on the other hand, report that men and women did not differ in their responses to the SCS. This absence of gender differences is certainly surprising. Fenigstein, et.



al. also note that "everyday stereotypes suggest that women are more self-conscious than men, particularly with respect to their public self-consciousness...." The present author also finds this lack of a gender difference unusual, especially in light of the manner in which women typically are socialized; women are taught to be reactors rather than initiators, a factor which would seem to provide them with a heightened degree of social insight. Perhaps the answer lies not in the disposition to be self-conscious, but, rather, in their reaction to public self-awareness. Future research will no doubt advance our understanding of whether or not gender differences do, in fact, exist, when individuals focus upon the public-self aspect and access social-self standards.

### The Consequences of Self-Awareness

#### The Perception of a Discrepancy

The theory of objective self-awareness (Duval and Wicklund, 1972; Wicklund, 1975) suggests that self-focused attention most often leads to the perception of a negative discrepancy on the salient self-dimension. The self is seen wanting when compared to the "standard of correctness." As noted previously, positive discrepancies, in the rare case that they are perceived by the individual, are believed to be a fleeting phenomenon.

The theory of self-consciousness (Buss, 1980) also emphasizes the perception of negative discrepancies, especially as they relate to the state of public self-awareness. When standards are employed by the self-focused individual, as when the person is attended to by others or machines, or when receiving feedback from these machines, the standards are posited to be higher than one's "immediate perception" of his or her self, and therefore lead to the perception of negative discrepancies. With respect to being observed by others Buss notes that the "...predominantly negative conditioning [in childhood] establishes a firm bond between scrutiny by others and having done something that is socially wrong." And with respect to perceptual feedback he suggests that "most of us are not grandiose about our looks or style, but our enduring image of these attributes is more positive than that provided by feedback devices."

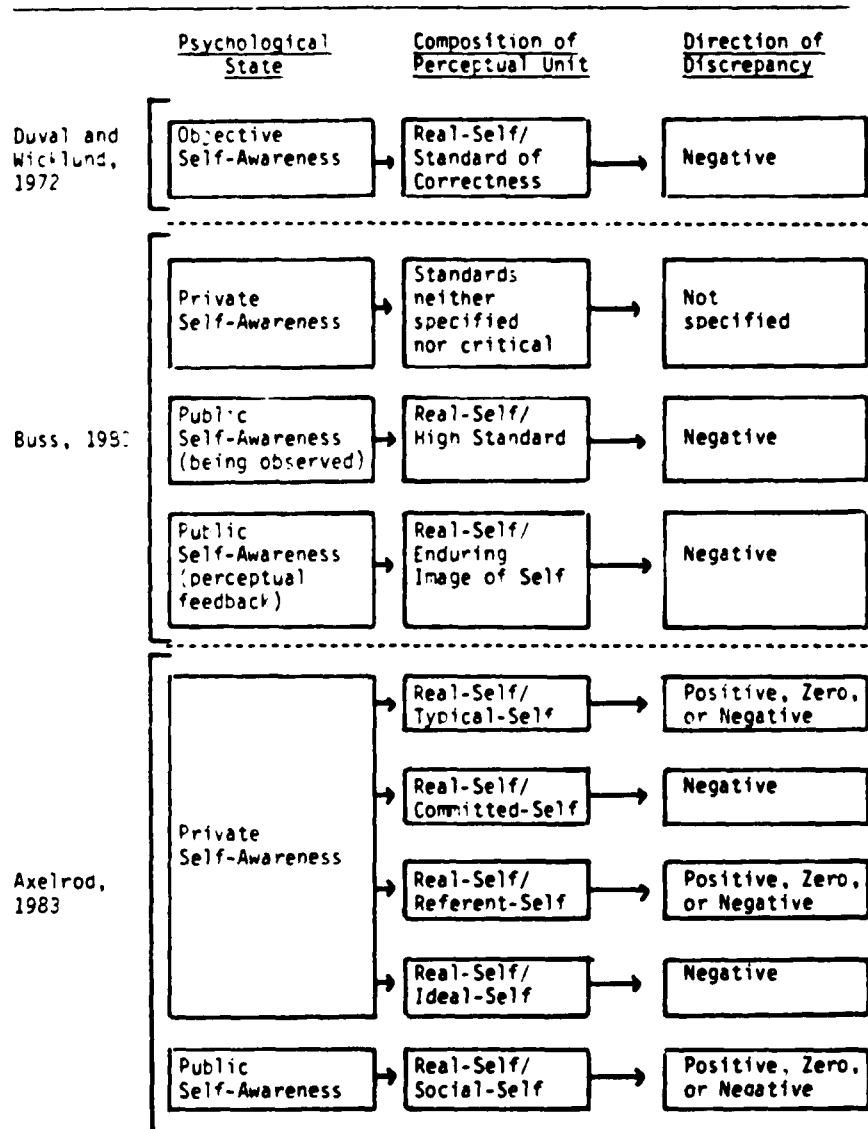
In contrast to both of these viewpoints (Duval and Wicklund, 1972; Buss, 1980), the interactionist model, having posited the existence of both personal and social standards higher, lower, or equal to one's real-self, recognizes the occurrence of positive, negative, or

zero discrepancies in either the state of public or private self-awareness. The direction of the discrepancy is simply a function of the position of one's real-self relative to that of the salient personal or social-self standard. It is further proposed that the self-aware person has an equal chance of experiencing each of these types of discrepancies.

The following figure graphically depicts the nature of the discrepancies experienced in the self-aware state as posited by the interactionist model, and compares this approach to that of Duval and Wicklund's (1972) and Buss' (1980).

Figure 4

The Perception of Discrepancies in the Self-Aware State:  
A Comparison of Approaches



### The Experience of Affect

According to the theory of self-awareness (Duval and Wicklund, 1972; Wicklund, 1975) self-focused attention has significant affective consequences that distinguish it from attention directed toward the environment. Most importantly, the theory maintains that self-evaluation is an automatic consequence of self-focusing, and, further, that the outcome of this comparison is most often negative. That self-evaluation is the consequence of self-focusing is not at all disputed. What is being questioned is whether or not this process ultimately leads to negative affect.

In contrast to the Duval and Wicklund position, Buss (1980) suggests that the experience of affect is a function of the aspect of self focused upon. Buss maintains that two processes occur when privately self-focused: 1) better knowledge of the private-self (e.g., moods, motives, self-esteem), and 2) the intensification of affect. He suggests that "...all private events, both affectively charged and neutral, become clearer and more distinct." Further, he suggests that "...private self-focused attention polarizes the affective component of any private event - positive aspects become more positive and negative aspects become more negative." With respect to public self-awareness, Buss maintains that the affect experienced is a function of the class of inducers leading to the state. According to Buss:

Being observed leads to at least mild discomfort and a concern about one's own appearance and style. The discomfort is relatively mild when the 'observer' is a machine, such as a camera or tape recorder. But when the observers are other people, the discomfort is usually more intense, shading into acute social anxiety, and accompanied by an inhibition of social behavior. Nonsocial feedback from movies, tape recordings, and mirrors leads to a more specific self-awareness, a focus on one

or a few aspects of the observable self....This negative discrepancy leads to temporary uneasiness and self-doubt about one's own worth. (p. 34)

Thus, according to Buss, public self-awareness generally produces negative affect. With respect to the affect experienced in the private state of awareness he is, unfortunately, less clear. Buss suggests that affective states are intensified, but these affective states are not the result of self-focused attention. They are what the person apparently focuses upon. In other words, we are not in this instance referring to positive or negative affective states, but, rather, to affective states such as anger, happiness, and sadness to name but a few. Since private self-awareness does not automatically engage self-evaluation, the state does not in and of itself produce affect. The self-aware individual is believed to focus upon an already existing affective state and this state is intensified.

Buss' model differs from the interactionist model with respect to the affective consequences of public self-awareness as well. Buss suggests that when attention is directed to the public-self aspect we focus on observable features of our appearance, behavior and style. The interactionist model, on the other hand, suggests that we focus upon that self-dimension most salient at the moment, a self-dimension that might be observable to others or not. In summary, the affect experienced in the self-aware state is a function of: 1) the position of the real-self relative to that of the salient self-standard, and 2) the centrality of the self-dimension under scrutiny.

### The issue of centrality

Centrality refers to the extent the self-dimension focused upon is self-defining for the individual. We all recognize and value performance on a vast number of self-dimensions, but our self-picture and related feelings of self are a function of only a small number of these dimensions. One's performance or ability with respect to a self-dimension is relevant only to the extent that it is self-defining or central to the self-concept of the individual. As Allport (1955) has indicated:

The first thing an adequate psychology of growth should do is to draw a distinction between what are matters of importance to the individual and what are, as Whitehead would say, merely matters of fact to him; that is, between what he feels to be vital and central in becoming and what belongs to the periphery of his being. (p. 26)

To date many theorists have stressed the importance of the concept of centrality to the understanding and measurement of the self-concept (Rosenberg, 1965, 1968, 1979; Turner, 1968; Markus, 1977, 1980; Rogers, Kuiper and Kirker, 1977; Bandura, 1978; Tesser, 1980), but few researchers appear to take this advice into consideration when designing and carrying out studies related to the self (Ickes, Wicklund and Ferris, 1973; Hull and Levy, 1979). Self-esteem and self-concept measures continue to be used with little regard as to whether or not they tap essential self-dimensions. Among the theorists who have commented on the importance of considering centrality is Markus (1980) who notes:

We do not have schemas about everything. In terms of the self, we have schemas only about those aspects of our behavior that are important to us or distinctive in some way. (p. 116)

Similarly, Rogers, Kuiper and Kirker (1977) have suggested:

The important thing to note is that the traits involved in a person's self are not necessarily the most extreme ones. Rather, they represent a mix of salience and extremity. (p. 686)

Turner (1968) maintains:

To be told that he will never equal the current baseball home-run king or television quiz wizard may upset a young boy, but it will seldom be taken as an insult by an older boy or man. An occasional evidence of modest athletic prowess or intellectual attainment is enough to create a favorable self-image to most men. (p. 103)

Bandura (1978) suggests:

People do not much care how they perform on tasks that have little or no significance for them. And little effort is expended on devalued activities. It is mainly in areas affecting one's welfare and self-esteem that favorable performance appraisals activate personal consequences. (p. 349)

And, lastly, Rosenberg (1968) tells us:

It is a fairly obvious point that a man's global self-esteem is not based on his assessment of his constituent qualities: it is based on his self-assessments of qualities that count.... To know that someone considers himself deficient with regard to a particular quality is plainly an inadequate indication of what he thinks of himself. We must also know how much he values this quality. (pp. 339-340)

The centrality of the self-dimension an individual is focused upon has important implications for both the affective and motivational consequences of self-awareness. Quite simply, focusing upon a self-dimension that is not central, or one that is, perhaps, ambiguous, will not have the same impact as focusing upon a dimension that is well-defined and central to a person's feelings of self-worth. For example, facing evidence regarding my lack of ping pong ability is of no consequence to me. This information is as likely to register contentment as discontentment; positive as negative affect. Should I be told, however, that my tennis game stinks, an ability that I value and one that is well-defined, my response would be entirely different. Affectively I would probably be disappointed, feel as if I had somehow failed; behaviorally I might devote more hours to practice; defensively I might



give up the game. In summary, there are a variety of possible responses attached to new information regarding a central self-dimension, and a corresponding lack of responsiveness to a peripheral self-dimension. Focusing upon ambiguous self-dimensions is likely to have limited affective and behavioral consequences, a factor past researchers in the area of self-awareness have not always taken into account. Hull and Levy (1979), for example, asked female subjects to indicate the degree to which each of 15 traits applied to them. The five traits measuring "general evaluation" were careful, intelligent, honest, disagreeable, and crude. The extent to which these five traits reflect one's feelings of self is somewhat questionable. For example, it seems rather unlikely that women ever think of themselves in terms of the trait "crude." As another example we can look to the trait "careful." This trait term is somewhat ambiguous in that it can be perceived by the person in both positive and negative (over-cautious) terms. At the very least one can say that the self-dimensions selected were but vague representations of the self. Certainly, with the exception of the trait "intelligent," they are of little consequence to this writer. Another example of the neglect in considering centrality can be found in the Ickes, Wicklund, and Ferris (1973) study in which the trait of "urgency" was employed to detect differences due to self-focused attention.

How can we tell which dimensions are central to a person's self-concept? Rosenberg (1968) offers a possible answer to this question. He maintains that an individual will place a greater value on those dimensions of the self that he considers himself successful at. "He will be disposed to value those things at which he considers himself good and to disvalue those qualities at which he considers himself poor."

Darley and Goethals (1980) also suggest that people cease to regard abilities as important which evidence suggests they do not possess. Therefore, one way in which we might determine the perceived relevancy or centrality of a self-dimension is to have people rate themselves on a variety of dimensions and select only those on which the person rates himself or herself highly. Another, somewhat more direct way would be to simply ask the person if one or several traits or abilities were of importance to him or her. One last way has been suggested by McGuire and Singer (1976) who stress the importance of studying spontaneous self-elements rather than those assumed to measure one's sense of self-worth. They suggest:

Instead of presenting the participants with the dimension on which they must describe themselves, they can be allowed to choose the dimensions that are salient and significant to them....there is more interesting information about the self-concept in the dimensions one chooses for describing oneself than in the positions to which one assigns oneself on dimensions presented by the experimenter. (pp. 743-744)

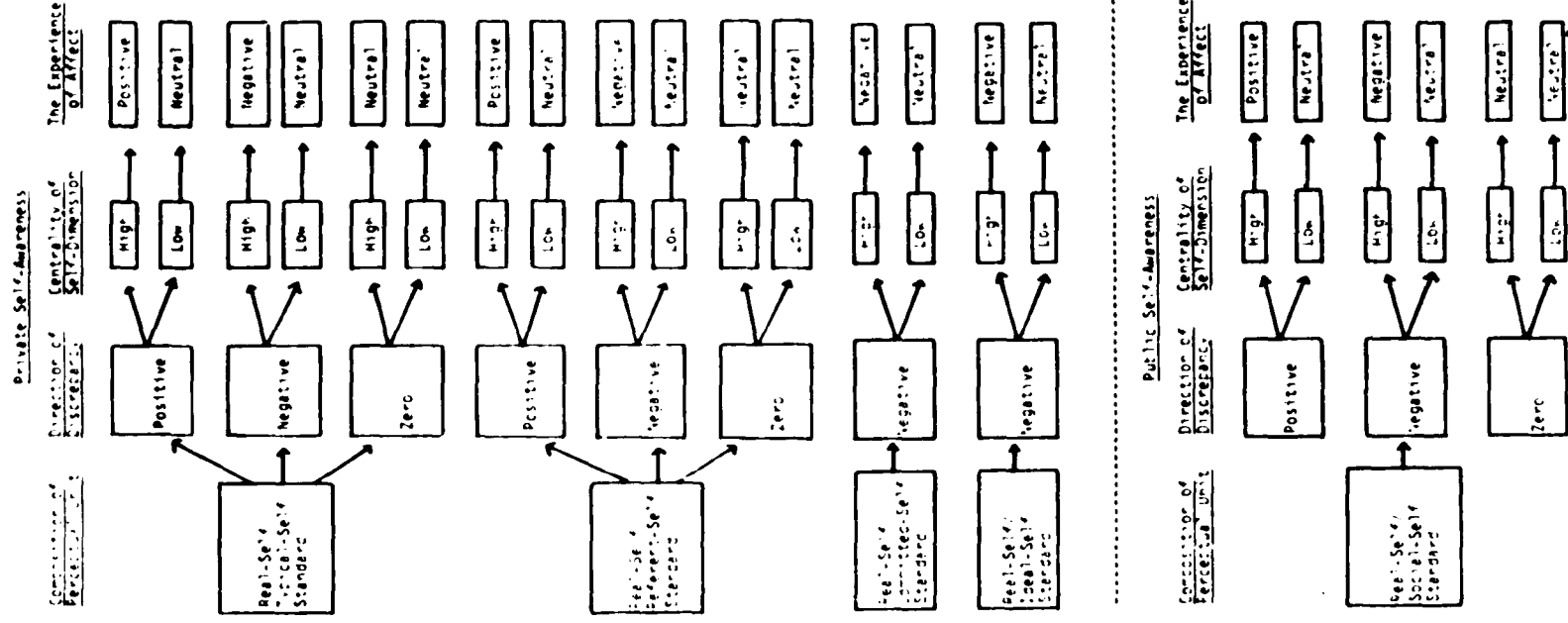
Perhaps one could somehow elicit spontaneous self-elements as suggested by McGuire and Singer. Or, for the sake of economy, we might go on assuming that certain dimensions are central to the population studied. However, if we do assume, our assumptions should be based upon firmer grounds than in the past. Future researchers must take notice of the centrality of self-dimensions if the consequences of self-focused attention are to provide us with relevant information.

In summary, the affect experienced in the state of self-awareness need not be negative, nor is this negative feeling the most usual outcome. In contrast to both Duval and Wicklund (1972) and Buss (1980), private as well as public self-awareness may lead to positive self-feelings. The affect experienced in the self-aware state is a function

of two factors: 1) the position of the real-self relative to that of the salient standard, and 2) the centrality of the self-dimension focused upon. Thus, positive discrepancies may engender positive or neutral affective states, negative discrepancies may engender negative or neutral affective states, and zero discrepancies should have no affective consequence whatsoever. Figure 5 graphically illustrates the nature of the affect experienced in the self-aware state as posited by the interactionist model.

Figure 5

The Affect Experienced in the Self-Aware State  
The Interaction: Mode



The Effect of Self-Awareness  
on Self-Esteem

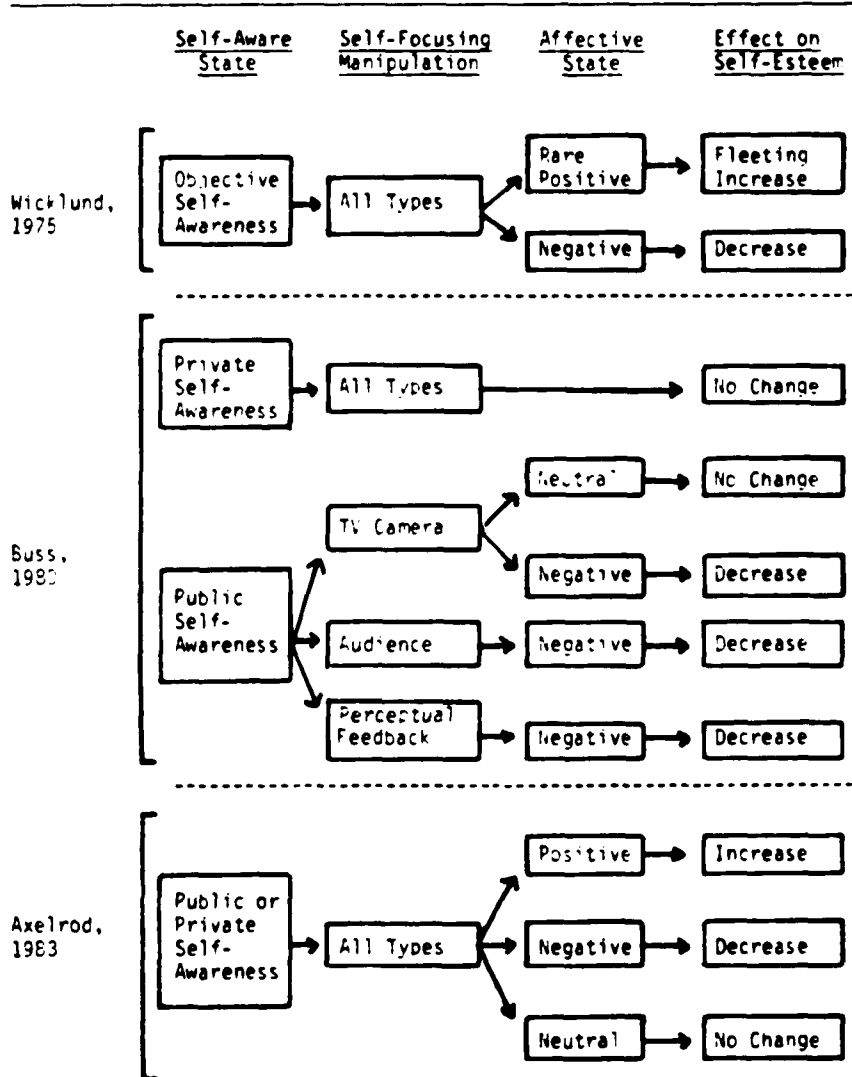
Duval and Wicklund (1972) and Wicklund (1975) suggest that the experience of self-awareness most often results in lowered self-esteem. In contrast to this position, the interactionist model proposes that self-awareness may increase, decrease, or have no effect upon one's level of self-esteem. If the person, for instance, has surpassed the standard upon which he or she is focusing, self-esteem should increase; if one has not surpassed this standard, self-esteem should decrease; if one's real-self coincides with this standard, self-esteem should remain unchanged. The only exception to this postulate has to do with the issue of centrality. As with the experience of affect, the perception of a discrepancy will have no effect upon one's level of self-esteem if the self-dimension focused upon lacks centrality.

The interactionist position is also contrary to that of Buss (1980), who suggests that the effect of self-awareness on one's self-esteem is, once again, a function of the stimulus engaging the state initially. Private self-awareness manipulations, according to Buss, should have no effect upon self-esteem. Television cameras with no video should have little or no effect upon level of self-esteem; however, if there is an effect, it should be in the direction of a decrease in self-esteem. Tape recordings and videotapes, manipulations which provide perceptual feedback, according to Buss, tend to diminish one's self-esteem. Lastly, he suggests that audiences, too, have a detrimental effect upon level of self-esteem. He maintains that "for most of us, acute public self-awareness tends to be an uncomfortable state, often accompanied by social anxiety, lowered self-esteem, or attempts to es-

cape the situation." In summary, whereas Buss proposes that the manipulation, *per se*, influences self-esteem, the interactionist model maintains that changes in self-esteem when attention is focused upon the self (either the public-self aspect or the private-self aspect) are a function of the relationship between the real-self and the standard focused upon on the salient self-dimension, as well as the centrality of that self-dimension to the person's global concept of self. Figure 6 depicts the influence of self-awareness upon one's level of self-esteem as posited by the three approaches.

Figure 6

The Experience of Self-Esteem in the Self-Aware State:  
A Comparison of Approaches



The Behavioral Consequences  
of Self-Awareness

A basic assumption underlying the original theory of self-awareness (Duval and Wicklund, 1972), later revisions (Wicklund, 1975), and more recent statements of the theory (Wicklund and Hormuth, 1981), is that the awareness of a negative discrepancy is a precondition for self-evaluation, and further, that only negative affective states have motivational properties. In essence, the experience of negative affect promotes behaviors designed to eliminate the discomfort associated with the state of self-awareness. The most common of these behaviors are posited to be avoidance of self-focusing stimuli or situations (when possible), or attempts at discrepancy reduction.

In contrast to the Duval and Wicklund position, the outcome of self-focusing according to Buss (1980) is, again, a function of the aspect of self focused upon. Being observed leads to discomfort, embarrassment, and an inhibition of behavior. Perceptual feedback from such recording devices as videotapes or voice recordings leads to self-doubt and avoidance tendencies. When attention is focused upon the private-self aspect self-related information becomes clearer resulting in more accurate self-reports. Further, Buss suggests that behaviors become intensified. Since the affective state itself is intensified in private self-awareness, the behavior indicative of this affect is likewise intensified. Thus, we will find angry people displaying more aggressive type behaviors, those focusing upon unhappiness displaying more depressive type behaviors, and those focusing upon a positive self-feeling displaying behaviors indicative of this state (e.g., pride, laughter, smiling).

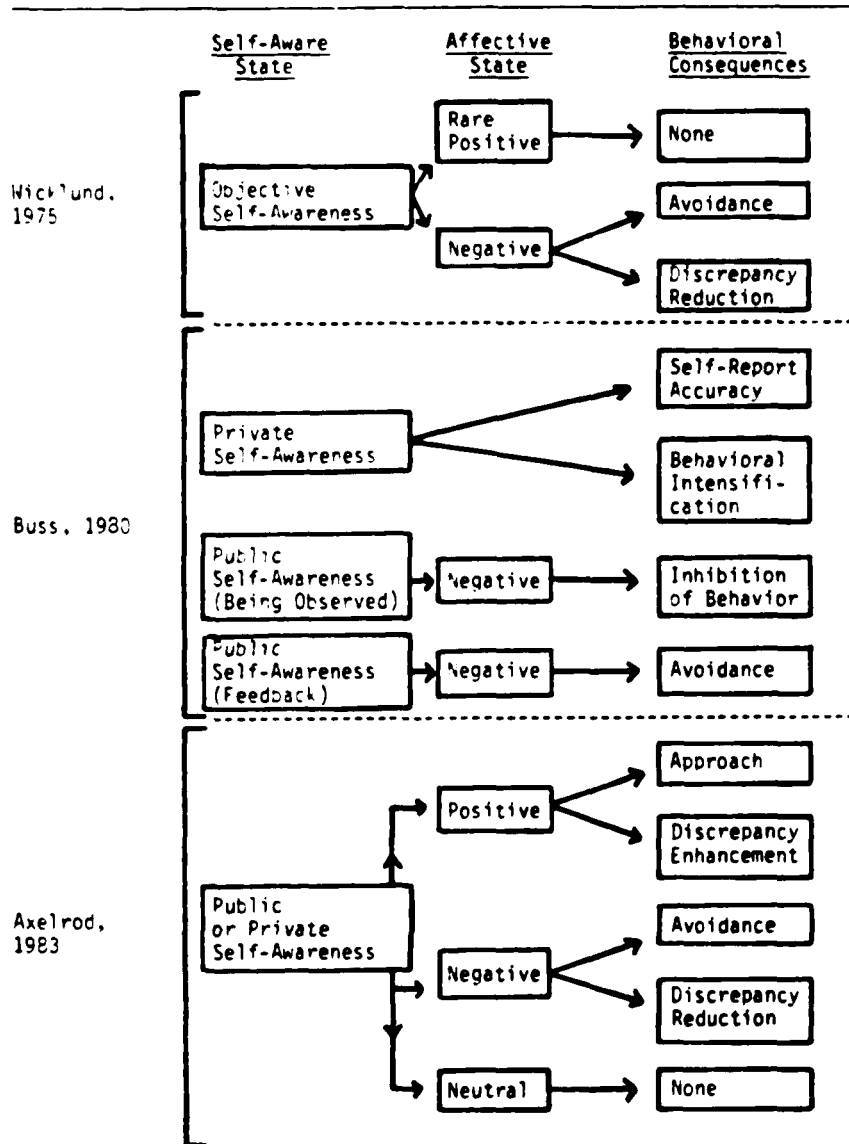


In a substantial departure from both the Wicklund (1975) and the Buss (1980) positions, the interactionist model has suggested that self-awareness may lead to positive or negative self-evaluation, and positive, negative or neutral affective states. It is further proposed that positive as well as negative affective states (but not necessarily perceived discrepancies) have motivational and behavioral consequences. That is, positive affect enhances behaviors which might best be described as approach tendencies, just as negative affect enhances behaviors best described as avoidance tendencies. It is only the absence of affect, neutral affect, that is non-motivational; and, neutral affect, as noted previously, may be the outcome of two self-evaluative experiences:

- 1) when one's real-self is comparable to the salient self-standard, or
- 2) when either a positive or negative discrepancy is perceived between one's real-self and the salient self-standard on a self-dimension that is of little consequence to the self-focused individual. In effect, the experience of negative affect promotes avoidance tendencies, or behaviors designed to reduce the perceived discrepancy. The experience of positive affect has the reverse effect; one can now observe approach tendencies, and, perhaps, behaviors designed to enhance the perceived discrepancy. Figure 7 graphically depicts the behavioral response to the state of self-awareness as posited by the interactionist model, and compares this approach to that of Duval and Wicklund's (1972) and Buss' (1980).

Figure 7

The Behavioral Consequences of Self-Focusing:  
A Comparison of Approaches



Summary

In agreement with Wicklund (1978), who suggests that "...it seems highly likely that important modifications of the theory of self-awareness will lead the theory in the direction of becoming a notion about salience," this author, too, recognizes the unique contribution the eventual understanding of saliency will have to the theory of self-awareness. Understanding saliency, what provides one self-aspect, one perceptual unit, one standard, with priority over another, appears to be the key to understanding the process and consequences of self-focused attention. And saliency, it appears is probably influenced by the person--one's picture of self, dispositional tendencies, and expectations--the situation--one's immediate stimulus context--and the interaction of the two. Just as certain individual difference variables will probably be found to promote the salience of particular standards across situations, so too will certain situational variables be found to encourage the regulation of our behavior in accordance with particular standards across a wide sample of the population.

People entering the same situation bring with them different ideas as to who they are and what the situation demands of them. Their unique picture of self, dispositional tendencies and expectations no doubt have a significant influence upon their response to that situation. Among the person variables posited to have an influence upon standard saliency are the following: 1) level of self-esteem, 2) level of public versus private self-consciousness, 3) dispositional self-monitoring, 4) preconceived stereotypes, 5) the strength and clarity of one's personal standards, 6) one's age, and 7) one's sex.

The situation, too, as the interactionist model suggests,

has an influence upon standard saliency and one's response to self-focused attention. It was suggested that certain situations encourage us to regulate our behavior in accordance with personal-self standards and others encourage us to regulate our behavior in accordance with social-self standards. The most critical aspect of the situation as it relates to the outcome of self-awareness was suggested to be its public versus private nature. Whereas public situations will most often promote the salience of social standards, private situations will most often promote the salience of personal-self standards. Further, since public situations, by definition, include others, the characteristics of these others as perceived by the self-focused person, need be considered. The perceived attributes of these others are particularly important because the person is believed to define the social standard with these perceived attributes in mind. Among the characteristics of an audience that may promote public self-awareness, influence the degree of public self-awareness experienced and, most importantly, determine the definition of the social-self standard are the following: 1) the behavior of the audience, 2) the expertise of the audience, 3) one's familiarity with the audience, 4) one's similarity to the audience, and 5) the size of the audience.

In summary, there is every reason to believe that person variables, situation variables, and, of course, the interaction of the two, will be found to have a significant bearing upon the antecedents, the process, and the consequences of self-directed attention. Thus, the task of future researchers seems to be that of more precisely defining those variables that render one or another standard salient when attention is self-focused and self-evaluative processes engaged.

PART III

THE PRESENT STUDY

## CHAPTER VIII

### METHOD

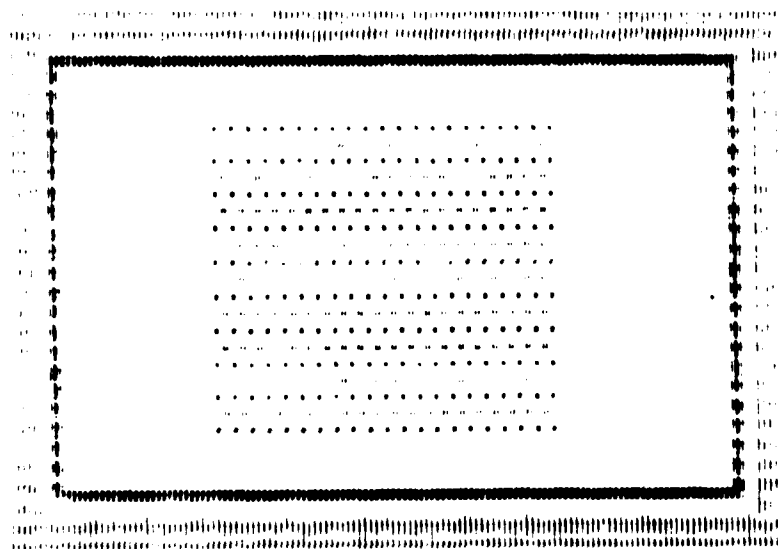
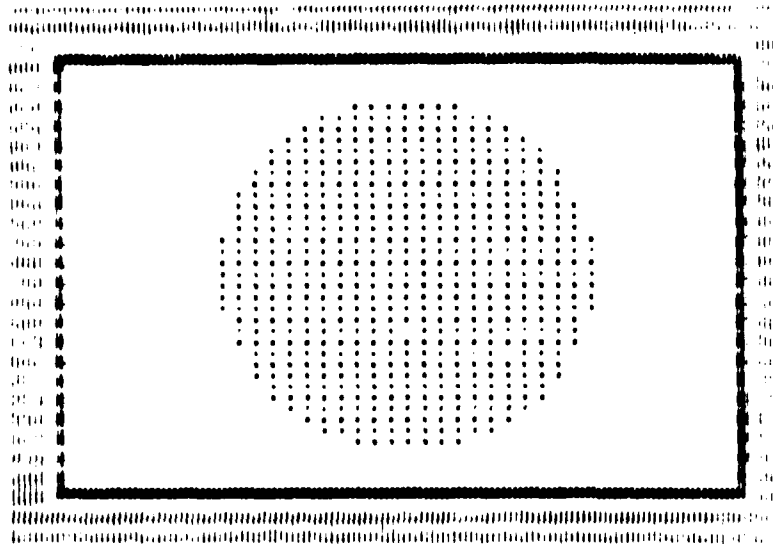
#### Overview

Two hundred female Brooklyn College students participated in the primary experimental procedure. Upon completion of several pre-measures (public self-consciousness, private self-consciousness, and self-esteem) subjects were led into an experimental cubicle approximately 10 x 12 feet in area. The four windows of the room were covered with black shades so that, in effect, the room could be considered windowless. An Apple II computer and television monitor were placed on a table within the room. All instructions pertaining to the procedure were relayed via the television monitor. Subjects were able to record their responses to the several tasks required of them by simply striking a number on the computer terminal keyboard. All such responses were recorded in the computer for later retrieval by the experimenter. This procedure allowed subjects to complete all experimental requirements in complete privacy.

Depending upon the condition to which the subject was randomly assigned, she was either confronted with a mirror (high private self-awareness), a TV camera purportedly transmitting responses to an audience (high public self-awareness), a TV camera turned away from her, toward a rear wall (low public self-awareness), or covered pieces of equipment, "left by the previous investigator" (low private self-awareness).

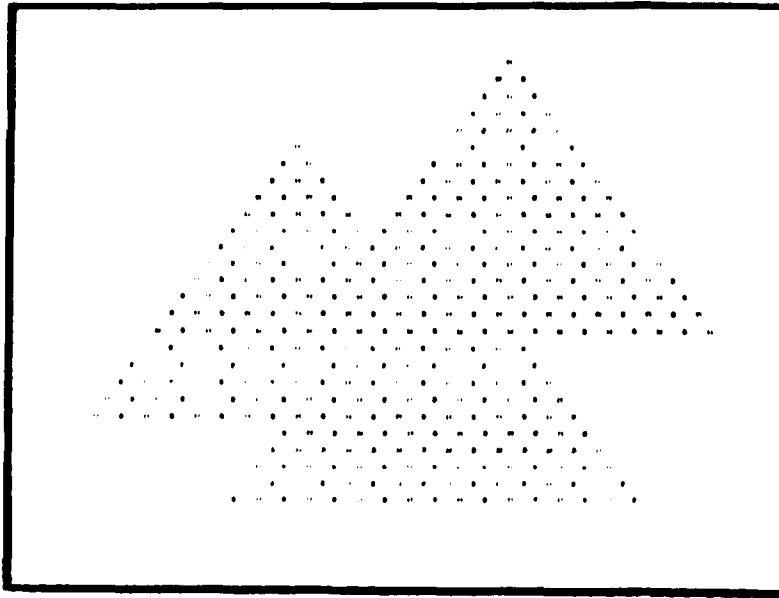
The experimental task required subjects to guess the number of

dots in a geometric arrangement appearing on the TV monitor, two examples of which follow.



Six such arrangements of dots, purportedly practice trials, were presented to subjects. A seventh arrangement of dots represented the test of intelligence the experimenter was purportedly validating. the TTT. Subjects were once again required to enter their estimate of the number of dots appearing in this triple triangle arrangement. The following

geometric arrangement of dots was described to subjects as the Triple Triangle Test of Perceptual Logic.



After subjects had entered their estimate of the number of dots in the triple triangle arrangement, three scores were displayed on the TV monitor: 1) their TTT score (real-self), 2) the computer prediction (social-self standard), and their typical practice score (personal-self standard). Depending upon the feedback condition the subject was assigned to, her real-self either surpassed the social-self standard but not the personal-self standard, or her real-self surpassed the personal-self standard but not the social-self standard.

In an effort to determine the boundaries of the perceptual unit the subject was focusing upon, several dependent measures (post self-esteem measure, satisfaction rating scale, performance rating scale, general satisfaction index, approach-avoidance behavior measure) were subsequently introduced and responded to.



### Subjects

Two-hundred and thirty female Brooklyn College undergraduates served as subjects. Thirty subjects participated in a pilot study designed to determine whether manner of presentation--paper and pencil versus computer--of the Rosenberg New York State Self-Esteem Scale influences response. The remaining 200 subjects participated in the main experimental procedure. Subjects chose the experiment from several available to them during the semester. Participation was mandatory.

### Procedure

Subjects were run individually during the Spring, 1981, semester at Brooklyn College of the City University of New York. Upon entering a waiting area, subjects were greeted by a female experimenter and informed that they would be participating in one of a series of tests designed to measure a component of intelligence known as perceptual logic. After being escorted into a separate room, subjects were provided with further written information concerning the study. Specifically, they were advised of the following:

This study is part of a series of tests being conducted for the purpose of constructing a new measure of IQ. The task you will be asked to perform is intended as a measure of one of the untapped abilities that comprise IQ. The ability is called perceptual logic. Very simply, you will be asked to guess the number of dots appearing on a screen. The test of this ability will be conducted on a computer. All instructions will be provided for you by the computer when the study begins. Before starting, please answer the questions that follow. Please notice that you have been assigned a number on the front page. Your answers will remain completely anonymous so please answer these questions honestly and to the best of your ability.

Subjects then filled out the public and private subscales of the Self-Consciousness Scale (Scheier, Fenigstein and Buss, 1975), and the New York State Self-Esteem Scale (Rosenberg, 1965).

Upon completion of the pre-measures, subjects were led into another room where they were seated at a table. Directly in front of them was an Apple II computer. A TV monitor was on the table to the left of the computer. Subjects were advised to read everything that was presented on the monitor and to follow all directions carefully. The experimenter then left the room, closing the door behind her. Subjects required approximately 15 minutes to complete the computer portion of the study, after which they returned to the first room and filled out the post-experimental questionnaire. Lastly, due to the sensitive nature of the subject matter, all subjects were very carefully debriefed. The entire experimental procedure lasted approximately 45 minutes.

#### Experimental Task

The entire experimental task, purportedly a measure of perceptual logic, was conducted on an Apple computer. All subjects were alone during the entire session. Subjects were required to guess the number of dots in a geometric arrangement appearing on the TV monitor. They were then required to enter their estimate into the computer. Six arrangements of dots were presented to subjects. They were advised that the purpose of these six trials was to simply acquaint them with the task.

Each arrangement of dots appeared on the screen for five seconds. When the arrangement had disappeared, subjects were prompted to enter their estimate. Specifically, the following information appeared on the TV monitor:

The following six trials will acquaint you with the task. These are only practice trials. When you are ready to begin, an arrangement of dots will appear on the screen. This arrangement will disappear in a few seconds. Your job is to guess the number of dots that appeared on the screen during this short interval.

After you have entered your estimate into the computer, three numbers will appear on the screen:

- 1) the estimate you entered into the computer,
- 2) the actual number of dots that appeared on the screen,
- 3) the error score - the amount your estimate deviates from the actual number of dots in the arrangement.

The error score may help you adjust your estimate on the following trial.

When the numbers have disappeared, the next arrangement of dots will appear on the screen. This procedure will be repeated six times.

In an effort to avoid confusion, subjects were provided with further information regarding the definition of the "error score." It was critical that subjects understood that a perfect score--an ideal score--was zero.

The error score tells you how far away your estimate was from the actual number of dots that appeared on the screen. For example, if your error score is +200, this means that your estimate was 200 dots over the actual number displayed on the screen. If your error score is -200, this means your estimate was 200 short of the actual number displayed on the screen.

Your final score on the test of perceptual logic is based upon the absolute error score you achieve. The closer your error score is to zero, the better you have done on the task. We are not interested in whether your score is plus (+) or minus (-). This information is provided to help you adjust your estimates on future trials. Once again, the closer your error score is to zero, the better your estimate.

Subjects were given six practice trials. A seventh arrangement of dots represented the actual test of perceptual logic--the Triple Triangle Test (TTT). Prior to taking the TTT subjects were told the following:

You have completed the six practice trials. You are now ready to participate in the Triple Triangle Test of Perceptual Logic. The accuracy of your estimate of the number of dots in the next arrangement will represent your perceptual logic ability.

After subjects had entered their estimate of the number of dots in this last arrangement the computer displayed the following information:

The computer is calculating three scores which will be displayed on the monitor screen shortly:

- Score #1 - YOUR TYPICAL PRACTICE SCORE. This is your average score on the six practice trials.
- Score #2 - TTT ERROR SCORE. This is the score you achieved on the triple triangle test of perceptual logic.
- Score #3 - COMPUTER PREDICTION. This is the score the computer predicted you would achieve on the TTT based upon your personal data and your performance on the practice trials.

Remember, the lower the score, the better your performance.

Three scores were then presented to the subjects in the following order:

Your Typical Practice Score \_\_\_\_\_

Your TTT Score \_\_\_\_\_

Computer's Predicted Score \_\_\_\_\_

At this time, the major dependent variables were introduced. The three scores remained on the upper portion of the TV monitor throughout the remainder of the experimental session. All subjects completed five dependent measures: 1) the satisfaction rating scale, 2) the performance rating scale, 3) the Rosenberg New York State Self-Esteem Measure, 4) a general satisfaction index comprised of five questions, and 5) a measure of approach-avoidance (see Appendix C).

The experimental task was completed with instructions to the subject advising her to inform the experimenter that she was finished.

#### Experimental Setting

As previously indicated, all subjects completed the experimental task in complete privacy. The task and all instructions were presented to subjects via a TV monitor and all responses were recorded by the computer for later retrieval by the experimenter. Both the TV monitor and the computer terminal were situated on a table directly in front of the subject. The room also contained a TV camera and a 3' x 5' mirror. The mirror was placed directly in front of subjects. The TV camera was

placed at the left rear of subjects. Apart from these items, the room was otherwise vacant. Although the TV camera and mirror remained in the room throughout conditions, their visibility was altered accordingly.

### Independent Variables

Three independent variables were manipulated: 1) Type of Self-Awareness, 2) Magnitude of Self-Awareness, and 3) Type of Feedback.

#### Type of self-awareness

The type of self-awareness manipulation--public or private--was created prior to subjects entering the experimental setting. In the public self-awareness condition a TV camera was visible to subjects; the mirror, on the other hand, was completely covered by a sheet. In the private self-awareness condition, the TV camera was covered and the mirror left visible (only in the high private self-awareness conditions).

#### Magnitude of self-awareness

Two levels of public and private self-awareness were examined: high self-awareness and low self-awareness.

#### High public self-awareness

Subjects assigned to the high public self-awareness condition were advised of the presence of the TV camera upon entering the room. The TV camera was aimed at the computer monitor purportedly transmitting the subject's responses to another room. During the experimental procedure, subjects were again advised as to the presence and purpose of the TV camera. The following information was provided via the computer to only subjects in this, high public self-awareness, condition:

One of the issues we are examining is whether practice on perceptual logic tasks influences a person's ability in this

area. In an effort to answer this question, two groups of students have been formed:

Group I - Students who will participate in practice trials before taking the test of perceptual logic.

Group II - Students who only observe the practice trials before taking the test of perceptual logic.

You have been assigned to Group I. You will perform the practice trials. The camera to the side of you will be transmitting the problems presented to you and your answers to another student and an experimenter in another room.

#### Low public self-awareness

In the low public self-awareness conditions the TV camera, although visible to subjects, was aimed toward the left wall, away from subjects, and conspicuously not plugged in (Geller and Shaver, 1976). The presence of the other equipment--the TV camera and the covered mirror--was minimized by informing subjects that it had been left in the room from a previous experiment.

#### High private self-awareness

Subjects assigned to the high private self-awareness conditions faced a large 3' x 5' mirror. From their seats subjects were able to clearly see their face, shoulders and upper torso above the table top and the lower portion of their body--lap and legs--from below the table ledge. The TV camera was covered by a sheet. Subjects were told that the mirror and other equipment in the room were left from a previous experiment.

#### Low private self-awareness

Subjects assigned to the low private self-awareness conditions were simply informed that all equipment in the room was left from a previous experiment. The TV camera and mirror were completely covered.

Feedback manipulation

In reviewing the effects of others' evaluations on one's self-concept, Shrauger and Schoeneman (1979) concluded, "that for feedback that diverges substantially from one's views to have a strong effect on self-evaluations, it must be perceived as being based on clear objective information." Following this piece of advice, feedback conditions were created based upon each subject's actual average error score on the six practice trials. The average error score--the typical practice score--was simply the mean number of errors they had made over the six trials. Three error scores were presented to all subjects: 1) their typical practice score, 2) their TTT score, and 3) the computer prediction. The typical practice score was the true average error score achieved during the six practice trials. This score reflects the actual ability of the subject at the task. It was designed to represent the subject's personal-self standard on the dimension of perceptual logic.

A bogus TTT score, based upon each subject's average error, represented the performance of the subject on the TTT, the test of perceptual logic. This score was designed to reflect one's real-self on this dimension.

The computer prediction, also based upon the subject's average error, supposedly represented that score the computer calculated the subject would receive on the test of perceptual logic--the TTT. It was intended to represent one's social-self standard on the dimension of perceptual logic.

Two feedback conditions were established by manipulating the relative position of the two self-standards, the personal-self standard and the social-self standard, in relation to the real-self, the TTT

score.

Surpassed social standard not personal standard

Subjects were advised that the score they achieved on the TTT (real-self) fell short of their typical practice score (personal-self standard) but surpassed the computer prediction (social-self standard). The TTT score, in fact, fell midway between their typical practice score and the computer prediction. The TTT score was derived by adding 15% to the subject's typical practice score. The computer prediction was derived by adding 30% to the subject's typical practice score. As an example, imagine the subject who achieved an average practice score of 100. The following three scores would be presented to this particular subject:

|                             |            |
|-----------------------------|------------|
| Your Typical Practice Score | <u>100</u> |
| Your TTT Score              | <u>115</u> |
| The Computer Prediction     | <u>130</u> |

Since lower error scores reflect better performance, the TTT score of this subject (115) fell short of the typical practice score (100) but surpassed the computer prediction (130).

Surpassed personal standard not social standard

Subjects assigned to this condition were advised that the TTT score they achieved surpassed their typical practice score (personal-self standard) but fell short of the computer prediction (social-self standard). Once again, the TTT score, based upon the subject's typical practice score, fell midway between the typical practice score and the computer prediction. The TTT score was derived by subtracting 15% from the subject's typical practice score. The computer prediction was derived by subtracting 30% from the subject's typical practice score.



Since lower scores reflect better performance, subjects in this condition received feedback indicating that they had achieved a score better than their typical practice score (personal-self standard) but did not do as well as the computer predicted they would do (social-self standard). Because the standards employed in this study were based upon the subject's actual performance level, the subjects participating in this condition were also given feedback that was absolutely better than the feedback given subjects in the surpassed social but not personal-self standard condition. The effects of this particular manipulation will be addressed further in the discussion section.

#### Dependent Variables

A variety of self-report measures were collected in an effort to explore the psychological process underlying the behavior of subjects classified as publicly and privately self-aware, and to check on the validity of the procedures and manipulations employed. The five major dependent measures examined were: 1) change in self-esteem, 2) general satisfaction with measure of intelligence, 3) satisfaction with performance, 4) perceived performance level on TTT, and 5) approach-avoidance behavior toward volunteering for future studies with respect to the TTT. In addition, several questions were included in the post-experimental questionnaire in an effort to further examine the underlying self-evaluation process.

#### Change in self-esteem

The primary dependent measure included in this study was the change in self-esteem score. The Rosenberg Scale was selected for several reasons. First, the scale is short, easy to administer and score, and can be completed by the subject in a relatively short period of time.

Since this scale was administered twice, its ease of administration was an important consideration. Second, its format was easily adapted to use on the computer. Third, and most important, the scale is highly recommended by Wylie's (1974) review of self-esteem measuring instruments. She reports that this scale has good construct validity, convergent validity and reliability. With reference to the Rosenberg scale (see Appendix D) she concludes:

All things considered, it seems that this scale deserves more research, development, and application. One merit of its brief, direct approach is that it does not assume that a group of items with heterogeneous content, chosen by E, and of variable and unknown salience to Ss may be summed to indicate global self-regard.

It is impressive that such high reliability is attainable with only ten items and that such a short scale has yielded relationships supporting its construct validity. (p. 189)

All subjects were required to complete the ten items of the Rosenberg self-esteem measure twice; once prior to all experimental manipulations, and again during the experimental session. Responses were summed across the ten items, and averaged for each subject. Higher scores reflected higher self-esteem. Change scores were computed by subtracting post self-esteem scores from pre self-esteem scores for each subject. Positive scores represented an increase in self-esteem; negative scores reflected a decrease in self-esteem.

#### General satisfaction index

The five item general satisfaction index was included in order to measure subjects' satisfaction with their performance on the TTT, and their feelings regarding the TTT's usefulness as a measure of intelligence. The five items making up the index were: 1) All in all, I believe the TTT is a good measure of intelligence; 2) I believe that perceptual logic is an important dimension of intelligence; 3) I am

somewhat disappointed with my score on the TTT; 4) I am proud of my score on the TTT; and 5) I feel I could have scored higher on the TTT. Each statement was followed by a 4-point scale with the endpoints labeled strongly agree (1) and strongly disagree (4). Items 1, 2 and 4 were reverse scored so that higher general satisfaction scores reflect greater satisfaction. The five items making up this index were interspersed with the post self-esteem items.

#### Performance rating scale

In an effort to have this scale reflect the world the college student is familiar with, subjects were asked to grade themselves in a manner consistent with their college career. Each subject was required to assign herself a grade for her performance on the TTT. Grades were arranged on a 5-point scale ranging from A (excellent) to F (failure).

#### Satisfaction rating scale

Subjects completed a 10-point scale intended to be a direct measure of their satisfaction with the score they achieved on the TTT. The scale ranged from "not at all satisfied" (0) to "completely satisfied" (9) so that higher satisfaction scores reflect greater reported satisfaction with performance.

#### Approach-avoidance of self-awareness stimuli measure

According to the theory of self-focused attention, the existence of a negative discrepancy may lead to behaviors characterized as avoidance responses when the individual is self-aware. A person who believes he or she has fallen short of a salient self-standard, or has performed poorly on the required task, will want to avoid future encounters with

the task. (The theory allows that one may feel able to reduce the discrepancy but with reference to the present design this mode of response was not as likely.) It seems equally likely that positive discrepancies may lead to behaviors which might be characterized as approach tendencies. Wicklund (1975) has noted: "If the discrepancy in focus is positive, the person will welcome stimuli that bring on the objective state, and will tend to seek out self-focusing circumstances."

An indirect measure of subjects' positive or negative self-feelings, or perceived discrepancy, might be their willingness to volunteer for future testing sessions of the TTT. Subjects wishing to avoid the discrepancy and the associated affect should volunteer less of their time than subjects wishing to focus upon the discrepancy and extend the pleasurable feelings associated with it; and, these differences should be intensified by self-focused attention. Based upon this line of reasoning, subjects were asked to volunteer their time, at a later date, for future testing sessions of the TTT (see Appendix C). Time allotments ranged from none (1) to one and a half hours (7) in 15 minute increments. Higher volunteer scores are indicative of a greater amount of time allotted to future testing sessions.

#### Post-Experimental Questionnaire

##### Measures of recall

A recall index was derived from the subject's ability to reproduce three scores: 1) her typical practice score, 2) the computer prediction for her, and 3) her TTT score. The index was calculated such that recalling all three scores earned a score of 3, recalling two earned a score of 2, recalling one correctly earned a score of 1, and those unable to recall a single score received a score of 0.

### Importance rating

Several researchers (Rosenberg, 1965; Shrauger, 1975) have suggested that the importance one ascribes to a performance or an ability might be influenced by the feedback received regarding that ability. In effect, if a person believes he has performed well with respect to a particular ability, he may decide that the particular ability is important to him. If this line of reasoning is correct then the importance one ascribes to the self-dimension focused upon may be indicative of whether he is focusing upon a positive or a negative discrepancy. An importance rating was, therefore, included in the post-experimental questionnaire as an indirect measure of whether the subject was focusing upon a positive (good performance) or negative (poor performance) discrepancy. Subjects were asked to indicate, on a 7-point scale, how important it was to them that they do well on tasks that measure intelligence. Higher scores reflect greater attributed importance.

### Hypotheses

The following hypotheses were constructed for each of the dependent measures employed in this study. Predictions pertain to those conditions wherein self-focused attention is high, since, as previously noted, the low self-awareness conditions are not expected to lead to the same degree of self-focused attention and are, therefore, less likely to initiate the comparison to standard process. Again, public self-awareness is hypothesized to focus attention upon the salient social-self standard; private self-awareness will focus attention upon the salient personal-self standard. In effect, the salience of one or the other standard is expected to increase relative to the other as a function of the state of self-awareness. In turn, the salient self-standard will be

employed in the comparison to standard process and determine the affect experienced and behaviors subsequently exhibited.

### Primary Predictions

#### Self-esteem change score

A Type of Self-Awareness  $\times$  Feedback interaction is predicted among the high self-awareness conditions such that private self-awareness will lead to an increase in self-esteem when one has surpassed the personal-self standard but not the social self-standard, and a decrease in self-esteem when one has failed to surpass the personal-self standard even though the social-self standard is exceeded. The reverse is predicted when the social-self standard is made salient by the public self-awareness manipulation. Public self-awareness is predicted to lead to a decrease in self-esteem when one has failed to surpass the social-self standard even though the personal-self standard is exceeded, and to an increase when one has surpassed the social standard but not the personal-self standard.

To state the same prediction from a different perspective, in the surpassed social-self standard but not personal-self standard condition, privately self-aware subjects will exhibit a decrease in self-esteem compared to publicly self-focused subjects, who will exhibit an increase in self-esteem. In the surpassed personal-self standard but not social-self standard conditions, privately self-aware subjects will demonstrate an increase in self-esteem compared to publicly self-focused subjects who will exhibit a decrease in self-esteem.

#### Satisfaction and performance rating scales

A Feedback  $\times$  Type of Self-Awareness interaction is predicted

among the high self-awareness conditions for both satisfaction and performance ratings, such that privately self-focused subjects will report a greater level of satisfaction and grade their performance on the TTT higher when they have surpassed the personal-self standard but not the social-self standard, compared to when they have surpassed the social-self standard but not the personal-self standard. The opposite effect is expected for publicly self-focused subjects.

#### General satisfaction index

Once again, a Type of Self-Awareness x Feedback interaction among the high self-awareness conditions is predicted, such that publicly self-focused subjects will report a higher general level of satisfaction with their performance on the TTT and its usefulness as a measure of intelligence when they have surpassed the social-self standard but not the personal-self standard, and a lower level of general satisfaction when they have failed to surpass the social-self standard even though they have exceeded the personal-self standard. The opposite effect is predicted for privately self-focused subjects.

#### Approach-avoidance behavior toward self-awareness stimuli

With reference to the high self-awareness conditions, when subjects are privately self-focused, they should demonstrate a greater willingness to participate in future testing sessions of the TTT (volunteer a greater amount of time) when they have surpassed the personal-self standard but not the social-self standard than when they have not surpassed the personal-self standard even though they have exceeded the social-self standard. The reverse is predicted when the social-self standard is made salient by the public self-awareness manipulation.

### Secondary Predictions

Theoretically, if subjects are actually focusing upon a specific standard, it stands to reason that this self-standard should be more readily recalled, or more easily retrieved from memory, than a standard that is not being focused upon. For this reason, a measure of recall was included in the post-experimental questionnaire. Subjects were asked to recall each of the scores presented to them during the experimental procedure: the score they obtained on the TTT (real-self), the score the computer predicted for them (the social-self standard), and their average practice score (the personal-self standard).

It is predicted that subjects in the high self-awareness conditions will demonstrate better recall of all three scores (general recall index) than subjects who were assigned to the low self-awareness conditions. Furthermore, high public self-awareness relative to high private self-awareness should enhance one's recall of the social-self standard, the computer's predicted score. Similarly, high private self-awareness relative to high public self-awareness should enhance one's recall of the personal-self standard, the typical practice score. This effect may be influenced by the feedback one receives, in that focusing upon a standard that one has not surpassed may evoke a defensive reaction. Thus, the best recall is expected in those conditions wherein the subject has surpassed the standard she is theoretically focusing upon.



## CHAPTER IX

### RESULTS

#### Procedural Checks

Prior to the analysis of the dependent measures, several control measures were examined to insure that the groups were similar with respect to their basic composition.

#### Public and Private Self-Consciousness

Prior to the experimental manipulations subjects completed the public and private subscales of the Self-Consciousness Scale (Fenigstein, Scheier and Buss, 1975). Each of the measures was submitted to a three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback) to insure that there were no systematic or unintended differences between groups. No main effects or interactions attained significance. (See Appendix A, Tables 6, 7, 8, and 9.)

#### Pre-Self-Esteem

In light of the fact that change in self-esteem was the major dependent variable examined in this study, it was essential that groups were equivalent in self-esteem prior to the experimental manipulations. A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback) revealed no significant differences between the groups. (See Appendix A, Tables 11 and 12.)

### Typical Practice Score

The typical practice score represents subjects' actual ability at the task they were required to perform. It also represents subjects' personal-self standard on the self-dimension of perceptual logic. Since both the TTT score (real-self) and the computer prediction (social-self standard) were based upon the typical practice score, it was necessary to determine whether subjects' actual performance was influenced by either type of self-awareness or magnitude of self-awareness since these manipulations were introduced prior to the practice trials and were present throughout. Typical practice scores were, therefore, submitted to a three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback). This analysis revealed no significant main effects or interactions. (See Appendix A, Tables 14 and 15.)

### Method of Presentation and Response to the Rosenberg Self-Esteem Scale

Wylie (1974) reviewed a number of self-concept studies which indicated that several factors (e.g., experimenter's self-presentation, expected future interaction, need for approval) influence self-report measures of self-esteem. The possibility also existed that the method of presentation and response to the Rosenberg New York State Self-Esteem Scale might likewise have an effect upon self-reports. In light of the fact that pre self-esteem scores were measured by means of a paper and pencil test whereas post self-esteem scores were presented on a computer screen and responded to by entering responses into a computer terminal, it was necessary to determine whether mode of presentation and response might influence reported feelings of self.

A separate pilot study was conducted to ascertain the influence of mode of presentation and response. Thirty female subjects participated in this study. Half the subjects completed the Rosenberg Scale in the traditional paper and pencil manner. The scales were presented to the other half of the subjects via the computer screen and subjects responded by entering responses into the computer terminal. A  $t$ -test (2-tail) was performed on the responses between the groups. No significant difference was found between groups,  $t(28)=1.18$ , *n.s.*

#### Manipulation Checks

Most studies to date have assumed that the self-awareness manipulations employed have had their intended effect. That is, it is not customary for subjects to be asked whether or not they noticed a mirror or were aware of the fact that they were being observed. For that matter, Wicklund (1975) notes the folly in asking subjects these questions: "this would make approximately as much sense as asking subjects in social facilitation experiments if they noticed the audience."

Past studies have largely assumed that these manipulations have had only one effect; increased attention to the self. In contrast, this paper has suggested that different manipulations focus attention upon different self-aspects. It is therefore quite important to determine whether subjects are responding to these manipulations as intended. The TV camera and information provided subjects participating in the high public self-awareness conditions was intended to create the belief that these subjects were in a public situation in which they were being observed by an evaluative audience. Obviously, if these subjects are not aware of the fact that they are being observed, they have not met the requirements of the design. In a similar vein, subjects in the high

private self-awareness conditions must believe they are in a private situation. If they believe they are being observed they, as well, have not met the most fundamental requirement of the design.

In light of the importance of this public-private distinction to the very essence of the design, subjects were asked, on the post-experimental questionnaire, two questions: 1) whether they noticed a mirror, and 2) whether or not they knew they were being observed.

Subjects in the mirror condition were, for the most part, aware of the mirror. Those in the other conditions, as expected, did not notice the mirror. The question regarding observation, however, revealed that some subjects "knew" they were observed when, in fact, the TV camera was not focused upon them, and they were given no information to this effect. Furthermore, some subjects in the high public self-awareness condition, who were advised as to the purpose of the TV camera and of the fact that they were being observed, apparently did not understand these instructions. That is, some of these subjects reported that they "did not know" they were being observed. Since it is critical to the research design that these instructions be understood, we cannot assume that these subjects are publicly self-focused.

Due to the importance of this particular manipulation, those subjects who were incorrect regarding the public-private nature of their particular condition were discarded from the remaining analysis. (See Appendix A, Table 47.) Thirty-six subjects were eliminated. All further analyses were based upon the responses of the remaining 164 subjects. The elimination of these 36 subjects did not change the direction of the results to be reported. (See Appendix B, Tables

48 through 83, for a separate analysis performed on each dependent variable using the full sample of 200 subjects.) This problem of subject deletion will be addressed at greater length in the discussion section, since it has important implications for the interpretation of the current experiment, as well as for future research in this area.

### Dependent Variables

#### Change in Self-Esteem

Post-experimental self-esteem scores were subtracted from pre-test self-esteem scores to derive a measure of self-esteem change. Positive scores reflect an increase in self-esteem and negative scores a decrease in self-esteem. A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback) on these change scores, with two levels on each factor, was performed. This analysis revealed a significant triple interaction,  $F(1, 156) = 6.10$ ,  $p < .02$ , between Type of Self-Awareness, Magnitude of Self-Awareness, and Type of Feedback. No main effects or lower-order interactions approached significance. (See Appendix A, Tables 20 and 21.)

Table 1

Mean Change in Self-Esteem Scores Under Conditions of Public and Private Self-Awareness as a Function of Magnitude of Self-Awareness and Type of Feedback

|                         |                                                 | <u>Type of Self-Awareness</u> |            |                |            |
|-------------------------|-------------------------------------------------|-------------------------------|------------|----------------|------------|
|                         |                                                 | <u>Public</u>                 |            | <u>Private</u> |            |
|                         |                                                 | <u>High</u>                   | <u>Low</u> | <u>High</u>    | <u>Low</u> |
| <u>Type of Feedback</u> | Surpassed Social Standard Not Personal Standard | .0522                         | -.0542     | -.0263         | .0790      |
|                         | Surpassed Personal Standard Not Social Standard | -.0167                        | .0174      | .1200          | .0167      |

Note: 1) Positive means reflect an increase in self-esteem; negative means reflect a decrease in self-esteem; 2) see Appendix A, Table 20 for corresponding standard deviations.

The mean self-esteem scores are presented in Table 1. As this Table reveals, the predicted effect was obtained within each Type of Self-Awareness. Subjects in the high public self-awareness condition exhibited a mean increase in self-esteem when they had surpassed the social standard but not the personal standard, and a mean decrease in self-esteem when they had surpassed the personal standard but not the social standard. Also, as predicted, this effect was reversed for subjects in the high private self-awareness conditions. When privately self-aware, a mean decrease in self-esteem was observed when subjects surpassed the social standard but not the personal standard, and an increase in self-esteem when subjects had surpassed the personal standard but not the social standard.

An unexpected interaction was revealed in the low self-

awareness conditions. As Figure 8 indicates (two pages forward), under conditions of high self-awareness, the predicted interaction appears quite clearly. Under conditions of low self-awareness, expected to show a pattern of results similar to that of high self-awareness, but at a diminished level, the interaction is quite different. When subjects had surpassed the personal-self standard but not the social-self standard, focus of attention (Type of Self-Awareness) seemed not to have had much of an impact; this effect was not totally unexpected. What was unexpected was that this effect was not present in those conditions within which subjects had surpassed the social-self standard but not the personal-self standard. Rather than making no difference, Type of Self-Awareness appears to have had a very clear effect. Under conditions of low public self-awareness, surpassing the social standard led to a decrease in self-esteem. In the low private self-awareness condition, on the other hand, surpassing the social-self standard led to an increase in self-esteem.

In an attempt to explain the findings in the low self-focus condition subjects were classified into four groups based upon their level of public and private self-consciousness (i.e., high-high, high-low, low-high, low-low). The possibility seemed to exist that subjects may have been unevenly distributed among the low self-focus cells along this public-private self-consciousness dimension. That is, subjects who responded as though they were focusing upon the social standard (low privately self-focused subjects who had surpassed the social standard but not the personal-self standard) may, in fact, be over-represented with respect to their mean level of public self-consciousness; compared to the other cells, more of these subjects may

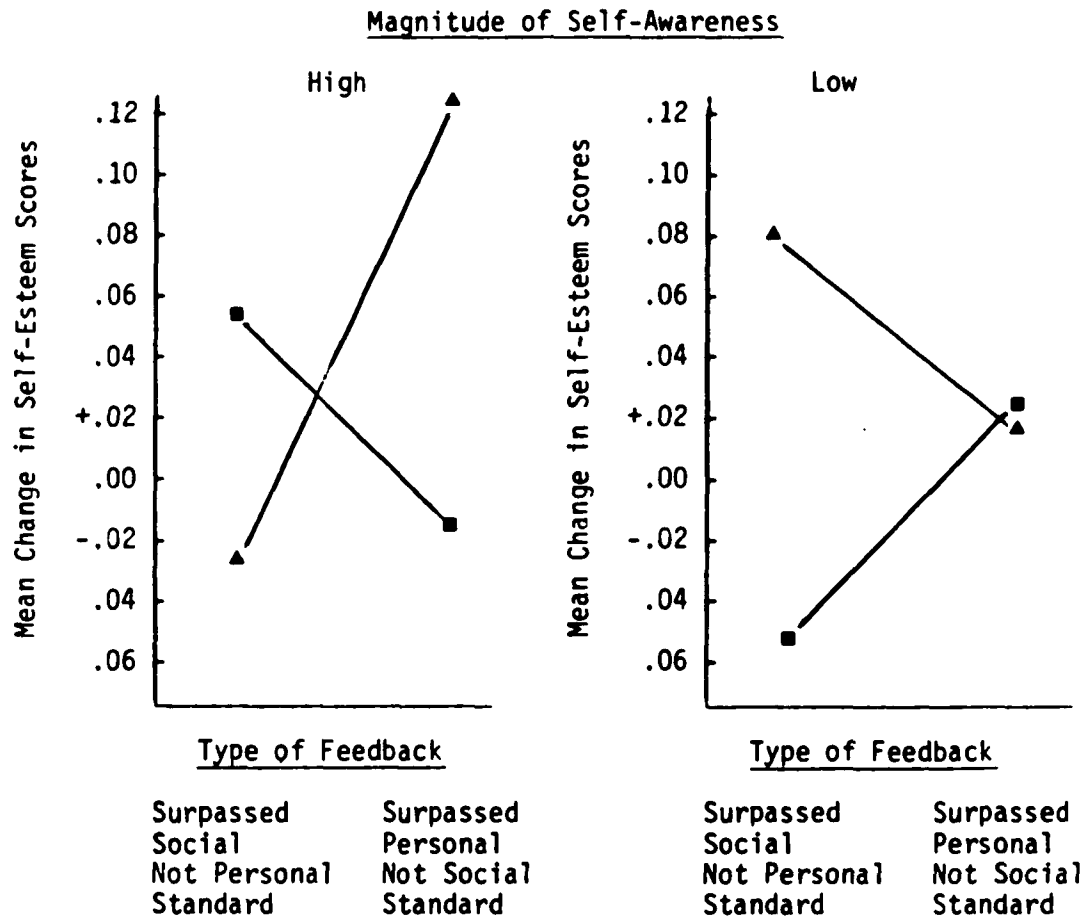
be high in public self-consciousness coupled with low in private self-consciousness. The division of subjects along this dimension revealed no difference between the four low self-focus conditions: an approximately equal number of subjects of each type (high-high, low-high, high-low, low-low) were found in each of the four cells.

The possibility of systematic differences between the cells with respect to the relationship between public and private self-consciousness and self-esteem change scores was also examined by constructing a correlation matrix. No systematic relationship was found between public or private self-consciousness and self-esteem change overall or within condition.



Figure 8

Mean Change in Self-Esteem Scores Under Conditions of High and Low Self-Awareness as a Function of Type of Self-Awareness and Type of Feedback



Note: ▲ =Private Self-Awareness; ■ =Public Self-Awareness

The means reported in Table 1 suggest that the significant triple interaction was largely attributable to the results obtained in the high self-awareness conditions. Indeed, planned comparisons (i.e., simple interaction effects analysis) demonstrated that the Type of Self-Awareness x Type of Feedback interaction was significant in the

high self-focus conditions,  $F(1, 156) = 4.03, p < .05$ , but not in the low self-focus conditions,  $F(1, 156) = 2.0, n.s.$  Additional simple effects analysis revealed that Type of Feedback only had an effect on the self-esteem of subjects in the high private self-awareness conditions,  $F(1, 156) = 4.27, p < .05$ .

#### Approach-Avoidance Behavior

As a measure of approach-avoidance behavior, subjects were asked how much time they would be willing to devote, on a volunteer-no course credit basis, to future testing sessions of the TTT. Subjects responded on a 7-point scale, ranging from "no time at all" (1) to "one hour and thirty minutes" (7), in 15 minute intervals. The cell means are presented in Table 2.

Table 2

Mean Number of Minutes Volunteered Toward Future Testing Sessions of the TTT Under Conditions of Public and Private Self-Awareness as a Function of Magnitude of Self-Awareness and Type of Feedback

|                                           | <u>Type of Self-Awareness</u> |       |                |       |
|-------------------------------------------|-------------------------------|-------|----------------|-------|
|                                           | <u>Public</u>                 |       | <u>Private</u> |       |
|                                           | High                          | Low   | High           | Low   |
| Surpassed Social Not<br>Personal Standard | 37.80                         | 41.85 | 30.75          | 30.00 |
| Surpassed Personal<br>Not Social Standard | 19.95                         | 27.45 | 36.75          | 31.95 |

Note: Higher means reflect greater approach tendencies.

Subjects' responses were submitted to a three-way analysis of variance. The only effect to attain significance was the two-way interaction between Type of Self-Awareness and Type of Feedback,  $F(1, 156) =$

5.10,  $p < .03$ . (See Appendix A, Tables 38 and 39.)

Table 3

Mean Number of Minutes Volunteered Toward Future Testing Sessions of the TTT as a Function of Type of Self-Awareness and Feedback

|                        | <u>Type of Feedback</u>                    |                                            |
|------------------------|--------------------------------------------|--------------------------------------------|
|                        | Surpassed Social But Not Personal Standard | Surpassed Personal But Not Social Standard |
| Private Self-Awareness | 30.5                                       | 34.1                                       |
| Public Self-Awareness  | 40.0                                       | 25.0                                       |

Note: Higher means reflect greater approach tendencies.

As Table 3 indicates, privately self-aware subjects volunteered a greater amount of time to future testing sessions of the TTT when they had surpassed the personal-self standard than when they had surpassed the social-self standard. In contrast, publicly self-focused subjects volunteered a greater amount of time when they had surpassed the social-self standard than when they had surpassed the personal-self standard. Simple interaction effects analysis demonstrated that the Type of Self-Awareness x Type of Feedback interaction approached significance in the high self-awareness conditions,  $F(1, 156) = 3.28$ ,  $p < .07$ , but not in the low self-focus conditions,  $F(1, 156) = 1.83$ , n.s.

#### General Satisfaction Index

A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback) was performed on subjects' mean responses to each of the questions making up the general satisfaction index, as well as on the combined scores on the satisfaction in-

dex. (See Appendix A, Tables 22 through 33.) The results of this analysis revealed that the only effect to approach significance was a Type of Feedback x Type of Self-Awareness interaction for the question regarding one's pride in their score on the TTT,  $F(1, 156) = 3.10$ ,  $p = .08$ . (See Appendix A, Tables 28 and 29.)

Table 4

Mean Pride in Scores Obtained on the TTT as a Function of Type of Self-Awareness and Type of Feedback

|                        | <u>Type of Feedback</u>                   |                                           |
|------------------------|-------------------------------------------|-------------------------------------------|
|                        | Surpassed Social Not<br>Personal Standard | Surpassed Personal Not<br>Social Standard |
| Private Self-Awareness | 1.26                                      | 1.45                                      |
| Public Self-Awareness  | 1.43                                      | 1.23                                      |

Note: Higher means reflect greater reported pride in score.

As Table 4 indicates, privately self-aware subjects reported a greater feeling of pride when they had surpassed the personal standard than when they had surpassed the social standard. In contrast, publicly self-aware subjects reported a greater feeling of pride when they had surpassed the social standard than when they had surpassed the personal standard.

#### Satisfaction Rating

Subjects rated their level of satisfaction with the score they achieved on the TTT. Although the means were in the predicted direction (see Appendix A, Table 36), a three-way analysis of variance revealed

no significant effects. (See Appendix A, Table 37.)

### Performance Rating

Subjects were required to grade their performance on the TTT. A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback) revealed no significant main effects or interactions. (See Appendix A, Tables 34 and 35.)

### Post-Experimental Questionnaire

#### Measures of Recall

The post experimental questionnaire included three questions intended to determine subjects' ability to recall specific scores or standards. It was suggested that self-focusing leads to a clearer and more accurate self-picture. It follows that self-awareness might lead to a clearer picture of one's real-self to the standard one is focusing upon. This line of reasoning leads to two tentative hypotheses. First, high compared to low self-awareness should produce better recall of scores. Second, it seems plausible that if an individual is actually focusing upon a specific standard, that standard should be more readily recalled. Thus, privately self-focused subjects should be better able to recall the typical practice score (personal-self standard) than publicly self-focused subjects. In a similar vein, publicly self-focused subjects should be better able to recall the computer prediction (social-self standard) than privately self-focused subjects.

To test these hypotheses, subjects were asked to recall, as best they could, each of three scores: 1) the TTT score, 2) the typical practice score, and 3) the computer prediction. The recalled score was considered accurate if the subject's response was within 5% of the actual

score.

#### Recall index

A general recall score was calculated for each subject. If the subject recalled none correct she received a score of zero; one correct earned a score of 1; two correct earned a score of 2; all three correct earned a score of three. A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Type of Feedback) revealed a tendency for type of self-awareness to have an influence upon the recall index,  $F(1, 156) = 3.19, p < .08$ . Publicly self-focused subjects tended to demonstrate better recall of scores than did privately self-focused subjects. The expected Magnitude of Self-Awareness effect was not significant. (See Appendix A, Tables 42 and 43.)

#### Recall of individual scores

A separate one-way Chi-square analysis was performed on subjects' recall of each of the individual scores. None of these analyses yielded significant differences between the groups (see Tables 44, 45 and 46).

#### Importance Rating

Subjects were asked to indicate, on a 7-point scale ranging from "not at all important" (1) to "very important" (7), how important it was for them to do well on tasks that measure intelligence. It was expected that if a subject believed she had performed well on the TTT--a measure of intelligence-- she would attribute greater importance to tasks that were purported to measure this ability. Although a three-way analysis of variance did not reveal any significant effects (see Appendix A, Tables 40 and 41), the means reported on the following page (Table 5) suggest that subjects in the high self-awareness conditions responded

in the predicted direction.

Table 5

Mean Importance Ratings as a Function of Type of Self-Awareness,  
Magnitude of Self-Awareness and Type of Feedback

|                         |                                 | <u>Type of Self-Awareness</u> |            |                |            |
|-------------------------|---------------------------------|-------------------------------|------------|----------------|------------|
|                         |                                 | <u>Public</u>                 |            | <u>Private</u> |            |
|                         |                                 | <u>High</u>                   | <u>Low</u> | <u>High</u>    | <u>Low</u> |
| <u>Type of Feedback</u> | Surpassed Social Standard Not   |                               |            |                |            |
|                         | Personal Standard               | 5.62                          | 5.25       | 5.42           | 5.07       |
|                         | Surpassed Personal Standard Not |                               |            |                |            |
|                         | Social Standard                 | 4.82                          | 5.28       | 5.88           | 5.05       |

Note: Higher means reflect higher ascribed importance to tasks that measure intelligence.

Planned comparisons (simple interaction effects) revealed that under conditions of high self-awareness the Type of Self-Awareness x Type of Feedback interaction approached significance,  $F(1, 118) = 3.03$ ,  $p < .07$ ; the same interaction did not approach significance under conditions of low self-awareness,  $F(1, 118) < 1$ . Simple effects analysis indicated that this interaction effect was due mainly to the responses obtained in the surpassed personal but not social standard cells,  $F(1, 118) = 4.28$ ,  $p < .05$ . When subjects surpassed the personal standard but not the social standard, private self-awareness led to higher attributed importance to intellectual tasks than did public self-awareness.

## PART IV

### DISCUSSION AND CONCLUSIONS



## CHAPTER X

### THEORETICAL IMPLICATIONS FOR SELF-AWARENESS THEORY

With the introduction of self-awareness theory (Duval and Wicklund, 1972) came a renewed interest in the study of self-structure, self-process, and particularly, the consequences of self-directed attention. The ten years since its inception have provided those interested in the area with a substantial literature on the topic. The primary objective of this paper was that of reviewing the literature that had accumulated in the field so that modifications to the theory might be proposed and tested where the research evidence indicated a need for conceptual elaboration. The most fundamental revisions relate to the process of self-evaluation, the process believed to be evoked by self-focused attention, and to mediate subsequent behavior.

#### The Differential Effects of Self-Focusing Stimuli

According to the theory of self-awareness (Duval and Wicklund, 1972; Wicklund, 1975), self-focused attention is evoked by any stimulus in the surrounding environment that reminds the person of his or her object status. Among the stimuli which have been used to manipulate self-focus in the laboratory are mirrors, tape recordings, TV cameras and audiences. In addition, the individual's own distinctive behavior is believed to heighten self-attention. The equivalence of these many varied manipulations was largely assumed by past researchers in this

area. More recent theory (Buss, 1980) has suggested, and research demonstrated (Scheier and Carver, 1980a; Froming and Walker, in press; Froming, Walker and Lopyan, in press), that these stimuli may differ in the psychological states they initiate. Froming, Walker and Lopyan (in press), for instance, examining the differential effects of mirrors versus audiences on the relationship between one's prior attitudes and subsequent behaviors indicative of those attitudes, were able to show that direction of attention, toward the public or private-self aspect, is a function of the type of manipulation employed. One objective of the present study was the replication of the effect reported by Froming, et. al., and the extension of this finding to the more general process mediating self-focused attention and behavior: the process of self-evaluation.

In the present study self-awareness was induced by means of either a large mirror or a TV camera purportedly transmitting subjects' responses to an audience. Results indicated that when self-awareness was induced by means of the mirror stimulus, subjects focused upon the private-self aspect; when self-awareness was induced by the TV camera stimulus, subjects focused upon the public-self aspect. In effect, it was demonstrated that the self-assessments of subjects confronting the identical configuration of scores was a function of the self-awareness manipulation employed. Thus, the results of the present study provide substantial support to the findings reported by Froming, Walker and Lopyan (in press): self-awareness manipulations are not equivalent with respect to the aspect of the self to which they direct attention, and that the consequence of self-focused attention is, in large part, a function of the aspect of self focused upon. These findings also sup-

port the proposal that self-focusing stimuli which provide one with appearance cues focus attention upon the private-self aspect and personal-self standards, a proposal which runs contrary to Buss' (1980) theory of self-consciousness. Buss suggests that only small mirrors direct attention to the private-self. Large mirrors focus attention upon "...an aspect of your social self about which you possess only vague information." In the present study subjects were seated in front of a large mirror. This arrangement certainly presented subjects with a posture of themselves with which they were relatively unfamiliar, and, yet, attention appears to have been focused upon the private-self. Thus, it was demonstrated that large mirrors, reflecting infrequently encountered appearance cues, direct attention to the private-self and that TV cameras direct attention to the public-self, and, further that this differential salience of self-aspects can profoundly influence one's picture of self. Why should the aspect of self attended to have such a major impact upon self-evaluation? The answer to this question can be found in the relationship between psychological perspective and the saliency of personal versus social standards.

#### Psychological Perspective and Standards

Early on in this paper a description of the structure of self was advanced by the present author. In agreement with recent theory and research (Buss, 1980; Froming, Walker and Lopyan, in press) the reflexive-self was described as existing on two planes. The private-self included within its boundaries what was referred to as the private concept of self; the public-self aspect included what was referred to as the public concept of self. The public concept of self was envisioned as being highly situational, arising and changing as a function of soc-

ial context; in contrast, the private concept of self was envisioned as possessing an enduring quality; it is essentially one's knowledge about who he or she is based upon past experience. When attention is directed to the public-self aspect, self-evaluation was proposed to be a function of the relationship between one's real-self and the public concept of self; when attention is directed to the private-self aspect, it was suggested that self-evaluation would be a function of the relationship between one's real-self and the private concept of self. It was further proposed that each of the concepts of self contained a variety of self-standards, correspondingly referred to as personal and social-self standards, and that the particular standard evoked in this comparison process was a function of saliency. Thus, the answer to the question--why do shifts in attention lead to different self-evaluative consequences--is that these shifts lead to different perceptual outcomes. That is, they evoke different perceptual units for the purpose of self-evaluation.

In an effort to test the hypothesis that shifts in attention evoke different perceptual units two conditions had to be met. First, two types of standards had to be created and afforded an equivalent degree of salience in the subject's perceptual space. In the present study subjects were provided with two such standards: a personal and a social standard. Each of these standards was afforded the same amount of prominence in subjects' perceptual space, and were, therefore, equally available for use in the process of self-evaluation. These standards were also computed in such a way that their absolute values were equidistantly distributed about the real-self, the score subjects were advised they had achieved on the TTT.

A second condition that had to be met is related to the differential effects of public versus private self-focusing manipulations. Many of the early researchers in this area created designs which allowed for only a unilateral assessment of the self-evaluation process; manipulations were employed which evoked either one or the other concept of self, thereby artificially predetermining the precise type of standard rendered salient, as well as the subsequent affective and behavioral responses (Liebling and Shaver, 1973; Carver, 1975; Davis and Brock, 1975; Gibbons and Wicklund, 1976; Scheier, 1976; Pryor, Gibbons, Wicklund, Fazio and Hood, 1977; Carver and Scheier, 1978). Other researchers, at the time unaware of the differential influence of the various manipulations, often employed both types of manipulations in the same condition as a means of heightening self-focus, or, unintentionally included an evaluative experimenter in all conditions, unaware of his or her possible confounding influence on the type of self-awareness experienced (Scheier, Fenigstein and Buss, 1974; Innes and Young, 1975; Buss and Scheier, 1976; Diener and Wallbom, 1976; Geller and Shaver, 1976; Brockner and Hulton, 1978; Brockner, 1979a, 1979b; Diener and Srull, 1979). Still others inadvertently provided subjects with one highly salient standard upon which to base their self-assessments (Ickes, Wicklund and Ferris, 1973). More recent researchers, acknowledging the importance of a bilateral approach to the use of self-focusing stimuli, and the differential effects of these stimuli upon the aspect of self attended to, in creating their research design, unintentionally embedded subjects within a social context (Scheier and Carver, 1980a; Scheier, Carver and Gibbons, in press). The present writer sought to correct the many problems inherent in past research efforts by creat-

ing a situation in which it was possible to present subjects with a pure manipulation of the type of self-awareness they were intended to experience. Creating a pure manipulation of public self-awareness posed no immediate problem. The creation of a pure private self-awareness condition, however, required considerably more effort. The challenge of creating this condition was met by incorporating a computer into the experimental design. The computer was programmed in such a way that subjects were able to participate in the primary experimental procedure without the aid or feedback of an experimenter. The uniqueness of this design, relative to past designs, allowed for a clearer delineation of the two states of self-awareness, and a better understanding of the self-evaluation process proposed to mediate each state.

The composition of the perceptual unit rendered salient--real-self/social-self versus real-self/personal-self--was predicted to be a function of the type of manipulation employed. The mirror was expected to promote the salience of the personal-self standard, whereas the TV camera was expected to promote the salience of the social-self standard. Change in self-esteem, the principal measure of subjects' affective experience, provided a means by which one could ascertain the composition of the perceptual unit focused upon by the self-aware person in their determination of self-worth. An increase would be indicative of the experience of a positive discrepancy, and a discrepancy of this sort would be expected if one were focusing upon a standard lower than one's real-self; a standard one had surpassed. In contrast, a decrease would be indicative of the experience of a negative discrepancy, and a discrepancy of this sort would be expected if one were focusing upon a standard higher than one's real-self; a standard one has not met.

The results of the present study provide substantial support for the proposed existence of two types of perceptual units corresponding to the two states of self-awareness. A three-way analysis of variance performed on subjects' change in self-esteem scores yielded a significant triple interaction between type of self-awareness, magnitude of self-awareness, and type of feedback ( $p < .02$ ). In the presence of a mirror (high private self-awareness), subjects who had surpassed the personal standard exhibited a mean increase in self-esteem ( $\bar{X} = +.1200$ ) even though their performance on the TTT (real-self) had not exceeded the social standard. In contrast, those subjects who had not surpassed the personal standard exhibited a mean decrease in self-esteem ( $\bar{X} = -.0263$ ) even though the score they had obtained on the TTT had exceeded the social standard. The opposite effect was obtained in the high public self-awareness conditions; in the presence of a TV camera, coupled with an implied audience, subjects surpassing the social standard exhibited a mean increase in self-esteem ( $\bar{X} = +.0522$ ) even though their performance had fallen short of the personal standard. In contrast, those subjects who had not surpassed the social standard exhibited a mean decrease in self-esteem ( $\bar{X} = -.0167$ ) even though their score on the TTT had exceeded the personal standard. Simple interaction effects analysis revealed that this Type of Self-Awareness x Type of Feedback interaction was significant in the high self-awareness conditions ( $p < .05$ ) but not in the low self-awareness conditions. Thus, it was demonstrated that when attention is self-directed, one's self-picture and level of self-esteem is a function of the relationship between the real-self and the salient standard on that aspect of self being focused upon.

### The Importance of the Situation

The major finding of the present study was that the perceptual unit employed in the process of self-evaluation evoked by the self-aware state, and the type of standard focused upon, is a function of one's psychological perspective, and that psychological perspective is, in large part, a function of the immediate situation. Some situations pull one's attention toward the public-self aspect, and self-evaluation is determined by an introspective examination of the public concept of self; other situations pull one's attention toward the private-self aspect, and evaluation is determined by an introspective examination of one's private concept of self. It appears now that one of the most critical aspects of the situation is its public versus private nature, a factor past researchers, for the most part, did not consider in their research designs.

A study by Diener and Srull (1979), because it is so conceptually similar to the present study, serves to demonstrate just how important this public-private distinction is to the outcome of self-focused attention. Diener and Srull found that when self-aware subjects had surpassed the social standard but not the personal standard, they rewarded themselves more and reported greater satisfaction than when they had surpassed the personal standard but not the social standard. These findings would certainly suggest that self-aware subjects rely upon social standards in the real-self to standard comparison process. An examination of this study, however, clearly indicates the confounding influence of the experimental situation. As noted previously, this study unintentionally employed three self-focusing stimuli: 1) the TV image of the subject, 2) a recording of the subject's voice, and 3) the presence of two eval-



uative experimenters throughout the procedure. On balance, it can be seen that the public nature of the situation overshadowed its private nature, a factor likely to promote attention to the public-self aspect. That the public nature of the situation was apparent to subjects is supported by the finding that self-aware subjects were more concerned with how they appeared to others and less concerned about their personal standard than non-self-aware subjects. Further, they reported feeling less freedom in choice of reward level, a response indicative of experiencing less control or more constraints placed upon them by the situation, and likely to be associated with the state of public self-awareness. The major difference between the Diener and Srull study and the present one was this writer's creation of a purely private situation and the use of a pure self-focusing manipulation. A comparison of the findings, therefore, suggests that one must consider the confounding influence of any and all extraneous situational variables upon the aspect of self focused upon.

#### Magnitude of Self-Awareness

An unpredicted outcome in the present study was the Type of Self-Awareness x Feedback interaction in the low self-awareness condition. Although this interaction did not attain significance in the simple interaction effects analysis, it did contribute to the significance of the higher-order, three-way, interaction, and, therefore, cannot simply be ignored. It was predicted that the results in the low self-awareness condition might reflect one of two lines of reasoning: 1) responses in these cells would parallel those in the corresponding high self-awareness cells, but at a diminished level; or 2) there would be very little difference between cells, and that these means would fall midway between the

corresponding high public and high private self-awareness cell means. The first prediction follows directly from the theory of self-awareness (Duval and Wicklund, 1972). The second prediction rests upon the idea that standard salience in the low self-awareness cells would be a function of individual dispositional tendencies to focus upon one or the other standard, and since subjects were randomly assigned to groups, it was believed that individual differences would average out across these cells. Neither of these predictions were supported. Under conditions of low self-awareness, no difference in self-esteem was detected between type of self-awareness groups when subjects had surpassed the personal but not the social-self standard. In contrast, when subjects had not surpassed the personal standard, but had exceeded the social standard, a type of self-awareness effect was apparent (although not significant). The mean change in self-esteem in the low private self-focusing cell indicated that subjects were focusing upon the social standard; self-esteem increased. The mean change in self-esteem in the low public self-awareness condition, however, suggests that subjects were focusing upon the personal standard; self-esteem decreased. This finding is extremely puzzling.

One explanation for the pattern of results obtained in the low self-awareness cells, is, perhaps, provided by Diener and Srull (1979). Finding that low self-awareness led to a reliance upon personal standards they suggested the following:

The procedure used in the present study...presented standards in such a way that they were explicit and easily comparable. Thus, attention to the two types of standards was likely to be high in both self-aware and non-self-aware conditions. However, the viewpoint or perspective of the subject was likely to change across the two conditions....In the non-self-aware condition, subjects were...likely to be equally aware of both types of

standards, but...gave greater weight to the personal standard, apparently because of their egocentric perspective. (p. 420)

Or, there may be yet another explanation for the reliance upon personal standards when magnitude of self-awareness is low. The level of reward cell means in the Diener and Srull study indicate that subjects rewarded themselves about equally when they had surpassed the personal standard only (6.10) and when they had surpassed both standards (6.73). Furthermore, in the surpassed one but not the other cells, non-self-focused subjects rewarded themselves more when they had surpassed the personal standard (5.50) than when they had surpassed the social standard (3.65). They also rewarded themselves more when they had surpassed only the personal standard (6.10) than when they had only surpassed the social standard (4.13) and no information was provided about the other standard. These subjects are responding as though they are focused on the private concept of self. Perhaps this is indicative of a pre-existing tendency for individuals to focus upon personal standards. When the situation, however, becomes more public, as when, in the Diener and Srull study, predominantly public manipulations are introduced, focus is preempted from the predominant standard, the personal standard, to the one that has gained salience, the social standard. In the present study there is also this trend in the low self-awareness cells to focus upon the private-self aspect. Three of the four cells yielded mean change in self-esteem suggesting that subjects were basing their self-evaluation upon the relationship of their real-self to the personal standard. The fourth cell, however, persists at presenting a problem in interpretation. When low privately self-focused subjects had surpassed the social standard, mean change in self-esteem scores increased, suggesting a reliance upon the social standard. Although no simple, clear explanation is

apparent to account for the results in this cell, strong predictions were not formulated for the low self-focus condition. In the high self-awareness condition, where strong hypotheses were developed, results were obtained which closely followed the predicted outcome.

### The Predominance of Personal Versus Social-Self Standards

In the preceding section it was suggested that there may exist a pre-existing tendency to focus upon personal standards: that attention can be focused upon the public concept of self and social standards, but it is attention that is preempted from the predominant concept of self, the private concept of self. In effect, public self-awareness has the power to preempt private self-awareness. Does this line of reasoning imply that social standards have a greater impact upon the self-evaluation process and self-esteem than personal standards? To the contrary, one's typical life experiences, as well as the enduring quality of personal standards, would seem to suggest the greater strength of one's personal standards relative to social standards.

Theoretically, several factors should contribute to the predominance of personal-self standards. The first such factor is the relative infrequency of feedback the individual is afforded in the usual course of social interaction. Secondly, it would seem that what information we do receive from others is, in part, a function of the information we already possess. Thus, self-evaluation, even in the presence of others, is somewhat determined by the private concept of self and personal standards. Shrauger and Schoeneman (1979) suggest we must first understand this feedback process before we can determine the relative influence of personal versus social standards.

To understand the real impact of others' opinions, one must determine how frequently such opinions are communicated directly in people's everyday social interactions. Who gives evaluations? On what dimensions? Under what circumstances? How often and how explicitly? The answers to such questions would facilitate an assessment of the relative influence of others' judgments on self-perceptions, as opposed to the opposite influence of self-perceptions on the perception of others' judgments. When information from others is not explicit, its interpretation may depend substantially on one's own self-perception on the attribute being assessed. (p. 566)

A third factor relates to the temporal nature of the public concept of self. Although self-esteem may very well be influenced one way or another in the face of a salient social-self standard, a reasonable suggestion would be that this change would be temporary. Once out of the public eye, when the individual is once again alone and focusing on his or her self, he or she is likely to be attending to the private concept of self, a self which he or she sees largely as before.

There is also some indirect evidence in the literature suggesting the relative predominance of personal standards. As noted previously, Diener and Srull (1979) found that under conditions of low self-awareness, subjects based their level of reward and satisfaction with performance ratings upon their self-derived personal standards. And, in the Seta and Hassan (1980) study, in which subjects were advised that an audience was aware of two standards, subjects responded as though they believed the audience would evaluate subsequent performance relative to previous performance; in effect, their personal rather than social-self standard. Lastly, in the present study, wherein subjects were provided with an equal opportunity to focus their attention upon personal or social standards, subjects confronted with their mirror image focused upon the personal standard--the typical practice score-- the score which represented their history on the self-dimension of perceptual logic.

The personal standard gained perceptual saliency in spite of the fact that the experimental situation tends to be perceived as a highly public environment, an environment likely to focus one's attention upon the public concept of self. As Geis (1978) points out,

...most laboratory situations provide little familiar context for subjects. They typically claim to feel uncertain of the meaning and purpose of procedures. In this ambiguous situation, with no relevant, previous experience of it, subjects look for external cues. Among the most salient of these are the experimenter's definitions. (p. 145)

In agreement with Geis, the experimental situation is certainly an ambiguous one for most subjects, and, as suggested previously, ambiguous situations most often focus attention upon social cues and relevant others in the situation. In the present study the experimenter, or by extension her equipment, provided the only social cues. And, the equipment, the computer, clearly provided the subject with a standard--the computer prediction, the social-self standard. Bray and Sugarman (1980) offer evidence which further supports the notion that one's presence in an experiment may predispose one to focus upon the public concept of self. Finding that subjects experienced evaluation apprehension in an alone condition of their experiment they suggest that "while the source of this apprehension may lie more in the subject's awareness of participation in a laboratory experiment than in the observers per se, the fact that such apprehension exists suggests caution in weighing the merits of the two hypotheses."

A final effect in the present study pertaining to the issue of the predominance of the private concept of self is the finding that the greatest mean change in self-esteem was found for subjects assigned to the high private self-awareness condition who had surpassed the personal standard but not the social standard. And further, the simple simple

effects analysis revealed that feedback only had a significant effect upon the self-esteem of subjects in the high private self-awareness condition.

In summary, theory and research provide some support, albeit weak, for the predominance of the private concept of self and personal-self standards. Future research will no doubt clarify this issue.

### The Affective Consequences of Self-Focused Attention

The major purpose of this study was the clarification of the self-evaluative process believed to be evoked by self-focused attention and to mediate subsequent behavior. Specifically, what do we attend to when self-aware? What sort of information is processed? In answer to these questions it was found that the concept of self we attend to is a function of the stimulus in the environment that has initiated the state of self-awareness, and that the standard we employ on this concept of self is the one most salient at the moment.

A second but equally important purpose of this research was the clarification of the affective consequences of self-directed attention. According to the theory of self-awareness (Duval and Wicklund, 1972; Wicklund, 1975), attention directed toward the self has significant affective consequences that distinguish it from attention toward the environment. Specifically, the self-aware state is believed to elicit negative affect; positive self-feelings can occur, but this affective consequence is considered a rare and fleeting phenomenon. Wicklund (1975), for instance, points out that "a recent and potent success experience seems to be sufficient for transforming objective self-awareness into a desirable state of affairs." Further on he suggests "if someone

meets with unequivocal success on a dimension and then proceeds to rate himself on the same dimension, ratings are more positive when undertaken in the presence of self-focusing stimuli." And, commenting upon the findings of the Ickes, Wicklund and Ferris (1973) study he suggests the results were due to the "potency" of the positive feedback; that the feedback in the positive condition "...was at such a level that most subjects certainly would not have expected such a favorable result." Thus, an unequivocal and potent success can create a fleeting positive discrepancy, a discrepancy absent of motivational consequences (Wicklund and Hormuth, 1981).

Also emphasizing the negative consequences of self-awareness is Buss (1980), who suggests that for most people "...being observed leads to discomfort that varies from mild squirming to intense social anxiety." With respect to feedback devices he maintains that "most of us are not grandiose about our looks or style, but our enduring image of these attributes is more positive than that provided by feedback devices." Once again, he posits a negative discrepancy.

In a significant departure from both the Wicklund (1975) and Buss (1980) positions, it was suggested by the present writer that the affect associated with either public or private self-awareness need not be negative, nor is this the most common affective outcome. Rather, self-directed attention may lead to positive, negative or neutral self-feelings. The direction and degree of affect experienced is a function of the relationship between the real-self and the salient standard and the centrality of the self-dimension under examination. Several studies in the literature, indicating that private self-awareness can and does lead to positive self-evaluation and positive affect support this prop-



osition (Blount and Pedersen, 1970; Braucht, 1970; Ickes, Wicklund and Ferris, 1973; Davis and Brock, 1975; Scheier and Carver, 1977; Carver and Scheier, 1978; Fenigstein, 1979; Hull and Levy, 1979; Greenberg and Musham, 1981; Brockner and Wallnau, in press). Other studies suggest that public self-awareness need not be aversive or unpleasant (Paivio, 1965; Davis and Brock, 1975; Gibbons and Wicklund, 1976; Carver and Scheier, 1978).

Further support for the existence of positive as well as negative discrepancies and affect is provided by the findings of the present study. When self-focused subjects were "apparently" focusing upon a standard they had surpassed, an increase in mean change in self-esteem was observed. This effect was observed in spite of the fact that these subjects were aware of another standard, a standard they had not surpassed. Further, when subjects were focusing upon a standard they had failed to meet, self-esteem diminished, and, again, this effect was observed in spite of the fact that they were aware of another standard they had surpassed. It seems that the experience of positive affect is not as uncommon as Duval and Wicklund (1972) and Buss (1980) would have us believe. The question then becomes one of why the perception of a negative discrepancy and the experience of negative affect was thought to be the predominant response to the self-aware state. The answer to this question can be found in the definition of the "standard of correctness."

The majority of the researchers in this area define the standard of correctness, particularly as it relates to an individual's personal characteristics (e.g., physical appearance, intelligence), in terms of one's ideals (Duval and Wicklund, 1972; Ickes, Wicklund and Ferris,

1973; Wicklund, 1975) or, generally speaking, in terms of standards higher than the real-self (Buss, 1980). Thus, when self-focused, the person becomes more cognizant of how his or her immediate self compares to this higher standard, realizes that his or her abilities are lacking in contrast, and subsequently experiences a state of discomfort. The position advanced in this paper was that past formulations had placed too great an emphasis upon the importance of ideal-self standards. It was suggested that although ideals might be occasionally referenced by a few, or predominantly referenced by those predisposed to focus on ideals (e.g., individuals with low self-esteem), in general, ideals are not the standards most often accessed for the purpose of self-evaluation in the state of self-awareness. If ideal standards, standards ultimately higher than one's real-self, are not focused upon, then the perceived discrepancy need not be negative, and the affective outcome need not be psychological discomfort.

The most difficult problem faced in the design of this study, or, in fact, any research attempting to examine the self-evaluation process evoked by self-focused attention, was the demonstration of this internal comparison process. There is no simple way to link internal processes such as comparison to standard to external or observable responses; and, there is no simple way in which to measure affect. We must, in effect, infer the process and the affect from a response. Thus, affective reactions were indirectly measured by examining subjects' responses to several dependent measures, and particularly their responses to the Rosenberg New York State Self-Esteem Scale. If self-esteem was found to increase, it was concluded that subjects were focusing upon a positive discrepancy, and a positive discrepancy is created when one's real-self

has surpassed the salient self-standard. In a similar vein, if self-esteem decreased, it was concluded that subjects were focusing upon a negative discrepancy, and a discrepancy of this type is created when one has fallen short of the salient standard.

In the present study subjects were provided with three standards: a personal standard, a social standard and an ideal standard. [It should be noted that this last standard, although known to subjects, was not presented on the computer screen, whereas the first two were.] The personal standard was the subject's history on the self-dimension of perceptual logic, a history created by familiarizing subjects with the type of exercise they would later be required to perform. The social standard, an external criterion, defined as the individual's perception of the standard others in the situation are employing in their evaluation of him or her, was provided in the form of a computer prediction. The third standard, the ideal standard, was the perfect error score of zero. Since previous theorizing and research had indicated that self-awareness leads to a comparison to ideals it was critical that an ideal against which subjects could evaluate their self be available should this be, in fact, the standard that is customarily employed.

The present study also wished to demonstrate that a success experience need not be "unequivocal" nor "potent" for one to experience a positive within-self discrepancy. Therefore subjects' real-self was only 15% higher than one of the standards--personal or social--coupled with 15% lower than the other standard--social or personal. This configuration of scores represented only a small success or failure as well as a success or failure that was certainly not unequivocal since only one of the standards was surpassed or not surpassed.

As predicted, the perceptual unit employed for the purpose of self-evaluation differed as a function of psychological perspective. Public self-awareness resulted in an increase in self-esteem when subjects had surpassed the social standard but not the personal standard, indicating the existence of a positive within-self discrepancy, the saliency of the social standard, and the experience of positive affect; when subjects had not surpassed the social standard self-esteem decreased, even though they had exceeded the personal standard, indicating the perception of a negative discrepancy, the saliency of the social standard, and the experience of negative affect. Private self-awareness had precisely the opposite effect on direction of attention and the experience of affect.

Thus, it was demonstrated that the state of self-awareness need not promote the salience of ideals. If subjects had been focusing upon ideals, thereby becoming cognizant of a negative discrepancy, self-esteem should have diminished across self-awareness conditions. It was further demonstrated that a positive discrepancy can be perceived and positive affect experienced in the face of a small and certainly equivocal success experience. An increase in self-esteem was obtained in those cells in which a positive within-self discrepancy was predicted, in spite of the fact that these subjects had surpassed one standard but fallen short of two other standards.

Based upon the findings of the present study it would appear that the continued all important role attributed to the experience of negative discrepancies and the corresponding affect, to the exclusion of any interest in, or concern with, the perception of positive within-self discrepancies and positive affect (Archer, 1980; Wicklund and

Hormuth, 1981), is not in the best interest of the theory. Researchers interested in gaining a better understanding of the self-awareness phenomenon and its consequences must, in the future, consider the not uncommon experience of the positive discrepancy, and devote greater attention to the affective and behavioral consequences of this pleasant state.

### The Behavioral Consequences of Self-Focused Attention

The behavioral consequences of self-awareness are predicated upon the assumption of the negative within-self discrepancy and the experience of negative affect. The experience of negative affect results in attempts by the individual to either avoid the unpleasant state or reduce the discrepancy (Duval and Wicklund, 1972; Wicklund, 1975; Carver and Scheier, 1981b; Wicklund and Hormuth, 1981). Wicklund and Hormuth (1981), in fact, suggest that the awareness of a discrepancy is a precondition for self-evaluation, the awareness of a negative discrepancy. They also suggest that the amount of negative affect experienced is a function of the size of the discrepancy, but more importantly, that positive within-self discrepancies haven't motivational properties. In a substantial departure from this position this writer proposed that positive as well as negative affective states possess motivating properties. That is, positive affect enhances approach tendencies just as negative affect enhances avoidance tendencies. It is only the absence of affect that is non-motivational. The results of the present investigation lend some support to this proposition.

Investigators in the area of self-awareness have demonstrated that self-focusing elicits behaviors intended to either reduce the perceived discrepancy or avoid the unpleasantness associated with the state.

The simplest and most expedient manner in which one could avoid the discomfort associated with self-awareness in the present study would be to avoid the experimental procedure itself. The subject who believes that she has fallen short of the salient standard, has performed poorly on the test of intelligence (TTT), should want to avoid future encounters with the testing situation. It seems equally likely that the perception of positive discrepancies, discrepancies indicative of a task well done, should lead to behaviors which might best be described as approach behaviors. As an indirect measure of the motivational characteristics associated with positive as well as negative affective states, subjects were asked to volunteer some amount of time to future testing sessions of the TTT. It was assumed that subjects wishing to avoid the discomfort associated with a negative discrepancy would volunteer significantly less of their time than would subjects perceiving a positive discrepancy.

A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Feedback) revealed a significant Type of Self-Awareness x Feedback interaction,  $F(1, 156) = 5.10, p < .03$ . Privately self-focused subjects volunteered more of their time to future testing sessions of the TTT when they had surpassed the personal standard (34.1 minutes) than when they had surpassed the social standard (30.5 minutes). In contrast, publicly self-focused subjects volunteered a greater amount of time when they had surpassed the social standard (40.0 minutes) than when they had surpassed the personal standard (25.0 minutes). Planned simple interaction effects analysis demonstrated that the Type of Self-Awareness x Feedback interaction approached significance in the high self-awareness condition, but not in the low self-

awareness condition. Further simple effects analysis suggests that the significant second-order interaction was largely attributable to the results in the public self-awareness condition. Publicly self-focused subjects volunteered significantly more of their time when they had surpassed the social standard than when they had surpassed the personal standard.

Thus, the hypothesis was partially confirmed. Further support is provided by the finding that the means in the high self-awareness condition were in precisely the expected direction and that the interaction between type of self-awareness and feedback approached significance. When privately self-aware subjects had surpassed the social standard the mean number of minutes volunteered was 30.75 compared to 36.75 when they had surpassed the personal standard. In a similar vein, when high publicly self-focused subjects had surpassed the personal standard the mean number of minutes volunteered was 19.95 compared to 37.80 minutes when they had surpassed the social standard, the standard they were theoretically focusing upon. In light of the fact that the results were in the predicted direction, the possibility exists that the behavioral measure lacked the sophistication required to detect subtle motivational and behavioral tendencies.

An unexpected finding was the lack of a magnitude of self-awareness effect. It was predicted that low self-awareness would yield mean volunteer levels midway between those high self-awareness cells wherein subjects were theoretically focusing upon a standard they had surpassed and those high self-awareness cells wherein subjects were focusing upon a standard they had not surpassed. Although this was the direction reflected in the surpassed personal standard but not social

standard cells, it was not reflected in the surpassed social standard but not personal standard cells. Again, the measure employed may have been an inadequate indicator of motivational tendencies.

An interesting, although not immediately apparent result of the present experiment was that public self-awareness had a greater impact upon the behavioral measure, the number of minutes volunteered, than did private self-awareness, whereas private self-awareness had a greater impact upon the affective measure, the change in self-esteem score, than did public self-awareness. To find that attention directed toward the private concept of self should have a greater influence upon an internal indicator of process, self-esteem change, than attention directed toward the public concept of self, makes a good deal of intuitive sense: it seems entirely appropriate that the results would be in this direction. It was, after all, suggested previously that personal standards are more critical to a person's conception of self than are social standards; and, further, that focusing upon social standards may elicit a more temporary change in one's feelings of self-worth when compared to focusing upon personal standards. It might be further suggested that one's picture of self derived from an examination of the public concept of self is simply not as potent a source of affect as is the picture of self gleaned from an examination of the private-self. Social-self standards may have less of an impact upon feelings of self-worth than personal standards.

It also seems appropriate that attention directed toward the public-self should have a greater influence upon external indicators of self-worth, or more particularly, behaviors that others are attending to. Subjects aware of an audience were responding with the audience's interpretation of their behavior in mind. They volunteered



more when they had exceeded the audience's standard, perhaps suggesting that since they had performed well, the test possessed some value; the test was a good indication of their intelligence. When, however, they had fallen short of the audience's standard, had performed poorly, volunteering for future testing sessions would have suggested to the audience that they believed the test had merit. It would be difficult for subjects to reconcile their poor performance on a valid test of intelligence. Thus, by volunteering as little time as deemed acceptable under the circumstances, they may have been attempting to discredit the test in the eyes of the audience. Discrediting the validity of the test would then make their performance on it irrelevant. It was simply not a good measure of intelligence. In contrast to publicly self-focused subjects, privately self-focused subjects were not faced with this predicament. They were not aware of an audience and were not focusing upon the social-self standard. When they had surpassed their own standard, they volunteered more time than when they had not surpassed it. Their response was in the predicted direction but the effect was simply not as strong as the effect of those who were focusing upon the audience's interpretation of the situation, and, more precisely, the audience's interpretation of the individual's behavior.

This interpretation is, of course, very speculative, especially in light of the fact that the behavioral measure only approached significance in the high self-awareness condition. But, it is an explanation that accounts for the findings. Further studies which include more refined behavioral measures of the motivational properties associated with self-awareness will no doubt elucidate the differential affective and behavioral effects evoked by the two states of self-awareness.

## CHAPTER XI

### THEORETICAL IMPLICATIONS FOR SELF-EVALUATION THEORY

The objective of this paper and the research presented was to advance our understanding of a process: the process of self-evaluation as it functions in the self-aware state. But, the fact is, the process of self-evaluation itself can produce the objective state. Any time we examine our selves, evaluate our characteristics or attributes, take an introspective examination of our abilities or limitations, on any one or a number of self-dimensions, we are engaging the self-aware state. So it is difficult to completely separate the two processes: self-evaluation and self-awareness; the two are inextricably interwoven. Self-evaluation engages self-awareness and self-awareness engages self-evaluation. Thus, the results of the present study also contribute to our knowledge of the more general process of self-evaluation and self-esteem.

#### Self-Concept Stability Versus Flux

The findings of the present study advance our understanding of an issue debated among psychologists since the beginnings of interest in the self-concept: the question of self-concept stability versus flux. A basic assumption underlying much of the theory and research on the self is that the individual's self-view develops during childhood and remains relatively stable thereafter. According to the symbolic interactionist

position (Cooley, 1902; Mead, 1934) the child learns to see himself or herself as significant others in the environment view him or her. This view of self, thus developed, becomes stable over time. In contrast to this position is the belief that the self-concept is in constant flux: that is, it is dependent upon the views others hold in any given situation.

The definition of the self advanced in this paper allows for both self-concept stability and flux. Very simply, the private-self aspect contains relatively stable self-positions. The public-self aspect, on the other hand, is defined by the social context one is momentarily a part of. The results of the present study indicated that one's view of self is both a function of the self-aspect focused upon and the self-standard brought to the forefront of awareness. Focusing upon the private-self and personal standards is likely to result in a fairly stable self-view. In contrast, focusing on the public-self and social standards is likely to result in a variety of different self-views. Because of the multitude of social situations impinging upon the person, one's picture of self must be viewed as an open system, and, as such, responsive to the person's ever changing experiences.

#### Increasing the Accuracy of Prediction

The relationship between one's view of self and subsequent behaviors has received a great deal of attention from psychologists in the past and more recent years (Coopersmith, 1959, 1967; Wylie, 1961, 1974). Unfortunately, many have found that self-report measures of esteem are plagued by the same sort of problems found in other measures

of attitudes and their corresponding behaviors. Pryor (1980), for instance, states that "personality inventories and attitude questionnaires typically bear only a weak predictive relationship (if any) to overt behaviors." Based upon the numerous studies citing this inconsistency between self-reports and behavior, some theorists question whether the self actually exists (Epstein, 1979). Since the utility of the concept of self is, in large part, a function of its usefulness in explaining behavior, it is essential that it does just that--explain behavior.

One solution to the problem of inconsistency and unpredictability of self-concept measures and, in fact, personality measures in general, has been offered by those wishing to "save" the construct: considering the importance of the Person x Situation interaction (Wylie, 1974; Epstein, 1979; Kenrick and Stringfield, 1980). Wylie (1974) suggests:

Situational variables which we have reason to think may influence response output on our measures should be systematically considered and controlled in designing, applying and interpreting our instruments....Many of these variables need to be studied further as independent variables in their own right in the self-concept research area, with the results of such methodological research used to guide further refinements of the measurement situation. (p. 123)

The results of the present study demonstrate the utility of considering one such situational variable: the influence of self-awareness upon one's self-concept.

Yesterday's theorist based his research upon the premise that people possess but one view of their abilities and characteristics, and that this view could be accurately assessed by rating one's self on a variety of scales. There are, of course, many variations on this basic theme, but, for the most part, self-esteem indices are derived by summing these ratings. It now appears that there may be two very distinct selves or self-views. Further, attention to each of these selves may

yield very different self-views. In fact, there may be a specific type of self-esteem associated with each of these selves. We may, in the future, be speaking of personal-self-esteem and social-self-esteem. Acknowledging the existence of these two self-aspects provides one with the ability to comment upon and, perhaps, correct past problems in the area of self-concept research.

When attention is focused upon the private-self personal standards are made salient. As suggested in the body of this paper, these standards have a history, and the picture of self gleaned from the perceptual unit comprised of the real-self and a personal standard (especially the typical-self standard) probably possesses a degree of stability. It is this picture of self that researchers have commonly sought and attempted to measure with their questionnaires. When these estimates are later used to establish a pattern of responses or predict a particular response we are often times amazed by their inadequacy. If we conceptualize two selves, and understand that the situation functions to make one or the other salient, then the problem of prediction becomes less awesome and the low correlations more understandable. Quite simply, we cannot expect an estimate of one's private view of self to either be consistent with one's public view of self or predict self-related public behaviors. Much as attitudes have been shown to be situation specific (Froming and Walker, in press), so we will no doubt observe that one's feelings concerning one's abilities are likewise influenced by social context. We may, in fact, discover that the principal determinants of self-esteem lie not in the privately reported characteristics of the person but, rather, in the social variables, forces, and demands inherent in the surrounding environment. A comment by Darley and Goethals

(1980) illustrates the importance of considering context.

As an academic I may be genuinely convinced that grace on the dance floor is not an important characteristic for me to possess. Nonetheless, if circumstances drag me to the dance floor, there is a 'me' outside myself that regards my awkward gyrations and is diminished by them. (p. 24)

By including the concept of self-awareness, and particularly the influence of the situation upon psychological perspective and standard saliency, we are in a better position to realize the relationship between self and behavior. If we wish to predict behavior from self-indices, then these measures must, in some manner, gain access to our social-self picture and yield self-estimates indicative of social-self-esteem. Suggesting that one's social-self picture be considered in future theory should not be taken as an indication that the study of one's private-self is without merit. Nothing could be further from the truth. But, if we expect to predict public behaviors, we must consider and include the possible influence of social-self standards.

One way in which we might gain access to a person's social-self would be through public self-awareness manipulations. It was demonstrated in the present study that when subjects were made aware of the public nature of the situation their self estimate was based, not upon their previously established base-line performance level or personal standard, but upon the salient social standard. We must, of course, keep in mind that one's feelings concerning specific attributes in public situations are likely to be dependent upon social standards, but a person's global self-estimate is probably a function of personal standards.

Another way in which we might approach the measurement of the social-self concept would be to devise measures which allowed the individual to consider his or her reactions from a more social perspective.

A few investigators, acknowledging the importance of situational variables upon self-feelings, have already initiated attempts in this direction (Ziller, 1969; Ziller, Hagey, Smith and Long, 1969; Long, Henderson and Ziller, 1970; Epstein, 1979; Kenrick and Stringfield, 1980).

### Self-Report Reliability

By acknowledging the importance of one's social-self concept we are not in any way undermining the importance of the personal-self or personal standards. To the contrary, one's personal view of self probably has a tremendous influence upon self-feelings even in social environments since the individual must enter a situation with some preconceived notion of self. And, quite obviously, personal-self standards have been shown to have a rather definite influence upon feelings of self-worth in private environments. Thus, instruments which tap the personal-self are not to be abandoned. These measures, however, are not void of problems. The most fundamental problem researchers are faced with is that these instruments are typically reported to be unreliable. Different self-measures are not as highly associated as one would like, and correlations obtained for the same instrument are often found to be disappointingly low. The wide variety of instruments, as well as the multitude of situations within which they are administered appear to be critical factors contributing to the limitation in their yield. Acknowledging the importance of small situational changes in the test-taking environment and their subsequent effect upon the aspect of self focused upon is a first step in achieving consistency.

Several self-awareness investigators have suggested that one's personal views might be more accurately perceived and therefore more accurately reported in the presence of a mirror (Carver, 1975; Scheier,

1976; Pryor, Gibbons, Wicklund, Fazio and Hood, 1977; Gibbons, 1978; Wicklund, 1978; Pryor, 1980; Scheier and Carver, 1980a; Greenberg and Musham, 1981; Brockner and Wallnau, in press; Froming and Walker, in press; Froming, Walker and Lopyan, in press). Mirrors, we have seen, focus attention upon the private-self aspect and, in turn, upon personal-self standards. Buss (1980) indicates that private self-awareness makes all private events clearer. In effect reflecting upon one's personal characteristics renders a more precise and accurate self-picture. Thus, if we wish to increase the consistency between the same measures administered at different times, we might consider employing self-awareness manipulations which heighten the salience of our private-self.

#### Increasing Low Self-Esteem

It was suggested early on in this paper that one's psychological perspective may be influenced by certain individual difference variables. In effect, some characteristic of the individual may function in such a way as to render one self-standard a greater degree of salience than another. One such personality variable is level of self-esteem.

The issue of the differential perception of self-standards among those with high and low self-esteem is, of course, of theoretical interest. The issue, however, has a definite practical application as well. Quite simply, by changing those standards that one characteristically accesses when attention is self-directed, either privately or publicly, we can change both the amount and direction of the perceived discrepancy as well as one's resultant self-picture. One way in which we might modify one's level of self-esteem would be to increase the num-



ber of success experiences the person encounters. Berren and Gillis (1976) have developed a technique which employs the use of "failure models." The use of models that have failed allows the individual to raise his or her level of self-esteem because he or she is able to compare his or her performance or achievement in the situation with the lowered standard provided by the model.

Another way in which we might correct or modify a person's self-picture would be to modify one's perception of the social standard typically accessed. It appears that the person with low self-esteem has a rather biased estimate of others' standards. Changing one's level of self-esteem may entail training the individual to make more accurate assessments of others' standards.

By understanding the actual process of self-evaluation, by determining the types of standards people actually employ, we are in a better position to control one's self-picture and one's level of self-esteem. By defining the perceptual unit that gains salience when attention is self-directed, we can influence the manner in which individuals interpret self-relevant information.

### Clinical Applications

One of the primary challenges faced by clinical psychologists is the development of techniques which function to promote client insight. If private self-awareness manipulations increase the clarity of personal standards, these manipulations might be incorporated into programs designed to enable the client to gain a better grasp of his or her feelings or problems.

Another way in which clinicians might profit from the findings of the present study was noted previously. Techniques might be created

which enable the clinician to systematically change the standards against which the client evaluates his or her behavior. With respect to one's public concept of self, therapies might be developed which included the use of public self-awareness manipulations (e.g., voice recordings, viewing oneself on tape in the presence of others). Such techniques might provide the client with a new social-self perspective.

## CHAPTER XII

### POSSIBLE LIMITATIONS

#### Loss of Subjects

Most studies to date have assumed that the self-focusing manipulations have had the intended effect; that is, they have directed one's attention to the self. For this reason it is not customary for subjects to be asked whether or not they were aware of a mirror or whether or not they noticed an audience. Recently, however, it has been demonstrated that the various manipulations have different effects (Froming and Walker, in press). Because of the differential effects of public versus private self-awareness manipulations, and the fact that type of self-awareness was one of the variables manipulated in the present study, it was thought to be essential to determine whether subjects were responding to the manipulations as they were intended to respond to them. Obviously, if publicly self-aware subjects are not aware of the fact that they are being observed they have not met the requirements of the design. In a similar vein, if privately self-aware subjects believe they are being observed they, too, have not met the most fundamental requirement of the design, to perceive the situation as the experimenter intends it to be perceived. In light of the importance of this public-private distinction subjects were asked on the post-experimental questionnaire whether or not they were aware of the fact that they were being observed. If they responded in a manner inconsistent

with the requirements of their condition they were asked why they responded as they did. This question revealed that 11 subjects in the high private self-awareness condition, 7 subjects in the low private self-awareness condition, and 3 subjects in the low public self-awareness condition, "knew" they were being observed when, in fact, the TV camera was not directed toward the computer screen and they were given no information that should have led to this conclusion.

That subjects participating in an experiment should "think" they are being observed is not particularly surprising (Rosenthal, 1966; Bray and Sugarman, 1980), but that they should report that they "know" they are being observed is quite another matter. These 21 subjects believed they were being observed. When asked their reason for this belief they reported "someone was watching from behind the black shades in the room," or "I knew someone was behind the sheet," (the covered mirror in the low self-awareness conditions), or "subjects are always observed in these experiments." Due to the importance of this particular manipulation to the purpose of the experiment it was deemed necessary to eliminate these 21 subjects from all further analysis. If they believed they were in a public situation, as their responses seem to indicate, their attention may have been directed toward the public-self, thereby reducing the possibility of detecting a difference between these conditions and the conditions wherein attention was intended to be directed toward the public-self. Chi-square analysis revealed that the number of subjects deleted from the analysis because they knew they were being observed when, in fact, they were not ( $N=21$ ), did not differ as a function of the condition to which they were assigned ( $\chi^2 = 8.43$ ,  $df = 5$ ,  $p > .10$ ).

Fifteen subjects in the high public self-awareness condition were also eliminated from the analysis. These subjects were advised of the presence of the camera upon entering the experimental room and told that their performance was to be monitored. It should be noted that most previous studies (an exception being Hass, 1979) employing the camera manipulation have aimed the camera toward the subject's face. A pilot study revealed that the placement of the TV camera toward the subject's face did not produce the intended effect. Subjects reported very little concern with what the audience thought of them, and for a very good reason; the audience was not able to view the computer screen, and were, therefore, unaware of the subject's performance. Froming and Walker (in press) report that "passive audiences" do not have the intended effect. Paivio (1965) also stresses the fact that an audience should be perceived as evaluative. In an effort to increase the evaluative nature of the situation, the camera was placed directly behind the subject and aimed toward the computer screen. Upon entering the experimental room subjects were advised of the presence of the camera and briefly informed of its purpose. This configuration of equipment, however, presented another, different set of problems. The effectiveness of the manipulation may have been compromised. Scheier, Fenigstein and Buss (1974) found it necessary for subjects to maintain frequent eye contact for the audience to have its intended effect. Thus, in an effort to increase the social nature of the situation, and to remind subjects of the presence of the TV camera, the computer program was rewritten to emphasize both the public and the evaluative nature of the testing situation. During the experimental procedure subjects in the high public self-awareness condition were provided with the following additional information:

One of the issues we are examining is whether practice on perceptual logic tasks influences a person's ability in this area. In an effort to answer this question, two groups of students have been formed:

Group I - Students who will participate in practice trials before taking the test of perceptual logic.

Group II- Students who only observe the practice trials before taking the test of perceptual logic.

You have been assigned to Group I. You will perform the practice trials. The camera to the side of you will be transmitting the problems presented to you and your answers to another student and the experimenter in another room.

In spite of the presence of the TV camera, and the additional information provided to these subjects, 15 subjects in the public self-awareness condition reported that they "did not know" they were being observed. When these subjects were later asked why they responded the way they did to this question, the fact that there was a language problem became very apparent to the experimenter. The great majority of these subjects did not possess the language skills necessary to participate in this study. They did not respond to the public nature of the situation because the experimental instructions, and information provided stressing this set, was too difficult for them to understand. Most of these subjects said they did not see this information. A few subjects, possessing the language skills necessary, admitted that they had skimmed through a good deal of the preliminary information, and one subject reported that she simply forgot about the audience. If these instructions were not understood and/or the intended set not instilled, it cannot be assumed that these subjects were experiencing a state of public self-awareness. Since this manipulation represented a variable critical to the design of this study, these 15 subjects were eliminated from the analysis.

In total, 36 subjects were deleted from the analysis. All further analysis was based upon the responses of the remaining 164 sub-

jects who had responded in a manner consistent with the condition to which they were assigned. The elimination of these 36 subjects did not change the direction of the results reported in this paper. However, the fact that so great a proportion of subjects were deleted cannot be left without comment. And, the fact that the number of subjects eliminated from each condition was not found to be equivalent ( $\chi^2 = 23.11$ ,  $df = 7$ ,  $p < .01$ ) presents a serious problem. (It should be noted that the significant Chi-square appears to be almost entirely due to the elimination of subjects in the high public self-awareness condition.) Because the loss of subjects was not equivalent across conditions (see Table 47), we cannot be certain that their elimination was not somehow related to the experimental treatments.

If the elimination of subjects, particularly those subjects in the high public self-awareness condition, is related to the experimental treatment, we are faced with a highly ambiguous situation. We cannot be certain whether 1) public self-awareness was ever evoked, 2) whether it was elicited by the treatment but subsequently diminished, or 3) whether public self-awareness was evoked and subsequently avoided. If attention was never directed toward the public concept of self, an event likely to occur if subjects lack the required language skills, and the explanation believed to account for the incorrect observational response, the number of subjects eliminated from each of the high public conditions should be approximately equal. This position, however, was not supported by the data ( $\chi^2 = 8.06$ ,  $df = 1$ ,  $p < .05$ ). In the surpassed social-self standard but not personal-self standard feedback condition, only 2 publicly self-aware subjects were discarded; in contrast, in the cell in which subjects were told that they had not surpassed the social-self standard but had

exceeded the personal-self standard, 13 publicly self-focused subjects were eliminated. Because a far greater number of subjects were deleted from the surpassed personal-self standard than the surpassed social-self standard condition, the possibility that the feedback treatment was influencing subjects' response to the observation question cannot be eliminated. This configuration of responses then, leaves us with explanation 2 and 3 to consider; did public self-awareness diminish or was the state avoided?

The possibility certainly exists that subjects in the high public self-awareness condition may have experienced a diminished awareness of their social-self. Subjects may have become totally absorbed with the task at hand, thereby forgetting that their performance was being monitored. It is possible that the degree of scrutiny required by the task created a state of subjective self-awareness, such that the presence of the TV camera and implied audience was effectively blocked out. Or, subjects may have adapted to the state of public self-awareness. Pryor, Gibbons, Wicklund, Fazio and Hood (1977) suggest,

...there is the possibility that subjects can adapt to a self-awareness-raising manipulation....adaptation to the stimulus may possibly diminish the difference between groups after an extended period of time. This is only to say that the procedure must be arranged so that the subject cannot easily habituate to the stimulus or avoid it. (p. 525)

In support of the ease with which subjects may adapt to a public self-focusing stimulus, Scheier, Fenigstein and Buss (1974) demonstrated that subjects easily ignored the presence of observers if these observers were outside the subject's field of vision. In a similar vein, Argyle and Kendon (1967) suggest that reducing eye contact reduces audience anxiety, in effect reducing attention to the social concept of self. Froming and Walker (in press) also note the importance of eye contact



to the maintenance of self-awareness. In light of the fact that the present experiment required from 30 to 45 minutes to complete, it is certainly possible that attention may have waned. If either adaptation or total involvement in the task was responsible for the incorrect response to the question as to whether or not they were being observed, then, once again, an equal number of subjects should have been in error in each of the public self-awareness cells. This was not, however, what occurred. This leaves us with one last explanation.

If subjects did not know they were being observed when, in fact, this situation was made especially obvious to them, subjects may have been avoiding the state of public self-awareness. Avoidance of the state would account for the inequality between the two public self-awareness conditions. When subjects had surpassed the social-self standard but not the personal-self standard, only 2 subjects reported no knowledge of being observed. When, however, subjects had not surpassed the social-self standard but had exceeded the personal-self standard, 13 subjects reported no knowledge of being observed. If these latter subjects were actually publicly self-aware and, therefore, focusing upon the social-self standard, we would expect avoidance to be the response to the unpleasant affect associated with the perception of a negative discrepancy. But would one expect this avoidance to be so successful? I suggest not. Then, perhaps subjects were engaging in denial. Again, this explanation is doubtful. By denying the existence of the audience, they are exchanging the unpleasantness associated with performing poorly during the experiment with another unpleasantness; acknowledging to the experimenter, in effect, another, more immediate observer, that they were not astute subjects. A negative response to a question such as "did you know you

were being observed?" when one is well aware that they had been observed would seem to be a confirmation of one's lack of intelligence. Denial does not seem to provide a means by which one could escape the unpleasant affect associated with the previous perception of a negative within-self discrepancy.

This brings us full circle back to the original explanation for the incorrect response to the question as to whether these subjects knew they were being observed. It is this writer's belief that these subjects did not respond to the public nature of the situation because they did not possess the comprehension skills necessary to understand the experimental instructions. Why there should have been such a pronounced difference between the two public self-awareness conditions cannot be explained by this investigator.

#### Feedback Manipulation

In reviewing the effects of others' evaluation on one's self-concept, Shrauger and Schoeneman (1979) concluded, "that for feedback that diverges substantially from one's views to have a strong effect on self-evaluations, it must be perceived as being based on clear objective information." Following this piece of advice, feedback conditions were created based upon subjects' actual average error score on the six practice trials. The average error score was simply the mean number of errors subjects had made during the six practice trials. Three different error scores were presented to each subject: 1) their average error score, 2) their TTT error score, and 3) the computer's predicted error score. The average error score, reflecting subjects' actual ability at the task, represented the personal-self standard on the self-dimension of perceptual logic. Two feedback conditions were established by man-

ipulating the relative position of two standards, the personal-self standard and the social-self standard, in relation to the real-self, the TTT error score. In the surpassed social-self standard but not personal-self standard feedback condition, subjects were advised that the score they had achieved on the TTT fell short of their average practice score, the personal-self standard, but had surpassed the computer prediction, the social-self standard. The TTT score they achieved, in fact, fell midway between the personal-self standard and the social-self standard. The TTT score was derived by adding 15% to the subject's average error score; the computer prediction was derived by adding 30% to the subject's average error score. In the surpassed personal-self standard but not social-self standard feedback condition, subjects were advised that the score they had achieved on the TTT was better than their average error score but had fallen short of the computer's prediction. Once again, the TTT score presented to them fell midway between the personal-self standard and the social-self standard. In this feedback condition the TTT score was derived by subtracting 15% from the subject's average error score; the computer prediction was derived by subtracting 30% from the subject's average error score.

Basing the two feedback conditions upon subjects' actual ability at the task they were required to perform had the advantage of imparting a sense of credibility to the experiment. That is, subjects, if at all suspicious of the procedure, which is not an unlikely state of affairs, could clearly see that the personal-self standard, their average practice score, was an accurate reflection of their previous performance. Credibility was further enhanced by this means of establishing feedback conditions in that none of the three scores presented to subjects differ-

ed substantially from one another. Further, the two standards were always equidistant from the TTT score, although the numbers did not make the fact apparent to subjects. Lastly, by employing a constant percentage in the computation of the scores, the standards possessed a certain amount of face validity; they didn't appear to have been predetermined by the experimenter. This method of establishing the feedback conditions, however, also had a disadvantage; a disadvantage that may have had a confounding influence upon the effects attributed to the feedback variable.

Shrauger (1975) suggests that two factors influence affective reactions to feedback: 1) the absolute level of the feedback presented to the individual, and 2) the discrepancy between the individual's expectancy and the feedback received. Subjects in the surpassed personal-self standard but not social-self standard feedback condition were provided with feedback which was "absolutely" better than the feedback presented to subjects in the surpassed social-self standard but not personal-self standard condition. (See Appendix A, Tables 14, 16 and 18.) As an example of the two types of feedback condition, consider the subject who has achieved an average error score (personal-self standard) of 100 on the practice trials. If this hypothetical subject was assigned to the surpassed social-self standard feedback condition, she would have been informed that she had achieved a score of 115 on the TTT (her real-self score), whereas the computer predicted she would achieve a score of 130 (the social-self standard). Since these scores reflect the amount of error in the subject's estimate of the number of dots in the geometric arrangement presented to her, lower absolute values are indicative of better performance (less error). Now, if this identical subject had been assigned to the surpassed personal-self standard feedback condition, she

would have been informed that she had achieved a TTT score (real-self) of 85, whereas the computer predicted she would achieve a score of 70 (the social-self standard). Thus, in the first instance this subject was presented with a TTT score of 115 and in the second a TTT score of 85. In a similar vein, in the first case this subject would have been informed that the computer predicted a score of 130, whereas in the second example she would have been informed that the computer predicted a score of 70. Therefore, the range of values presented to the subject who had been assigned to the surpassed social-self standard but not the personal-self standard feedback condition, 100 to 130, was absolutely higher (indicative of poorer performance) than the range of values, 70 to 100, presented to the subject who had been assigned to the surpassed personal-self standard but not social-self standard feedback condition.

A three-way analysis of variance was performed on each of the three scores presented to subjects: the TTT score, the average error score, and the computer's predicted score. These analyses demonstrated that the groups did not differ with respect to their actual ability or performance on the practice trials, their average error scores (see Appendix A, Tables 14 and 15), but did differ, as would be expected, with respect to their TTT score (see Appendix A, Tables 16 and 17), and with respect to the computer prediction (see Appendix A, Tables 18 and 19). Each of these last two analyses revealed a highly significant main effect for feedback. No other effects approached significance.

Although there was a significant difference in the absolute level of feedback subjects in the two feedback conditions received, this difference does not appear to have had an effect on any of the dependent measures; that is, none of the analyses performed on the dependent

variables revealed a significant main effect for feedback, nor for that matter, a main effect that even approached significance. The fact that no main effects were obtained on any of the dependent measures suggests that subjects were not anchoring their performance to an absolute score of zero, or the ideal-self standard.

A final note about the method of calculating standards employed in this design is in order. In developing this method, the present investigator assumed that although a subject could conceivably obtain a perfect score of zero, she would not necessarily anchor her performance to this ideal. This assumption was based upon the belief that subjects would realize that the attainment of a perfect score was near impossible. Furthermore, subjects were completely unfamiliar with this bogus test of intelligence. They were made aware of the fact that the closer one's score was to zero, the better one's performance, but they possessed no preconceived notion as to what score might represent a good score, or for that matter, a bad score. It was therefore assumed that whatever range of scores they obtained on the six practice trials would constitute a sample of possible scores, some better than others. It was believed that their best score would represent to them a point on the high end of the TTT distribution and their worst score a point on the low end of this distribution. Quite obviously, they could not be certain as to where they placed on this measure, but their own performance provided some cue value. Thus, it was assumed that the absolute values attached to the three scores they were presented with had very little meaning outside of their own experience. This being the case, the absolute difference in the range of values provided to the subjects in the two feedback conditions was thought to be irrelevant. Looking back at this line of reason-

ing, it now occurs to this writer that too large an assumption was made. Subjects conceivably could have anchored to a value of 100 or 200 or 50; we have little control over their imaginations, and control over all factors other than those we are concerned with is the most fundamental requirement of any experiment. I would suggest that researchers impart a sense of credibility in a different manner in the future.

### Inefficacious Measures of Self-Evaluation

A variety of self-report measures were collected in an effort to determine the psychological process underlying the two states of self-awareness: public and private self-awareness. Several of these measures appear to have had the power to detect subtle differences between these two states (i.e., change in self-esteem measure, volunteering behavior). Other measures, however, appear to have lacked the necessary refinement (i.e., satisfaction rating scale, performance rating scale, general satisfaction index). The question addressed in this section is why some measures were effective, and others ineffective, indicators of the processes underlying the two states of self-focused attention.

#### Performance Rating Scale

In an effort to have the performance rating scale reflect the world the college student was most familiar with, subjects were asked to grade themselves in a manner consistent with their college career. Each subject was asked to assign herself a grade, ranging from Excellent (A) to Failure (F), for her performance on the TTT. It was predicted that high privately self-focused subjects would assign themselves a higher grade when they had surpassed the personal-self standard but not the

social-self standard than when they had surpassed the social-self standard but not the personal-self standard. The opposite effect was predicted for subjects in the high public self-awareness condition. A three-way analysis of variance revealed no main effects or interactions, and for a very good reason; the cell means on this measure were virtually identical (see Appendix A, Tables 34 and 35).

As noted previously, we wanted this measure to reflect a method of grading familiar to subjects. Unfortunately, little prior thought was given to the fact that this particular method yields a five-point rating scale, a scale with a midpoint. But, far worse than having a scale with a midpoint was the fact that this midpoint was labeled "C" and further described as indicative of an "average" performance level. In light of the nature of the task subjects were required to perform it is not surprising that the great majority of subjects assigned themselves a grade of C. The TTT represented both an ambiguous measure of intelligence and one with which the subjects were completely unfamiliar. Subjects who had experienced a positive within-self discrepancy were probably not certain as to how well they had performed just as those who had experienced a negative discrepancy were probably not certain as to how poorly they had performed. A grade of C, the average grade, was both a safe estimate of one's performance and an estimate which may have served an instrumental function for publicly self-aware subjects.

Shrauger (1975) notes:

One problem with assuming that self-ratings reflect genuine attitudes about oneself is that they have instrumental functions. One's self-appraisal, unless wholly private, also involves self-presentation to other people....Thus it seems important that when changes in self-appraisals are being assessed the functional utility of the way an individual is presenting himself should be considered. (p.586)



With the performance rating scale positive discrepancy subjects had the opportunity to appear modest in the face of success, whereas negative discrepancy subjects could maintain the appearance of adequacy in the face of failure. All in all, this measure was simply too unsophisticated to detect the subtle difference in the cognitive process and affect experienced by subjects in the different treatment groups.

### Satisfaction Rating Scale

In his review of studies examining affective reactions to positive versus negative feedback using verbal report measures, Shrauger (1975) concluded that the most consistent finding is that "feedback which was more positive than expected produced a more favorable affective reaction than that which was more negative than expected." It was therefore expected that subjects focusing upon a standard they had surpassed would be more satisfied with their performance than would subjects who were focusing upon a standard which they had not surpassed. Based upon this line of reasoning, subjects were required to rate, on a ten-point scale, their degree of satisfaction with the score they had achieved on the TTT.

Although the cell means obtained on this dependent measure were in the expected direction (see Table 36), a three-way analysis of variance revealed no significant main effects or interactions. This finding was particularly surprising in that the rating scale, intended to be a specific measure of subjects' affective reactions, was expected to yield a pattern of results paralleling those obtained on the more global measure of affect, the self-esteem measure. Interestingly, Ickes, Wicklund and Ferris (1973) also report a significant self-awareness effect on

several self-esteem statements but not on a specific rating of "surgency;" this post-surgency rating leaned toward a similar interaction but it did not attain significance.

That the pattern of results was similar, but in the instance of the satisfaction rating scale, not significant, may be due to the possibility that the two measures were tapping psychological processes at different levels of awareness or consciousness. Perhaps the global measure of self-esteem was reflecting the less conscious and more immediate affective reactions to the perception of positive and negative within-self discrepancies. The satisfaction rating scale, on the other hand, may have reflected subjects' more conscious cognitive responses to their perceived performance on the TTT, a test measuring an ability heretofore unheard of; responses that are more likely to be influenced by defensive strategies, strategies employed by both individuals experiencing a positive as well as those experiencing a negative within-self discrepancy. In effect, the satisfaction rating scale may have been reflecting a more thoughtful response to the perceived discrepancy. Shrauger (1975) notes the possibility that this type of measure may be too transparent. The possibility also exists that these types of measures may be influenced by self-presentation tactics. Schneider (1969) suggests that after a failure experience an individual is primarily motivated to gain approval whereas after a success he is primarily motivated to avoid disapproval. In effect, the person with temporarily lowered self-esteem should want to reestablish a more favorable picture of self; the person with temporarily enhanced self-esteem, on the other hand, should want to maintain it. He suggests that quite often people employ self-presentation tactics in an effort to obtain these goals:

...we assume that a success subject who wants to avoid disapproval will adopt rather conservative tactics for self-presentation. By presenting a moderate self, one that is normative, he will give an evaluator little reason to give him a negative evaluation, and in this way he can hope to protect his tenuous but positive self-evaluation. A failure subject, on the other hand, wants approval and can get this more directly by presenting a highly positive self, one that if accepted as genuine will generate a highly positive evaluation from the other. (p. 263)

If subjects in the present study were, in fact, employing these types of self-presentation tactics, we would expect the difference between the cells to be less obvious.

There is yet another possible reason for the inability of the satisfaction rating scale to reflect the discrepancies subjects were experiencing. Self-awareness theory suggests that the perception of a negative discrepancy is accompanied by attempts to reduce the discrepancy. If there is a viable means of accomplishing this, the subject should avail herself of it. One way in which this might be done would be for the person to decide that she was satisfied with her performance, that the performance was good enough.

#### General Satisfaction Index

The general satisfaction index, comprised of five items, was intended as both a measure of subjects' satisfaction with their performance (e.g., "I am somewhat disappointed with my score on the TTT."), and their feelings regarding the TTT's usefulness as a measure of intelligence (e.g., "All in all, I believe the TTT is a good measure of intelligence."). The five items, followed by a four-point rating scale ranging from "strongly agree" (1) to "strongly disagree" (4), were interspersed with the post self-esteem items (see Appendix C). A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-

Awareness, Feedback) was performed on subjects' responses to each of these items as well as on their combined score on the index. As reported previously, the only effect to approach significance was a Type of Feedback x Type of Self-Awareness interaction for the question regarding subjects' pride in their score. Privately self-aware subjects reported a greater feeling of pride when they had surpassed the personal-self standard than when they had surpassed the social-self standard. In contrast, publicly self-aware subjects reported a greater feeling of pride when they had surpassed the social-self standard than when they had surpassed the personal-self standard. The question naturally arises as to why the other items comprising the index did not show a similar trend. (See Appendix A, Tables 22 through 33.)

The items tapping subjects' satisfaction with their performance on the TTT may have been subject to the same effects noted for the satisfaction rating scale. The two items, however, which were included as a measure of subjects' feelings with respect to the validity of the TTT would seem to be less obvious measures of the direction of the discrepancy subjects were experiencing. Darley and Goethals (1980) suggest that one of the tactics people employ in an effort to excuse poor performance is to maintain that a single measure of an ability is not a sufficient sample of behavior. They note that "these distancing tactics are generally used after it is clear or the probability is high that the performance was poor enough to require denying." In a similar vein, Shrauger (1975) states:

Once evaluative information is received some judgment must be made about its credibility. If the evaluation is based upon a relatively objective measure, such as a test, credibility will depend mainly on the validity ascribed to that assessment measure. (p. 584)

Thus, subjects' responses to the question as to whether or not the TTT was a good measure of intelligence was expected to be influenced by just these types of tactics. It was expected that subjects focusing upon a standard they had not exceeded would be more inclined to report that the TTT was not a good measure, that their performance should be discounted because of its lack of validity. In support of this line of reasoning Hull (1977, cited in Wicklund, 1978, p. 512) found that subjects failing on a test of cognitive abilities were less inclined to admit that abilities were involved when self-aware and, further, more reluctant to characterize their performance as a failure. Subjects who were experiencing a negative within-self discrepancy could have easily reduced the discrepancy between their real-self and the salient standard by reporting that the TTT was not a good measure of intelligence. If it wasn't measuring intelligence, their performance on it was irrelevant to their actual level of intelligence. In contrast, those subjects experiencing a positive within-self discrepancy, in essence being told that they possess a high degree of intelligence, should want to maintain this positive self-view. This self-view could hardly be upheld if they did not believe the TTT was a valid test of intelligence. Had they rated its validity as being poor, they would be admitting that their relatively good performance on it had been incidental to their actual intelligence; they would be admitting that they had, in fact, been lucky. The same logic can be applied to the question regarding the relationship between perceptual logic and intelligence: does perceptual logic measure intelligence? Is it an important dimension of intelligence? (See Table 26) If a person has experienced success on a test that measures one's perceptual logic ability, she should be more in-

clined to report that this particular ability is one of several abilities that comprise intelligence. On the other hand, if one has not performed well, she should be reluctant to admit that this ability is involved in intelligence. If perceptual logic is not an important indicator of I.Q., then one's performance on a test measuring this ability is, again, irrelevant.

Why the questions making up the general satisfaction index were not effective indicators of the direction of the within-self discrepancy subjects were experiencing (see Appendix A, Tables 22 through 33) is not easily answered. Perhaps all the questions were too transparent. Or, the nature of the task which was purported to measure I.Q., the test of perceptual logic, may have been perceived by all subjects as a rather far-fetched measure. Or, since subjects were told that the purpose of the experiment was to determine the test's validity, subjects may have thought "If the experimenter isn't sure whether or not the TTT is a good index of one's intellectual abilities, who am I to suggest it is or isn't a good measure. It certainly doesn't look like an I.Q. test."

#### Measures of Recall

This study has demonstrated that the stimuli capable of eliciting self-awareness and the process of self-evaluation differ in the type of self-awareness they evoke; that mirrors evoke a state of private self-awareness and that TV cameras and audiences evoke a state of public self-awareness. And, further, that the state of private self-awareness promotes the salience of a perceptual unit comprised of one's real-self and a personal-self standard, whereas the state of public self-awareness promotes the salience of a perceptual unit comprised of one's real-self

and a social-self standard. If, in fact, aspects of self, perceptual units, and standards are differentially called into focus as a function of the self-awareness manipulation employed, then these same perceptual units and standards should be more clearly perceived; in effect, one should have a clearer picture of that perceptual unit that is being focused upon. It then follows that the components of the perceptual unit one is focusing upon should be more readily recalled than the components of the perceptual unit one is not focusing upon. To test this assumption, a measure of recall was included in the post-experimental questionnaire. Subjects were asked to recall, as best they could, each of the scores presented to them during the experimental procedure; the score they obtained on the TTT (their real-self), the score the computer predicted they would obtain (their social-self standard), and the average practice score (their personal-self standard). It was believed that even though all subjects were presented with comparable information, they differed in the degree to which they attended to it as a function of magnitude of self-awareness. Thus, it was predicted that subjects in the high self-awareness conditions (both public and private) would demonstrate better recall of all three scores (general recall index) than subjects in the low self-awareness conditions (see Appendix A, Tables 42 and 43). Secondly, if the subject was focusing upon a specific perceptual unit, the standard included within that unit would be more easily recalled than the other standard. In agreement with Markus (1980) "...it is the salient, vivid information that is likely to be most cognitively available or most ready for use." Turner (1980) also suggests that individual differences in self-consciousness reflect both differences in the strength and clarity of self-schemata and in-

dividual differences in self-referencing habits. He found that subjects high in private self-consciousness recalled a greater number of self-relevant trait terms than those low in private self-consciousness. If we extend this finding to state self-awareness we would expect high private self-awareness, like dispositional private self-consciousness, to promote a clearer picture of the personal-self standard, and high public self-awareness to promote a clearer picture of the social-self standard. Furthermore, if we conceptualize attention as being a limited entity, being focused on the self or the environment (Duval and Wicklund, 1972), then we can also conceptualize it as being limited in the number of aspects to which it can attend efficiently; processing one type of information should reduce the individual's capacity to process other information to the same degree. Based upon this line of reasoning it was predicted that high publicly self-aware subjects compared to high privately self-aware subjects would demonstrate better recall of the social-self standard--the computer prediction. In contrast, high privately self-aware subjects compared to high publicly self-aware subjects would demonstrate better recall of the personal-self standard--the typical practice score. In general, components of the salient perceptual unit were expected to be clearer, more available, and more easily brought to mind at a later time; in essence, easier to retrieve.

The possibility was noted that the expected saliency effect might be influenced by the feedback one receives. Thus, focusing upon a standard one has not surpassed may create a defensive reaction; one may attempt to block the standard from memory or avoid it. It should be noted, however, that Fenigstein (1979) reported a tendency for rejected subjects (negative feedback) to report engaging in a greater



amount of self-attention than accepted subjects (positive feedback). The majority of evidence, however, suggests that positive feedback will be attended to more closely than negative feedback. Shrauger (1975) concludes that "the available evidence indicates that feedback is more accurately retained when it is either consistent with one's initial perceptions of competence or associated with experiences which are consistent with such perceptions." Therefore, the best recall was expected in those conditions wherein the subject had surpassed the standard she was focusing upon.

A general recall score was calculated for each subject. If the subject recalled none correct she received a score of zero; one correct earned a score of 1; two correct earned a score of 2; and all three correct earned a score of 3. A three-way analysis of variance (Type of Self-Awareness, Magnitude of Self-Awareness, Feedback) revealed a tendency for publicly self-focused subjects to attain higher scores on the recall index than privately self-focused subjects. The expected magnitude of self-awareness main effect was not significant. A separate Chi-square analysis on subjects' recall of each of the individual scores revealed no difference in recall between the groups. That is, privately self-aware subjects did not demonstrate better recall of the personal-self standard relative to publicly self-aware subjects, and publicly self-aware subjects did not demonstrate better recall of the social-self standard relative to privately self-aware subjects.

Because salience effects are of the utmost importance to the understanding of the cognitive processes underlying self-focused attention and, in fact, are proposed to be responsible for one's subsequent picture of self, the inability of the several recall measures to reflect

differences in saliency is puzzling. Interestingly, two studies conducted by Taylor, Crocker, Fiske, Sprinzen and Winkler (1979), examining the relationship between attributions of causality and salience, yielded a recall effect similar to the one found in the present study. In both studies an index of causality yielded the predicted effect, whereas a measure of recall did not. This would suggest that although one might expect an individual to remember information which is highly salient, this expectation would not necessarily be confirmed. It appears that measures of recall may not be adequate indicators or measures of saliency effects. In effect, a particular perceptual unit may have gained salience in the present study, as the self-esteem change scores would seem to indicate, without subjects being able to later recall that perceptual unit.

Taylor, et. al. also report that positive information was more likely to be recalled than negative information, a finding that is neither uncommon in research nor theory. McFarlin and Blascovich (1981) report that studies which have examined affective responses to evaluation have demonstrated that people prefer positive to negative feedback and further that people distort or inaccurately recall outcomes inconsistent with their expectancies. Swann and Read (1981) suggest that individuals "...may actively seek, elicit, and recall social feedback that confirms their self-conceptions, thereby promoting the stability of these conceptions." And Markus (1980) maintains:

'Looking out for number one' probably begins very early in the information processing sequence. Thus, we are not only more likely to focus on ourselves but also to attend selectively to the good aspects of our behavior. We do not yet have evidence on the way self-structures influence the initial categorization or encoding of behavior relevant to the self. However, there is much evidence to indicate that self-structures will influence memory of events about the self, so that our good, correct,

responsible, consistent, and successful activities are much more likely to be recalled than the bad, incorrect, irresponsible, inconsistent, or unsuccessful ones. (p. 127)

The possibility seems to exist that when subjects in the present study were focusing upon a standard they had surpassed they were less inclined to take notice of other standards; they had already processed the "good" information (see Table 42). When, however, they were focusing upon a standard they had not surpassed, a perceptual experience likely to be a threat to their self-esteem, they may have been inclined to increase their efforts to acquire other information, more positive information. In effect, these subjects may have looked elsewhere, to the other standard, for information capable of enhancing their self-picture. Thus, privately self-focused subjects who had surpassed the personal-self standard demonstrated a poorer level of recall (1.45) than privately self-focused subjects who had not surpassed the personal-self standard (1.53). Furthermore, publicly self-focused subjects who had surpassed the social-self standard demonstrated less recall (1.48) than publicly self-focused subjects who had not surpassed the social-self standard (1.83). This argument, of course, is only tentatively offered for the reader's consideration in that the difference between these cells was not found to be significant. Lastly, the fact that recall was somewhat better among publicly self-focused subjects (although not significantly so) may be indicative of a preexisting tendency to focus upon personal self-standards. In effect, all subjects noted the personal-self standard, but publicly self-focused subjects, because of the salience of the public self-aspect, also became especially cognizant of the social-self standard. Because their attention was in this manner divided, at least for an instant, all scores might have at least been noted.

**PART V**

**APPENDICES**

## APPENDIX A

### STATISTICAL ANALYSES: SAMPLE SUBJECT TO DELETIONS (N=164)

#### Analysis of Variance Summary and Mean and Standard Deviation Tables for All Experimental Variables

Table 6

Summary of Cell Means and Standard Deviations: Private Self-Consciousness (N=164)

|                             | Public Self-Awareness         |                               | Private Self-Awareness        |                               |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                             | High                          | Low                           | High                          | Low                           |
| Surpassed Social Standard   | 2.626<br>Mean<br>.634<br>S.D. | 2.588<br>Mean<br>.594<br>S.D. | 2.558<br>Mean<br>.772<br>S.D. | 2.663<br>Mean<br>.662<br>S.D. |
| Surpassed Personal Standard | 2.558<br>Mean<br>.491<br>S.D. | 2.683<br>Mean<br>.370<br>S.D. | 2.540<br>Mean<br>.742<br>S.D. | 2.654<br>Mean<br>.594<br>S.D. |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher private self-consciousness.

Table 7

Analysis of Variance Summary: Private Self-Consciousness Scores (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1065.20132     | 1   | 1065.20132  | 2778.28 | 0.0000           |
| Feedback (S)       | 0.00000        | 1   | 0.00000     | 0.00    | 0.9991           |
| Awareness Type (A) | 0.00378        | 1   | 0.00378     | 0.01    | 0.9210           |
| Magnitude (M)      | 0.22769        | 1   | 0.22769     | 0.59    | 0.4421           |
| S x A              | 0.00720        | 1   | 0.00720     | 0.02    | 0.8912           |
| S x M              | 0.07216        | 1   | 0.07216     | 0.19    | 0.6650           |
| A x M              | 0.04375        | 1   | 0.04375     | 0.11    | 0.7360           |
| S x A x M          | 0.05797        | 1   | 0.05797     | 0.15    | 0.6979           |
| Error              | 59.81092       | 156 | 0.38340     |         |                  |

Table 8

Summary of Cell Means and Standard Deviations: Public Self-Consciousness Scores (N=164)

|                             | Public Self-Awareness         |                               | Private Self-Awareness        |                               |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                             | High                          | Low                           | High                          | Low                           |
| Surpassed Social Standard   | 2.714<br>Mean<br>.686<br>S.D. | 2.889<br>Mean<br>.644<br>S.D. | 2.842<br>Mean<br>.713<br>S.D. | 2.993<br>Mean<br>.795<br>S.D. |
| Surpassed Personal Standard | 2.726<br>Mean<br>.508<br>S.D. | 2.869<br>Mean<br>.593<br>S.D. | 2.950<br>Mean<br>.713<br>S.D. | 2.721<br>Mean<br>.728<br>S.D. |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater public self-consciousness.

Table 9

Analysis of Variance Summary: Public Self-Consciousness Scores (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1260.68006     | 1   | 1260.68006  | 2699.47 | 0.0000           |
| Feedback (S)       | 0.07360        | 1   | 0.07360     | 0.16    | 0.6919           |
| Awareness Type (A) | 0.23068        | 1   | 0.23068     | 0.49    | 0.4832           |
| Magnitude (M)      | 0.14146        | 1   | 0.14146     | 0.30    | 0.5829           |
| S x A              | 0.05981        | 1   | 0.05981     | 0.13    | 0.7209           |
| S x M              | 0.41361        | 1   | 0.41361     | 0.89    | 0.3481           |
| A x M              | 0.38300        | 1   | 0.38300     | 0.82    | 0.3665           |
| S x A x M          | 0.29652        | 1   | 0.29652     | 0.63    | 0.4268           |
| Error              | 72.85364       | 156 | 0.46701     |         |                  |

Table 10

Summary of Cell Means and Standard Deviations: Pre-Self-Esteem Scores  
(N=164)

|                                | Public<br>Self-Awareness |                | Private<br>Self-Awareness |                 |
|--------------------------------|--------------------------|----------------|---------------------------|-----------------|
|                                | High                     | Low            | High                      | Low             |
| Surpassed<br>Social Standard   | 3.252<br>.4832           | 3.154<br>.3967 | 3.142<br>.4337            | 3.132<br>.4243  |
| Surpassed<br>Personal Standard | 3.233<br>.4774           | 3.065<br>.5773 | 3.135<br>.4234            | 3.317<br>.38523 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher self-esteem.

Table 11

Analysis of Variance Summary: Pre-Self-Esteem Scores (N=164)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 1581.60590        | 1   | 1581.60590     | 7700.21 | 0.0000              |
| Feedback (S)       | 0.01205           | 1   | 0.01205        | 0.06    | 0.8089              |
| Awareness Type (A) | 0.00102           | 1   | 0.00102        | 0.00    | 0.9438              |
| Magnitude (M)      | 0.02206           | 1   | 0.02206        | 0.11    | 0.7435              |
| S x A              | 0.19973           | 1   | 0.19973        | 0.97    | 0.3256              |
| S x M              | 0.03645           | 1   | 0.03645        | 0.18    | 0.6741              |
| A x M              | 0.46761           | 1   | 0.46761        | 2.28    | 0.1334              |
| S x A x M          | 0.16827           | 1   | 0.16827        | 0.82    | 0.3668              |
| Error              | 32.04202          | 156 | 0.20540        |         |                     |



Table 12

Summary of Cell Means and Standard Deviations: Post-Self-Esteem Scores (N=164)

|                             | Public Self-Awareness          |                                | Private Self-Awareness         |                                |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                             | High                           | Low                            | High                           | Low                            |
| Surpassed Social Standard   | 3.304<br>Mean<br>.4931<br>S.D. | 3.100<br>Mean<br>.4222<br>S.D. | 3.116<br>Mean<br>.4752<br>S.D. | 3.211<br>Mean<br>.4743<br>S.D. |
| Surpassed Personal Standard | 3.217<br>Mean<br>.4609<br>S.D. | 3.083<br>Mean<br>.5598<br>S.D. | 3.255<br>Mean<br>.5010<br>S.D. | 3.333<br>Mean<br>.4093<br>S.D. |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater self-esteem.

Table 13

Analysis of Variance Summary: Post-Self-Esteem Scores (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1605.08107     | 1   | 1605.08107  | 7068.19 | 0.0000           |
| Feedback (S)       | 0.06024        | 1   | 0.06024     | 0.27    | 0.6072           |
| Awareness Type (A) | 0.10891        | 1   | 0.10891     | 0.48    | 0.4896           |
| Magnitude (M)      | 0.06685        | 1   | 0.06685     | 0.29    | 0.5882           |
| S x A              | 0.32957        | 1   | 0.32957     | 1.45    | 0.2301           |
| S x M              | 0.00710        | 1   | 0.00710     | 0.03    | 0.8599           |
| A x M              | 0.63981        | 1   | 0.63981     | 2.82    | 0.0952           |
| S x A x M          | 0.01838        | 1   | 0.01838     | 0.08    | 0.7764           |
| Error              | 35.42528       | 156 | 0.22709     |         |                  |

Table 14

Summary of Cell Means and Standard Deviations: Average Error  
(Personal-Self Standard) Scores (N=164)

|                                | Public<br>Self-Awareness |                 | Private<br>Self-Awareness |                 |
|--------------------------------|--------------------------|-----------------|---------------------------|-----------------|
|                                | High                     | Low             | High                      | Low             |
| Surpassed<br>Social Standard   | 170.39<br>53.46          | 159.17<br>56.74 | 170.47<br>78.58           | 182.53<br>58.19 |
| Surpassed<br>Personal Standard | 181.25<br>59.94          | 141.57<br>45.47 | 160.35<br>64.40           | 152.21<br>45.49 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater error or poorer performance on practice trials.

Table 15

Analysis of Variance Summary: Average Error (Personal-Self Standard)  
Scores (N=164)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 4247986.05214     | 1   | 4247986.052    | 1273.41 | 0.0000              |
| Feedback (S)       | 5444.95931        | 1   | 5444.959       | 1.63    | 0.2033              |
| Awareness Type (A) | 425.17450         | 1   | 425.175        | 0.13    | 0.7216              |
| Magnitude (M)      | 5402.12415        | 1   | 5402.124       | 1.62    | 0.2051              |
| S x A              | 2777.34082        | 1   | 2777.341       | 0.83    | 0.3629              |
| S x M              | 5789.51795        | 1   | 5789.518       | 1.74    | 0.1896              |
| A x M              | 7349.90214        | 1   | 7349.902       | 2.20    | 0.1397              |
| S x A x M          | 167.09832         | 1   | 167.098        | 0.05    | 0.8232              |
| Error              | 520402.69579      | 156 | 3335.915       |         |                     |

Table 16

Summary of Cell Means and Standard Deviations: TTT (Real-Self) Scores  
(N=164)

|                                | Public<br>Self-Awareness |                 | Private<br>Self-Awareness |                 |
|--------------------------------|--------------------------|-----------------|---------------------------|-----------------|
|                                | High                     | Low             | High                      | Low             |
| Surpassed<br>Social Standard   | 195.91<br>61.43          | 183.08<br>65.32 | 195.89<br>90.38           | 209.95<br>66.92 |
| Surpassed<br>Personal Standard | 154.17<br>50.94          | 120.35<br>38.60 | 136.30<br>54.64           | 129.38<br>38.66 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater error or poorer performance.

Table 17

Analysis of Variance Summary: TTT (Real-Self) Scores (N=164)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 4293856.10442     | 1   | 4293856.10     | 1193.56 | 0.0000              |
| Feedback (S)       | 146380.84279      | 1   | 146380.84      | 40.69   | 0.0000              |
| Awareness Type (A) | 792.94534         | 1   | 792.95         | 0.22    | 0.6394              |
| Magnitude (M)      | 3819.89534        | 1   | 3819.90        | 1.06    | 0.3044              |
| S x A              | 3114.39847        | 1   | 3114.40        | 0.87    | 0.3536              |
| S x M              | 4307.33168        | 1   | 4307.33        | 1.20    | 0.2755              |
| A x M              | 7072.57117        | 1   | 7072.57        | 1.97    | 0.1629              |
| S x A x M          | 0.00032           | 1   | 0.00           | 0.00    | 0.9998              |
| Error              | 561211.10532      | 156 | 3597.51        |         |                     |

Table 18

Summary of Cell Means and Standard Deviations: Computer's Predicted (Social-Self Standard) Scores (N=164)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 224.30<br>67.00       | 207.00<br>73.69 | 221.84<br>102.22       | 237.32<br>75.72 |
| Surpassed Personal Standard | 126.83<br>41.76       | 99.13<br>31.84  | 112.30<br>45.10        | 106.63<br>31.76 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater error or poorer performance.

Table 19

Analysis of Variance Summary: Computer's Predicted (Social-Self Standard) Scores (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 4361021.92664  | 1   | 4361021.927 | 1100.31 | 0.0000           |
| Feedback (S)       | 485552.33729   | 1   | 485552.337  | 122.51  | 0.0000           |
| Awareness Type (A) | 1059.59766     | 1   | 1059.598    | 0.27    | 0.6059           |
| Magnitude (M)      | 3031.75408     | 1   | 3031.754    | 0.76    | 0.3831           |
| S x A              | 2977.53559     | 1   | 2977.536    | 0.75    | 0.3874           |
| S x M              | 2433.99674     | 1   | 2433.997    | 0.61    | 0.4344           |
| A x M              | 7346.02673     | 1   | 7346.027    | 1.85    | 0.1753           |
| S x A x M          | 282.63446      | 1   | 282.634     | 0.07    | 0.7898           |
| Error              | 618299.60151   | 156 | 3963.459    |         |                  |

Table 20

Summary of Cell Means and Standard Deviations: Change in Self-Esteem Scores (N=164)

|                             | Public Self-Awareness |                   | Private Self-Awareness |                   |
|-----------------------------|-----------------------|-------------------|------------------------|-------------------|
|                             | High                  | Low               | High                   | Low               |
| Surpassed Social Standard   | +.0522<br>/ .1904     | -.0542<br>/ .2553 | -.0263<br>/ .2400      | +.0790<br>/ .2175 |
| Surpassed Personal Standard | -.0167<br>/ .0835     | +.0174<br>/ .1850 | +.1200<br>/ .3318      | +.0167<br>/ .1494 |

Note: 1) 

|                |
|----------------|
| Mean<br>/ S.D. |
|----------------|

 ; 2) Plus (+) indicates an increase in self-esteem; minus (-) indicates a decrease in self-esteem.

Table 21

Analysis of Variance Summary: Change in Self-Esteem Scores (N=164)

| Source             | Sum of Squares | df  | Mean Square | F    | Tail Probability |
|--------------------|----------------|-----|-------------|------|------------------|
| Mean               | 0.08647        | 1   | 0.08647     | 1.77 | 0.1853           |
| Feedback (S)       | 0.01841        | 1   | 0.01841     | 0.38 | 0.5402           |
| Awareness Type (A) | 0.08882        | 1   | 0.08882     | 1.82 | 0.1795           |
| Magnitude (M)      | 0.01210        | 1   | 0.01210     | 0.25 | 0.6193           |
| S x A              | 0.01617        | 1   | 0.01617     | 0.33 | 0.5659           |
| S x M              | 0.01137        | 1   | 0.01137     | 0.23 | 0.6301           |
| A x M              | 0.01347        | 1   | 0.01347     | 0.28 | 0.6003           |
| S x A x M          | 0.29788        | 1   | 0.29788     | 6.10 | 0.0146           |
| Error              | 7.62044        | 156 | 0.04885     |      |                  |

Table 22

Summary of Cell Means and Standard Deviations: General Satisfaction Scores (N=164)

|                             | Public Self-Awareness |                | Private Self-Awareness |                |
|-----------------------------|-----------------------|----------------|------------------------|----------------|
|                             | High                  | Low            | High                   | Low            |
| Surpassed Social Standard   | 2.330<br>.3548        | 2.392<br>.5356 | 2.368<br>.3351         | 2.242<br>.3237 |
| Surpassed Personal Standard | 2.367<br>.3985        | 2.270<br>.2991 | 2.480<br>.3334         | 2.358<br>.2945 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater general satisfaction.

Table 23

Analysis of Variance Summary: General Satisfaction Scores (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 865.05799      | 1   | 865.05799   | 6395.66 | 0.0000           |
| Feedback (S)       | 0.04927        | 1   | 0.04927     | 0.36    | 0.5470           |
| Awareness Type (A) | 0.02004        | 1   | 0.02004     | 0.15    | 0.7008           |
| Magnitude (M)      | 0.19705        | 1   | 0.19705     | 1.46    | 0.2293           |
| S x A              | 0.24064        | 1   | 0.24064     | 1.78    | 0.1842           |
| S x M              | 0.05776        | 1   | 0.05776     | 0.43    | 0.5144           |
| A x M              | 0.11004        | 1   | 0.11004     | 0.81    | 0.3685           |
| S x A x M          | 0.06496        | 1   | 0.06496     | 0.49    | 0.4893           |
| Error              | 21.10009       | 156 | 0.13526     |         |                  |

Table 24

Summary of Cell Means and Standard Deviations: Response to the Statement "I believe the TTT is a good measure of perceptual logic." (N=164)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 2.6957<br>.5588       | 2.6250<br>.8754 | 2.6842<br>.6710        | 2.7895<br>.6306 |
| Surpassed Personal Standard | 2.7500<br>.4523       | 2.5217<br>.8458 | 2.3500<br>.7452        | 2.5833<br>.7173 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater disagreement.

Table 25

Analysis of Variance Summary: Response to the Statement "I believe the TTT is a good measure of perceptual logic." (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1078.47859     | 1   | 1078.47859  | 2099.62 | 0.0000           |
| Feedback (S)       | 0.84921        | 1   | 0.84921     | 1.65    | 0.2004           |
| Awareness Type (A) | 0.08404        | 1   | 0.08404     | 0.16    | 0.6864           |
| Magnitude (M)      | 0.00385        | 1   | 0.00385     | 0.01    | 0.9311           |
| S x A              | 0.59066        | 1   | 0.59066     | 1.15    | 0.2852           |
| S x M              | 0.00213        | 1   | 0.00213     | 0.00    | 0.9487           |
| A x M              | 0.99396        | 1   | 0.99396     | 1.94    | 0.1662           |
| S x A x M          | 0.19960        | 1   | 0.19960     | 0.39    | 0.5340           |
| Error              | 80.13019       | 156 | 0.51366     |         |                  |

Table 26

Summary of Cell Means and Standard Deviations: Response to the Statement "Perceptual logic is an important dimension of intelligence." (N=164)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 2.5217<br>.8980       | 2.4167<br>.8297 | 2.3684<br>.6840        | 2.8421<br>.8342 |
| Surpassed Personal Standard | 2.5000<br>.9045       | 2.5217<br>.7903 | 2.2500<br>.6387        | 2.4167<br>.6539 |

Note: 1) 

|      |
|------|
| Mean |
| S.D. |

 ; 2) Higher means reflect greater disagreement.

Table 27

Analysis of Variance Summary: Response to the Statement "Perceptual logic is an important dimension of intelligence." (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 962.41897      | 1   | 962.41897   | 1583.02 | 0.0000           |
| Feedback (S)       | 0.51869        | 1   | 0.51869     | 0.85    | 0.3571           |
| Awareness Type (A) | 0.01683        | 1   | 0.01683     | 0.03    | 0.8681           |
| Magnitude (M)      | 0.75881        | 1   | 0.75881     | 1.25    | 0.2656           |
| S x A              | 0.96205        | 1   | 0.96205     | 1.58    | 0.2103           |
| S x M              | 0.07942        | 1   | 0.07942     | 0.13    | 0.7183           |
| A x M              | 1.28084        | 1   | 1.28084     | 2.11    | 0.1487           |
| S x A x M          | 0.46029        | 1   | 0.46029     | 0.76    | 0.3856           |
| Error              | 94.84230       | 156 | 0.60796     |         |                  |



Table 28

Summary of Cell Means and Standard Deviations: Response to the Statement "I am proud of my performance on the TTT." (N=164)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 2.6087<br>.7827       | 2.5417<br>.8330 | 2.6316<br>.4956        | 2.8421<br>.5015 |
| Surpassed Personal Standard | 2.5833<br>.5150       | 2.8696<br>.4577 | 2.4500<br>.6048        | 2.6250<br>.5758 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater disagreement.

Table 29

Analysis of Variance Summary: Response to the Statement "I am proud of my performance on the TTT." (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1094.20328     | 1   | 1094.20328  | 2822.15 | 0.0000           |
| Feedback (S)       | 0.02261        | 1   | 0.02261     | 0.06    | 0.8095           |
| Awareness Type (A) | 0.00728        | 1   | 0.00728     | 0.02    | 0.8912           |
| Magnitude (M)      | 0.89437        | 1   | 0.89437     | 2.31    | 0.1308           |
| S x A              | 1.20256        | 1   | 1.20256     | 3.10    | 0.0802           |
| S x M              | 0.24690        | 1   | 0.24690     | 0.64    | 0.4261           |
| A x M              | 0.06766        | 1   | 0.06766     | 0.17    | 0.6767           |
| S x A x M          | 0.36968        | 1   | 0.36968     | 0.95    | 0.3304           |
| Error              | 60.48432       | 156 | 0.38772     |         |                  |

Table 30

Summary of Cell Means and Standard Deviations: Response to the Statement "I am somewhat disappointed with my performance on the TTT." (N=164)

|                             | Public Self-Awareness |                | Private Self-Awareness |                |
|-----------------------------|-----------------------|----------------|------------------------|----------------|
|                             | High                  | Low            | High                   | Low            |
| Surpassed Social Standard   | 2.348<br>.5728        | 2.375<br>.8754 | 2.421<br>.6925         | 2.368<br>.5973 |
| Surpassed Personal Standard | 2.250<br>.8660        | 2.174<br>.3876 | 2.400<br>.5982         | 2.333<br>.5647 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater disagreement.

Table 31

Analysis of Variance Summary: Response to the Statement "I am somewhat disappointed with my performance on the TTT." (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 852.44214      | 1   | 852.44214   | 2027.68 | 0.0000           |
| Feedback (S)       | 0.30831        | 1   | 0.30831     | 0.73    | 0.3931           |
| Awareness Type (A) | 0.34588        | 1   | 0.34588     | 0.82    | 0.3658           |
| Magnitude (M)      | 0.06920        | 1   | 0.06920     | 0.16    | 0.6855           |
| S x A              | 0.14414        | 1   | 0.14414     | 0.34    | 0.5590           |
| S x M              | 0.03365        | 1   | 0.03365     | 0.08    | 0.7776           |
| A x M              | 0.01212        | 1   | 0.01212     | 0.03    | 0.8654           |
| S x A x M          | 0.01947        | 1   | 0.01947     | 0.05    | 0.8299           |
| Error              | 65.58270       | 156 | 0.42040     |         |                  |

Table 32

Summary of Cell Means and Standard Deviations: Response to the Statement "I could have scored higher on the TTT." (N=164)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 2.1304<br>.6944       | 2.0417<br>.6903 | 2.1053<br>.7375        | 2.3158<br>.5824 |
| Surpassed Personal Standard | 2.4167<br>.6686       | 2.0870<br>.8482 | 2.2000<br>.6959        | 2.0833<br>.5036 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater disagreement.

Table 33

Analysis of Variance Summary: Response to the Statement "I could have scored higher on the TTT." (N=164)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 738.75845      | 1   | 738.75845   | 1573.59 | 0.0000           |
| Feedback (S)       | 0.09186        | 1   | 0.09186     | 0.20    | 0.6589           |
| Awareness Type (A) | 0.00201        | 1   | 0.00201     | 0.00    | 0.9479           |
| Magnitude (M)      | 0.25772        | 1   | 0.25772     | 0.55    | 0.4599           |
| S x A              | 0.53850        | 1   | 0.53850     | 1.15    | 0.2858           |
| S x M              | 0.78941        | 1   | 0.78941     | 1.68    | 0.1966           |
| A x M              | 0.64196        | 1   | 0.64196     | 1.37    | 0.2440           |
| S x A x M          | 0.01819        | 1   | 0.01819     | 0.04    | 0.8442           |
| Error              | 73.23785       | 156 | 0.46947     |         |                  |

Table 34

Summary of Cell Means and Standard Deviations: Performance Ratings  
(N=164)

|                                | Public<br>Self-Awareness |                 | Private<br>Self-Awareness |                 |
|--------------------------------|--------------------------|-----------------|---------------------------|-----------------|
|                                | High                     | Low             | High                      | Low             |
| Surpassed<br>Social Standard   | 2.174<br>/ .717          | 2.042<br>/ .690 | 2.000<br>/ .577           | 2.000<br>/ .471 |
| Surpassed<br>Personal Standard | 2.000<br>/ .603          | 1.913<br>/ .417 | 2.000<br>/ .562           | 2.083<br>/ .776 |

Note: 1)

|                |
|----------------|
| Mean<br>/ S.D. |
|----------------|

; 2) Higher means reflect higher performance ratings.

Table 35

Analysis of Variance Summary: Performance Ratings (N=164)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 642.78873         | 1   | 642.78873      | 1673.42 | 0.0000              |
| Feedback (S)       | 0.11751           | 1   | 0.11751        | 0.31    | 0.5810              |
| Awareness Type (A) | 0.00502           | 1   | 0.00502        | 0.01    | 0.9092              |
| Magnitude (M)      | 0.04515           | 1   | 0.04515        | 0.12    | 0.7322              |
| S x A              | 0.36415           | 1   | 0.36415        | 0.95    | 0.3317              |
| S x M              | 0.04046           | 1   | 0.04046        | 0.11    | 0.7460              |
| A x M              | 0.22385           | 1   | 0.22385        | 0.58    | 0.4464              |
| S x A x M          | 0.00354           | 1   | 0.00354        | 0.01    | 0.9236              |
| Error              | 59.92210          | 156 | 0.38412        |         |                     |

Table 36

Summary of Cell Means and Standard Deviations:  
Satisfaction Ratings (N=164)

|                             | Public Self-Awareness |                | Private Self-Awareness |                |
|-----------------------------|-----------------------|----------------|------------------------|----------------|
|                             | High                  | Low            | High                   | Low            |
| Surpassed Social Standard   | 4.130<br>1.984        | 3.833<br>2.565 | 3.947<br>1.929         | 3.158<br>1.803 |
| Surpassed Personal Standard | 3.583<br>1.505        | 4.174<br>1.193 | 4.150<br>1.725         | 3.917<br>1.413 |

Note: 1) 

|      |
|------|
| Mean |
| S.D. |

 ; 2) Higher means reflect greater satisfaction.

Table 37

Analysis of Variance Summary: Satisfaction Ratings (N=164)

| Source             | Sum of Squares | df  | Mean Square | F      | Tail Probability |
|--------------------|----------------|-----|-------------|--------|------------------|
| Mean               | 2334.08138     | 1   | 2334.08138  | 641.03 | 0.0000           |
| Feedback (S)       | 1.39365        | 1   | 1.39365     | 0.38   | 0.5370           |
| Awareness Type (A) | 0.73735        | 1   | 0.73735     | 0.20   | 0.6533           |
| Magnitude (M)      | 1.30090        | 1   | 1.30090     | 0.36   | 0.5509           |
| S x A              | 3.33601        | 1   | 3.33601     | 0.92   | 0.3400           |
| S x M              | 5.09829        | 1   | 5.09829     | 1.40   | 0.2385           |
| A x M              | 4.23738        | 1   | 4.23738     | 1.16   | 0.2824           |
| S x A x M          | 0.26883        | 1   | 0.26883     | 0.07   | 0.7862           |
| Error              | 568.02006      | 156 | 3.64115     |        |                  |

Table 38

Summary of Cell Means and Standard Deviations: Number of Minutes  
Volunteered Toward Future Testing Sessions of the TTT (N=164)

|                                | Public<br>Self-Awareness |                | Private<br>Self-Awareness |                |
|--------------------------------|--------------------------|----------------|---------------------------|----------------|
|                                | High                     | Low            | High                      | Low            |
| Surpassed<br>Social Standard   | 39.63<br>10.82           | 42.66<br>21.87 | 34.35<br>13.58            | 33.75<br>12.75 |
| Surpassed<br>Personal Standard | 23.33<br>11.68           | 28.26<br>13.50 | 38.81<br>20.38            | 35.16<br>20.07 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater approach tendencies.

Table 39

Analysis of Variance Summary: Number of Minutes Volunteered Toward  
Future Testing Sessions (N=164)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F      | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|--------|---------------------|
| Mean               | 1540.85110        | 1   | 1540.85110     | 448.30 | 0.0000              |
| Feedback (S)       | 6.51079           | 1   | 6.51079        | 1.89   | 0.1707              |
| Awareness Type (A) | 0.05861           | 1   | 0.05861        | 0.02   | 0.8963              |
| Magnitude (M)      | 0.36260           | 1   | 0.36260        | 0.11   | 0.7458              |
| S x A              | 17.51800          | 1   | 17.51800       | 5.10   | 0.0254              |
| S x M              | 0.00600           | 1   | 0.00600        | 0.00   | 0.9667              |
| A x M              | 3.18013           | 1   | 3.18013        | 0.93   | 0.3376              |
| S x A x M          | 0.59972           | 1   | 0.59972        | 0.17   | 0.6767              |
| Error              | 536.19085         | 156 | 3.43712        |        |                     |

Table 40

Summary of Cell Means and Standard Deviations: Importance Ratings  
Attributed to Tasks Measuring Intelligence (N=126; Deleted Sample)

|                                | Public<br>Self-Awareness |                | Private<br>Self-Awareness |                |
|--------------------------------|--------------------------|----------------|---------------------------|----------------|
|                                | High                     | Low            | High                      | Low            |
| Surpassed<br>Social Standard   | 5.615<br>1.387           | 5.250<br>1.020 | 5.417<br>1.165            | 5.071<br>1.492 |
| Surpassed<br>Personal Standard | 4.818<br>1.722           | 5.278<br>1.179 | 5.875<br>1.025            | 5.045<br>1.463 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher attributed  
importance to tasks measuring intelligence.

Table 41

Analysis of Variance Summary: Importance Ratings (N=126; Deleted Sample)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 3348.61769        | 1   | 3348.61769     | 1969.54 | 0.0000              |
| Feedback (S)       | 0.21192           | 1   | 0.21192        | 0.12    | 0.7247              |
| Awareness Type (A) | 0.37305           | 1   | 0.37305        | 0.22    | 0.6404              |
| Magnitude (M)      | 2.17800           | 1   | 2.17800        | 1.28    | 0.2600              |
| S x A              | 2.69404           | 1   | 2.69404        | 1.58    | 0.2106              |
| S x M              | 0.21648           | 1   | 0.21648        | 0.13    | 0.7219              |
| A x M              | 3.00380           | 1   | 3.00380        | 1.77    | 0.1864              |
| S x A x M          | 3.19758           | 1   | 3.19758        | 1.88    | 0.1729              |
| Error              | 200.62418         | 118 | 1.70020        |         |                     |

Table 42

Summary of Cell Means and Standard Deviations: Recall Index  
(N=164)

|                             | Public Self-Awareness |                | Private Self-Awareness |                |
|-----------------------------|-----------------------|----------------|------------------------|----------------|
|                             | High                  | Low            | High                   | Low            |
| Surpassed Social Standard   | 1.478<br>1.163        | 1.708<br>1.042 | 1.526<br>1.073         | 1.000<br>.943  |
| Surpassed Personal Standard | 1.833<br>1.030        | 1.739<br>1.251 | 1.450<br>1.099         | 1.542<br>1.021 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater recall of all three scores.

Table 43

Analysis of Variance Summary: Recall Index (N=164)

| Source             | Sum of Squares | df  | Mean Square | F      | Tail Probability |
|--------------------|----------------|-----|-------------|--------|------------------|
| Mean               | 368.62498      | 1   | 368.62498   | 311.78 | 0.0000           |
| Feedback (S)       | 1.77207        | 1   | 1.77207     | 1.50   | 0.2227           |
| Awareness Type (A) | 3.76698        | 1   | 3.76698     | 3.19   | 0.0762           |
| Magnitude (M)      | 0.21332        | 1   | 0.21332     | 0.18   | 0.6680           |
| S x A              | 0.01545        | 1   | 0.01545     | 0.01   | 0.9091           |
| S x M              | 0.21097        | 1   | 0.21097     | 0.18   | 0.6733           |
| A x M              | 0.79604        | 1   | 0.79604     | 0.67   | 0.4132           |
| S x A x M          | 2.17139        | 1   | 2.17139     | 1.84   | 0.1773           |
| Error              | 184.44409      | 156 | 1.19233     |        |                  |



Table 44

Percentage of Subjects Recalling the TTT Score (Real-Self) Correctly Under Conditions of Public and Private Self-Awareness as a Function of Magnitude of Self-Awareness and Feedback (N=164)

|                             | Public Self-Awareness |     | Private Self-Awareness |     |
|-----------------------------|-----------------------|-----|------------------------|-----|
|                             | High                  | Low | High                   | Low |
| Surpassed Social Standard   | .61                   | .58 | .47                    | .26 |
| Surpassed Personal Standard | .58                   | .61 | .40                    | .54 |

Table 45

Percentage of Subjects Recalling the Personal Standard Correctly Under Conditions of Public and Private Self-Awareness as a Function of Magnitude of Self-Awareness and Feedback (N=164)

|                             | Public Self-Awareness |     | Private Self-Awareness |     |
|-----------------------------|-----------------------|-----|------------------------|-----|
|                             | High                  | Low | High                   | Low |
| Surpassed Social Standard   | .39                   | .50 | .42                    | .26 |
| Surpassed Personal Standard | .42                   | .39 | .30                    | .29 |

Table 46

Percentage of Subjects Recalling the Social Standard Correctly  
Under Conditions of Public and Private Self-Awareness as a  
Function of Magnitude of Self-Awareness and Feedback  
(N=164)

|                                | Public<br>Self-Awareness |     | Private<br>Self-Awareness |     |
|--------------------------------|--------------------------|-----|---------------------------|-----|
|                                | High                     | Low | High                      | Low |
| Surpassed<br>Social Standard   | .35                      | .58 | .53                       | .42 |
| Surpassed<br>Personal Standard | .83                      | .65 | .60                       | .67 |

Table 47

Number of Subjects Discarded From Analysis (Subjects in Error  
as to Whether They Were or Were Not Observed)

|                                | Public<br>Self-Awareness |     | Private<br>Self-Awareness |     |
|--------------------------------|--------------------------|-----|---------------------------|-----|
|                                | High                     | Low | High                      | Low |
| Surpassed<br>Social Standard   | 2                        | 1   | 6                         | 6   |
| Surpassed<br>Personal Standard | 13                       | 2   | 5                         | 1   |

Note: Each cell originally contained 25 subjects.

## APPENDIX B

### STATISTICAL ANALYSES: FULL SAMPLE

(N=200)

Analysis of Variance Summary and Mean and Standard Deviation  
Tables for All Experimental Variables

Table 48

Summary of Cell Means and Standard Deviations: Private  
Self-Consciousness Scores (N=200)

|                                | Public<br>Self-Awareness |                | Private<br>Self-Awareness |                |
|--------------------------------|--------------------------|----------------|---------------------------|----------------|
|                                | High                     | Low            | High                      | Low            |
| Surpassed<br>Social Standard   | 2.62<br>.60896           | 2.60<br>.58452 | 2.53<br>.69874            | 2.70<br>.60861 |
| Surpassed<br>Personal Standard | 2.55<br>.49508           | 2.74<br>.40723 | 2.50<br>.67545            | 2.66<br>.58238 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher private  
self-consciousness.

Table 49

Analysis of Variance Summary: Private Self-Consciousness Scores (N=200)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 1367.12169        | 1   | 1367.12169     | 3937.75 | 0.0000              |
| Feedback (S)       | 0.00005           | 1   | 0.00005        | 0.00    | 0.9904              |
| Awareness Type (A) | 0.03645           | 1   | 0.03645        | 0.10    | 0.7463              |
| Magnitude (M)      | 0.75645           | 1   | 0.75645        | 2.18    | 0.1416              |
| S x A              | 0.06845           | 1   | 0.06845        | 0.20    | 0.6575              |
| S x M              | 0.12005           | 1   | 0.12005        | 0.35    | 0.5572              |
| A x M              | 0.07605           | 1   | 0.07605        | 0.22    | 0.6403              |
| S x A x M          | 0.15125           | 1   | 0.15125        | 0.44    | 0.5100              |
| Error              | 66.65920          | 192 | 0.34718        |         |                     |

Table 50

Summary of Cell Means and Standard Deviations: Public Self-Consciousness Scores (N=200)

|                             | Public Self-Awareness          |                                | Private Self-Awareness         |                                |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                             | High                           | Low                            | High                           | Low                            |
| Surpassed Social Standard   | 2.732<br>Mean<br>.6679<br>S.D. | 2.888<br>Mean<br>.6301<br>S.D. | 2.646<br>Mean<br>.7967<br>S.D. | 3.103<br>Mean<br>.7361<br>S.D. |
| Surpassed Personal Standard | 2.772<br>Mean<br>.5474<br>S.D. | 2.925<br>Mean<br>.6015<br>S.D. | 2.846<br>Mean<br>.7186<br>S.D. | 2.680<br>Mean<br>.7411<br>S.D. |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect higher public self-consciousness.

Table 51

Analysis of Variance Summary: Public Self-Consciousness Scores (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1594.99475     | 1   | 1594.99475  | 3405.47 | 0.0000           |
| Feedback (S)       | 0.06625        | 1   | 0.06625     | 0.14    | 0.7073           |
| Awareness Type (A) | 0.00541        | 1   | 0.00541     | 0.01    | 0.9145           |
| Magnitude (M)      | 1.13101        | 1   | 1.13101     | 2.41    | 0.1218           |
| S x A              | 0.28275        | 1   | 0.28275     | 0.60    | 0.4381           |
| S x M              | 1.22305        | 1   | 1.22305     | 2.61    | 0.1077           |
| A x M              | 0.00097        | 1   | 0.00097     | 0.00    | 0.9638           |
| S x A x M          | 1.19815        | 1   | 1.19815     | 2.56    | 0.1114           |
| Error              | 89.92563       | 192 | 0.46836     |         |                  |

Table 52

Summary of Cell Means and Standard Deviations: Pre-Self-Esteem Scores  
(N=200)

|                                | Public<br>Self-Awareness |                   | Private<br>Self-Awareness |                   |
|--------------------------------|--------------------------|-------------------|---------------------------|-------------------|
|                                | High                     | Low               | High                      | Low               |
| Surpassed<br>Social Standard   | 3.276<br>/ .47546        | 3.184<br>/ .41601 | 3.224<br>/ .43520         | 3.056<br>/ .42237 |
| Surpassed<br>Personal Standard | 3.068<br>/ .46163        | 3.076<br>/ .55699 | 3.169<br>/ .40694         | 3.324<br>/ .37390 |

Note: 1)

|                |
|----------------|
| Mean<br>/ S.D. |
|----------------|

; 2) Higher means reflect higher self-esteem.

Table 53

Analysis of Variance Summary: Pre-Self-Esteem Scores (N=200)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F        | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|----------|---------------------|
| Mean               | 2012.31630        | 1   | 2012.31630     | 10065.14 | 0.0000              |
| Feedback (S)       | 0.03380           | 1   | 0.03380        | 0.17     | 0.6814              |
| Awareness Type (A) | 0.03820           | 1   | 0.03820        | 0.44     | 0.5074              |
| Magnitude (M)      | 0.02880           | 1   | 0.02880        | 0.14     | 0.7047              |
| S x A              | 0.87120           | 1   | 0.87120        | 4.36     | 0.0382              |
| S x M              | 0.56180           | 1   | 0.56180        | 2.81     | 0.0953              |
| A x M              | 0.01620           | 1   | 0.01620        | 0.08     | 0.7762              |
| S x A x M          | 0.15680           | 1   | 0.15680        | 0.78     | 0.3769              |
| Error              | 38.33640          | 192 | 0.19993        |          |                     |

Table 54

Summary of Cell Means and Standard Deviations: Post-Self-Esteem Scores (N=200)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 3.304<br>.47564       | 3.132<br>.44321 | 3.188<br>.47638        | 3.128<br>.45600 |
| Surpassed Personal Standard | 3.000<br>.70887       | 3.080<br>.54544 | 3.288<br>.49187        | 3.360<br>.42230 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher self-esteem.

Table 55

Analysis of Variance Summary: Post-Self-Esteem Scores (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 2028.84454     | 1   | 2028.84454  | 7811.51 | 0.0000           |
| Feedback (S)       | 0.00180        | 1   | 0.00180     | 0.01    | 0.9337           |
| Awareness Type (A) | 0.62720        | 1   | 0.62720     | 2.41    | 0.1218           |
| Magnitude (M)      | 0.02000        | 1   | 0.02000     | 0.08    | 0.7817           |
| S x A              | 1.47920        | 1   | 1.47920     | 5.70    | 0.0180           |
| S x M              | 0.46080        | 1   | 0.46080     | 1.77    | 0.1844           |
| A x M              | 0.03380        | 1   | 0.03380     | 0.13    | 0.7187           |
| S x A x M          | 0.04500        | 1   | 0.04500     | 0.17    | 0.6777           |
| Error              | 49.86721       | 192 | 0.25973     |         |                  |

Table 56

Summary of Cell Means and Standard Deviations: Average Error  
(Personal-Self Standard) Scores (N=200)

|                                | Public<br>Self-Awareness |                | Private<br>Self-Awareness |                |
|--------------------------------|--------------------------|----------------|---------------------------|----------------|
|                                | High                     | Low            | High                      | Low            |
| Surpassed<br>Social Standard   | 172.1<br>51.88           | 162.4<br>57.91 | 173.4<br>70.56            | 186.5<br>56.11 |
| Surpassed<br>Personal Standard | 191.2<br>75.21           | 144.0<br>46.22 | 169.0<br>62.07            | 153.0<br>44.71 |

Note: 1) 

|      |
|------|
| Mean |
| S.D. |

 ; 2) Higher means reflect greater error.

Table 57

Analysis of Variance Summary: Average Error (Personal-Self Standard)  
Scores (N=200)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 5708482.60500     | 1   | 5708482.605    | 1641.67 | 0.0000              |
| Feedback (S)       | 4315.20500        | 1   | 4315.205       | 1.24    | 0.2667              |
| Awareness Type (A) | 465.12500         | 1   | 465.125        | 0.13    | 0.7150              |
| Magnitude (M)      | 11175.12500       | 1   | 11175.125      | 3.21    | 0.0746              |
| S x A              | 4617.60500        | 1   | 4617.605       | 1.33    | 0.2506              |
| S x M              | 13927.80500       | 1   | 13927.805      | 4.01    | 0.0468              |
| A x M              | 9099.00500        | 1   | 9099.005       | 2.62    | 0.1074              |
| S x A x M          | 222.60500         | 1   | 222.605        | 0.06    | 0.8005              |
| Error              | 667629.92000      | 192 | 3477.239       |         |                     |



Table 58

Summary of Cell Means and Standard Deviations: TTT (Real-Self) Scores (N=200)

|                             | Public Self-Awareness |                 | Private Self-Awareness |                 |
|-----------------------------|-----------------------|-----------------|------------------------|-----------------|
|                             | High                  | Low             | High                   | Low             |
| Surpassed Social Standard   | 197.8<br>59.624       | 186.8<br>66.649 | 199.3<br>81.175        | 214.5<br>64.530 |
| Surpassed Personal Standard | 162.6<br>63.300       | 122.4<br>39.218 | 139.0<br>59.732        | 132.7<br>43.159 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater error or poorer performance.

Table 59

Analysis of Variance Summary: TTT (Real-Self) Scores (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 5739610.80500  | 1   | 5739610.805 | 1541.36 | 0.0000           |
| Feedback (S)       | 182589.24500   | 1   | 182589.245  | 49.03   | 0.0000           |
| Awareness Type (A) | 780.12500      | 1   | 780.125     | 0.21    | 0.6477           |
| Magnitude (M)      | 5628.60500     | 1   | 5628.605    | 1.51    | 0.2204           |
| S x A              | 5586.24500     | 1   | 5586.245    | 1.50    | 0.2221           |
| S x M              | 8051.80500     | 1   | 8051.805    | 2.16    | 0.1431           |
| A x M              | 11325.12500    | 1   | 11325.125   | 3.04    | 0.0828           |
| S x A x M          | 186.24500      | 1   | 186.245     | 0.05    | 0.8233           |
| Error              | 714956.80000   | 192 | 3723.733    |         |                  |

Table 60

Summary of Cell Means and Standard Deviations: Computer's Predicted (Social-Self Standard) Score (N=200)

|                             | Public Self-Awareness |                | Private Self-Awareness |                |
|-----------------------------|-----------------------|----------------|------------------------|----------------|
|                             | High                  | Low            | High                   | Low            |
| Surpassed Social Standard   | 226.3<br>65.02        | 211.2<br>75.19 | 225.5<br>91.77         | 242.4<br>73.04 |
| Surpassed Personal Standard | 133.8<br>52.63        | 100.8<br>32.38 | 118.4<br>43.48         | 107.2<br>31.20 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater error.

Table 61

Analysis of Variance Summary: Computer's Predicted (Social-Self Standard) Score (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 5828039.40500  | 1   | 5828039.405 | 1537.81 | 0.0000           |
| Feedback (S)       | 619495.80500   | 1   | 619495.805  | 163.46  | 0.0000           |
| Awareness Type (A) | 1420.44500     | 1   | 1420.445    | 0.37    | 0.5411           |
| Magnitude (M)      | 5607.40500     | 1   | 5607.405    | 1.48    | 0.2253           |
| S x A              | 4870.84500     | 1   | 4870.845    | 1.29    | 0.2583           |
| S x M              | 6670.12500     | 1   | 6670.125    | 1.76    | 0.1862           |
| A x M              | 9045.12500     | 1   | 9045.125    | 2.39    | 0.1240           |
| S x A x M          | 325.12500      | 1   | 325.125     | 0.09    | 0.7699           |
| Error              | 727648.72000   | 192 | 3789.837    |         |                  |

Table 62

Summary of Cell Means and Standard Deviations: Change in Self-Esteem Scores (N=200)

|                             | Public Self-Awareness |                | Private Self-Awareness |                |
|-----------------------------|-----------------------|----------------|------------------------|----------------|
|                             | High                  | Low            | High                   | Low            |
| Surpassed Social Standard   | +.028<br>.2011        | -.052<br>.2502 | -.036<br>.2531         | +.072<br>.2354 |
| Surpassed Personal Standard | +.040<br>.2179        | +.004<br>.1882 | +.120<br>.3041         | +.036<br>.1753 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Plus (+) indicates an increase in self-esteem; minus (-) indicates a decrease in self-esteem.

Table 63

Analysis of Variance Summary: Change in Self-Esteem Scores (N=200)

| Source             | Sum of Squares | df  | Mean Square | F    | Tail Probability |
|--------------------|----------------|-----|-------------|------|------------------|
| Mean               | 0.14045        | 1   | 0.14045     | 2.62 | 0.1071           |
| Feedback (S)       | 0.11045        | 1   | 0.11045     | 2.06 | 0.1527           |
| Awareness Type (A) | 0.09245        | 1   | 0.09245     | 1.73 | 0.1906           |
| Magnitude (M)      | 0.02645        | 1   | 0.02645     | 0.49 | 0.4832           |
| S x A              | 0.00845        | 1   | 0.00845     | 0.16 | 0.6917           |
| S x M              | 0.06845        | 1   | 0.06845     | 1.28 | 0.2598           |
| A x M              | 0.06125        | 1   | 0.06125     | 1.14 | 0.2863           |
| S x A x M          | 0.17405        | 1   | 0.17405     | 3.25 | 0.0731           |
| Error              | 10.28800       | 192 | 0.05358     |      |                  |

Table 64

Summary of Cell Means and Standard Deviations: General Satisfaction Scores (N=200)

|                             | Public Self-Awareness |               | Private Self-Awareness |               |
|-----------------------------|-----------------------|---------------|------------------------|---------------|
|                             | High                  | Low           | High                   | Low           |
| Surpassed Social Standard   | 2.32<br>.3464         | 2.41<br>.5306 | 2.34<br>.3490          | 2.27<br>.4159 |
| Surpassed Personal Standard | 2.40<br>.3830         | 2.27<br>.2880 | 2.37<br>.4070          | 2.36<br>.2887 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher general satisfaction.

Table 65

Analysis of Variance Summary: General Satisfaction Scores (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1097.92946     | 1   | 1097.92946  | 7476.54 | 0.0000           |
| Feedback (S)       | 0.00980        | 1   | 0.00980     | 0.07    | 0.7964           |
| Awareness Type (A) | 0.00980        | 1   | 0.00980     | 0.07    | 0.7964           |
| Magnitude (M)      | 0.04500        | 1   | 0.04500     | 0.31    | 0.5805           |
| S x A              | 0.08820        | 1   | 0.08820     | 0.60    | 0.4393           |
| S x M              | 0.07220        | 1   | 0.07220     | 0.49    | 0.4840           |
| A x M              | 0.00500        | 1   | 0.00500     | 0.03    | 0.8538           |
| S x A x M          | 0.24500        | 1   | 0.24500     | 1.67    | 0.1980           |
| Error              | 28.19520       | 192 | 0.14685     |         |                  |

Table 66

Summary of Cell Means and Standard Deviations: Response to the Statement "I believe the TTT is a good measure of perceptual logic." (N=200)

|                             | Public Self-Awareness |               | Private Self-Awareness |               |
|-----------------------------|-----------------------|---------------|------------------------|---------------|
|                             | High                  | Low           | High                   | Low           |
| Surpassed Social Standard   | 2.72<br>.5416         | 2.60<br>.8660 | 2.84<br>.6880          | 2.68<br>.6904 |
| Surpassed Personal Standard | 2.56<br>.6506         | 2.48<br>.8226 | 2.52<br>.8226          | 2.60<br>.7071 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater disagreement.

Table 67

Analysis of Variance Summary: Response to Statement "I believe the TTT is a good measure of perceptual logic." (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1378.12500     | 1   | 1378.12500  | 2581.97 | 0.0000           |
| Feedback (S)       | 1.44500        | 1   | 1.44500     | 2.71    | 0.1015           |
| Awareness Type (A) | 0.24500        | 1   | 0.24500     | 0.46    | 0.4989           |
| Magnitude (M)      | 0.24500        | 1   | 0.24500     | 0.46    | 0.4989           |
| S x A              | 0.04500        | 1   | 0.04500     | 0.08    | 0.7719           |
| S x M              | 0.24500        | 1   | 0.24500     | 0.46    | 0.4989           |
| A x M              | 0.04500        | 1   | 0.04500     | 0.08    | 0.7719           |
| S x A x M          | 0.12500        | 1   | 0.12500     | 0.23    | 0.6290           |
| Error              | 102.48000      | 192 | 0.53375     |         |                  |

Table 68

Summary of Cell Means and Standard Deviations: Response to the Statement "Perceptual logic is an important dimension of intelligence." (N=200)

|                             | Public Self-Awareness         |                               | Private Self-Awareness        |                               |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                             | High                          | Low                           | High                          | Low                           |
| Surpassed Social Standard   | 2.56<br>Mean<br>.8699<br>S.D. | 2.40<br>Mean<br>.8615<br>S.D. | 2.48<br>Mean<br>.7141<br>S.D. | 2.72<br>Mean<br>.8426<br>S.D. |
| Surpassed Personal Standard | 2.40<br>Mean<br>.8660<br>S.D. | 2.52<br>Mean<br>.7703<br>S.D. | 2.32<br>Mean<br>.6272<br>S.D. | 2.40<br>Mean<br>.6455<br>S.D. |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater disagreement.

Table 69

Analysis of Variance Summary: Response to Statement "Perceptual logic is an important dimension of intelligence." (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1225.12500     | 1   | 1225.12500  | 2043.29 | 0.0000           |
| Feedback (S)       | 0.84500        | 1   | 0.84500     | 1.41    | 0.2366           |
| Awareness Type (A) | 0.00500        | 1   | 0.00500     | 0.01    | 0.9273           |
| Magnitude (M)      | 0.24500        | 1   | 0.24500     | 0.41    | 0.5234           |
| S x A              | 0.60500        | 1   | 0.60500     | 1.01    | 0.3164           |
| S x M              | 0.04500        | 1   | 0.04500     | 0.08    | 0.7844           |
| A x M              | 0.40500        | 1   | 0.40500     | 0.68    | 0.4122           |
| S x A x M          | 0.60500        | 1   | 0.60500     | 1.01    | 0.3164           |
| Error              | 115.12000      | 192 | 0.59958     |         |                  |

Table 70

Summary of Cell Means and Standard Deviations: Response to the Statement "I am proud of my performance on the TTT." (N=200)

|                             | Public Self-Awareness         |                               | Private Self-Awareness        |                               |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                             | High                          | Low                           | High                          | Low                           |
| Surpassed Social Standard   | 2.60<br>Mean<br>.7638<br>S.D. | 2.52<br>Mean<br>.8226<br>S.D. | 2.56<br>Mean<br>.5831<br>S.D. | 2.80<br>Mean<br>.6455<br>S.D. |
| Surpassed Personal Standard | 2.60<br>Mean<br>.5000<br>S.D. | 2.88<br>Mean<br>.4397<br>S.D. | 2.60<br>Mean<br>.6455<br>S.D. | 2.64<br>Mean<br>.5686<br>S.D. |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater disagreement.

Table 71

Analysis of Variance Summary: Response to the Statement "I am proud of my performance on the TTT." (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1404.50000     | 1   | 1404.50000  | 3511.25 | 0.0000           |
| Feedback (S)       | 0.18000        | 1   | 0.18000     | 0.45    | 0.5031           |
| Awareness Type (A) | 0.00000        | 1   | 0.00000     | 0.00    | 1.0000           |
| Magnitude (M)      | 0.72000        | 1   | 0.72000     | 1.80    | 0.1813           |
| S x A              | 0.72000        | 1   | 0.72000     | 1.80    | 0.1813           |
| S x M              | 0.08000        | 1   | 0.08000     | 0.20    | 0.6552           |
| A x M              | 0.02000        | 1   | 0.02000     | 0.05    | 0.8233           |
| S x A x M          | 0.98000        | 1   | 0.98000     | 2.45    | 0.1192           |
| Error              | 76.80000       | 192 | 0.40000     |         |                  |

Table 72

Summary of Cell Means and Standard Deviations: Response to the Statement "I am somewhat disappointed with my performance on the TTT." (N=200)

|                             | Public Self-Awareness |               | Private Self-Awareness |               |
|-----------------------------|-----------------------|---------------|------------------------|---------------|
|                             | High                  | Low           | High                   | Low           |
| Surpassed Social Standard   | 2.36<br>.5686         | 2.40<br>.8660 | 2.48<br>.7141          | 2.28<br>.6137 |
| Surpassed Personal Standard | 2.28<br>.7371         | 2.16<br>.3742 | 2.28<br>.6137          | 2.36<br>.5686 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect greater disagreement.

Table 73

Analysis of Variance Summary: Response to the statement "I am somewhat disappointed with my performance on the TTT." (N=200)

| Source             | Sum of Squares | df  | Mean Square | F       | Tail Probability |
|--------------------|----------------|-----|-------------|---------|------------------|
| Mean               | 1081.12500     | 1   | 1081.12500  | 2586.94 | 0.0000           |
| Feedback (S)       | 0.60500        | 1   | 0.60500     | 1.45    | 0.2304           |
| Awareness Type (A) | 0.12500        | 1   | 0.12500     | 0.30    | 0.5851           |
| Magnitude (M)      | 0.12500        | 1   | 0.12500     | 0.30    | 0.5851           |
| S x A              | 0.12500        | 1   | 0.12500     | 0.30    | 0.5851           |
| S x M              | 0.04500        | 1   | 0.04500     | 0.11    | 0.7432           |
| A x M              | 0.00500        | 1   | 0.00500     | 0.01    | 0.9130           |
| S x A x M          | 0.60500        | 1   | 0.60500     | 1.45    | 0.2304           |
| Error              | 80.24000       | 192 | 0.41792     |         |                  |



Table 74

Summary of Cell Means and Standard Deviations: Response to the Statement  
"I could have scored higher on the TTT." (N=200)

|                                | Public<br>Self-Awareness      |                               | Private<br>Self-Awareness     |                               |
|--------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                                | High                          | Low                           | High                          | Low                           |
| Surpassed<br>Social Standard   | 2.12<br>Mean<br>.6658<br>S.D. | 2.04<br>Mean<br>.6758<br>S.D. | 2.12<br>Mean<br>.7257<br>S.D. | 2.28<br>Mean<br>.6137<br>S.D. |
| Surpassed<br>Personal Standard | 2.28<br>Mean<br>.6782<br>S.D. | 2.08<br>Mean<br>.8622<br>S.D. | 2.12<br>Mean<br>.6658<br>S.D. | 2.08<br>Mean<br>.4933<br>S.D. |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater disagreement.

Table 75

Analysis of Variance Summary: Response to the Statement "I could have  
scored higher on the TTT." (N=200)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 915.92000         | 1   | 915.92000      | 1983.94 | 0.0000              |
| Feedback (S)       | 0.00000           | 1   | 0.00000        | 0.00    | 1.0000              |
| Awareness Type (A) | 0.02000           | 1   | 0.02000        | 0.04    | 0.8353              |
| Magnitude (M)      | 0.08000           | 1   | 0.08000        | 0.17    | 0.6777              |
| S x A              | 0.50000           | 1   | 0.50000        | 1.08    | 0.2993              |
| S x M              | 0.32000           | 1   | 0.32000        | 0.69    | 0.4061              |
| A x M              | 0.50000           | 1   | 0.50000        | 1.08    | 0.2993              |
| S x A x M          | 0.02000           | 1   | 0.02000        | 0.04    | 0.8353              |
| Error              | 88.64000          | 192 | 0.46167        |         |                     |

Table 76

Summary of Cell Means and Standard Deviations: Performance Ratings  
(N=200)

|                                | Public<br>Self-Awareness |               | Private<br>Self-Awareness |               |
|--------------------------------|--------------------------|---------------|---------------------------|---------------|
|                                | High                     | Low           | High                      | Low           |
| Surpassed<br>Social Standard   | 2.20<br>.7071            | 2.04<br>.6758 | 2.04<br>.5385             | 2.04<br>.5385 |
| Surpassed<br>Personal Standard | 2.00<br>.5000            | 1.92<br>.4000 | 1.84<br>.7461             | 2.12<br>.7810 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher performance ratings.

Table 77

Analysis of Variance Summary: Performance Ratings (N=200)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 820.12500         | 1   | 820.12500      | 2107.39 | 0.0000              |
| Feedback (S)       | 0.60500           | 1   | 0.60500        | 1.55    | 0.2140              |
| Awareness Type (A) | 0.04500           | 1   | 0.04500        | 0.12    | 0.7342              |
| Magnitude (M)      | 0.00500           | 1   | 0.00500        | 0.01    | 0.9099              |
| S x A              | 0.12500           | 1   | 0.12500        | 0.32    | 0.5715              |
| S x M              | 0.40500           | 1   | 0.40500        | 1.04    | 0.3089              |
| A x M              | 0.84500           | 1   | 0.84500        | 2.17    | 0.1422              |
| S x A x M          | 0.12500           | 1   | 0.12500        | 0.32    | 0.5715              |
| Error              | 74.72000          | 192 | 0.38917        |         |                     |

Table 78

Summary of Cell Means and Standard Deviations:  
Satisfaction Ratings (N=200)

|                             | Public Self-Awareness |               | Private Self-Awareness |               |
|-----------------------------|-----------------------|---------------|------------------------|---------------|
|                             | High                  | Low           | High                   | Low           |
| Surpassed Social Standard   | 4.24<br>1.985         | 3.84<br>2.511 | 4.24<br>1.855          | 3.40<br>2.082 |
| Surpassed Personal Standard | 3.72<br>1.429         | 4.08<br>1.320 | 3.64<br>1.934          | 4.00<br>2.000 |

Note: 1) 

|      |
|------|
| Mean |
| S.D. |

 ; 2) Higher means reflect higher satisfaction.

Table 79

Analysis of Variance Summary: Satisfaction Ratings (N=200)

| Source             | Sum of Squares | df  | Mean Square | F      | Tail Probability |
|--------------------|----------------|-----|-------------|--------|------------------|
| Mean               | 3034.20500     | 1   | 3034.20500  | 821.54 | 0.0000           |
| Feedback (S)       | 0.24500        | 1   | 0.24500     | 0.07   | 0.7970           |
| Awareness Type (A) | 1.12500        | 1   | 1.12500     | 0.30   | 0.5817           |
| Magnitude (M)      | 0.84500        | 1   | 0.84500     | 0.23   | 0.6330           |
| S x A              | 0.24500        | 1   | 0.24500     | 0.07   | 0.7970           |
| S x M              | 12.00500       | 1   | 12.00500    | 3.25   | 0.0730           |
| A x M              | 0.60500        | 1   | 0.60500     | 0.16   | 0.6861           |
| S x A x M          | 0.60500        | 1   | 0.60500     | 0.16   | 0.6861           |
| Error              | 709.12000      | 192 | 3.69333     |        |                  |

Table 80

Summary of Cell Means and Standard Deviations: Number of Minutes  
Volunteered Toward Future Testing Sessions of the TTT (N=200)

|                                | Public<br>Self-Awareness |               | Private<br>Self-Awareness |               |
|--------------------------------|--------------------------|---------------|---------------------------|---------------|
|                                | High                     | Low           | High                      | Low           |
| Surpassed<br>Social Standard   | 38.7<br>11.03            | 42.3<br>21.46 | 35.1<br>14.85             | 27.6<br>12.30 |
| Surpassed<br>Personal Standard | 29.6<br>13.42            | 29.2<br>13.32 | 36.0<br>14.52             | 34.2<br>20.10 |

Note: 1) 

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

 ; 2) Higher means reflect greater approach tendencies.

Table 81

Analysis of Variance Summary: Number of Minutes Volunteered Toward  
Future Testing Sessions (N=200)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F      | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|--------|---------------------|
| Mean               | 1984.50000        | 1   | 1984.50000     | 575.84 | 0.0000              |
| Feedback (S)       | 2.88000           | 1   | 2.88000        | 0.84   | 0.3618              |
| Awareness Type (A) | 2.88000           | 1   | 2.88000        | 0.84   | 0.3618              |
| Magnitude (M)      | 0.18000           | 1   | 0.18000        | 0.05   | 0.8195              |
| S x A              | 8.82000           | 1   | 8.82000        | 2.56   | 0.1113              |
| S x M              | 0.08000           | 1   | 0.08000        | 0.02   | 0.8791              |
| A x M              | 2.00000           | 1   | 2.00000        | 0.58   | 0.4471              |
| S x A x M          | 0.98000           | 1   | 0.98000        | 0.28   | 0.5945              |
| Error              | 661.68000         | 192 | 3.44625        |        |                     |

Table 82

Summary of Cell Means and Standard Deviations: Importance Ratings  
Attributed to Tasks Measuring Intelligence (N=161; Full Sample)

|                                | Public<br>Self-Awareness |                | Private<br>Self-Awareness |                |
|--------------------------------|--------------------------|----------------|---------------------------|----------------|
|                                | High                     | Low            | High                      | Low            |
| Surpassed<br>Social Standard   | 5.333<br>1.496           | 5.286<br>1.007 | 4.778<br>1.801            | 5.158<br>1.463 |
| Surpassed<br>Personal Standard | 4.917<br>1.381           | 5.250<br>1.164 | 5.667<br>1.317            | 4.870<br>1.660 |

Note: 1)

|              |
|--------------|
| Mean<br>S.D. |
|--------------|

; 2) Higher means reflect higher attributed  
importance.

Table 83

Analysis of Variance Summary: Importance Ratings (N=161; Full Sample)

| Source             | Sum of<br>Squares | df  | Mean<br>Square | F       | Tail<br>Probability |
|--------------------|-------------------|-----|----------------|---------|---------------------|
| Mean               | 4200.48475        | 1   | 4200.48475     | 2072.37 | 0.0000              |
| Feedback (S)       | 0.05418           | 1   | 0.05418        | 0.03    | 0.8703              |
| Awareness Type (A) | 0.24301           | 1   | 0.24301        | 0.12    | 0.7296              |
| Magnitude (M)      | 0.04252           | 1   | 0.04252        | 0.02    | 0.8350              |
| S x A              | 2.73589           | 1   | 2.73589        | 1.35    | 0.2471              |
| S x M              | 1.56461           | 1   | 1.56461        | 0.77    | 0.3810              |
| A x M              | 1.21851           | 1   | 1.21851        | 0.60    | 0.4393              |
| S x A x M          | 5.99130           | 1   | 5.99130        | 2.96    | 0.0876              |
| Error              | 310.11517         | 153 | 2.02690        |         |                     |

## APPENDIX C

### COMPUTER SCREEN DISPLAYS

## SCREEN DISPLAY #1

CURRENT THEORY REGARDING INTELLECTUAL FUNCTIONING  
SUGGESTS THAT INTELLIGENCE IS MADE UP OF SEVERAL  
DISTINCT DIMENSIONS OR ABILITIES. SEVERAL OF THESE  
ABILITIES HAVE NEVER BEEN INCLUDED IN TRADITIONAL  
INTELLIGENCE TESTS.

-PRESS ANY KEY TO CONTINUE-

---

## SCREEN DISPLAY #2

THIS STUDY IS PART OF A SERIES OF TESTS BEING  
MADE FOR THE PURPOSE OF CONSTRUCTING A NEW  
MEASURE OF INTELLIGENCE. THE TASK YOU WILL BE  
ASKED TO PERFORM IS INTENDED AS A MEASURE OF ONE  
OF THE UNTAPPED ABILITIES THAT COMPRISE I.Q.  
THE ABILITY IS CALLED PERCEPTUAL LOGIC

-PRESS ANY KEY TO CONTINUE-

## CONDITIONAL SCREEN DISPLAY A\*

ONE OF THE ISSUES WE ARE EXAMINING IS WHETHER PRACTICE ON PERCEPTUAL LOGIC TASKS INFLUENCES A PERSON'S ABILITY IN THIS AREA. IN AN EFFORT TO ANSWER THIS QUESTION, TWO GROUPS OF STUDENTS HAVE BEEN FORMED:

GROUP 1. STUDENTS WHO WILL PARTICIPATE IN PRACTICE TRIALS BEFORE TAKING THE TEST OF PERCEPTUAL LOGIC.

GROUP 2. STUDENTS WHO WILL ONLY OBSERVE THE PRACTICE TRIALS BEFORE TAKING THE TEST OF PERCEPTUAL LOGIC.

-PRESS ANY KEY TO CONTINUE-

\* This screen display is presented to high public self-awareness groups only.

---

## CONDITIONAL SCREEN DISPLAY B\*

YOU HAVE BEEN ASSIGNED TO GROUP 1. YOU WILL PERFORM THE PRACTICE TRIALS. THE CAMERA TO THE SIDE OF YOU WILL BE TRANSMITTING THE PROBLEMS PRESENTED TO YOU AND YOUR ANSWERS TO ANOTHER STUDENT AND AN EXPERIMENTER IN ANOTHER ROOM.

-PRESS ANY KEY TO CONTINUE-

\* This screen display is presented to high public self-awareness groups only.



## SCREEN DISPLAY #3

THE FOLLOWING 6 TRIALS WILL ACQUAINT YOU WITH THE TASK.

THESE ARE ONLY PRACTICE TRIALS

WHEN YOU ARE READY TO BEGIN, AN ARRANGEMENT OF DOTS WILL APPEAR ON THE SCREEN. THIS ARRANGEMENT WILL DISAPPEAR IN A FEW SECONDS. YOUR JOB IS TO GUESS THE NUMBER OF DOTS THAT APPEARED ON THE SCREEN DURING THIS SHORT INTERVAL.

-PRESS ANY KEY TO CONTINUE-

---

## SCREEN DISPLAY #4

AFTER YOU HAVE ENTERED YOUR ESTIMATE INTO THE COMPUTER THREE NUMBERS WILL APPEAR ON THE SCREEN:

1. THE ESTIMATE YOU ENTERED INTO THE COMPUTER.
2. THE ACTUAL NUMBER OF DOTS IN THE ARRANGEMENT.
3. THE ERROR SCORE - THE AMOUNT YOUR ESTIMATE DEVIATES FROM THE ACTUAL NUMBER OF DOTS IN THE ARRANGEMENT.

THE ERROR SCORE MAY HELP YOU ADJUST YOUR ESTIMATE ON THE FOLLOWING TRIAL.

WHEN THESE NUMBERS HAVE DISAPPEARED, THE NEXT ARRANGEMENT OF DOTS WILL APPEAR ON THE SCREEN. THIS PROCEDURE WILL BE REPEATED 6 TIMES.

-PRESS ANY KEY TO CONTINUE-

## SCREEN DISPLAY #5

A WORD ABOUT THE ERROR SCORE.....

THE ERROR SCORE TELLS YOU HOW FAR AWAY YOUR ESTIMATE WAS FROM THE ACTUAL NUMBER OF DOTS ON THE SCREEN. FOR EXAMPLE, IF YOUR ERROR SCORE IS +200, THIS MEANS THAT YOUR ESTIMATE WAS 200 DOTS OVER THE ACTUAL NUMBER DISPLAYED ON THE SCREEN. SIMILARLY, IF YOUR ERROR SCORE IS -200, THIS MEANS YOUR ESTIMATE WAS 200 SHORT OF THE ACTUAL NUMBER DISPLAYED ON THE SCREEN.

-PRESS ANY KEY TO CONTINUE-

---

## SCREEN DISPLAY #6

YOUR FINAL SCORE ON THE TEST OF PERCEPTUAL LOGIC IS BASED UPON THE ABSOLUTE ERROR SCORE YOU ACHIEVE. THE CLOSER YOUR ERROR SCORE IS TO ZERO, THE BETTER YOU HAVE DONE ON THE TASK. WE ARE NOT INTERESTED IN WHETHER YOUR SCORE IS PLUS (+) OR MINUS (-). THIS INFORMATION IS PROVIDED TO HELP YOU ADJUST YOUR ESTIMATES ON FUTURE TRIALS,

ONCE AGAIN, THE CLOSER YOUR ERROR SCORE IS TO ZERO, THE BETTER YOUR ESTIMATE.

-PRESS ANY KEY TO CONTINUE-

SCREEN DISPLAY #7

YOU WILL BE GIVEN 6 PRACTICE TRIALS. THE 7TH  
TRIAL WILL REPRESENT THE TEST OF PERCEPTUAL LOGIC.

-PRESS ANY KEY TO CONTINUE-

---

SCREEN DISPLAY #8

ENTER YOUR GUESS INTO THE COMPUTER BY TYPING THE  
NUMBERS ONE AT A TIME. WHEN YOU HAVE ENTERED ALL  
THE NUMBERS, PRESS THE 'RETURN' KEY ON THE RIGHT  
HAND SIDE OF THE KEYBOARD.

IF YOU MAKE A MISTAKE PRESS THE 'BELL G' KEY IN THE  
MIDDLE OF THE KEYBOARD TO START AGAIN.

ANY NUMBER BETWEEN 0 AND 999 IS POSSIBLE,

-PRESS ANY KEY TO CONTINUE-

SCREEN DISPLAY #9

IF YOU ARE READY TO BEGIN, PRESS THE SPACE BAR.

IF YOU WOULD LIKE TO RE-READ THE INSTRUCTIONS  
PRESENTED TO THIS POINT, PRESS ANY OTHER KEY.

PRESS SPACE TO BEGIN, ANY OTHER KEY TO REVIEW THE  
INSTRUCTIONS - □

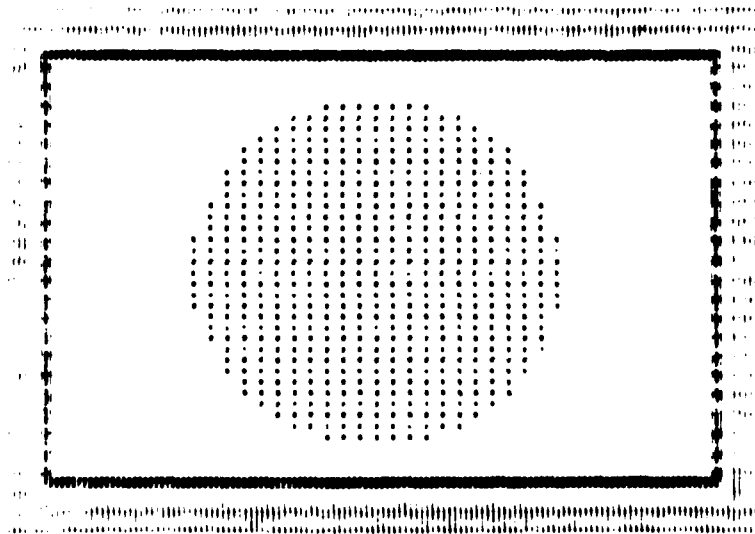
---

SCREEN DISPLAY #10

NOW WE ARE READY TO BEGIN THE TRIALS,

-PRESS ANY KEY TO CONTINUE-

## SCREEN DISPLAY #11\*



\* An array of 339 dots appear on the screen for 5 seconds. The circle is multicolored and the border is blue.

---

## SCREEN DISPLAY #12

YOUR ESTIMATE

  0

## SCREEN DISPLAY #13

YOUR ESTIMATE \_\_\_\_\_

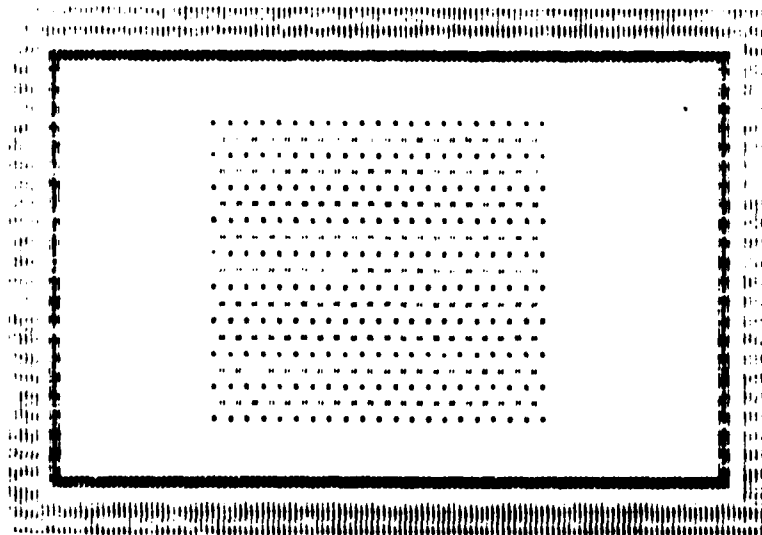
ACTUAL NUMBER OF DOTS \_\_\_\_\_

ERROR SCORE \_\_\_\_\_

-PRESS ANY KEY TO CONTINUE-

---

## SCREEN DISPLAY #14\*



\* An array of 305 dots appear on the screen for 5 seconds. The square is multicolored and the border is pink.

SCREEN DISPLAY #15

YOUR ESTIMATE

  0        

---

SCREEN DISPLAY #16

YOUR ESTIMATE

ACTUAL NUMBER OF DOTS

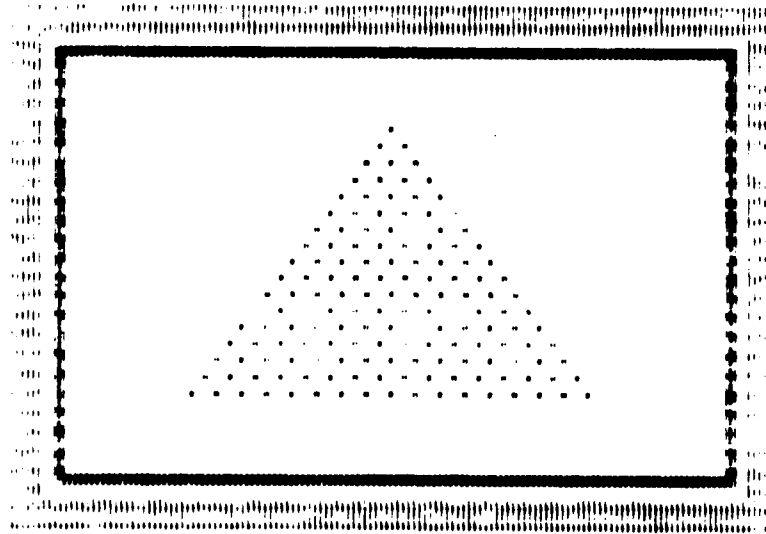
                  

ERROR SCORE

-PRESS ANY KEY TO CONTINUE-

## SCREEN DISPLAY #17\*



\* An array of 231 dots appear on the screen for 5 seconds. The triangle is multicolored and the border is orange.

---

## SCREEN DISPLAY #18

YOUR ESTIMATE

0



## SCREEN DISPLAY #19

YOUR ESTIMATE

---

ACTUAL NUMBER OF DOTS

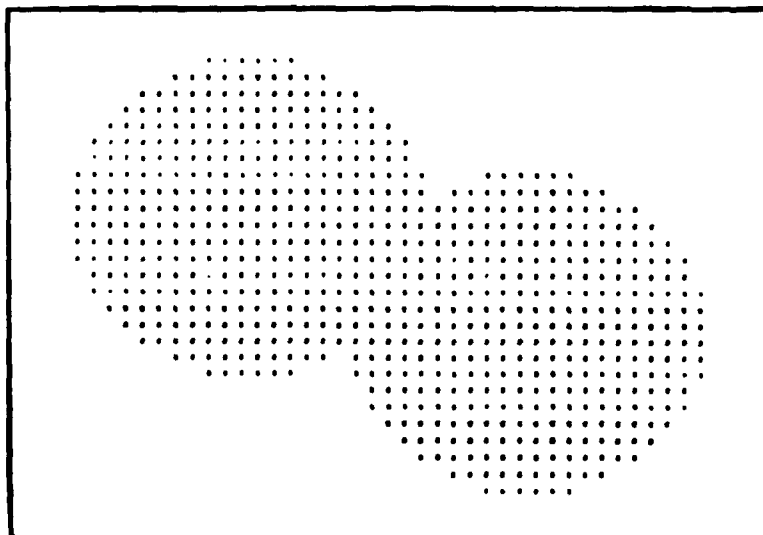
---

ERROR SCORE

---

-PRESS ANY KEY TO CONTINUE-

## SCREEN DISPLAY #20\*



\* A double circle arrangement of 678 multicolored dots appear on the screen for 5 seconds.

SCREEN DISPLAY #21

YOUR ESTIMATE

0      

---

SCREEN DISPLAY #22

YOUR ESTIMATE

\_\_\_\_\_

ACTUAL NUMBER OF DOTS

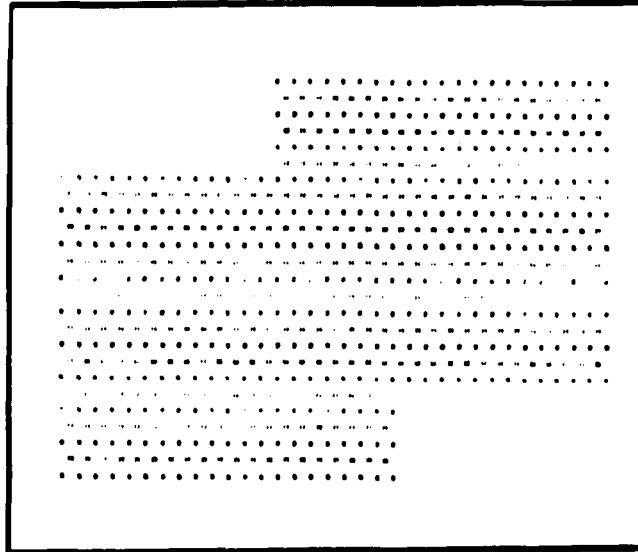
\_\_\_\_\_

ERROR SCORE

\_\_\_\_\_

-PRESS ANY KEY TO CONTINUE-

## SCREEN DISPLAY #23\*



\* A double square arrangement of 560 multicolored dots appear on the screen for 5 seconds.

---

## SCREEN DISPLAY #24

YOUR ESTIMATE

## SCREEN DISPLAY #25

YOUR ESTIMATE

---

ACTUAL NUMBER OF DOTS

---

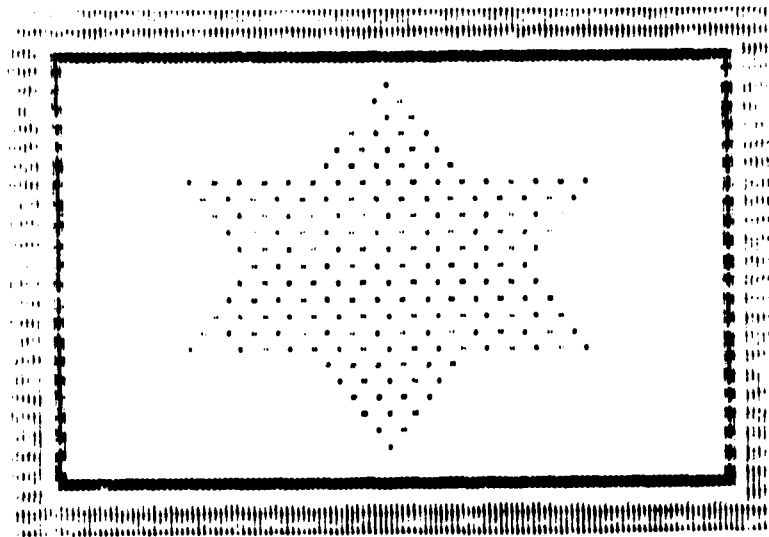
ERROR SCORE

---

-PRESS ANY KEY TO CONTINUE -

---

## SCREEN DISPLAY #26\*



\* An array of 308 multicolored dots in the shape of a star appear on the screen for 5 seconds. The border is green.

SCREEN DISPLAY #27

YOUR ESTIMATE

0          

---

SCREEN DISPLAY #28

YOUR ESTIMATE

ACTUAL NUMBER OF DOTS

ERROR SCORE

-PRESS ANY KEY TO CONTINUE-

SCREEN DISPLAY #29

YOU HAVE COMPLETED THE 6 PRACTICE TRIALS.

-PRESS ANY KEY TO CONTINUE-

---

SCREEN DISPLAY #30

THE TRIPLE TRIANGLE TEST OF PERCEPTUAL LOGIC (TTT)

-PRESS ANY KEY TO CONTINUE-

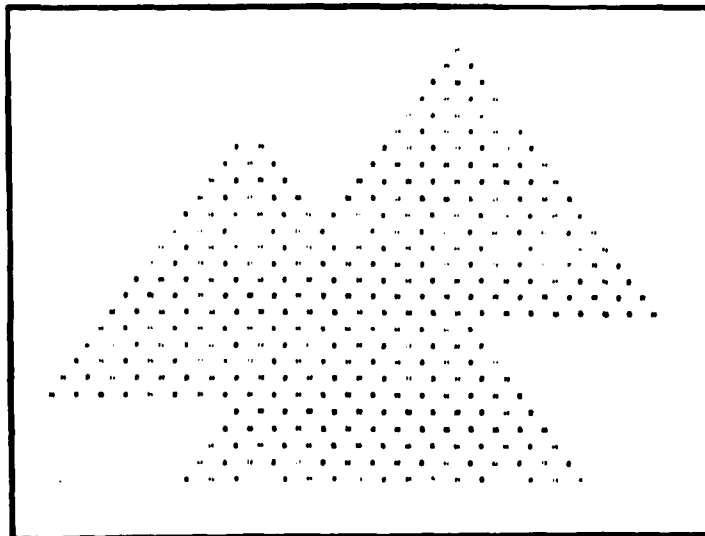
## SCREEN DISPLAY #31

YOU ARE NOW READY TO PARTICIPATE IN THE TRIPLE  
TRIANGLE TEST OF PERCEPTUAL LOGIC. THE ACCURACY  
OF YOUR ESTIMATE OF THE NUMBER OF DOTS IN THE  
NEXT ARRANGEMENT WILL REPRESENT YOUR PERCEPTUAL  
LOGIC ABILITY.

-PRESS ANY KEY TO CONTINUE-

---

## SCREEN DISPLAY #32\*



\* A triple triangle arrangement of 900 multicolored dots appears on the screen for 5 seconds.

SCREEN DISPLAY #33

YOUR ESTIMATE

  □            

SCREEN DISPLAY #34

THE COMPUTER IS CALCULATING 3 SCORES WHICH WILL  
BE DISPLAYED ON THE MONITOR SCREEN SHORTLY.

SCORE #1. YOUR TYPICAL PRACTICE SCORE. THIS IS  
YOUR AVERAGE SCORE ON THE 6 PRACTICE  
TRIALS.

SCORE #2. TTT ERROR SCORE. THIS IS THE SCORE  
YOU ACHIEVED ON THE TRIPLE TRIANGLE  
TEST OF PERCEPTUAL LOGIC.

SCORE #3. COMPUTER PREDICTION. THIS IS THE  
SCORE THE COMPUTER PREDICTED YOU  
WOULD ACHIEVE BASED UPON YOUR PERSONAL  
DATA AND YOUR PERFORMANCE ON THE PRACTICE  
TRIALS.

REMEMBER THE LOWER THE SCORE, THE BETTER YOUR  
PERFORMANCE.\*

-PRESS ANY KEY TO CONTINUE-

\* Statement flashes until the subject continues on  
to the next screen display.



## CONDITIONAL SCREEN DISPLAY C-1\*

|                             |                                       |
|-----------------------------|---------------------------------------|
| YOUR TYPICAL PRACTICE SCORE | <u>Ss Absolute Average Error</u>      |
| YOUR TTT SCORE              | <u>Ss Absolute Average Error +15%</u> |
| COMPUTER'S PREDICTED SCORE  | <u>Ss Absolute Average Error +30%</u> |

-PRESS ANY KEY TO CONTINUE -

\* This screen display presented to those subjects in the Surpassed Social Standard But Not Personal Standard conditions.

---

## CONDITIONAL SCREEN DISPLAY C-2\*

|                             |                                       |
|-----------------------------|---------------------------------------|
| YOUR TYPICAL PRACTICE SCORE | <u>Ss Absolute Average Error</u>      |
| YOUR TTT SCORE              | <u>Ss Absolute Average Error -15%</u> |
| COMPUTER'S PREDICTED SCORE  | <u>Ss Absolute Average Error -30%</u> |

-PRESS ANY KEY TO CONTINUE-

\* This screen display presented to those subjects in the Surpassed Personal Standard But Not Social Standard conditions.

## CONDITIONAL SCREEN DISPLAY D\*

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

PLEASE ANSWER THE FOLLOWING QUESTIONS.

-PRESS ANY KEY TO CONTINUE-

\* On all of the following conditional screen displays,  
the three scores or standards remain on the upper  
part of the monitor.

## CONDITIONAL SCREEN DISPLAY E

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

HOW SATISFIED ARE YOU WITH THE SCORE YOU ACHIEVED ON  
THE TEST OF PERCEPTUAL LOGIC. USING THE SCALE BELOW  
CHOOSE A NUMBER THAT BEST DESCRIBES YOUR LEVEL OF  
SATISFACTION. ENTER THAT NUMBER.

|   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|

Not At All  
Satisfied

Completely  
Satisfied

ENTER THAT NUMBER - □

## CONDITIONAL SCREEN DISPLAY F

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

WHAT GRADE DO YOU THINK YOU DESERVE FOR YOUR PERFORMANCE ON THE TEST OF PERCEPTUAL LOGIC. ENTER THE NUMBER WHICH BEST DESCRIBES YOUR FEELINGS ABOUT YOUR PERFORMANCE.

|           |           |         |      |         |
|-----------|-----------|---------|------|---------|
| EXCELLENT | VERY GOOD | AVERAGE | POOR | FAILURE |
| A         | B         | C       | D    | F       |
| 4         | 3         | 2       | 1    | 0       |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY G

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

SEVERAL STATEMENTS WILL APPEAR ON THE MONITOR, WE WOULD LIKE TO KNOW THE EXTENT TO WHICH THESE STATEMENTS DESCRIBE YOUR FEELINGS ABOUT YOURSELF. FOUR DEGREES OF AGREEMENT WILL BE PRESENTED FOLLOWING EACH STATEMENT,

|          |       |          |          |
|----------|-------|----------|----------|
| STRONGLY |       |          | STRONGLY |
| AGREE    | AGREE | DISAGREE | DISAGREE |

EXAMPLE: \_\_\_\_\_

|   |   |   |   |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

PLEASE ENTER THE NUMBER THAT CORRESPONDS TO YOUR LEVEL OF AGREEMENT WITH THE STATEMENT PRESENTED ON THE SCREEN, FOR EXAMPLE, IF YOU STRONGLY AGREE WITH THE STATEMENT, ENTER THE NUMBER 1.

-PRESS ANY KEY TO CONTINUE-

## CONDITIONAL SCREEN DISPLAY H

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

ON THE WHOLE I AM SATISFIED WITH MYSELF.

| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
|-------------------|-------|----------|----------------------|
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □  

---

## CONDITIONAL SCREEN DISPLAY I

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

AT TIMES I THINK I AM NO GOOD AT ALL.

| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
|-------------------|-------|----------|----------------------|
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY J

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----ALL IN ALL, I BELIEVE THE TRIPLE TRIANGLE TEST (TTT)  
IS A GOOD MEASURE OF PERCEPTUAL LOGIC.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY K

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

I FEEL THAT I HAVE A NUMBER OF GOOD QUALITIES,

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY L

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
 -----  
 I BELIEVE THAT PERCEPTUAL LOGIC IS AN IMPORTANT  
 DIMENSION OF INTELLIGENCE.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY M

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
 -----  
 I AM SOMEWHAT DISAPPOINTED WITH MY PERFORMANCE ON  
 THE TRIPLE TRIANGLE TEST.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY N

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

I AM ABLE TO DO THINGS AS WELL AS MOST OTHER PEOPLE.

| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
|-------------------|-------|----------|----------------------|
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY O

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

I FEEL I DO NOT HAVE MUCH TO BE PROUD OF.

| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
|-------------------|-------|----------|----------------------|
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY P

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----

-----

I CERTAINLY FEEL USELESS AT TIMES.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY Q

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----

-----

I AM PROUD OF MY PERFORMANCE ON THE TRIPLE TRIANGLE  
TEST.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □



## CONDITIONAL SCREEN DISPLAY R

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----I FEEL THAT I AM A PERSON OF WORTH, AT LEAST ON AN  
EQUAL PLANE WITH OTHERS.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY S

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

I WISH I WOULD HAVE MORE RESPECT FOR MYSELF.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY T

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

ALL IN ALL, I AM INCLINED TO THINK I AM A FAILURE.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY U

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_

YOUR TTT SCORE \_\_\_\_\_

COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

I TAKE A POSITIVE ATTITUDE TOWARD MYSELF.

|                   |       |          |                      |
|-------------------|-------|----------|----------------------|
| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

## CONDITIONAL SCREEN DISPLAY V

YOUR TYPICAL PRACTICE SCORE \_\_\_\_\_  
YOUR TTT SCORE \_\_\_\_\_  
COMPUTER'S PREDICTED SCORE \_\_\_\_\_

-----  
-----

I FEEL I COULD HAVE SCORED HIGHER ON THE TTT.

| STRONGLY<br>AGREE | AGREE | DISAGREE | STRONGLY<br>DISAGREE |
|-------------------|-------|----------|----------------------|
| 1                 | 2     | 3        | 4                    |

ENTER NUMBER - □

---

SCREEN DISPLAY #35

THANK YOU FOR PARTICIPATING IN THIS STUDY

-PRESS ANY KEY TO CONTINUE-

## SCREEN DISPLAY #36

WE ARE PLANNING TO CONDUCT FURTHER TESTING SESSIONS OF THE TTT AT BROOKLYN COLLEGE DURING THE NEXT FEW MONTHS. WE CANNOT, HOWEVER, GIVE CREDIT FOR THESE SESSIONS. HOW MUCH OF YOUR TIME WOULD YOU BE WILLING TO VOLUNTEER?

|                       |          |
|-----------------------|----------|
| 1 HOUR AND 30 MINUTES | <u>7</u> |
| 1 HOUR AND 15 MINUTES | <u>6</u> |
| 1 HOUR                | <u>5</u> |
| 45 MINUTES            | <u>4</u> |
| 30 MINUTES            | <u>3</u> |
| 15 MINUTES            | <u>2</u> |
| NONE                  | <u>1</u> |

ENTER NUMBER - ☐

---

## SCREEN DISPLAY #37

PLEASE TELL THE EXPERIMENTER YOU  
HAVE FINISHED.

APPENDIX D

EXPERIMENTAL QUESTIONNAIRES

COMBINED PUBLIC AND PRIVATE  
SELF-CONSCIOUSNESS SCALE

THIS STUDY IS PART OF A SERIES OF TESTS BEING CONDUCTED FOR THE PURPOSE OF CONSTRUCTING A NEW MEASURE OF I.Q. THE TASK YOU WILL BE ASKED TO PERFORM IS INTENDED AS A MEASURE OF ONE OF THE UNTAPPED ABILITIES THAT COMPRISE I.Q. THE ABILITY IS CALLED PERCEPTUAL LOGIC. VERY SIMPLY, YOU WILL BE ASKED TO GUESS THE NUMBER OF DOTS APPEARING ON A SCREEN.

THE TEST OF THIS ABILITY WILL BE CONDUCTED ON A COMPUTER. ALL INSTRUCTIONS WILL BE PROVIDED FOR YOU BY THE COMPUTER WHEN THE STUDY BEGINS.

BEFORE STARTING PLEASE ANSWER THE QUESTIONS THAT FOLLOW. PLEASE NOTICE THAT YOU HAVE BEEN ASSIGNED A NUMBER ON THE FRONT PAGE. YOUR ANSWERS WILL REMAIN COMPLETELY CONFIDENTIAL AND ANONYMOUS SO PLEASE ANSWER THESE QUESTIONS HONESTLY AND TO THE BEST OF YOUR ABILITY.

THANK YOU.

THE FOLLOWING PAGES CONTAIN A VARIETY OF STATEMENTS THAT MAY OR MAY NOT APPLY TO YOU. WE WOULD LIKE TO KNOW THE EXTENT TO WHICH THESE STATEMENTS REFLECT YOUR FEELINGS ABOUT YOURSELF. FOLLOWING EACH STATEMENT IS A FIVE-POINT SCALE RANGING FROM "EXTREMELY UNCHARACTERISTIC" TO "EXTREMELY CHARACTERISTIC."

|          |                               |   |   |   |                             |
|----------|-------------------------------|---|---|---|-----------------------------|
|          | 0                             | 1 | 2 | 3 | 4                           |
| EXAMPLE: | Extremely<br>Uncharacteristic |   |   |   | Extremely<br>Characteristic |

PLEASE READ EACH STATEMENT CAREFULLY AND TAKE YOUR TIME. IF YOU FEEL THE STATEMENT IS EXTREMELY CHARACTERISTIC OF YOUR FEELINGS OR BEHAVIOR PLEASE CIRCLE THE NUMBER 4. IF THE STATEMENT IS ONLY SOMEWHAT CHARACTERISTIC YOU MAY WANT TO CIRCLE THE NUMBER 3. READ EACH STATEMENT CAREFULLY AND CIRCLE THAT NUMBER WHICH BEST DESCRIBES HOW CHARACTERISTIC OF YOU THAT STATEMENT IS.

|                                                             |          |          |          |          |          |
|-------------------------------------------------------------|----------|----------|----------|----------|----------|
| I REFLECT ABOUT<br>MYSELF A LOT.                            | <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I'M CONCERNED<br>ABOUT WHAT OTHER<br>PEOPLE THINK OF<br>ME. | <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I'M GENERALLY<br>ATTENTIVE TO MY<br>INNER FEELINGS.         | <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I USUALLY WORRY<br>ABOUT MAKING A<br>GOOD IMPRESSION.       | <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |

I'M ALWAYS TRYING  
TO FIGURE MYSELF  
OUT.

|                               |          |          |          |                             |
|-------------------------------|----------|----------|----------|-----------------------------|
| <u>0</u>                      | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u>                    |
| Extremely<br>Uncharacteristic |          |          |          | Extremely<br>Characteristic |

I'M CONCERNED  
ABOUT THE WAY I  
PRESENT MYSELF.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M CONSTANTLY  
EXAMINING MY  
MOTIVES.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M SELF-CONSCIOUS  
ABOUT THE WAY I  
LOOK.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M ALERT TO  
CHANGES IN MY  
MOOD.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M USUALLY AWARE  
OF MY APPEARANCE.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I TEND TO  
SCRUTINIZE MYSELF.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

ONE OF THE LAST  
THINGS I DO BEFORE  
LEAVING THE HOUSE IS  
LOOK IN THE MIRROR.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

GENERALLY, I'M AWARE  
OF MYSELF.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M CONCERNED ABOUT  
MY STYLE OF  
DOING THINGS.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M AWARE OF THE WAY  
MY MIND WORKS WHEN  
I WORK THROUGH  
A PROBLEM.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I'M OFTEN THE  
SUBJECT OF MY  
OWN FANTASIES.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|

I SOMETIMES HAVE THE  
FEELING THAT I'M OFF  
SOMEWHERE WATCHING  
MYSELF.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|----------|



**ROSENBERG NEW YORK STATE  
SELF-ESTEEM SCALE**

THE FOLLOWING PAGES CONTAIN A VARIETY OF STATEMENTS THAT MAY OR MAY NOT APPLY TO YOU. WE WOULD LIKE TO KNOW THE EXTENT TO WHICH YOU AGREE WITH THESE STATEMENTS ABOUT YOURSELF. FOLLOWING EACH STATEMENT IS A FOUR-POINT SCALE RANGING FROM "STRONGLY AGREE" TO "STRONGLY DISAGREE."

EXAMPLE:      1            2            3            4  
                  Strongly    Agree       Disagree   Strongly  
                  Agree                                   Disagree

PLEASE READ EACH STATEMENT CAREFULLY. IF YOU STRONGLY AGREE WITH THE STATEMENT CIRCLE THE NUMBER 1. AGAIN, READ EACH STATEMENT CAREFULLY AND CIRCLE THAT NUMBER WHICH BEST DESCRIBES YOUR AGREEMENT OR DISAGREEMENT WITH THE STATEMENT AS IT APPLIES TO YOUR FEELINGS ABOUT YOURSELF.

|                                                                                     |          |          |          |          |
|-------------------------------------------------------------------------------------|----------|----------|----------|----------|
| ON THE WHOLE I AM<br>SATISFIED WITH MYSELF.                                         | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| AT TIMES I THINK I<br>AM NO GOOD AT ALL.                                            | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I FEEL THAT I HAVE A<br>NUMBER OF GOOD QUALITIES.                                   | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I AM ABLE TO DO THINGS AS<br>WELL AS MOST OTHER PEOPLE.                             | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I FEEL I DO NOT HAVE<br>MUCH TO BE PROUD OF.                                        | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I CERTAINLY FEEL<br>USELESS AT TIMES.                                               | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I FEEL THAT I'M A<br>PERSON OF WORTH, AT LEAST<br>ON AN EQUAL PLANE WITH<br>OTHERS. | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I WISH I COULD HAVE<br>MORE RESPECT FOR MYSELF.                                     | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| ALL IN ALL, I AM<br>INCLINED TO FEEL I AM<br>A FAILURE.                             | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| I TAKE A POSITIVE<br>ATTITUDE TOWARD MYSELF.                                        | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |

POST EXPERIMENTAL QUESTIONNAIRE

POST EXPERIMENTAL QUESTIONNAIRE

AS YOU WERE INFORMED AT THE BEGINNING OF THIS SESSION, THIS EXPERIMENT WAS DESIGNED TO HELP PSYCHOLOGISTS CONSTRUCT A NEW AND BETTER MEASURE OF INTELLIGENCE. IT IS, THEREFORE, VERY IMPORTANT FOR US TO DETERMINE WHETHER THE INSTRUCTIONS WERE CLEAR TO YOU. NATURALLY, IF THE WORDING IS CONFUSING, WE CANNOT RELY ON THE RESULTS WE GET. IN ORDER TO DETERMINE WHETHER FURTHER CHANGES NEED TO BE MADE, WE WOULD LIKE YOU TO ANSWER A FEW MORE QUESTIONS.

1. HOW WOULD YOU DEFINE THE TERM "ERROR SCORE?" \_\_\_\_\_  
\_\_\_\_\_.
2. WHAT IS THE BEST ERROR SCORE POSSIBLE ON THE TTT - THE IDEAL SCORE?  
\_\_\_\_\_.
3. WHAT DO YOU PERSONALLY CONSIDER TO BE A GOOD SCORE ON THE TTT?  
\_\_\_\_\_.
4. PLEASE FILL IN THE BLANKS WITH NUMBERS: I WOULD HAVE BEEN VERY SATISFIED WITH MY ERROR SCORE ON THE TTT IF IT HAD FALLEN BETWEEN \_\_\_\_\_ AND \_\_\_\_\_.
5. WHAT SCORE DID YOU GET ON THE TTT? \_\_\_\_\_
6. WHAT WAS YOUR AVERAGE PRACTICE SCORE? \_\_\_\_\_
7. WHAT SCORE DID THE COMPUTER PREDICT YOU WOULD GET? \_\_\_\_\_
8. WAS THE SCORE YOU ACHIEVED ON THE TTT BETTER OR WORSE THAN YOU EXPECTED IT TO BE? BETTER \_\_\_\_\_, WORSE \_\_\_\_\_.
9. WAS THE SCORE YOU ACHIEVED ON THE TTT BETTER OR WORSE THAN YOUR AVERAGE PRACTICE SCORE? BETTER \_\_\_\_\_, WORSE \_\_\_\_\_.
10. WAS THE SCORE YOU ACHIEVED BETTER OR WORSE THAN THE COMPUTER PREDICTED IT WOULD BE? BETTER \_\_\_\_\_, WORSE \_\_\_\_\_.
11. YOU WERE ASKED TO RATE YOUR SATISFACTION WITH THE SCORE YOU ACHIEVED ON THE TTT. I AM NOT INTERESTED IN THE NUMBER YOU GAVE FOR AN ANSWER BUT, RATHER, ON HOW YOU DECIDED ON THAT NUMBER. HOW DID YOU DETERMINE YOUR LEVEL OF SATISFACTION? \_\_\_\_\_  
\_\_\_\_\_.

12. YOU WERE ASKED TO GIVE YOURSELF A GRADE (A, B, C, D, F) FOR YOUR PERFORMANCE ON THE TTT. I AM NOT INTERESTED IN WHICH GRADE YOU GAVE YOURSELF BUT, RATHER, WHICH OF THE FOLLOWING SCORES WAS MOST IMPORTANT TO THIS DECISION?

YOUR AVERAGE ON THE 6 PRACTICE TRIALS. \_\_\_\_\_

THE COMPUTER'S PREDICTION \_\_\_\_\_

THE IDEAL ERROR SCORE \_\_\_\_\_

OTHER (PLEASE EXPLAIN BELOW) \_\_\_\_\_

13. HOW IMPORTANT IS IT TO YOU THAT YOU DO WELL ON TASKS THAT MEASURE INTELLIGENCE? CIRCLE A NUMBER.

|                            |   |                       |   |   |                   |   |
|----------------------------|---|-----------------------|---|---|-------------------|---|
| 1                          | 2 | 3                     | 4 | 5 | 6                 | 7 |
| Not at<br>All<br>Important |   | Somewhat<br>Important |   |   | Very<br>Important |   |

14. DID YOU NOTICE A MIRROR? YES \_\_\_\_\_, NO \_\_\_\_\_.
15. DID YOU KNOW YOU WERE BEING OBSERVED? YES \_\_\_\_\_, NO \_\_\_\_\_.

APPENDIX E

MISCELLANEOUS

## DEBRIEFING STATEMENT

The first thing you ought to know is that this experiment, and the test you took (the TTT), had absolutely nothing to do with your I.Q., intelligence, or perceptual logic. The term "perceptual logic" was coined by the experimenter. Being able or unable to guess the number of dots presented on the computer screen measures only your guessing ability. In fact, the score you achieved on the TTT, as well as the score the computer predicted you would attain, were what psychologists commonly refer to as "false feedback." That is, they were decided in advance by the experimenter and preprogrammed into the computer before any data was gathered about you. These scores are a part of the experimental design and in no way reflect information about your ability. Are there any questions to this point?

Being a psychology student you have probably heard that researchers, particularly in the field of psychology, don't always tell the whole truth to their subjects. I would like to explain why this is often necessary, but first I would like to explain the true purpose of this study so that you may come to understand the often times use of deception.

I am conducting research in an area within the field of social psychology called objective self-awareness. Experimenters in this area have found that such devices as mirrors and TV cameras tend to make a person self-aware. That is, the person focuses his or her attention on whatever aspect of his or her self that is most apparent at the moment. For instance, if a young woman has recently finished a game of racketball the mirror or TV camera will cause her to focus her attention on her sports ability. When this occurs a comparison takes place between what

we call her "real-self" - the ability she exhibited during the game - and what is called an "ideal-self" - her ideal racketball game. Researchers have demonstrated that this comparison process is most often accompanied by negative self-feelings and a general decrease in self-esteem. In most of these past studies the experimenter has made the ideal-self very apparent to subjects. One of the purposes of this study was to determine whether or not people normally compare to these ideals. A second purpose was to determine if mirrors and TV cameras have the same effect on this self-evaluation process. Are there any questions at this time?

After you guessed the number of dots in the triple triangle two error scores were presented to you in addition to your TTT score: 1) your average practice score, and 2) the computer's prediction regarding the score you should have achieved. In addition, another score was known to you - the perfect score of zero errors. Each of these scores represents a standard against which you could have evaluated your TTT score. Your average score was meant to represent a personal standard. It was your past experience with the aspect of intelligence you were supposedly focusing upon. The computer standard was intended to represent a social standard - the standard you believe other people may be using in their evaluation of your ability. The ideal score of zero was intended to represent the ideal standard. Which of these standards you focused upon was hypothesized to be a function of two factors: 1) the situation confronting you, and 2) your level of public and private self-consciousness. The situation confronting subjects in this experiment varied. Some subjects worked in front of a mirror, others were aware of a TV camera recording their responses and televising these responses to



an experimenter in an adjoining room. Still other subjects served as a control, neither aware of a mirror nor a TV camera. Self-consciousness was measured by the questions you answered before you entered the computer room.

I predicted that people facing a mirror would tend to compare their performance on the TTT with their personal standard - their average on the six practice trials. Subjects aware of a TV camera on the other hand were believed to focus upon the social standard - the computer prediction. Those subjects who served as controls could have focused on either of these standards.

That pretty much explains the purpose of this study. One last thing you should understand is why we felt it necessary to tell you that this experiment had to do with intelligence testing - that is, why it was necessary to deceive you. We needed a self-dimension that you would think of as important to your self-concept. Intelligence was a dimension that we could be fairly certain fit this criterion. We also had to be certain that the standard you used to determine if your performance was adequate was that standard that you would use in a more natural setting. If we had told you all you know now we could not have been certain that your responses were really reflecting a "normal" response. Being aware of the fact that your intelligence was not really being measured could easily have influenced your responses. It was very important that you be concerned about the self-dimension under examination and highly motivated during this study.

Now that I've explained the actual purpose of this experiment I would appreciate your not discussing this study with other students who may in the near future serve as subjects. Are there any questions you

might like to ask about anything I've told you or anything you do not understand? Is there perhaps something you were asked to do during the experiment that hasn't been explained to your satisfaction? Thank you for participating in this study.

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