INVESTIGATION OF THE ENGAGEMENT STYLE CONSTRUCT: A SELF-SCHEMA APPROACH

By

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ABSTRACT

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The nature of the engagement style (ES) construct, an individual difference variable related to the active-reactive dimension and perceptions of doing and being done to, was explored in a multitrait-multimethod matrix and an extrinsic convergent and discriminant correlation matrix. According to the ES construct, individuals experience engagement with the environment as agency, an active style; patience, a reactive style; or interaction, a balance of agency and patience. In this study, a new style of engagement, active in nature and involving the perception of acting in connection with the environment, was proposed and labelled communion. In contrast to the original conception that ES is organized as a single, bipolar dimension, it also was proposed that individuals construe ES as three independent dimensions, namely, agency, communion, and patience. The nature of the ES construct was explored using the original measure, the Test of Engagement Style (TES), and two new measures based on Markus' self-schemata model. The new measures consist of response times to affirmative self-referent decisions and self-ratings on agency, communion, and patience traits.

The results confirm the original ES construct and the TES as a reliable and valid measure of the construct. The data show that ES is perceived by respondents as a single, bipolar dimension, anchored by agency and patience and related to the active-reactive dimension. The

data also confirm that the TES reliably measures agency, the perception of acting or doing to, and patience, the perception of reacting or being done to. The TES does not measure a third, unique engagement style. Neither the self-ratings nor the reaction times to the agency, communion, and patience traits measure engagement style as defined by the TES. The agency, communion, and patience self-ratings appear to measure Bakan and Block's notions of agency and communion and a third variable closely tied to passivity. The agency, communion, and patience reaction times did not measure three variables, but seem to have measured a general self-schema associated with self-perceived psychological well-being. Research is needed to explore the validity of using reaction times to self-referent decisions as a behavioral measure of personality constructs.

To all my teachers, past and present

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INTRODUCTION

The present study was conducted in order to explore the nature of engagement style, an individual difference construct related to the active-reactive dimension and to perceptions of doing and being done to (McKinney, 1978a, 1978b, 1978c, 1980, 1981). The Test of Engagement Style (McKinney, 1978a) and two new measures developed to investigate the construct were examined in a multitrait-multimethod matrix and an extrinsic convergent and discriminant correlation matrix. Two issues concerning engagement style and the scoring of the Test of Engagement Style also were raised and investigated in the present study.

Given that all individuals interact with their environments, it is of interest to know whether people perceive that they do so according to predictable patterns. McKinney has found that most people perceive they have regular styles of being engaged with their environments. The nature of the differences and similarities among these perceived styles of engagement appears to be related to the active-reactive behavioral dimension and to perceptions of acting on the environment and being done to by it.

Elaborating this concept, McKinney proposed a personality construct centered on differences in individuals' perceptions of being engaged with the environment. These differences are proposed to be related to perceptions of three related engagement style orientations: a) agency, an active style, b) patience, a reactive style, and

c) interaction, a balance of being active and reactive. He has investigated this concept using a semi-projective measure, the Test of Engagement Style (McKinney, 1978a, 1981), which is internally reliable and has received support as a valid test of the construct.

Recently, questions were raised concerning the nature of the dimensionality of the engagement style construct and the scoring procedure of the Test of Engagement Style (Reinhart, 1983a). A new style of engagement which is active in nature and involves perception of acting in connection with the environment also was developed and labelled communion (Reinhart, 1983a). In contrast to the accepted construction of engagement style, these newly raised issues concern the possibility that individuals construe engagement style as three independent dimensions, namely, agency, communion, and patience.

The purpose of the study reported here was threefold. First, the validity of the Test of Engagement Style and two new measures of engagement style were explored in a multitrait-multimethod matrix. Second, the engagement style construct as originally proposed was explored in the multitrait-multimethod matrix and an extrinsic validity correlation matrix. Third, the validities of the proposed changes in the engagement style construct were investigated in the multitrait-multimethod matrix and the extrinsic validity matrix.

The Engagement Style Construct

Engagement style is defined by McKinney (1978a, 1978b, 1978c, 1980, 1981) as a personality construct which characterizes how a person perceives him or herself experiencing engagement with the

environment. The agent perceives that she or he is a doer, someone who predominantly acts on the environment and is rarely done to. The patient is the psychological opposite of the agent and perceives himself or herself as acted upon by the environment. The interactor (previously labelled communion) is a person who perceives that he or she can be either actor or reactor, depending on the situation, and is engaged with the environment with a balance of the two extreme forms of engagement style.

Measurement of Engagement Style: The Test of Engagement Style

Engagement style is measured by The Test of Engagement Style (TES) (McKinney, 1978a), a semi-projective test. It consists of 24 critical stimulus pictures of either a boy (Billy), used with male respondents, or a girl (Sally), used with female respondents. In the cards Billy or Sally is depicted involved in activities typical of older school-aged children, and the main stimulus character is always shown with a peer of the same age who is of the same or other gender. The Test of Engagement Style includes six filler cards to which respondents generally give agent replies and two practice cards, which are the first given. Except for the gender of the main stimulus character, the cards which depict Billy or Sally are identical.

During administration of the test, the experimenter directs the subject to "Tell me what's happening in each picture." The subject's response is then always scored to indicate perception of either doing, being done to, or both doing and being done to. The subject's reply is scored agent if the primary character is the subject of an active verb, a verb expressing desire, wish, or thought, or is simply

described. If the primary character is the object of another's action, the object of the sentence, the object of a preposition, the object of a verb suggesting desire, wish, or thought, the subject of a passive verb, or is having something done to him or her, the subject's reply is scored as patient. The response is scored agent-and-patient if the primary character is both a subject and an object of the reply sentence or is both doing and being done to. All agent scores, including half of the agent-and-patient scores, are summed for the subject's single score. Subjects are tested individually, and the testing normally takes 15 min.

Reliability. McKinney (1980, 1981) has reported inter-scorer agreement typically approaches 90%. He also reported split-half reliability coefficients of .81 to .91 in a study involving small groups of 300 elementary and high school students, and internal reliability (Cronbach's alpha) of .73 in a study of 30 female college students. Test-retest reliabilities for the current form of the test have not been published, but test-retest (6-week interval) reliability for the previous form of the TES (Form B) ranged from .74 to .79. Other reliabilities reported for Form B are consistent with those given for the final version of the TES.

Validity. McKinney (1978b, 1980, 1981), McKinney and Moore (1978), and Moore and McKinney (1979) conducted and reported a series of studies examining several variables which they predicted to be related to engagement style in certain ways. These variables included family size, birthorder, age changes, parental employment, gender, sex-role expectations, and sex-role self-descriptions.

Family size. McKinney (1980), in a study involving 51 male college students, predicted and found a significant difference in the variances of the agent scores of those students who were from large families (five or more children) and those who were from relatively small (four or fewer children) families. Males from larger families had more extreme scores on the TES (σ^2 = 32.48), than males from smaller families, $F(25, 69) = 1.92$, $p < .001$, who tended to be in the midrange of scores, (σ^2 = 16.84), That is, as expected, males from larger families tended to be either agent or patient, and males from smaller families tended to be in the range of interaction. Birth order was not a factor in degree of agency.

Age changes. Three hundred children in grades 2, 7, and 12 from two communities were examined using the TES. A 3-way (gender X community X grade) analysis of variance supported a predicted main effect for grade, $F(2, 288) = 7.84$, $p < .005$. TES scores dropped from Grade 2 to Grade 7 and showed a slight increase from Grade 7 to Grade 12. As McKinney (1980, 1981) noted, the drop in TES at Grade 7 coincides with a marked increase in peer conformity (Costanzo & Shaw, 1966), which is a patient style of engagement.

Family setting and parental employment. Fifty male and female students in the twelfth grade took the TES and answered questions concerning their mother's and father's employment statuses (McKinney, 1980). Miller and Swanson's (1958) definition of family setting was used by McKinney in his classification of social integration setting, which was based on paternal employment. Bureaucratic setting

describes the family setting if the father of the family is employed by others; the father of the entrepreneurial family setting is self-employed. Mother's employment was determined to be either in or outside the home, and either part- or full-time.

An interaction of integration setting and socioeconomic status was found to significantly differentiate males' agency scores ($F(2,38)=3.24$, $p < .05$), and maternal occupation significantly differentiated females' agency scores ($F(1,46) = 4.98$, $p < .05$). The data indicate that males whose fathers held entrepreneurial jobs of a relatively high socioeconomic status (doctors, lawyers) were likely to have high agent scores and males whose fathers held relatively high socioeconomic status bureaucratic jobs (teachers, librarians as compared to laborers) were likely to have low agency scores. Females whose mothers worked outside the home had significantly higher agency scores ($M = 11.08$) than those whose mothers did not work ($M = 8.06$). Paternal occupation was not related to females' TES scores and maternal occupation was not related to males' TES scores.

Differences based on gender and sex role. Data derived from the TES have consistently indicated no difference between males' and females' general agency scores (McKinney, 1980, 1981). In a study of gender and sex-role related differences in college students' engagement style, McKinney and Moore (1978) replicated these findings. However, when replies were examined for inclusion of the stimulus character's peer, the authors found that males and females responded to the TES differently.

Recall that the stimulus character and a peer are sketched in each

of the TES cards. Respondents sometimes mention only the stimulus character (nonsocial reply), other times both characters are mentioned (social reply). McKinney and Moore scored all nonsocial replies (α = .90) and found no difference in number of nonsocial replies. However, women had higher agency scores than did the men, if only the nonsocial replies were considered (Z = 2.41, p < .01); and women were significantly more agent when the peer in the stimulus card was a female than when the peer was a male (t = 7.00, p < .001).

In order to test the hypothesis that the women in the study were conforming to expectations consistent with sex-role stereotypes, i.e., men prefer them to be less agent in their presence than when the women are alone or in the presence of a female, the authors conducted a second study (Moore & McKinney, 1979). In this study 30 males and 30 females took the TES and the Bem Sex Role Inventory (Bem, 1974). The Bem Sex Role Inventory (BSRI) was completed twice by the respondents under different conditions: 1) Subjects described themselves on the BSRI, and 2) Subjects described the ideal of their sex as they believed it was held by the other sex, i.e., men described "women's ideal man" and women described "man's ideal women."

TES scores were correlated with the respondents' self-ratings of masculinity, femininity, and androgyny, scored by the subtractive method. The TES scores were unrelated to each of the BSRI scores. The difference between the androgyny scores from the two scorings on the BSRI was then computed for both males and females such that a negative difference indicated that the respondent saw him or herself as less sex-role stereotyped than the other gender's ideal. The

difference was then correlated with the agency scores given in response to the cards where the peer was of the other gender. Males scores were unrelated, r = .10, n.s. Females' scores were significantly related, r = .46, $p < .005$. That is, females who believe that men prefer them to be more sex-typed than they actually are tend to be less agent in the presence of males than when alone or in the presence of females. However, this finding provides no support for the more general thesis that agency and patience as conceptualized in the framework of engagement style are associated with masculinity and femininity, respectively.

Summary. Engagement style appears to be a meaningful personality construct reliably measured by the TES, which has been shown to be distinct from the notion of sex-role orientation as measured by the BSRI. It has also been shown that engagement style is related to family size for college males, paternal work for high school males, maternal work for high school females, age change in early adolescence, and the association of college females' perceptions of man's ideal female sex role and their own androgyny.

Reconceptualizations of the Engagement Style Construct

Two reconceptualizations of the engagement style construct have recently been proposed (Reinhart, 1983a). The two reformulations are centered on the meaning of the agent-and-patient replies given to the TES. Because a psychological construct and its measurement are integrally related, the two proposed revisions also have implications for the measurement and scoring of engagement style. The construct reformulations and the related implications for its measurement and

scoring will be reviewed and elaborated here, and research supporting the reformulations will be discussed.

The first reconceptualization focuses on the possibility that the engagement styles may be perceived by respondents as independent dimensions. This is in contrast to the accepted engagement style construct which states that engagement style is a single bipolar dimension anchored by agency and patience with a midrange defined by interaction. The reconceptualization of the nature of the dimensionality of engagement style has implications for the scoring of the TES and the formulation of a new style of being engaged with the world.

The second reconceptualization of the construct follows from the proposed independence of the styles of engagement and involves the definition of a new engagement style. The newly defined engagement style is based on respondents' perceptions of simultaneously experiencing agency and patience, and is reflected in an agent-and-patient response to a single TES card. In this TES response, agency and patience are projected simultaneously; and it was suggested that neither agency nor patience were perceived, but an interaction of the two, which implies an engagement style qualitatively distinct from either agency or patience. Further, it was suggested that the newly defined engagement style is active in nature and is experienced as neither <u>acting on</u> nor <u>being acted upon</u>. Rather, the engagement style is proposed to be experienced as <u>acting in connection with</u> and has been labelled <u>communion.</u> Following from the formulation of the independence of engagement styles and the new conceptualization of the

communion style, a new scoring procedure for the TES also was proposed (Reinhart, 1983a).

Independence of Engagement Styles

The accepted engagement style construct (AESC) includes the concept that engagement style represents a perceptual, bipolar continuum wherein two positive extremes, agency and patience, anchor the ends of the continuum and interaction defines the midrange. Further, the bipolarity of agency and patience implies that being patient is dependent upon not being agent. It is a formulation similar to measuring masculinity and femininity on a single bipolar continuum, such that conceptually one cannot be both masculine and feminine. The reconceptualization of the dimensionality of engagement styles proposes that the styles are perceived by respondents as independent dimensions. That is, it is suggested that being agent has no psychological implication for being patient, and each engagement style is perceived as a single dimension with ends anchored by being and not being. The independence of perceptions of agency and patience appears to be mathematically illogical, but can be compared to similar psychological constructs which have been empirically supported. For example, several researchers (e.g., Bradburn, 1969; Costa & McCrae, 1980) have found that perceptions of experiencing positive affect (pride, excitement, pleasure) and negative affect (boredom, loneliness, depression) are orthogonal, yet, both contribute to overall estimates of happiness. Similarly, it has been proposed that perception of each engagement style is independent of perceptions of each of the others,

yet all contribute to an overall perception of how one is engaged with the world.

Preliminary Support for the Independence of Engagement Style. In an earlier engagement style study, the issue of the dimensionality of engagement style was explored (Reinhart, 1983a). One test for dependence of engagement styles involves the relationship among the values of the agent and patient styles. That is, if engagement style is a bipolar continuum, agency and patience should be strongly and negatively correlated. This predicted association was examined in a study involving 277 male and 267 female college students (Reinhart, 1983a). The specific nature of this study will be reviewed in later sections of this paper. Here, only the details of the study relevant to the proposed independence of engagement style will be discussed.

Based on two previous studies (Reinhart, 1983a), five agent and five patient trait adjectives were selected and embedded within 67 other trait adjectives. Respondents were asked to rate each trait for degree of self-descriptiveness on an 11-point Likert-type scale. Cronbach's alpha for the males' agent scale was .72, and their patient scale alpha was .61; the females' agent scale alpha was .69, and their patient scale alpha was .50. Zero-order, scale correlations uncorrected for attenuation were then computed and examined for evidence of dimensionality. Agent and patient self-descriptive scale scores were uncorrelated for both samples ($\bar{r}_M$ = .07; $\bar{r}_F$ = .08).

Whereas the alphas of the scales were only moderately high, it is possible that the real relationship between the variables was masked due to measurement error (Ghiselli, Campbell, & Zedeck, 1981). That

is, it is possible that a real association between the variables exists and was not evident in the data due to error of measurement. To examine the relationship between the two variables with no attenuation for measurement error, the correlations were corrected for attenuation. After correcting for attenuation, agent and patient scale scores were slightly and positively correlated, ($\bar{r}_M$ = .11; $\bar{r}_F$ = .14).

The data from the students' self-ratings seem illogical on appearance. One would have expected that doing or acting upon is the opposite of being done to or being acted upon. However, the data indicate that agency and patience are not negatively related when college students describe themselves.

The observation that individuals' self perceptions often contain apparently contradictory ideas can be found frequently in the literature (e.g., Jones, Sensenig, & Haley, 1974). Recognizing the regularity of the phenomenon, Jones et al. (1974) discussed a paper by Gergen in which Gergen argued for acceptance of the fact that inconsistencies of this nature are commonplace in self-conception (Gergen, 1968, cited in Jones et al, 1984). Jones et al. quoted Gergen as follows; it . . . "seems that the more "natural" state of the organism is one which includes numerous disparities and contradicting tendencies" (1974, p. 44). It appears college students' perceptions of the agent and patient engagement styles are no exception.

Implications for Scoring Engagement Style. The most important implication derived from the preliminary evidence on dimensionality of engagement style is centered on the scoring of the three types of

replies given to the TES. These replies include those that are only agent, those that are only patient, and those that are an agent-and-patient reply to a single card. In the present scoring system, all agent scores, including half of the agent-and-patient scores are summed for a single score, degree of agency. To examine the possibility that respondents perceive three independent dimensions, the three types of TES replies must be scored separately, i.e., agent scores, agent-and-patient scores, and patient scores must be summed individually. This scoring procedure would yield three independent scores for each respondent, the meanings of which will be elaborated in the following sections of this paper. Here the revised scoring procedure will be introduced.

If agency and patience are perceived to be experienced as independent dimensions, one can perceive that one is high or low on each style, independently of perceptions of other styles. It is possible to perceive one's engagement style as high on one style, low on all styles, or high on two or more engagement styles. That is, respondents could perceive themselves as being high on only one engagement style. These people would have an agent style, a patient style, or a style consistent with giving a large number of agent-and-patient replies. This last style of engagement is the communicant style, according to the proposed engagement style conceptualization (PESC). Second, if the styles are independent, one can also be low on all styles. I will call this condition aschematic on engagement style. Finally, if the styles are independent, it is also possible to perceive that one is high on more than one style. That is, one could

perceive that one is both an agent and a communicant or both an agent and a patient, for example. The meaning according to the PESC of perceiving oneself as high on both agency and patience will be discussed below. Implications for other possible combinations of styles of engagement also will be discussed, but in a later section of this paper.

Implications for Agency, Interaction, and Patience. Following from the PESC scoring of independent agent and patient dimensions, one can score relatively high on both agency and patience. According to the PESC, this person would be called an interactor. Here interactor is meant to have a meaning very similar to the definition given to the term by the AESC. According to the PESC, interaction is a style of engagement wherein one perceives that he or she is both agent and patient and can be engaged with the environment with either style depending on the situation. In this the PESC is consistent with the AESC. However, the PESC bases the notion of interaction on the independence of agency and patience, and in this it differs from the AESC. According to the AESC, interaction is defined by the midrange of the bipolar dimension of engagement style which is anchored by agency and patience. In contrast to the PESC, interaction as defined by the AESC is based on the dependence of agency and patience. According to both conceptualizations, the interactor is a person who can engage the world according to either an agent or a patient engagement style, depending on the perceived situation.

The proposed reformulation of the dimensionality of engagement style carries no further implication for the definitions of agency and

patience. That is, the essence of agency and patience as originally defined by McKinney (e.g., 1981) are maintained in the reformulation of the construct, with the exception of the issue of dimensionality. According to the PESC, the agent perceives being engaged with the environment as an actor, a doer, one who perceives that he or she does to the environment and is rarely done to. The patient, according to the PESC, perceives being engaged with the environment as a reactor, someone who is primarily done to and rarely is an actor. That is, the essence of being agent and patient, as originally defined, are maintained in the PESC. The one change in the PESC which concerns the agency and patience conceptualizations is the proposition that individuals perceive that the two engagement styles are essentially independent dimensions.

Acting in Connection With: The Communion Engagement Style

As stated above, the PESC suggests an engagement style not previously investigated. The new engagement style was labelled communion and was proposed to be reflected in the agent-and-patient replies given to a single engagement style experience as reflected in a single TES situation. The description of this engagement style and its relationship to the TES was developed in an earlier paper (Reinhart, 1983a) and will be developed and elaborated further here.

Scoring of the TES. The notion of the communicant engagement style is derived from the agent-and-patient response given to a single TES card. The meaning and the scoring of this response varies according to the AESC and the PESC; and the differential interpretation

of this type of reply is integrally related to the communicant engagement style, the second new formulation of the PESC.

According to both the AESC and the PESC, when the TES is scored, "Sally is swinging on the swing" is an agent reply; "Sally's friend is pushing her on the swing" is a patient reply; and "Sally is swinging on the swing, and her friend is giving her a push" is an agent-and-patient reply.

When the TES is scored according to the AESC, the agent-and-patient replies are scored as one half of an agent score, and all agent scores are summed for degree of agency. According to the AESC, the respondent who gives 12 agent replies and 12 patient replies on the 24 critical cards will receive the same score on the TES as the person who gives 24 agent-and-patient replies to the critical cards.

When the TES is scored according to the PESC, replies that are only agent are summed for degree of agency; replies that are agent-and-patient are scored for degree of communion; and replies that are only patient are scored for degree of patience. That is, the respondent gets three scores: a) degree of agency, b) degree of communion, and c) degree of patience. According to the PESC scoring of the TES, the person who gives 12 agent replies and 12 patient replies is differentiated from the person who gives 24 agent-and-patient replies. That is, according to the PESC, the first person would be an interactor (relatively high on both agency and patience) and the second would be a communicant (high on communion as measured by agent-and-patient replies) (Reinhart, 1983a).

The Nature of the Communicant Engagement Style. According to the communicant formulation, the communicant's response indicates a style of engaging the environment seeking, not to act on it or to be acted upon by it, but to participate in it--become or respond as if he or she were a part of it. For this individual, agency and patience are integrated into a single experience, not experienced sequentially during separate experiences.

The new conceptualization of communion states that communicants experience engagement as being-in-connection-with the environment, whether the environment includes other persons (social communion) or does not include others (nonsocial communion). These individuals actively enter into a relationship with the environment, and coact with the environment, attempting to enter into the world and still be aware of their own thoughts, affects, and behaviors. In engagement with another, the communicant would enter into the other's context and perceive both the other's needs, affects, etc. and his or her own. Both contexts would then influence the communicant's experience of style of engagement. The communicant's style of engagement would be the same with the nonsocial world, i.e., the individual would enter into the context of the environment and also perceive his or her own. Both contexts again would influence the communicant's experience of style of engagement. That is, the communicant perceives an active integration of both aspects or viewpoints of the engagement. This integration of both aspects of an engagement with the environment is proposed to be the essence of the perception of the an agent-and-patient reply.

Recall that interaction is defined in the accepted engagement style conceptualization (AESC) as the perception that one is engaged with the environment as either agent or patient, i.e., agent at one time and patient at another. According to the proposed engagement style conceptualization (PESC), communion is neither agent nor patient, but is a unique style of being engaged with the environment distinct from interaction. The interactor is both agent and patient, the communicant is neither. Interactors perceive that they sometimes act upon the environment and sometimes are acted upon by it. Communicants perceive that they act in connection with the environment. Interactors are sometimes active and sometimes reactive; communicants are always actively engaged, as is the agent.

Preliminary Support for the Communion Engagement Style. The conceptualization of an engagement style wherein the individual acts in connection with the environment was first introduced in a previous study of the nature of engagement style (Reinhart, 1983a) where it received some support. That is, given a behavioral description of the communicant, both males and females were able to describe the ES using ratings on five trait adjectives which formed an internally consistent scale ($\underline{\alpha}_M$ = .70; $\underline{\alpha}_F$ = .80). Male and female college students also rated with internal consistency the same traits for degree of self-descriptiveness ($\underline{\alpha}_M$ = .67; $\underline{\alpha}_F$ = .61) and importance to their own perceptions of self ($\underline{\alpha}_M$ = .71; $\underline{\alpha}_F$ = .70). These data indicate that communion is a unitary, meaningful construct for male and female college students.

It also is worth noting that an investigator involved with a topic area distinct from the personality construct of engagement style is discussing a style of being engaged with others remarkable similar to the communion style. Gilligan (1984) is currently investigating the meanings of responsibility and independence and their relationships with identity formation in adolescent girls. Using the results of interviews with the high school students, Gilligan talks about the importance to some students' identity development to perceive oneself as being actively engaged in the world through connection with it. Gilligan states that for many of her respondents "the self is known through the experience of connection, defined not by reflection but by the responsiveness of human engagement" (1984, p. 7).

Based on Gilligan's account of the students' interviews, it appears that the style of human engagement perceived as a central component to some female adolescents' self development is the active, acting in connection with, communicant style. Gilligan asked the students about the meaning of responsibility and one student replied, "Responsibility is when you are aware of others and you are aware of their feelings. . . . Responsibility is taking charge of yourself by looking at others around you and seeing what they need and seeing what you need. . . and taking the initiative" (1984, p. 7), i.e., being active through being in connection with others. The issue of concern here is not the meanings of responsibility and independence as discussed by the students, but their repeated reference to the importance of being engaged with their world through experiences of connection.

To illustrate this active and mutual form of engagement, Gilligan (1984) gave the following example. Two children want to play together, but want to play different games. The children have four choices, each of which I propose corresponds to one form of ES, as discussed in this paper. One child can insist on her game (agent) and the other child can acquiesce and play her game (patient). The children can decide to first play one game and then play the other game (both children interactor). Finally, the two children can arrange and play a new game that includes all the important elements of each of the original games yet is distinct from both (communicant). According to the story told to Gilligan by the mother of one of the children, the children pursued the latter course, and so participated in a qualitatively different experience than if they had taken turns doing first what one wanted and then what the other wanted. The author discusses the story from the context of self, attachment, and separation, but it is equally applicable to engagement style as a personality construct.

Each of the children in the fourth solution to the dilemma acted in connection with the desires of self and those of the other child. The children integrated the two desires into a single experience. Both children were active, yet neither acted upon the other, nor was acted upon by the other. This is the essence of the communicant engagement style, as described here and in an earlier paper (Reinhart, 1983a). Gilligan's discovery of female adolescent students who tend to organize their identities around this construct can be interpreted as indirect, yet encouraging preliminary support for the explanatory

usefulness of the communicant engagement style construct, for at least some part of the population.

The PESC of communion is integrally related to the issues of the dependence of agency and patience. That is, the PESC states that agency, communion, and patience are three independent engagement styles, and communion is measured by the TES in responses which include agent-and-patient statements in a single engagement experience. Like the issues of dimensionality, the new conceptualization of communion has implications for the scoring of the TES.

Proposed Revisions in Engagement Style Scoring

A psychological construct and the nature of its measurement and the scoring of the measure are integrally related. The TES and its scoring accurately reflect the AESC as put forth by McKinney (1978a, 1981). Examination of the validity of the PESC necessitates new measurement and scoring procedures consistent with the reconceptualizations. Because much of the AESC is included in the PESC, the original measure of engagement style, the TES, can appropriately be used with only one scoring revision.

Measuring Agency, Communion,and Patience. According to the PESC, the only change in the AESC view of agency and patience is that respondents perceive them as independent engagement styles. That is, excluding issues of dimensionality, the basic definitions of agency and patience as elaborated in the AESC are retained in the PESC. According to both the AESC and the PESC, the TES is a valid measure of agency and patience. However, according to the PESC, agency and patience reflect independent engagement styles and should be given

independent scores. The PESC also argues that the original measure of engagement style, the TES, accurately measures a third style of engagement, i.e, communion. The PESC states that communion is measured by the agent-and-patient scores given to a single TES card. Further, the PESC argues that in order to investigate the validity of the communion engagement style, the scoring of the TES should be changed to reflect the uniqueness of these scores.

In summary, the TES can be scored to accurately measure the three styles of engagement proposed by the PESC. This scoring includes a score for each of the three styles of engagement. That is, according to the PESC, each respondent to the TES receives three scores: a) the sum of all scores that include only an agent reply, b) the sum of all communion scores, and c) the sum of all scores that include only a patient reply. To examine hypotheses regarding engagement style dimensionality, the three scale scores can be used in data analyses involving the TES. To examine hypotheses regarding the AESC and the PESC definitions of agency and patience, the agency-only and patience-only scale scores can be examined. To examine hypotheses regarding the PESC third engagement style, i.e., communion, agent-and-patient scores can be investigated.

Implications for Other Possible Combinations of Styles of Engagement. According to the PESC, agency, communion, and patience are independent engagement styles. Because these three styles are conceptualized as independent dimensions, several combinations of them are theoretically possible. According to the PESC, it is possible for individuals to be agent, communicant, patient, agent/patient (PESC

interactor), agent/communicant, communicant/patient, agent/communicant/patient, or low on agency/communion/patience (PESC aschematic). The only styles which were theoretically predicted for this study were the agent, communicant, and patient; but the remaining combinations of styles may also be experientially valid perceptions of one's engagement style.

The validity of all possible combinations of the three independent styles predicted by the PESC cannot be examined using the TES as a measure of engagement style. If respondents perceive that they engage the environment according to more than one style, they must score high (at the median score or above) on the measures of each of the styles. It seems highly unlikely that any person could score above the median on agency, communion, and patience. This rests on the fact that a respondent has exactly 24 replies and any type of reply given to a TES card eliminates the possibility that any other type of reply can be given to that card. That is, the agency, communion, and patience scores cannot be totally independent of each other in the TES. However, other measurement mechanisms do allow for the investigation of all possible styles. The only requisites are that the measurement procedure is theoretically appropriate and each of the three engagement style scorings remain independent of the others.

In the study discussed above (Reinhart, 1983a), I argued that these conditions were met, and I examined all possible engagement styles for relevance to male and female college students. The students were asked to rate 5 agent, 5 communicant, and 5 patient trait adjectives for degree of self-descriptiveness and importance to their

own sense of self. Ratings were based on 11-point, Likert-type scales. All trait adjectives had been found desirable by other students.

Respondents were classified agent, communicant, and/or patient if they rated 3/5 appropriate traits as highly self-descriptive (8 or above) and highly important to their perceived sense of self (8 or above). Respondents were classified as aschematic on engagement style if they rated 3/5 agent, communion, and patient traits as nondescriptive (4 or below) and unimportant to their perceived sense of self. Some students also remained unclassified on engagement style. These students fell in the midrange of self-description and self-importance on 3/5 agent, patient, and communion traits. All respondents who gave complete data were included in the analysis, $\underline{N}_M = 241$ and $\underline{N}_F = 184$. The male data were collected in the fall of the academic year and the female data were collected in the spring of the same academic year.

No students were classified as aschematic on the engagement style traits, but 25% of each sample remained unclassified. The percentages of respondents classified on the engagement styles are as follows (males' percentages are given first, females' percentages are given second): agent--8%, 5%, communicant--25%, 25%, patient--3%, 4%, agent/patient--2%, 2%, agent/communicant--15%, 16%, patient/communicant--11%, 11%, agent/communicant/patient--14%, 12%. This preliminary evidence indicates that measurement procedures that allow for the investigation of all possibly relevant engagement styles be included in a validity study of the engagement style construct.

Engagement Style and Related Constructs

Engagement style as predicted by both the AESC and the PESC seems similar to several theoretical constructs, yet can be distinguished from each. Bakan's (1966) notions of agency and communion appear to be closely related to engagement style, but are not identical. Intuitively, locus of control (Rotter, 1966) appears to be related to both doing and being done to. Agency and patience, as predicted by the AESC and the PESC, seem likely to be related to certain components of activity level (Buss & Plomin, 1975). Patience appears to be associated with other-directedness (Snyder, 1974) and public self-consciousness (Fenigstein, Scheier, & Buss, 1975). Some components of impulsivity (Buss & Plomin, 1975) also seem related to agency and patience, and self-esteem (Rosenberg, 1965, 1979) is likely to be associated with each style of engagement. In order to further clarify the nature of engagement style according to both the AESC and the PESC, each of the constructs mentioned above will be discussed from the perspective of each engagement style conceptualization.

Engagement Style and Bakan's Model of Agency and Communion

Bakan (1966) had previously used the terms agency and communion to describe two essential modes of being of Western people, with agency associated with alienation and isolation and communion, openness and union. Agency is believed by Bakan to express itself in self-assertion, self-expansion, the urge toward mastery, and in the repression of thought, feeling and impulse; communion is expressed in cooperation, being at one with other organisms, and the lack or removal of repression. Since separation is the essence of the

definition of agency, it is necessarily devoid of communion. Bakan states that agency leads to total aloneness and therefore must be tempered with communion for the well-being of society and its individual members. That is, agency, the existence of the organism as an individual, and communion, the participation of the individual in some larger organism of which it is a part, are both necessary for the health of the individual and its milieu. This notion, at least as it relates to college women, has received some empirical support (Reinhart, 1983b).

McKinney (1981) has stated that the accepted engagement style concept of agency is similar to Bakan's but is not identical. This is also true of the relationship between the PESC agent and Bakan's agent. Bakan's agent is clearly a doer, one who acts on the environment, yet also is something more than an agent according to both the AESC and the PESC, i.e., Bakan's agent represses feeling and impulse--conditions not necessary for the engagement style agent. Bakan also conceives agency to be a necessarily negative attribute in humankind; engagement style places no value of this kind on agency. The ability to act in an agent manner can certainly be construed as a positive attribute if the individual is to pursue goals and meaningful projects--projects which, if successfully completed, may increase the self-esteem of the individual and promote the advancement of society. The agent, according to the notion of engagement style, may express action by thinking and awareness of feelings; the agent in Bakan's theory represses both thinking and feeling.

Because the PESC views the agent as does the AESC, all relationships between Bakan's agent and the engagement style agent which were elaborated above are consistent with both the AESC and the PESC. The PESC communion, which is not predicted by the AESC, also is similar, but is not identical to Bakan's respective construct.

Bakan's communion is a partly active, partly passive way of being in the world which is signified by a sense of lack of repression and oneness and cooperation with the social milieu. The PESC communion is an active style of being in the world in which acting with the environment is the perceived style of engagement. The PESC communicant would attempt to enter into the context of the environment, but still would attempt to maintain his or her own sense of context. That is, the PESC communion is more active than Bakan's communion and does not seek to enter into union and oneness with the environment as does Bakan's communion. The PESC communicant maintains a clear sense of self during engagement, but Bakan's communion loses sense of self and enters completely into the environment.

Engagement Style and Locus of Control

Locus of control (Rotter, 1966; Lefcourt, 1976) is another construct from which engagement style can be distinguished. Locus of control is a generalized expectancy regarding the reinforcements of one's behavior. Those with an internal locus of control believe that reinforcements are the results of one's actions, while those with an external locus of control believe reinforcements to be the result of luck, chance, fate, or other persons.

According to both the AESC and the PESC, engagement style is not concerned with the reinforcement of one's behavior, but with the experience of one's behavior as acting, being acted upon, and in the case of the PESC, acting with, regardless of the expected reinforcements. That is, expectancy of reinforcement of behavior is independent of perception of the style of that behavior. One can believe that acting in either an agent, communicant, or patient manner will lead to reinforcement of behavior under internal control. ("I am in control of the results of my behavior and I know being agent, communicant, or patient will get me the outcome I want.") One also can expect that reinforcement of behavior is controlled by external sources and acting in any style of engagement is irrelevant for expectancy of outcomes of behaviors. ("My behaviors are rarely associated with what happens to me so it doesn't matter if I act in an agent or a patient manner.")

Perhaps the greatest confusion when considering the possible relationships among locus of control and styles of engagement concerns associations between agency and internal locus of control and patience and external locus of control. That is, one could predict that agents expect the reinforcements of their behaviors to be under their control, and patients expect others, fate, or chance to control the outcomes of their behaviors. Yet, these predictions are not supported by the AESC or the PESC.

One can imagine some juvenile offenders who clearly are doers, i.e, engage their environments by acting and acting upon, and also believe that others or fate determine the outcomes of their behaviors.

One can also imagine some individuals who might be engaged with others in a reactive style because they believe that by doing so they control the outcomes of their behaviors. Consider adolescents who live in a world of authoritarian, but predictable adults. It is likely the adolescents would have the combination of patient engagement style and internal locus of control.

Given the preceding argument, one would expect no relationship between locus of control and engagement style. Based on this prediction, McKinney (1980) investigated the relationship between the two constructs. In this study he measured locus of control with Rotter's (1966) Locus of Control Scale and measured degree of agency with the TES scored according to the AESC. As expected, no relationship (r = .01, n.s.; N = 51) between engagement style and locus of control was found.

Multidimensionality of the Locus of Control Scale and Engagement Style. Mirels' (1970) factor analysis of Rotter's (1966) Locus of Control Scale indicates the scale is multidimensional for both men and women. At least two factors appear to be contained in Rotter's scale; Mirels labelled them the Personal Control Factor and the Political and Social Control Factor. This factor structure of the scale has been confirmed by Abrahamson, Schulderman, and Schulderman (1973), and was investigated for predictive validity by Abramowitz (1973). In the Abramowitz study, the two scales were uncorrelated and differentially predicted a separate scale measuring political activity.

Strickland and Haley (1980) recently confirmed the multidimensionality of Rotter's scale and the presence of the essential nature

of Mirels' two factors. Factor analysis of their male subjects' data also indicated the presence of a third factor related to control of expectancy of reinforcements of one's academic behaviors. The women's data did not indicate the presence of a third factor.

Given the persistent finding of scale multidimensionality, it seems validation of the expected lack of relationship between degree of agency and locus of control should include an investigation of the prediction using the subscales of the Locus of Control Scale. It is also apparent that this prediction must be tested for the PESC. That is, relationships among the locus of control scale, the two locus of control subscales, and the TES scored separately for agency, communion, and patient replies should be investigated.

Relationships Between Engagement Style and Vigor, Tempo, and Lack of Inhibitory Control

Three temperamental characteristics appear to be closely related to engagement style, according to both the AESC and the PESC. That is, two components of activity level and one component of impulsivity appear to be associated with agency, communion, and patience. The nature of these proposed relationships will be developed here.

A number of authors (e.g., Buss and Plomin, 1975; Thomas & Chess, 1977) have argued that basic personality tendencies originate in temperament, i.e., broad, inherited dispositions which can modify the environment and are modifiable by experiences with the environment. Consequently, the various components of temperament should be related to more narrow aspects of individuals' personality styles.

Building on this thesis, Buss and Plomin (1975) hypothesized and investigated four basic temperamental components of personality: a) emotionality, b) activity, c) sociability, and d) impulsivity. It seems that engagement style is a part of an individual's personality to which at least the activity and impulsivity components of temperament strongly contribute. Two aspects of activity, vigor and tempo, and one component of impulsivity, lack of inhibitory control, seem especially likely to be associated with engagement style and will be discusses here.

By both the AESC and the PESC, the agent is active, a doer, someone who does to the environment. Tempo and vigor, two aspects of general activity level should be strongly and positively related to agency.

According to the PESC, the communicant is an active engagement style, but the communicant also is attentive, logical, and concerned about others, behaviors which tend to slow the pace of people. Therefore, it seems that vigor and tempo are related to communion, but not as strongly as they are related to agency. According to the PESC, it is likely that tempo and vigor would be moderately and negatively associated with patience, a more restricted engagement style than either agency or communion.

Components of impulsivity also seem closely related to some engagement styles, but perhaps not in the obvious ways one might expect. Agents can act on their impulses by inhibiting them; however, they also can act by acting on the world in order to satisfy their impulses. Patients can react to their impulses without plan or

purposeful action; indeed this is one meaning of being a reactor. However, patients also react to the world, and can allow others, fate, or chance essentially to control their impulses for them. These patients as children would be unthinkingly obedient, and as adults unthinkingly dependent on others, laws, and the like. Therefore, according to both the AESC and the PESC, inhibitory control is expected to be unrelated to being agent or patient.

According to the PESC, lack of inhibitory control is expected to be strongly and negatively associated with being a communicant. That is, the communicant acts in connection with the environment in a way that necessitates controlling attention and considering the various points of view from the positions of all those involved (Reinhart, 1983b). By definition, being communicant necessitates lack of impulsivity. Therefore, communion is expected to be strongly and negatively associated with lack of inhibitory control.

Engagement Style and Other-Directedness

One component of Snyder's (1974) Self-Monitoring Scale seems to be associated with patience, according to both formulations of engagement style. Other-Directedness, one of the three subscales of the Self-Monitoring Scale, is a measure of a person's orientation and conformity to others in social situations. It seems that perceptions of being patient implies reliance on others and conformity to them. That is, it is predicted that one who perceives experiencing a reactive style of being engaged with the world also is likely to perceive orientation and conformity to others. Alternatively, McKinney (personal communication, November, 1984) has argued that

engagement style predicts no relationship between patience and other-directedness. Here, the relationship between patience and being directed toward others as proposed by this author will be discussed.

The construct validity of Snyder's (1974) Self-Monitoring Scale has been called into serious question by a number of researchers (e.g., Briggs, Cheek, & Buss, 1980; Gabrenya & Arkin, 1980; Dillard, Hunter, & Burgoon, 1984). That is, the scale has consistently been found to be composed of three separate scales, which have been labelled Acting, Extroversion, and Other-Directedness. Dillard, Hunter, and Burgoon (1984) also demonstrated the scales measure separate psychological constructs which tend to have different causal relationships with other variables.

The Other-Directedness scale, one of the subscales which has been reported consistently in studies of the properties of the larger scale, is measured by items which tap one's orientation and conformity to others, e.g., "I'm not always the person I appear to be," and "In order to get along and be liked, I tend to be what people expect me to be rather than anything else."

It is argued here that patients, individuals who react to others and perceive that they are done to by others, would be likely to perceive that they often act as others expect. Further, others' expectations of the patient need not match the patient's own self-perceptions. In contrast to perceptions of engaging the environment according to one's own expectations of self, persistent perceptions of being engaged with others according to their expectations are likely to leave the person feeling like he or she is not perceived by others

accurately. This expectation has been supported by Cheek and Hogan (1983), who found that behaving in accordance with one's view of oneself necessitates both self-knowledge and acting in accordance with that knowledge.

It is predicted here that agents or communicants are likely to perceive acting in accordance with their own expectations, and patients are likely to perceive that they act in accordance with others' expectations. According to the argument presented above, engagement style would predict that the patient is strongly other-directed. Engagement style also would predict that other-directedness is negatively related to agency. That is, perceptions of doing and acting upon are expected to be negatively related to perceptions of reliance on others and conformity to them. Further, communicants would be expected to perceive having self-knowledge and knowledge of others and to perceive acting in accordance with both from a self-directive stance. Therefore, the PESC would predict that other-directedness would be moderately and negatively related to communion.

Engagement Style and Public Self-Consciousness

The patient is an object of others' behaviors, the environment, or internal states, in contrast to the agent and communicant who are subjects. This basic component of the AESC and the PESC is at the heart of the TES. If the respondent has the primary stimulus character as the subject of an active sentence, the reply is agent. If the primary character is an object of the verb or a preposition, the reply is patient.

When individuals focus on themselves as objects of others' attention, they are self-conscious by definition. Public self-consciousness (Fenigstein, Scheier, & Buss, 1975) is an individual difference variable which refers to the extent to which people focus on themselves as social objects. By definition, patience and public self-consciousness should be strongly and positively related. Following from this prediction, agency was expected to be strongly and negatively related to public self-consciousness. According to the PESC, it was expected that public self-consciousness would be moderately related to communion, in that the communicant takes the viewpoint of the other person--which includes the other's perceptions of the communicant.

Engagement Style and Self-esteem

Self-esteem is the final construct whose relationship to engagement style seems close enough to warrant discussion. Generalized self-esteem (Rosenberg, 1965, 1979) is expected to be negatively associated with patience and positively associated with agency and communion, according to the PESC. Alternatively, McKinney (personal communication, October, 1984) argues there is no reason to expect that self-esteem is associated with degree of agency and predicts no relationship between engagement style and self-esteem. The rationale for the predicted associations between self-esteem and engagement style according to the PESC will be presented here.

Rosenberg (1979) states that individuals with high self-esteem have high self-respect and considers themselves worthy individuals. These people recognize their faults as they are, but expect to

overcome them. Low self-esteem individuals feel they are seriously deficient as people.

According to the PESC, agency and communion are active engagement styles and patience is a reactive style wherein individuals perceive that they are frequently done to by the environment. Coopersmith (1967) has argued that children with high self-esteem are active and exhibit "more assertive and vigorous actions" (p. 70). He also argues that children with low self-esteem prefer nonparticipation and are apprehensive about expressing unpopular or unusual ideas. At least two pieces of research, one with adult males and the other with high school students, support Coopersmith's contentions for school-aged children. Rosenberg (1965) found that high self-esteem was associated with participation in high school activities, and Luck & Heiss (1972) found that low self-esteem in adult males was correlated with submissiveness. Based on these findings, it was expected that agency and communion would be positively associated with self-esteem and patience would be negatively associated with self-esteem.

Summary

Engagement style as described by the AESC and the PESC has been differentiated from generalized locus of control, personal locus of control, and political and social locus of control. Further, a number of hypothesized relationships between engagement style and other personality constructs and temperaments were developed and discussed. These predictions were explored in the present study as one means of investigating the construct validity of the AESC and the PESC. Also in the present study, a multitrait-multimethod correlation matrix was

investigated for evidence of convergent and discriminant construct validation of both the AESC and the PESC.

Construct Validation of Engagement Style

In the present study, answers to two questions were sought: 1) What is the psychological construct being measured by the test? and 2) How well does the test measure the construct? The psychological constructs of interest are the AESC and the PESC; and the test of interest is the TES, which measures the AESC when scored as the sum of agency scores and measures the PESC when scored as the separate sums of agent, communicant, and patient replies. In the previous section of this paper, a number of inferences for the Test of Engagement Style were derived from the AESC and the PESC and elaborated. The investigation of these predictions constituted one of two validity studies reported here. In the second validity study, two new measures of AESC and PESC agency and patience and PESC communion were developed and used to investigate two issues: a) the relative contributions of trait, method, and error variance in the TES scores and the scores derived from the two new measures of engagement style, and b) the dimensionality of agency, communion, and patience. In this section, the rationale behind the design of the two procedures used for investigating the validity of the AESC, the PESC, and the TES will be developed.

Means for Establishing Construct Validity

Stemming from the 1950-1954 meetings of the APA Committee on Psychological Tests whereby the term construct validity was first

purposed, Cronbach and Meehl (1955) defined and elaborated the concept and its implications for validating tests. "A construct is some postulated attribute of people, assumed to be reflected in test performance. In test validation the attribute about which we make statements in interpreting a test is a construct" (p. 283). Cronbach and Meehl state that one does not validate a test per se, but only "a principle for making inferences" (p. 297) derived from the use of the test. That is, there are as many validities related to a test as there are inferences about test results. The establishment of the validity of a personality construct is related to the validity of the test in that construct validity is based on validation of inferences for test results derived from the construct.

Cronbach and Meehl further stated that the inferences derived from the underlying construct define a network of interrelated concepts and propositions that relate observable characteristics associated with the construct to other observable characteristics or theoretical constructs, or relate the underlying theoretical construct to other theoretical constructs. This network of concepts and propositions is called the nomological network (Cronbach & Meehl, 1955).

Concerning the validation of personality constructs, Fiske (1973) has stated, "delineation of the construct must itself identify at least one (and preferably more than one) specific measuring operation congruent with the conceptualization" (p. 89). The implications of this statement are that the underlying conceptualization and the measuring operation form an integrated whole, and the results of the test should be predictable from the conceptualization. Further, results of other

measures of the construct which are congruent with the conceptualization should be related to external constructs in the same way as the original measure. That is, interpretations derived from the construct should be confirmed by results from different methods of measurement of the construct (Fiske, 1973).

Campbell & Fiske (1959) also have argued that the researcher is obliged to investigate the several methods of measurement in a multitrait-multimethod correlation matrix before the nomological network is investigated. In other words the first step in moving from the delineation of a construct to the operationalization of the construct should be an investigation of the relative contributions of method, trait, and error variance of several methods of measuring the construct. That approach was used in the validity study to be reported here.

Examination of the AESC, the PESC, and the Test of Engagement Style

The validity of the AESC, the PESC, and the TES were examined in two ways in the present study. In the first aspect of the study, the pattern of relationships among the three measures of agency, communion, and patience were investigated in a multitrait-multimethod correlation matrix for evidence of convergent and discriminant validity of the measures of engagement style. The multitrait-multimethod correlation matrix derived from the measures was used to investigate the relative contributions of method and trait variance to the TES scores and the validity of the AESC and the PESC. In the second phase of the study, the relationships among the measures of engagement

style and measures of other psychological constructs were examined. The derived correlation matrix was investigated for evidence of convergent and discriminant validity of the AESC, as it is measured by the TES scored for degree of agency, and the convergent and discriminant validity of the PESC, as it is measured by the TES scored by independently summing agent, communicant, and patient replies.

Relationships Within the Engagement Style Multitrait-Multimethod Matrix. As a test of one form of convergent and discriminant validity, the data from three measures of each of three variables, i.e., agency, communion, and patience, were examined in a multitrait-multimethod matrix (Campbell & Fiske, 1959). One purpose of this phase of the study was to investigate the ability of the TES to measure engagement style such that respondents' test scores are composed of little method variance. The importance of this criterion stems from the fact that the total variance of an individual's test score is composed of trait, method, and unique variance. That is, respondents' TES scores are a reflection of their perceptions of their own styles of engagement, the measurement procedure, and error variance (Campbell & Fiske, 1959; Fiske, 1973). A valid test measures the construct according to two criteria relevant here: 1) Individuals receive the same relative scores regardless of the assessment measure used, and 2) The use of the method to measure the engagement styles does not obscure the differences that exist among the different styles. In order to meet the requirement that all traits be measured by all methods, the TES was scored by summing separately the respondent's agency, communion, and patient replies. That is, each respondent received three TES

scores, an agency score, a communion score, and a patience score. The nature and construction of the other measures of engagement style will be discussed in later sections of this paper.

The correlations among the three measures of the three engagement styles were examined for evidence of method variance and trait variance according to four criteria. First, the correlations between different measures of the same engagement styles (convergent validities) should be statistically significant and meaningful. Second, the convergent validities should be stronger than the correlations of different styles measured by different procedures. Third, the convergent validities should be higher than the correlations between different engagement styles measured by the same method. Finally, a similar pattern of engagement style intercorrelations should be seen in the heterotrait-monomethod correlations and the heterotrait-heteromethod correlations.

The multitrait-multimethod matrix also was examined using an analysis strategy different from that originally conceived by Campbell and Fiske (1959). Schmitt (1978) has demonstrated that path analysis of a multitrait-multimethod matrix facilitates understanding the relative contributions of method, trait, and unique variance in the measurement of the construct. Analysis of the matrix using a confirmatory factor analysis and path analysis technique also allows the researcher to examine the matrix appropriately when the different methods are measured with different reliabilities and the traits and methods are correlated, two conditions that frequently prevail. The third important advantage of a path analytic approach is that the

researcher can investigate specific hypotheses concerning relationships among the traits and the methods. That is, the analysis strategy allows the researcher to investigate the relative merits of specifying dependence and independence among the traits and methods. Through the investigation of the relative merits of dependence and independence among the engagement styles, the validity of the AESC and the PESC formulations of dimensionality were examined in the present study in the multitrait-multimethod matrix.

Relationships of Engagement Style with Other Constructs. In the second aspect of the study, the patterns of the correlations of engagement style with measures of other psychological constructs were examined for evidence of convergent and discriminant validity. Inferences for the relationships of engagement style with other constructs were derived from both the AESC and the PESC; and the nomological networks were investigated for validity.

Four measures of engagement style were used to investigate these issues. The TES scored in two ways comprised the first two tests. First, the TES was scored according to the AESC, reflecting the conceptualized bipolar dimension. Agent replies and the agent components of the combined agent-and-patient replies were summed for a score reflecting degree of engagement style, according to the AESC. The second method of scoring was based on implications derived from the proposed independence of the engagement style dimensions, i.e., the TES was scored to reflect the three types of replies that are given by respondents. According to the PESC, the scores represent agent, communicant, and patient replies.

The third and fourth measures of engagement style were based on the self-schemata construct. The third measure consisted of the interaction of respondents' descriptive and importance self-ratings on the trait adjectives selected to measure agency, communion, and patience. The final measure of engagement style was the respondents' response times to affirmative self-referent decisions about the agent, communion, and patient trait adjectives. These two measures will be discussed in detail in a later section of this paper.

Predictions about the relationships among the engagement styles and other constructs were derived from both the AESC and the PESC and were investigated through the patterns of relationships among the four measures of engagement style and measures of other constructs. The predictions were partially based on issues related to both the dimensionality of engagement style and the meaning of the agent-and-patient replies, upon which the PESC communion construction is based. If the engagement styles are independent and communion is a style that is something other than being part agent and part patient, the measures scored to reflect communion should show unique patterns of correlations with other variables. Also following from the independence of the engagement style dimensions, patience should be associated with other variables according to patterns of correlations that are independent of agency. That is, if the dimensions are independent, the patterns of the relationships of agency, communion, and patience with other variables should be independent. Conversely, if engagement style is a continuous bipolar dimension it follows that agency and patience will have inverse relationships with the other constructs.

The pattern of associations among the four engagement style measures and measures of other constructs were used to investigate both the AESC and the PESC for evidence of convergent and discriminant validity. Convergent validity is evident when the results of the four engagement style measures converge in predicted patterns when correlated with measures of psychological constructs expected to be related to engagement style in specific ways. This type of convergent validity has been called extrinsic convergent validity (Fiske, 1971) and alternately, external parallelism (Hunter, 1973). The validity of the AESC and the PESC as measured by the TES also rests on the discrimination of the construct from others from which it is expected to differ. Each of the four measures of engagement style also were correlated with the measures of the constructs which were predicted to be unrelated to engagement style. Discriminant validity of engagement style is supported by lack of association between each of the measures of engagement style and the measures of the other constructs.

Predictions of discriminant validity of engagement style. Three measures of a psychological construct predicted to be independent of engagement style were chosen to assess the discriminant validity of engagement style according to the AESC and the PESC. The validity of engagement style was examined here by investigating the correlations of its four measures with the Locus of Control Scale (Rotter, 1966), the Personal Locus of Control subscale, and the Political-Social Locus of Control subscale (Mirels, 1970).

Predictions of convergent validity of engagement style. Measures of eight psychological constructs related to the engagement style

conceptualizations also were selected to investigate the validity of the engagement style nomological networks. The eight constructs investigated in this aspect of the study include Bakan's (1966) concepts of agency and communion as investigated by Block (1973), vigor and tempo--two components of the activity temperament (Buss & Plomin, 1975), inhibitory control--a component of the impulsivity temperament (Buss & Plomin, 1975), other-directedness--one factor of the Self-Monitoring Scale (Briggs, Cheek, & Buss, 1980; Snyder, 1974), public self-consciousness (Fenigstein, Scheier, & Buss, 1975), and generalized self-esteem (Rosenberg, 1965, 1979).

The relationships between engagement style and the external constructs were discussed previously. The specific predictions made about these relationships are summarized for the reader in Table 1.

New Measures of Engagement Style

In order to investigate the validity of the AESC and the PESC, it was necessary to develop alternative measurement procedures to be used in the convergent and discriminant validity studies. The new tests were designed to measure AESC agency and patience and PESC agency, communion, and patience.

It also was necessary that the new tests of engagement style to be used in the convergent and discriminant validity studies meet certain criteria. That is, it was necessary that the newly selected measurement procedures meet two criteria: 1) The test procedures had to be consistent with the underlying formulations of the construct which the tests attempted to measure, and 2) The alternative measurement procedures used to validate the construct had to have little or no shared

Table 1

Predicted Correlations Among Engagement Styles and External Constructs

External Constructs	Predictions Based on Accepted Engagement Style Construct	Predictions Based on Proposed Engagement Style Construct		
	Degree of Engagement Style	Agent	Communicant	Patient
Locus of Control	---	---	---	---
Personal Control	---	---	---	---
Political/Social Control	---	---	---	---
Bakan/Block Agent	+**	+**	+ *	---
Bakan/Block Communion	---	+ *	+**	+**
Vigor	+**	+**	+ *	- *
Tempo	+**	+**	+ *	- *
Lack of Inhibitory Control	---	---	-**	---
Other-Directedness	-**	-**	- *	+**
Public Self-Consciousness	-**	- *	+ *	+**
Self-Esteem	---	+ *	+ *	- *

* Indicates a moderate relationship
** Indicates a strong relationship

method variance with each other or the original measure (Campbell & Fiske, 1959; Cronbach & Meehl, 1955; Fiske, 1973).

Two measurement procedures based on the self-schemata construct (Markus, 1977) were proposed to meet the above requirements. Engagement style is described as one's perception of one's own degree of engagement with the environment according to certain styles. Self-schemata (Markus, 1977) have been described as perceived constructs of beliefs which have been shown to be organized around individual's perceptions of experiencing the world. It therefore seems that the self-schemata construct is consistent with the engagement style construct. Self-schemata have been measured most consistently by two measurement procedures: a) degree of self-description of related trait adjectives, and b) reaction times when making judgments about the descriptive ability of the trait adjectives.

In the present study, these two measurement procedures were used with appropriate agency, communion, and patience traits as alternative measures of engagement style. They were developed to be used with the TES to investigate a number of implications derived from the PESC and AESC nomological networks. The two new measures also were developed to be used to evaluate the validity of the TES as a measure of the PESC and the AESC.

Similarities in the Engagement Style Construct and the Self-Schemata Construct

McKinney (1981) has outlined engagement style as a personality construct (Kelly, 1955) which is perceptual and experiential in nature and is based on the notion of doing or being done to. That is,

"individuals have their own beliefs about their own agency and patience, and it is those perceptions or beliefs that I have studied" (McKinney, 1981, p. 367). According to the construct, individuals come to these perceptions or beliefs through the processes of "experiencing oneself as an active agent, influencing the environment, or as a passive patient, being influenced by the environment" (McKinney, 1981, p. 366-367). Based on these underlying concepts, any measurement procedure used to investigate engagement style must be consistent with the conceptualization that engagement style is a perceptual variable based on the individual's experience of engagement with the world. Further, these perceptions must form what Kelly (1955) has described as a basic personality construct. Of course, the measurement procedure also must be amenable to the content area of engagement style, i.e., doing or acting upon, doing or acting in connection with, and being done to or being acted upon.

The idea that individuals perceive constructs about themselves which are organized around experiencing the world has received a good deal of recent attention in the psychological literature. Markus (1977), Markus and her colleagues (Crane & Markus, 1982; Markus, Crane, Bernstein, & Siladi, 1982; Markus & Smith, 1981), and Mills (1983) have investigated individuals' self-schemata. Attributing the basic concept to "Kelly's (1955) methodology of allowing the individual to generate his own construct for categorizing himself" (Markus, 1977, p. 77), Markus describes self-schemata as perceived constructs of beliefs which have been shown to be organized around individuals' perceptions of experiencing the world. In studies conducted by Markus

(1977) and Mills (1983), it has been shown that these constructs of experienced behaviors are systematically organized (although not necessarily with any effortful or self-conscious process on the part of the individual) and used by individuals to process incoming self-associated information, retrieve past experiences associated with the construct, and confidently predict future behaviors in construct-related experiences.

Self-schemata, similar to personality constructs, are "generalizations about the self, derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences" (Markus, 1977). Markus (1977) has hypothesized and demonstrated that individuals who have self-schemata on a particular dimension have at their disposal a framework or depository that allows them to make inferences or interpret self-relevant information quickly.

Returning to the need to select new tests of engagement style, it appears that the self-schemata construct meets the basic requirements for an organizing principle of new measurement procedures for engagement style. The self-schemata construct is a perceptual variable, i.e., one perceives a generalized framework on a given dimension, as one perceives that one experiences engagement with the environment according to some style. The self-schemata notion also satisfies the requirements that it be developed through an individual's perceptions of experiencing his or her world, and that it form a personality construct. That is, the self-schemata concept is predicated on the belief that the generalized perceptual framework develops through

experiencing the environment; and, an individual's development of a self-schemata concept is akin to the development of a personality construct as outlined by Kelly (1955).

The self-schemata construct appears appropriate as the organizing principle for new measurement procedures designed to investigate engagement style. Therefore, decisions made about the nature of the new tests to be used in the present validity study were based on the construct. Markus (1977) used two measurement procedures to test the validity of the self-schemata construct which seem to meet the final criterion for measures selected for a convergent and discriminant validity study such as is described here. That is, the two measurement procedures used by Markus (1977) seem to share little method variance with each other and with the TES. The two procedures were used in the present validity study of engagement style as the alternative measures of the PESC and agency and patience of the AESC.

Two Measurement Procedures for the Self-Schemata Construct

Because the self-schemata variable is an individual difference variable, Markus (1977) first sought to determine which of her respondents were likely to have self-schemata on a given dimension. She hypothesized and demonstrated that individuals who have self-schemata tend to endorse as both highly descriptive and highly important to themselves, traits which are associated with the schemata.

Choosing the schemata dimension of independence-dependence, Markus selected subjects on the basis of three criteria: 1) a self-rating of 1-4 (dependent) or 8-11 (independent) on 2 out of 3 11-point semantic differential scales, 2) self-ratings of 8-11 on 11-point Likert-type

scales measuring the importance of the relevant traits to the subject, and 3) a check on appropriate trait adjectives which were part of an adjective check list. Subjects who met the three criteria for either dependence or independence were labelled schematics. Aschematics were defined as those who rated themselves in the midrange (5-7) on 2 of the 3 semantic differential scales, fell in the lower portion of the distributions on the importance scales, and did not check themselves on the dependent or independent words on the adjective checklist.

Predicting that schematics would process information about important aspects of themselves with relative ease, Markus (1977) measured the self-judgments and response latencies of schematics and aschematics when they were presented with decisions about various traits. She did this by asking the subjects to decide whether individual trait adjectives were self-descriptive, and by measuring their response latencies.

Independent and dependent schematics and aschematics significantly differed in the number of their affirmative replies to schema consistent words, $F(2, 45) = 14.89$, $p < .001$ (dependent words), $F(2, 45) = 9.27$, $p < .001$ (independent words). Planned comparisons indicated that independent schematics gave significantly more affirmative replies to independent schema-consistent words than did the dependent schematics. Similarly, dependent schematics gave more affirmative replies to dependent schema-consistent words than did the independent schematics.

Also consistent with predictions, independent and dependent schematics had shorter response latencies when making affirmative

replies to schema-consistent words than when making affirmative replies to words consistent with the schema of the opposite trait. That is, independent schematics responded affirmatively with significantly faster response latencies to independent words than to dependent words, $t(15) = 2.72$, $p < .01$; and dependent schematics responded affirmatively with significantly faster response latencies to dependent words than to independent words, $t(15) = 2.63$, $p < .01$.

In the same study, Markus (1977) further validated the self-schemata construct by demonstrating that schematics easily retrieve behavioral evidence supporting their judgments about self, resist counter-schematic information, and can self-confidently predict future behavior on schema-related dimensions. Since Markus' original self-schemata study, the use of self-judgments and response latencies have been further confirmed as valid measures of self-schemata in a number of studies conducted in her laboratory (Crane & Markus, 1982; Markus, Crane, Bernstein, & Siladi 1982; Markus & Smith, 1981) and others' (e.g., Bem, 1982; Kuiper & Rogers, 1979; Mills, 1983). These two measurement procedures, the combined use of self-descriptive and self-importance ratings and the combined use of self-referent decisions and response latencies, seem to have been sufficiently established as valid measures of individual's self-schemata to be considered as measurement strategies for the present study.

Selection of Two Measurement Procedures for Engagement Style

Campbell and Fiske (1959) and Fiske's (1973) criteria that the test procedures must be consistent with the underlying formulation of

the construct which the test attempt to measure and that the tests must not share method variance appear to be adequately met in the two measures of the self-schemata construct discussed above. The test procedures are generally consistent with the underlying formulations of engagement style, and the three tests to be used to investigate engagement style do not share method variance. It appears however that the second criterion is better met by both tests than is the first.

In discussing the use of response latencies for personality assessment, Mills (1983) points out one of the major values of the measurement strategy: "Such a nonobtrusive measure of personality could be very useful because it is relatively free of many of the biases affecting self-rating scales" (p. 170). This is exactly the position taken by McKinney (1981) about the value of the TES. That is, the measure is experiential in nature, and it is relatively free of response bias. The measurement procedure of recording response latencies to self-referent decisions about appropriate traits is an experiential, nonobtrusive measure; and as such, it meets the criteria for construct-consistent test characteristics as stated in the engagement style formulation (McKinney, 1981). It also seems likely that the reaction-time measurement technique differs from the TES semi-projective technique such that data derived from the two instruments would share little method variance. In the present study, individuals' response times to affirmative self-referent decisions about engagement style trait adjectives will be used as the second measure of engagement style.

The rating of trait adjectives for self-descriptiveness and importance is the final procedure considered for measurement of the engagement style construct. This procedure does not meet the requirements that it be experiential in nature, nor is it as necessarily free of potential social desirability response bias, as is the response-time procedure. However, there is strong evidence for its validity as a measure of perceptual variables derived from individuals' past and present experiences. That is, in studies conducted within and across research laboratories, the research procedure has been found to differentiate those individuals who are schematic on one dimension from individuals who are schematic on another dimension, or to differentiate schematics from aschematics. Although the test does not satisfy some criteria for a measurement procedure for engagement style as well as the response latency measure, it has been shown to measure an individual's self-schemata, as does the latency approach. It is clear that the paper and pencil self-rating test does not share method variance with either the response latency approach or the TES.

In spite of the area of potential bias in the third measure, it still appears to be useful and potentially valid as an alternative measure of engagement style. However, the fact that the procedure is not experiential in nature and therefore could be contaminated by social desirability response bias must be considered when evaluating the results of the study. Given that neither the TES nor the response-time measure share this potential bias, the self-rating effects can be compared to those of the other two measures for evidence of social desirability contamination.

In summary, the two new measurement procedures based on Markus' (1977) self-schemata concept appear to adequately meet the criteria for a convergent and discriminant validity study of a psychological construct, as stated by Cronbach and Meehl (1955), Campbell and Fiske (1959), and Fiske (1973). The two procedures also meet the more specific needs of the present study. That is, the measurement strategies can be used in a validity study of agency and patience as described by the AESC, and they can be used to investigate the validity of the PESC.

METHOD

In order to estimate each respondent's self-schema on engagement style, self-rating questionnaires were administered to small groups of participants. In this phase of the study, college students met in classrooms and rated engagement style traits for degree of self-description and self-importance. The engagement style traits were part of a booklet containing rating scales of 77 trait adjectives (see Appendix A) and measures of the constructs used in the extrinsic validity study. From the pool of subjects who were administered the tests (N = 568), 57 males and 64 females were chosen to participate individually in response-time and TES laboratory sessions. Subjects were selected on the basis of their engagement style self-schema, and returned to participate in the engagement style self-schema response-time study and the TES administration. The response-time and TES laboratory sessions were conducted on an individual basis at the mutual convenience of the subject and the two undergraduate assistants who conducted the sessions. The entire study consisted of three phases: 1) small group sessions wherein questionnaire booklets were administered, 2) individually administered response-time laboratory sessions, and 3) individual sessions wherein the TES was administered.

Participants

Male and female volunteers were solicited from introductory psychology classes at Michigan State University and participated in the

present study as one means of obtaining extra class credit. The students who volunteered for the study were told they might be asked to participate in a second study and were asked to supply information to facilitate contact at a later time during the same term. All students agreed to further participation and supplied the information needed for follow-up contact.

Based on the expectation that some college students participating in the study would show systematic variation in engagement style from term to term, it was decided to collect all data during the same academic term. However, due to limited available laboratory time, it was possible to conduct the response-time procedure with only 75 to 90 respondents per term. Given the foregoing circumstances, it was decided to conduct the study with male respondents during the fall term of one academic year, and complete the study with female respondents during the fall term of the following academic year.

Male participants were solicited during the fall of 1981, and female participants were solicited during the fall of 1982. In order to examine the comparability of the male population from which the data were drawn and the male population of 1982, a small sample of males also were solicited in the fall of 1982. A total of 291 females participated in the study; 277 males participated in the fall of 1981, and 44 males participated in the fall of 1982.

Engagement Style Categorization of Participants

Participants were administered gender-appropriate engagement style traits (see Table 2 below) and were asked to rate them for degree of self-description and self-importance on 11-point Likert-type scales.

In order to investigate the possibility that all combinations of engagement styles are relevant for individuals, respondents were categorized and selected for the participation in the laboratory sessions on the basis of their self-ratings on the engagement style traits.

According to the proposed independence of agency, communion, and patience, it is theoretically possible to perceive oneself as engaging the environment according to eight possible engagement style classifications: 1) agent, 2) communicant, 3) patient, 4) agent/communicant, 5) agent/patient, 6) communicant/patient, 7) agent/communicant/patient, or 8) aschematic on engagement style. Respondents' ratings were examined, and individuals were categorized into one of the eight engagement style classifications on the basis of their self-ratings. The first ten respondents classified in each engagement style category were selected to participate in the laboratory sessions.

Classification of participants was determined on the basis of both self-descriptive and self-importance ratings. Engagement style categorization was made according to the following criteria: a) the respondent rated three of the five critical engagement style trait words between 8 and 11 points on self-description, and b) the respondent rated the same three words between 8 and 11 points on importance to his or her perception of self. For example, an agent rated 3 of 5 agent traits as highly self-descriptive and highly self-important; an agent/communicant rated 3 of 5 agent traits and 3 of 5 communion traits as highly self-descriptive and highly self-important. Aschematics were defined as scoring 1 to 4 points on self-description and self-importance on three of five critical engagement style traits.

According to this classification system, chosen in order to emphasize any differences which might exist between schematics and aschematics, it was also possible for respondents to remain unclassified.

Three conditions contributed to the decision to select only the first ten respondents classified into an engagement style. First, in order to insure that no subject had a real change in engagement style from time of classification to participation in laboratory sessions, it was important to make all contacts with the participants during the same academic term. Second, as has been mentioned, available laboratory time was limited. Finally, in order to investigate the possible relevance of all engagement style classifications, it was necessary to measure and examine data collected from individuals in all engagement style classifications found in the samples. It was estimated that 80 students could be accommodated per term and would also allow investigation of all theoretically possible engagement styles. Consequently, the first ten respondents categorized in an engagement style were chosen to participate in the individual response-time and TES sessions.

Content and Structure of the Trait Self-Rating Scales

Seventy-seven trait adjectives were used as stimuli in the self-rating and laboratory response-time task. The traits (see Appendix A) included 17 engagement style adjectives; Block's (1973) 22 traits judged to measure Bakan's notions of agency and communion; several adjectives selected to measure creativity, a construct selected as a control check on response bias; three traits usually endorsed by all

respondents and three traits usually endorsed by almost no respondents, traits also selected to be used as checks on response bias; and 21 filler items.

Engagement Style Traits

In order to use the self-schema self-rating and response-time measurement procedures in the present study, it was necessary to select trait adjectives that were engagement-style construct congruent. The identification of the traits involved a three study process (Reinhart, 1983a) which will be reviewed here.

Respondents in trait selection studies were college students whose replies were evaluated separately on the basis of gender. Study 1 respondents supplied traits descriptive of each of the engagement styles, rated the descriptive value of traits supplied by the experimenter, and evaluated the desirability of each of the traits. Females evaluated a female stimulus character and males evaluated a male stimulus character. Two samples of Study 2 respondents rated the traits selected on the basis of the results of Study 1. One sample of Study 2 respondents rated the traits for degree of descriptiveness of one engagement style. As in Study 1, females evaluated a female stimulus character and males evaluated a male stimulus character. In Study 2, a second sample of male and female students rated the traits for desirability independent of engagement style. In Study 3, respondents rated themselves on the traits selected on the basis of the results from Study 1 and Study 2. In Study 3, the respondents rated the traits for self-descriptiveness and self-importance. In all studies, 11-point, Likert-type scales were used.

In Study 1 and Study 2, respondents evaluated same-gender character(s), each of which exemplified one engagement style. Each stimulus character was described according to the engagement style construct. The agent and patient exemplars were designed to reflect the AESC and the PESC agent and patient, and the communion exemplar was designed to reflect the PESC communion construct.

The following paragraph was used to elicit traits describing the agent.

> This person's name is Bob (Sue).
> Bob acts on his world. When acting he scarcely considers his environment. He takes his own goals and needs into account, but rarely allows his environment (including other persons) to be a major factor in his actions. Bob is a doer; he rarely allows other persons or his larger environment to have an effect on him. In conversations, Bob usually makes certain that his ideas and feelings are clearly made known to everyone--he might not be concerned about hearing the others' views.

The following paragraph was used to elicit traits describing the communicant.

> This person's name is Mark (Gwen).
> Mark interacts with his world. The world affects him and he has an effect on his world. He considers his physical environment and others around him as well as his own internal states as he goes through his daily routines. He considers his own goals and needs and also those of others in social situations. Mark would try very hard to make his views and feelings known in a conversation while also considering the views and feelings of others involved. He would be most satisfied if a mutual understanding could be achieved.

The following paragraph was used to elicit traits describing the patient.

> This person's name is Bill (Kate).
> Bill is primarily someone who reacts to his environment which may include his internal states and other persons in his world. He is responsive to this world rather than someone who acts upon it. He is not a doer--he reacts to internal and external

> stimuli. His environment--including other people--has a profound influence on his own life. In a conversation Bill would agree with the views and feelings expressed by others. He would not want to impose his own views or feelings on the others and might not offer them for consideration.

Traits were selected on the basis of the results of Study 1 and Study 2 using the following criteria: 1) high ratings of descriptiveness (8 or above) of only one engagement style, 2) positive desirability ratings (7 or above), and 3) moderate or high word usage according to the Word Frequency Book (Carroll, Davies, & Richman, 1971). Inter-item correlations were examined for patterns of internal consistency, and Cronbach's alpha was computed for each scale and examined for evidence of scale reliability. Discriminant function analysis was used to determine the ability of the items in the three scales to discriminate the three engagement styles.

Based on these analyses, desirable traits which discriminated among the three engagement styles were selected (Reinhart, 1983a). Fifteen items which form three (agent, patient, communicant) 5-item scales were chosen to compose the Engagement Style Scale (ESS). The results of the three studies consistently indicated the presence of gender-related differences that made impossible the selection of one ESS that could be used with both males and females. Therefore, the agent and patient scales differ for males and females by one item each; the communicant scale items are identical for males and females (see Table 2).

The inter-scale correlations and internal reliabilities of the Study 3 self-descriptive data were examined for confirmation of the scale composition derived on the basis of Study 1 and Study 2. The

Table 2

Trait Adjectives Describing Three Engagement Styles for Men and Women

Engagement Style	Males	Females
Agent	Doer	Doer
	Definite	Definite
	Daring	Daring
	Persistent	Persistent
	Vigorous	Initiating
Communicant	Perceptive	Perceptive
	Logical	Logical
	Attentive	Attentive
	Helpful	Helpful
	Concerned	Concerned
Patient	Agreeable	Agreeable
	Obliging	Obliging
	Humble	Humble
	Cautious	Cautious
	Accommodating	Sensitive

internal reliabilities of items in the scales were computed separately for males and females and were found to be fair to moderate: 1) agency scales--.72 (male) and .69 (female); 2) communion scales--.67 (male) and .61 (female); and 3) patience scales--.61 (male) and .50 (female). Inter-scale correlations indicated unique agency, communion and patience scales: agency-communion--.47 (male) and .51 (female); agency-patience--.07 (male) and .08 (female); and communion-patience--.45 (male) and .37 (female).

In the present study, the three gender-appropriate scales of trait adjectives were used in the self-rating task, and self-ratings for descriptiveness and importance of engagement style-consistent traits were scored to reflect the basic notions of the self-schemata construct. According to the schemata construct, individual's self-schemata are reflected in a combination of degree of descriptiveness and importance of schema-related traits. By definition, schema-consistent traits must be both highly descriptive and highly important components of schematics' self-perceptions. That is, self-schemata are formed through the perception that certain related personal characteristics are central components in the style and organization of individuals' daily engagements with the world. Accordingly, the respondents' self-ratings of engagement style self-schema were scored as the interaction of individuals' self-ratings of descriptiveness and of importance of the engagement style-related traits.

Bakan/Block's Agency and Communion Traits

Because no valid measure of Bakan's concepts of agency and communion had been reported previously, it was necessary to develop measures of the constructs to be used in the extrinsic validity study. Block (1973) had previously investigated Bakan's notions of agency and communion in a study of the nature of contemporary sex roles. In this study, she found 22 trait adjectives that differentiated males' and females' ideal roles and also described Bakan's ideas of agency and communion. In the present study, scales were constructed using Block's agent and communion traits. These scales were then used to

investigate the predicted relationships among Bakan's agency/communion construct and the engagement styles.

Block's 22 items formed the basis of an agent and a communion scale. These were used in the present study to measure respondents' self-schemata on Bakan's notions of agency and communion. Self-schemata were measured by the interactions of the subjects' self-ratings of descriptiveness and importance of the agent and communion traits.

Construction of the Agency and Communion Scales. Before the Block traits could be used as scale items, the psychometric properties of the traits had to be evaluated. A number of researchers (e.g., Rogers, 1973) have shown that subjects respond differently to desirable traits than to controversial traits; therefore it was important that all traits were considered likable so as not to confound the results with response bias. It also was necessary that the items formed internally consistent scales. Items from Block's 22 agent and communion traits were selected for use in this study on the basis of these criteria.

In a study related to the present engagement style investigation (Reinhart, 1983b), Block's 22 trait adjectives were examined for desirability, and the traits forming the agent and communion scales were examined for degree of internal consistency. Thirty-one college women and 25 college men rated Block's 14 agent traits and 8 communion traits for degree of desirability. Traits were rated on an 11-point Likert-type scale, and all desirability ratings were evaluated separately for the male and female judges. On the basis of these ratings,

eight agent traits and eight communion traits were found to be likable for men and women, i.e., the traits had average desirability rating of 8 or above for both samples. These items were selected to be examined for degree of internal consistency.

Indices of item reliability were examined in data collected from a sample of 263 college women who had rated the items for degree of self-descriptiveness. Within the agent and communion scales, inter-item and item-total correlations, item communalities, and Cronbach's alpha were computed and examined for evidence of scale internal consistency. On the basis of these statistics, two communion items and one agent item were dropped. The resulting agent scale consists of seven traits ($\underline{\alpha}$ = .72), and the communion scale consists of six traits ($\underline{\alpha}$ = .81) (see Table 3). The agency and communion scales were moderately correlated, $\underline{r}$ = .25.

All measures of internal consistency explored with the sample of females also were examined in the male data of this study (N = 277), and scale composition was re-evaluated for the males. As expected no differences among inter-item correlations, item-total correlations, alphas and inter-scale correlations were found. A close scrutiny of the contents of the scale items supports the evidence in that data that the scales are internally consistent, and this consistency was supported in the data from the male sample.

Rational analysis of the content of the items of the communion scale indicates the scale has face validity as a measure of Bakan's model of communion. The face validity of the items selected for the agent scale might not be as clear, yet, rational analysis of the

Table 3

Communion and Agent Scale Items Derived from Block's Traits

Communion	Agent
Loving	Independent
Affectionate	Ambitious
Considerate	Active
Helpful	Assertive
Sympathetic	Reasonable
Sensitive	Adventurous
Generous[a]	Rational
Artistic[a]	Practical[a]
	Vital[b]
	Competitive[b]
	Critical[b]
	Dominating[b]
	Shrewd[b]
	Self-Centered[b]

[a] Block item not used due to low or inconsistent correlations with other scale items.

[b] Block item not used due to moderate or low desirability ratings.

scale tends to validate the items as a measure of Bakan's agent. That is, the items in the agent scale indicate that the agent is described according to Bakan's construct.

According to the content of the agent scale, the agent is a separate individual (independent) using self-assertion (assertive, active), the urge toward mastery (ambitious, adventurous), and repression of impulse (rational, reasonable). However, it must be remembered that the negative components of the agent model have been removed necessarily in the scale to be used here. Still it seems that the essential nature of the agent has been retained. Bakan's primary contention is that agency leads to isolation, and therefore, for the sake of the individual and society, agency must be mitigated with communion. Analysis of the items in the agency scale leads to the same conclusion, i.e., a person whose self-schemata include only being ambitious, assertive, independent, rational, and adventurous will live in psychological isolation from others. Further, it is likely that the effect of the removal of the negatively valued traits was to strengthen the relationship between the Bakan and AESC and PESC agent scales. The closeness of the relationship between the Bakan agent and the engagement style agent already has been noted by McKinney (1981) and appears to pose no problem for the investigation being reported here.

Control Traits

A number of items also were included in order to check possible response contamination due to social desirability or individual differences in cognitive differentiation or speed of responding on the

reaction-time task. Traits which had been found to measure creativity (Smith & Schaefer, 1969), a construct theoretically unrelated to engagement style, were included in order to investigate the possible effects of social desirability and speed of responding on the reaction-time task. Three high acceptance and three low acceptance words were included as checks on social desirability and cognitive differentiation.

Creative Traits. Creativity is theoretically unrelated to all engagement styles. Therefore, traits which have been shown to measure creativity (Smith & Schaefer, 1969) and were judged by college students to be desirable were included as control words in both the self-rating task and the self-referent and response-time task. Respondents' replies to the creative adjectives were used to examine the possibility that social desirability or speed of reaction is associated systematically with engagement style classification.

No differences among classifications of engagement styles should exist on self-ratings of creative traits. That is, there is no reason to expect that groups of individuals classified on engagement style should show differences on their self-rated degree of creativity. However, if students responded to engagement style traits on the basis of their social desirability, it is likely that they also would have judged the creative adjectives descriptive and important. Differences among engagement styles on self-ratings of creative traits indicates social desirability contamination of engagement style trait self-rating.

It is also possible that respondents in some or all engagement style categories have fast reaction times to engagement style traits due to a general predisposition to respond to stimuli quickly. If a general predisposition to fast responding is systematically reflected in some engagement styles, persons classified in the styles also will respond quickly to creative traits, irrespective of real descriptive value. Response times to traits in the creative scale were used to investigate this possible source of contamination, as well as the previously discussed possible differences due to social desirability.

In order to use the creative traits to investigate possible response contamination, it was necessary to determine that all traits were considered desirable by the population from which the sample for this study was drawn. The creativity traits were given to an independent sample of college students (N = 44) and judged for desirability. Both men and women rated the traits for desirability on 11-point Likert-type scales. Thirteen traits were found desirable for both men and women and were used to investigate the possible sources of response bias mentioned above.

High Endorsement and Low Endorsement Traits. Three words previously found to receive high endorsement from college students and three found to receive low endorsement from college students (Anderson, 1968; Jones, Sesenig, & Haley, 1974) also were used as control words and were included in both the self-rating scales and the response-time measure. High acceptance words included loyal, understanding, and thoughtful; low acceptance words included rude, cruel, and malicious.

The means and standard deviations of participants' self-ratings on the high and low acceptance words were examined as a check of the previous findings concerning the regularity of endorsement of the words, and the words were used to investigate possible response bias in engagement style self-rating. That is, no differences among engagement styles should be found for words typically endorsed by almost all respondents and words typically endorsed by almost no respondents. Support of this prediction validates the measurement procedures as tools for self-categorization on engagement style, indicating that the categorizations are meaningful differentiations on what can be assumed to be relatively specifically defined styles of behaviors, in contrast to self-classification on traits which do not tend to differentiate individuals.

Responses to the traits were also examined for social desirability contamination. Differential endorsement of high and low acceptance words by people classified on different engagement styles can indicate general tendencies to present oneself in a socially desirable way or in a socially nondesirable way. Subjects' responses to these words were used with the responses to the creative traits to determine possible social desirability contamination.

Trait Filler Items

Some trait adjectives were selected and included in the self-rating and response-time tasks in order to disguise the critical traits. Respondents were necessarily aware that participation in the laboratory session was related to the self-rating task, and every attempt was made to keep respondents naive to the specific construct

under investigation and the specific design of the study. Accordingly, 21 trait adjectives, expected to be relevant for the participants and unrelated to engagement style, were included in the scales as distractor items. The 21 items included both positive and negative traits thought to be important to students, e.g., friendly, competent, innocent, bragging, frustrated, bossy, sincere.

Self-Rating Procedure

The 77 trait adjectives were randomly ordered and four orders of adjectives were used in both the male and female samples. The participants rated all traits first for degree of self-description and second for degree of self-importance. The directions for each rating task are given below.

Descriptive Ratings

> Think about yourself. Think about what kind of a person you are. What words might be used to describe your personality?
>
> Read each of the following adjectives and decide how much each adjective describes you as you see yourself. Be as truthful as possible. If the adjective describes you very much, circle 8, 9, 10, or 11. If it sort of describes you circle 5, 6, or 7. If it doesn't describe you at all, give it a 1, 2, 3, or 4. Try to use all the numbers and think about each adjective independently of the others. Do not look back to see how you have responded to previous adjectives or questionnaires. Put down your first thought.

Importance Ratings

> Think about how you might describe yourself to another person who does not know you. You want to give this other person the most accurate description possible. Be as truthful as you can.
>
> Read each of the following adjectives and decide how important each is to your own self-description. If it is very important to your self-description, circle 8, 9, 10, or 11. If it is sort of important to your own self-description, circle 5, 6, or 7. If it is not important at all to your own

self-description, give it a 1, 2, 3, or 4. Try to use all the numbers and think about each adjective independently of the others. Do not look back to see how you have responded to the previous adjectives or questionnaires. Put down your first thought.

Respondents were free to ask questions concerning the directions of the questionnaires and were told not to respond to an adjective if they did not know its meaning. When judging the meanings of each of the trait adjectives, respondents were told to think about the definitions of the words they typically used when thinking of their own descriptions and those of others they knew. The self-rating task took 25 to 35 min.

Extrinsic Validity Questionnaires

Paper and pencil measures of constructs to be used in the extrinsic convergent and discriminant validity study of engagement style were included in the self-rating booklet given to all respondents. As discussed above, 11 constructs were investigated using seven instruments. The newly-derived measures of the Bakan/Block agency and communion constructs were discussed above. The remaining instruments will be described below; the rationale for their use was discussed in an earlier section of this paper.

Rotter's (1966) 29-item Locus of Control Scale was administered, and the entire scale (23 items), the Personal Control factor (9 items), and the Political and Social Control factor (4 items) were investigated according to predictions elaborated above.

The 50-item EASI-III Temperament Survey (Buss & Plomin, 1975) was administered, and the vigor, tempo, and lack of inhibitory control subscales were investigated, as discussed above. Each of the three

subscales is measured by 5 items. Vigor is measured by items such as, "I often feel as if I'm bursting with energy," and "When I do things, I do them vigorously." Tempo items include "I like to keep busy all the time," and "My life is fast paced." Lack of inhibitory control is measured by items like "I can tolerate frustration better than most," (item is reversed) and "I have trouble controlling my impulses."

Self-esteem was measured by the Rosenberg (1966, 1979) 10-item global self-esteem scale.

Other-directedness is measured by items which tend to tap the respondent's willingness to be and do as other people are perceived to desire. As discussed above, the 11 items have been found to be one factor of Snyder's (1974) Self-Monitoring Scale (e.g., Briggs, Cheek, & Buss, 1980). The 25-item Self-Monitoring Scale was administered to respondents, and the 11-item Other-Directedness factor was investigated according to predictions discussed above.

The 23-item Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975) was the final scale administered to all respondents. Public self-consciousness is predicted to be related to engagement style, and was investigated using the 7-item Public Self-Consciousness subscale of the larger scale. These items emphasize one's awareness of oneself as a social object, e.g., "I'm self-conscious about the way I look" and "I'm usually aware of my appearance."

The EASI-III Survey and the Self-Consciousness Scale were measured on 5-point Likert-type scales, and the Self-Esteem Scale was measured on a 4-point Likert-type scale. The Locus of Control Scale consists of 29 forced choice items (including 6 fillers). The subject's score

is determined by summing all external locus of control choices on the critical items. The Self-Monitoring Scale was measured by true/false replies to 25 items.

Four random orders of presentation of the five measures of constructs to be used in the extrinsic convergent and discriminant validity study were used. The questionnaires were administered to all students in the small group sessions, and took approximately 40 minutes to complete.

Measurement of Response-Time Data

Within each engagement style classification, individual laboratory sessions were arranged for the first 10 subjects who were categorized in the classification on the basis of their self-ratings. In the individual sessions, the participants were presented the same 77 trait adjectives used in the self-rating task and then were administered the TES. In the response-time session, the traits adjectives were prepared on individual slides and presented to participants on a screen directly in front of them. Individuals decided if each adjective described him or her, and their self-referent decisions and response latencies were recorded. Timing of presentation was systematically controlled, and the time each individual needed to decide if an adjective described him or her was automatically recorded in milliseconds.

Items

The same 77 trait adjectives used in the self-rating task were prepared on 2 X 2 inch slides and used in the self-referent and

response-time (RT) task. The 21 filler traits were used in the RT task as practice words, and were presented in four random orders within each sample of subjects. The remaining 56 words were presented after the 21 practice words in four random orders within each sample of subjects.

Laboratory Procedure

Each subject was greeted by a trained undergraduate research assistant and shown into a laboratory room painted black and fully lit by an overhead light which remained on during the study. The participant was directed to a chair positioned four feet in front of a white screen. The subject was asked to sit facing the screen and to hold on his or her lap a small board on which two Speed-X telegraph keys were mounted. A white tape was placed on the front edge of the board and the subject was asked to rest his or her fingers on the tape. One key was labelled Me and the other Not me. For half of the subjects in each ES classification, the Me key was at the right hand and for the remaining half at the left hand. Keys were randomly assigned within engagement style classification. The research assistant sat approximately two feet to the right and slightly behind the subject. In front of the students a table held activation, relay, timing, and slide projection equipment. The assistant held a clipboard on which the subject's self-referent decisions and RTs were recorded manually.

After the subject was helped to be comfortable and relaxed, the assistant read instructions to the individual. To insure that participants were making decisions around similar types of behaviors, a

context was specified for the self-judgments and was included in the directions given to the participants.

> I am going to present to you a series of adjectives that have been used to describe various types of people. The adjectives will be presented one at a time on the white screen directly in front of you. Before each adjective comes on the screen, the other slide projector will show the letter X at the place on the screen where you should be looking. When you see the X, look at that place on the white screen. After two seconds the X will disappear, and the adjective will be presented in the same place. Your task is to read the adjective and decide if that word describes you as you see yourself. If you decide it describes you, tap the button that is labelled Me that is on the board on your lap. If the word does not describe you, tap the button that says Not me. You may remember some of the words from the first study you participated in. Don't worry about how you marked the adjective before. It doesn't matter. After you choose your response, I will record it, reset the equipment, and present the X and the next adjective. Remember to keep each hand with your fingers touching the white tape on the front edge of the board. Use the hand nearest to the response you choose to tap the key. Do you have any questions? (Assistant answers questions or waits 10 sec. if no response.) Again your task is to decide if each adjective presented describes you or not. When deciding about each of the trait words, try to picture yourself in a typical group situation. Pick a group situation that is very familiar to you, perhaps in a dorm room or at a meeting of people to decide an issue of importance. You and the others are trying to make an important decision. Many of the people in the group you know, others are unfamiliar to you. Okay? (Assistant waits for answer.) Let's begin.

When the participant was ready, the assistant activated a Gerbrands digital integrated circuit 300 series millisecond timer and a Gerbrands power relay attached to two Kodak Ectographic carousel slide projectors. After a 500 msec delay, the X was automatically presented on the screen for 2 sec. Presentation of the X was automatically followed by a 500 msec interstimulus interval, after which the trait adjective was automatically presented at the same place on the screen for a 2 sec interval. Time from presentation of each adjective until the subject tapped the telegraph key was automatically counted

and displayed in milliseconds by a Gerbrands digital millisecond clock/counter which was attached to the Gerbrands timer and was positioned so only the assistant could read its face. The assistant recorded the participant's response and the RT, reset the clock/counter, and re-activated the equipment. If participants asked questions or made comments after a trait word was presented and before they indicated their decision by tapping the key, their decision and RT were counted as missing.

In an attempt to eliminate random error in subjects' RTs, the entire list of adjectives was given to the participants twice. It was intended to compute an average RT for each of the adjectives, but inspection of the data indicated systematic differences between responses to the first presentation and the second presentation which varied for schematics and aschematics. Differences between respondents' first and second RTs to schema-related traits also were noted by Markus and Smith (1981) and appear to be systematically different for schematics and aschematics. Schematics tend to have shorter RTs to schema-related traits during the second presentation, and aschematics tend to have longer RTs. The data from the present study also indicated that some aschematics change their self-referent decisions during the second presentation. These results tend to validate the self-schema construct and are interesting from a self-schemata perspective. However, the focus of the present study is on the construct validity of engagement style, and some aschematics' changes in self-referent decisions made the averaging across responses problematic for the present study. Therefore, only participants'

responses to the first presentation of adjectives were reported in the present study.

All questions asked by participants were answered as straightforwardly as possible, but it was necessary that participants remained naive to the RT measurement so as not to artificially change its nature. During the RT study, no one asked about or indicated in any way that they knew about the recording of the RTs. However, after debriefing some respondents indicated they knew the RT assistant was recording more than the self-referent decision. No one indicated they knew the RTs were being measured and recorded.

Depending on the number of questions asked by the participants, the RT session tended to last from 30 to 45 minutes. When the participants had responded twice to the set of adjectives, they were shown to the laboratory room where the TES was administered. Research assistants previously unknown to the participants conducted the last phase of the study, i.e., they administered the TES, debriefed the respondents, and gave them extra class credits for involvement in the laboratory sessions.

Administration of the TES

The TES was administered individually to the participants, according to standard directions. The TES normally takes 10 to 20 minutes to complete. With the permission of the participants, all TES sessions were tape recorded, and the recordings were used to compute inter-rater agreement of a random sample of subjects from each sample.

Order of Test Presentation

Within both the small group and the individual sessions, the orders of presentation of the tests were not counterbalanced across respondents. That is, in the small group sessions, the self-rating measures were administered before the other questionnaires, and in the individual sessions, the response-time task was administered before the TES. This was done to eliminate any possible influences on subjects' reported perceptions of self-schemas by either responding to other paper and pencil measures or the TES.

Specifically, it was thought responding to the extrinsic validity measures could temporarily influence respondents' replies to the trait adjectives, decreasing the validity of the self-ratings. Further, it was thought that the decision making process involved in the self-rating and response-time task would focus subjects' attention on perceptions of self across broad areas of motivations, values, and behaviors (e.g., Markus & Nurius, 1984). In turn, it was expected that this would enhance consistency and accuracy of responding to related tasks. Consequently, neither the order of presentation of the self-rating task nor the order of presentation of the response-time task was counterbalanced with other tests given in the same session. The order of presentation of the extrinsic validity measures was counterbalanced, but always presented after the trait self-rating tasks.

Procedure

The primary investigator conducted the small group sessions and follow-up contacts with subjects chosen to participate in the

laboratory session. All aspects of the individual sessions were conducted by trained undergraduate assistants who were naive to the subjects' classifications, the critical trait adjectives, and the specific hypotheses of the study. No undergraduate assistant saw any data other than that which he or she collected, nor did the assistants have any contact with the respondents other than their own data collection task. No assistant personally knew any respondent from whom data were collected. The primary investigator had no contact with the respondents after the individual sessions had been arranged and before the final data were collected.

Selection and Training of Research Assistants

Undergraduate students interested in psychology research were solicited from the primary investigator's psychology classes and the class of a colleague to participate in this study as research assistants. A total of 22 undergraduates were trained and collected data from either male or female respondents. Of the 22 assistants, 19 students participated in the study on a volunteer basis. Male data were collected by 5 men and 6 women, and female data also were collected by 5 men and 6 women. No student assisted during more than one term.

Because of the difficulty in arranging a mutually satisfactory time for the use of the laboratory equipment, the respondent, and the two assistants, it was not possible to balance the gender of assistants within engagement style classifications. However, both males and females collected RT and TES data, every effort was made to

distribute assistants by gender equally within the engagement style classifications, and assistants were trained to behave as nonobtrusively as possible while remaining responsive to participants' questions. The effect of gender of research assistant on participants' RT responses is unknown, but in personal communication McKinney reported that previous studies have indicated gender of TES assistant does not influence responding.

All assistants were given an overview of the study, and were trained to administer the RT study, the TES study, or both, as the student desired. All students acted as respondents in both phases of the study during the training sessions. RT assistants practiced until they were able to run the RT study smoothly and professionally with both another student and the primary investigator as respondents. The TES assistants practiced until they were able to administer smoothly the TES to another student and score the administered test and a practice test with at least 90% agreement with the primary investigator. All students completing the training collected data throughout the term in which they were trained.

Ethical Considerations

The rationale, purpose, and design of the current study were submitted to the Michigan State University Committee for Research Involving Human Subjects (UCRIHS) for approval before any recruiting or research was begun. With the exception of the RT data collection, informed consent was obtained from all respondents before any data were collected. Responses of all individual participants were

confidential and anonymous and were kept separate from their signed permission forms.

At completion of the administration of the TES, the participants were read a statement by the TES assistant explaining all aspects of the study, respondents' questions were answered, and written permission was obtained from the participant to use his or her RT data for purpose of data analysis. Respondents were asked if they knew the RTs were being measured, and all those participating in the study were told how to contact the primary experimenter to discuss the nature of the study or obtain the results of the study. All of the respondents' questions were answered either by the primary investigator or the TES assistant. The permission forms and the formal debriefing given to respondents are included as Appendices B and C, respectively.

Data Analyses

The analyses used to investigate the data collected through the above procedures were conducted according to the purpose and predictions elaborated above and were organized into three units. First, it was necessary to evaluate the measurement models of each of the constructs investigated in the study. Second, a number of analyses were conducted in order to validate the controls and manipulations of the laboratory sessions, the self-schema measurement procedures, and the comparability of the primary male sample and the males sampled during the year the data were collected from the female sample. Finally, in the primary analyses, the data were analyzed according to the structures of the AESC and the PESC, as put forth in this paper. The primary analyses consisted of three parts:

a) investigation of the validity of the ESS self-rating and response-time measures of engagement style, b) investigation of the convergent and discriminant validity of the AESC, the PESC, and the TES using a multitrait-multimethod (MTMM) matrix, and c) investigation of extrinsic convergent and discriminant validity of the AESC and the PESC.

Within these analyses a number of specific decisions concerning the handling of the data had to be made. These decisions included prediction and investigation of gender and sex-role related issues, scoring of the self-referent decisions and the associated RTs, handling of the few very long RTs, i.e. RTs longer than 10 sec., and handling of missing data in computations of scales.

Gender and Sex-Role Related Differences

Based on the Bakan model of agency and communion and the predicted relationships among Bakan's constructs and those of engagement style, differences in percent of male and female classifications into the engagement style categories were predicted. Specifically, it was predicted that more males than females would be categorized into the agent and agent/communicant categories, and more females than males would be categorized into the communicant, communicant/patient, and patient categories. Predicted differences in engagement style classification according to gender of respondent were investigated using a crosstabulation procedure analyzed with a chi-squared statistic.

As a check against possible unforeseen gender-related bias in measurement instruments, analyses of all measurement models were conducted for males and females separately and combined, and analyses of

possible contamination effects of gender of research assistant were conducted separately on the male and female data.

Because there was no reason to expect the validity of the engagement style construct to vary by the gender of the respondent and all measures of engagement style were specifically constructed either to be free of gender and sex-role bias or to have accounted for it in scale construction, the multitrait-multimethod matrix was investigated using the combined male and female data. In the extrinsic validity study, the measures of engagement style were expected to be correlated with the measures of other constructs in the same ways and with the same strength for males and females. Therefore, all analyses directly investigating the construct validity of engagement style were conducted on male and female data combined.

Scoring of Response-Time Data

Analysis of the multitrait-multimethod matrix and the correlations of the extrinsic validity study necessitated that all subjects had valid scores on all measures of all constructs, including agency, communion, and patience. The RT data presented a scoring difficulty in this regard. The meaning of a reaction time is intrinsically tied to the response decision given to the critical traits. A relatively short reaction time indicates that the person is schematic on the construct, if the reply is affirmative. A relatively short reaction time indicates that the person is aschematic on the construct, if the reply is negative. Long reaction times indicate ambivalence about the self-schematic quality of the construct (Crane & Markus, 1982).

Therefore, it is necessary to score the RT data to accommodate both the self-referent decision and the RT.

The decision was made to solve this problem by selecting only those who responded affirmatively to the majority of all engagement style traits, i.e., schematics on engagement style. Participants were selected for data analyses if they responded affirmatively to the majority of agent, communicant and patient traits. Because of the this selection procedure, restriction of range of schematics' ESS self-rating scores is possible. Therefore, schematics' data will be investigated and corrected for restriction of range of ESS self-rating scores, if warranted.

The schematic selection procedure described above was used to select data for the primary analyses, i.e., validation of the ESS measures, the MTMM matrix and the extrinsic validity study. The checks of the measurement models, laboratory manipulations, and the validity of the self-schema measurement procedures were also conducted on this sample. TES inter-rater reliabilities were calculated on the entire sample of TES respondents ($\underline{N}$ = 121), and engagement style categorization of males and females was investigated on the full sample of respondents ($\underline{N}$ = 568).

The reaction data posed one further dilemma, viz., a small number of self-referent decisions had relatively long RTs. Average item RTs varied from approximately 1.055 sec to 4.500 sec. Included in the average RTs in the male data were twenty-four RTs to non-practice words greater than 10.000 sec., and in the female data, 6 RTs to non-practice words greater than 10.000 sec. Seven male and four female

participants accounted for the long RTs. Because the primary analyses of the study were based on the variances and covariances of participants' scores on the various measures, the extreme reaction times posed a serious threat to the validity of the computations in which they were involved. Extreme scores can radically and inappropriately change the nature of correlations between observed variables, i.e., one participant's extreme score can radically change the reported correlation between variables. In order to maintain the quality of the few long RTs and also to eliminate the threat to correlations between variables in the present study, the RTs over 10.000 sec. were truncated at 10.000 sec. Degree of skewness of the RTs also was checked after truncation to insure that a large skew in the distribution of scores did not remain.

Scoring of Missing Data

Two factors contributed to the decisions made concerning the handling of missing data in the data analyses. Analysis of descriptive statistics of the data indicated few data were missing, and second, no systematic differences in missing data were noted in the measures. Consequently, average item scale scores were computed on the non-missing data for all participants who had completed 60% or more of the items of each scale. The resulting scale scores were used in all analyses of the present study.

Estimations of the Measurement Models

Hunter and Gerbing (1982) and others (e.g., Wilson, 1980) have argued that any model can be broken into two components: a) the

structural or theoretical model, and b) the measurement model. Appropriate investigation of the structural model depends on an accurate measurement model, i.e., a measurement model free of random and systematic measurement error. All measures used in the present study were investigated for random measurement error and systematic measurement error attributable to lack of internal parallelism of the items.

All items of each measure used in the present study were submitted to confirmatory factor analysis using communalities in the diagonals of the correlation matrix. The resulting inter-item and item-total correlations were examined for parallelism or consistency among the items of the scales, and Cronbach's alpha was computed and examined for each scale. Items inconsistent with the pattern of correlations among the other items of the scale were eliminated, and the resulting internally consistent scales were used.

Analysis of the structural or theoretical model necessitates unbiased interpretations of the observed scores, which in turn necessitates an accurate measurement model, i.e., a model free of measurement error. No scales were measured without random error, therefore all correlations were corrected for attenuation due to measurement error, either implicitly by the analyses employed or directly by the experimenter before analyses were employed. All analyses of the measurement models and the MTMM matrix were conducted on correlations corrected for attenuation due to random measurement error, as were the correlations utilized in the ESS validity investigation and the extrinsic validity study.

The scoring of the TES involves judgments by the person administering the test about the replies that are given by the participant. Therefore, a measure of inter-rater agreement was also computed on the TES as one more check of the measurement model. Ten TES tests from the male sample and 10 TES tests from the female sample were randomly selected from the total pool of participants in the TES sessions. The 24 items in each test were scored by the primary investigator independent of the TES assistant's scores, and the percent agreement between the two test scores was computed.

Cohen (1960) argued that it is likely that part of the agreement between any two raters is due to chance, and he has developed a measure of inter-rater agreement which accounts for chance agreement. Kappa (Cohen, 1960) is a measure of the proportion of agreement between two raters not attributable to chance. As a further estimation of the accuracy of measurement of engagement style using the TES, inter-rater agreement not attributable to chance was estimated using Kappa for each of the 20 tests.

Comparability of Male Samples Across Years

As elaborated above, it was decided to sample the male population of college students a year before the sampling of the female population of college students. Because the male and female samples were directly compared in the analysis of the engagement style categorizations, it was necessary to investigate the comparability of the male sample and a control male sample selected during the year the female students were sampled.

The entire 1981 sample of males (N = 277) was compared to the 1982 sample of males (N = 44) on the engagement style self-ratings and several measures used in the extrinsic validity study. Specifically, the two samples were compared on the ESS agency, communion, and patience self-rating scales, the Bakan/Block measures of agency and communion, and the creative scale self-ratings using the t-test statistic and a significant probability level of .05.

Validation of Laboratory Session Manipulations

Several controls were implemented in the RT and TES sessions, and each was systematically investigated for effectiveness. In the RT sessions, hand position and order of adjective presentation were counterbalanced across participants, and order of adjective presentation was counterbalanced across hand position within engagement style category. That is, within engagement style categories, hand position was distributed equally across participants and adjective orders were distributed approximately equally across hand position and participants. Effects of hand position and adjective order across engagement style categories were investigated using two-way analyses of variance on RTs to engagement style traits. Significant main effects for hand order or adjective order or interactions of either with engagement style category indicates a lack of control for handedness or adjective presentation.

Attempts also were made to counterbalance the gender of RT and TES assistants within engagement style categories, although the attempts were not totally successful. Investigation of possible contamination effects due to gender of laboratory assistant were conducted. First,

the success of counterbalanced assignment of assistant by gender to engagement style category was investigated using a crosstabulation procedure. A chi-squared statistic was computed on the proportion of male and female assistants assigned across engagement style categories during both the RT and TES data collections. Possible contamination effects of gender of assistant across engagement style categorizations also were investigated using two-way analyses of variance. The 7(ES categorization) X 2(gender of assistant) ANOVAs were conducted on RTs to engagement style traits and TES agent, communion, and patient scores. Again, main effects for gender of assistant or interaction effects indicate failure to adequately control for contamination effects. All analyses of effects of gender of assistant were computed separately for male and female participants.

Validation of Self-Schema Measurement Procedures

The two measurement procedures chosen for alternative measures of engagement style are based on the self-schema construct and were developed for the present study. Contamination of responses to the two procedures seems possible from three areas. First, because all traits were judged desirable by samples from the population involved in the study, social desirability contamination of engagement style responding seems conceivable. Second, it is possible that responses to the traits could have been determined, not by an engagement style self-schema, but by cognitive style differences associated with cognitive complexity, i.e., degree of cognitive differentiation. Finally, it is possible that speed of response to self-referent

decisions was determined not by the self-referent value of the trait, but by a general tendency to respond quickly to external stimuli.

Self-ratings, self-referent decisions to traits, and RTs to the self-referent decisions were examined for possible social desirability contamination associated with engagement style classification. The same measurement procedures were investigated for cognitive style differences associated with engagement style classification. RTs to self-referent decisions were examined for differences in generalized speed of responding associated with engagement style classification.

Social desirability contamination of engagement style categorizations were investigated primarily through comparisons of participants' scores on a creativity scale measured by each of the three measurement procedures. A measure of creativity was selected because the construct is theoretically independent of engagement style, i.e., all measurements of the construct should be unrelated to all engagement styles. One-way analyses of variance of the engagement style categories on each of the three measures of the creative scale were computed. That is, the three dependent variables were the creative scale scored by the interaction of respondents' ratings of self-description and self-importance, the creative scale scored by the number of "Me" replies to the creative traits, and the creative scale scored by the RTs to affirmative self-referent decisions to the traits. No difference among categories indicates that social desirability responding to the three measurement procedures is not differentially related to engagement style classifications.

Validity of measurement of individual differences on engagement style self-schemata was investigated through examination of predicted uniformity of responses to six traits unrelated to engagement style. Three traits were selected because they were expected to receive endorsement from nearly all respondents, and three traits were selected because they were expected to receive endorsement from almost no respondents (Anderson, 1968; Jones, Sesenig, & Haley, 1974). The means and standard deviations of each adjective as it was endorsed by the complete male and female samples were examined for confirmation of either high or low endorsement.

Three measures of each of the high and low endorsement words were investigated for endorsement according to engagement style categorization. One-way analyses of variance of the engagement style categories on each of the six adjectives measured by each of the three self-schema procedures were conducted. The three high endorsement words were measured by the interaction of participants' ratings on self-description and self-importance of the trait, a "Me" response to the trait, and RT to an affirmative response. The three low endorsement words were measured by the self-rating interaction, a "Not me" response, and RT to a negative self-referent decision. No differences among the engagement style categories on the traits indicates that differences in the self-schema scores are not associated with cognitive complexity. That is, consistent classification differences in responding to the high and low acceptance words would indicate that those classified on the differentiating styles tend to differentiate

their self-schemas more complexly than respondents endorsing other classifications.

The three high endorsement and three low endorsement words also were examined for social desirability contamination of self-ratings, self-referent responses, and response-times. Self-ratings, RTs, and self-referent decisions to the high and low endorsement words were examined by engagement style category for evidence of social desirability contamination. Exceptionally high endorsement of high endorsement words and no differences in endorsement of low acceptance words would be an indication of social desirability contamination.

One other possible source of contamination of the RT measurement procedure seemed conceivable and was investigated. Differences among engagement styles in general speed of responding to external stimuli seemed possible and could have contaminated RTs. To investigate this source of bias, a one-way ANOVA of engagement style categorization on RTs to the creative traits was computed. Of interest was a general speed of response to decisions, regardless of the content of decisions; therefore all RTs irrespective of self-referent decision were investigated. No differences among the engagement style categories indicates no differences among them on general speed to formation and indication of self-referent decisions.

Validation of ESS Self-Ratings and Response Times

As the first means of examining the validity of the engagement style agent, communion, and patient trait adjectives, respondents' scores on the ESS self-rating and response time measures were compared with their TES scores. This analysis was conducted with the TES

scored two ways. In the first analysis the TES was scored according to the AESC, i.e., all agent and one half of the agent-and-patient scores were summed for a degree of agency score. In the second analysis the TES was scored according to the PESC, i.e., respondents received an agent score, a communion score, and a patience score. In both cases, the TES score(s) was correlated with agent, communion, and patient self-ratings and response-times to affirmative self-referent decisions. All correlations were corrected for attenuation.

If the ESS self-rating and response-time agent, communicant, and patient scales are measuring engagement style, the TES scored according to the AESC and the ESS agent scales will be positively and significantly correlated. Because the TES scored according to the AESC includes half of the agent-and-patient replies which are proposed to constitute the communion scores according to the PESC, the AESC-scored TES does not score communion as proposed by the PESC. Therefore, the AESC-scored TES and ESS communicant scales should not be correlated significantly. The prediction for the correlations between the TES and the patient scales vary according to prediction of the dimensionality of engagement style. If engagement style is a bipolar dimension, the TES scored according to the AESC and the patient scales should be correlated negatively and significantly. If these are independent engagement styles, the AESC-scored TES and the patient scales should not be correlated significantly.

The ESS agent, communion, and patient self-ratings and response-times also were correlated with the TES agent, communicant, and patient scores. If the new instruments are valid measures of

engagement style according to the PESC, all respective scales should be correlated positively and significantly.

Analysis of the Multitrait-Multimethod Matrix

The MTMM matrix was visually inspected according to the four criteria described by Campbell and Fiske (1959) which were elaborated above. The confirmatory factor analysis and path analytic procedure outlined by Schmitt (1978) also was used in the analysis of the MTMM matrix. The investigation of the MTMM matrix was conducted in order to evaluate the contributions of trait and method variance to participants' agency, communion, and patience scores, as measured by the PESC-scored TES, the ESS self-ratings, and the ESS RTs. The MTMM also was analyzed in order to investigate the validity of the AESC and the PESC. That is, the MTMM also was investigated for degree and direction of intercorrelations among the three engagement styles. This final analysis of the MTMM is a direct test of the dimensionality of the three engagement styles, one of the major constructs of interest in the present study.

Extrinsic Convergent and Discriminant Validation of Engagement Style

The final analysis of the present study was the extrinsic convergent and discriminant validity study of the AESC and the PESC. This analysis involved the computation and visual inspection of the correlations between engagement style and other constructs predicted to be associated with it in specific ways.

Four measures of engagement style were correlated with nine other constructs and examined according to the specific predictions

elaborated above. The four measures of engagement style include the AESC-scored TES, PESC-scored TES, ESS self-ratings, and ESS RTs. All correlations were corrected for attenuation before evaluation.

In this analysis, the validity of the AESC, the PESC, and new measures of engagement style were examined according to the external parallelism criterion discussed by Hunter and Gerbing (1982). That is, if several scales are measures of the same construct, all scales should be associated with other constructs in the same manner. For example, all measures of agency should be related to external constructs in similar ways which are consistent with the predictions elaborated above. The patterns of correlations of all measures of engagement style with external constructs were examined for confirmation of predictions and for consistency across different measures.

RESULTS

ESS Self-Rating Classification of Participants

ESS descriptive and importance self-rating questionnaires were completed by 277 males and 291 females. All respondents were classified on engagement style on the basis of the self-ratings, and the ESS self-rating (SR) classifications were used for selection of laboratory session subjects. From the ESS SR classified respondents, the first 10 tested respondents of each gender within each classification were selected for further participation in the study. If less than 10 respondents were categorized in an ESS SR classification, all respondents in the classification participated in the laboratory sessions.

Proportions of respondents classified into the engagement styles are given in Table 4. No respondents were categorized as aschematic and 68 males (25%) and 57 females (20%) remained unclassified. A total of 57 males and 64 females (N = 121) were selected to participate in the RT and TES sessions.

Gender Differences in ESS Classification

Predicted differences between males' and females' ESS self-rating classifications were confirmed, χ^2 (6, N = 568) = 22.08, $p < .01$. As can be seen in Table 4, more males than females were classified agent and agent/communicant; and more females than males were classified communicant, communicant/patient, and patient.

Table 4

Frequencies of Respondent ESS Self-Rating Classification

Males[a]						
Agent	Communicant	Patient	Agent Communicant	Agent Patient	Patient Communicant	Agent Patient Communicant
16 (5.8%)[c]	63 (22.7%)	5 (1.8%)	48 (17.3%)	2 (.7%)	28 (10.1%)	47 (17%)

Females[b]						
Agent	Communicant	Patient	Agent Communicant	Agent Patient	Patient Communicant	Agent Patient Communicant
9 (3%)[c]	73 (25%)	11 (3.8%)	33 (11.3%)	5 (1.7%)	63 (21.6%)	40 (13.7%)

[a]Number of males unclassified = 68 (25%). N = 277.

[b]Number of females unclassified = 57 (20%). N = 291.

[c]Male and female percents total 100.

Self-Rating Classifications of Response-Time Schematics

From the 57 males and 64 females selected for the RT and TES laboratory sessions, respondents who were judged schematic on engagement style were chosen for inclusion in the three primary data analyses. Respondents were judged schematic if they gave affirmative self-referent responses to the majority of the trait adjectives in each of the agent, communicant, and patient ESSs.

Analyses of the measurement models were conducted on data from respondents who were judged schematic on the basis of the five agent, five communicant, and five patient traits listed in Table 2 (N = 92). As a result of the analyses of the measurement models, one communicant and one patient trait were dropped from the ESS. On the basis of the revised ESS, 86 respondents gave affirmative self-referent replies to the majority of traits of each of the agent, communicant and patient ESS scales. The 86 respondents were judged schematic on engagement style, and their data were included in the primary data analyses. According to classification on self-ratings, male schematics included 4 agents, 8 communicants, 3 patients, 7 agent/communicants, 2 agent/patients, 6 communicant/patients, and 10 agent/communicant/patients (N = 40). Female schematics included 4 agents, 7 communicants, 8 patients, 8 agent/communicants, 3 agent/patients, 8 communicant/patients, and 8 agent/communicant/patients (N = 46).

Evaluation of the Measurement Models

The measurement instruments were evaluated for internal reliability using confirmatory cluster analysis with communalities in the diagonals. Use of this analysis yields all correlations corrected for

attenuation and item-total correlations corrected for item overlap. In all investigations of the the measurement models, male and female data were analyzed separately and combined. Inter-rater reliabilities of the TES were computed separately for the male and female data.

Estimations of Internal Consistency

The internal consistency of each scale used in the present study was determined on the basis of four criteria: a) the consistency or parallelism of the inter-item correlations, b) the item-total correlations corrected for item-overlap, c) Cronbach's alpha, and d) inter-scale correlations. On the basis of these criteria, items were deleted from seven scales, two scales were combined, and two scales were dropped from analysis.

Changes in Scale Composition and Selection. One item was removed from each of the EASI-III scales used in the present study, and five items were removed from the Other-Directedness scale. Item 22 was removed from the Vigor scale; Item 17 was removed from the Tempo scale; and Item 32 was removed from the Lack of Inhibitory Control scale. Items 2,3,6,17, and 23 were removed from the Other-Directedness scale. All of these changes served to remove items which carried forms of common specific errors (e.g., item reversal); and none of the changes affected the essential meaning of the scales, as previously discussed in this paper.

In the data of engagement style schematics, two items in the Bakan/Block Agent scale correlated poorly with other scale items and were dropped. The items rational and reasonable had low correlations with other items and the total scale, and alpha was improved by their

removal. The remaining Agent items include independent, ambitious, active, assertive, and adventurous. The effect of the deletion of the two items is to remove all reference to reason, an effect consistent with Bakan's (1966) original premise that the agent represses thought. As expected, the inter-scale correlation of the final Bakan/Block Agent and Communion scales (r = .12, N = 86) indicates that the two scales measure different constructs.

One item also was removed from each of two ESSs, viz., the Communion scale and the Patient scale. Logical was dropped from the Communion scale, leaving perceptive, attentive, helpful, and concerned to define the scale content. Humble was dropped from the Patient scale, leaving agreeable, obliging, cautious, and either accommodating (male) or sensitive (female) to define its scale content. Again, the changes appear to have face validity, and the internal parallelism and the alphas of the scales were improved significantly by dropping the items. Inter-scale correlations of all measures of engagement style are of primary relevance for the questions raised by this study and are presented in Tables 10 and 11 and discussed below.

Examination of the criteria for internal reliability of the scales also indicated that some scales were measures of the same construct. Accordingly, Vigor and Tempo were combined into one scale and the Personal Control scale and Political and Social Control scale were dropped from further analysis.

Vigor and Tempo were correlated .73 on the combined male and female data, and visual inspection of the inter-item and item-total correlations indicated that the two scales were measures of the same

construct. Vigor and Tempo were combined, and the newly formed scale was labelled Activity and used in the extrinsic validity study.

Contrary to the research reviewed above, the data of the present study indicate that the Personal Control scale and the Political and Social Control scale measure the same construct as the encompassing Locus of Control Scale. In the present study, the Personal Control scale was correlated with the larger scale 1.00, and the Political and Social Control scale was correlated .87 with the full scale. Consequently, the Personal Control scale and the Political and Social Control scale were dropped from further analysis. That is, the only measure of locus of control used in the extrinsic validity study was the 23-item Locus of Control Scale.

Internal Reliability of the Final Scales. Cronbach's alpha was computed for each scale used in the primary data analyses of the present study. In Table 5, alphas are given for the TES scored according to the AESC and the PESC, the ESS self-ratings, the ESS RTs, three measures of creativity used as control checks, and the eight measures used in the external validity study. With few exceptions, male and female alphas are consistent, and reliabilities are good to excellent. As mentioned above, inter-scale correlations of engagement style measures are presented and discussed in a later part of this paper. Correlations among the engagement style scales and the external variables also are central to the questions raised in this paper and will be discussed below. All inter-scale correlations among the external variables are low to moderate, indicating that the scales measure unique variables. With one exception all correlations among

Table 5

Scale Internal Reliabilities

Sample	AESC TES	PESC Agent TES	PESC Communicant TES	PESC Patient TES	ESS Agent Self-Rating	ESS Communicant Self-Rating	ESS Patient Self-Rating	ESS Agent RT	ESS Communicant RT	ESS Patient RT
Males[a]	76	72	72	72	64	76	79	85	77	80
Females[b]	77	77	77	75	65	66	48	80	79	75
Total[c]	77	75	75	77	64	71	63	84	75	78

Sample	Locus of Control	Self-Esteem	Other-Directedness	Public Self-Consciousness	Activity	Lack of Inhibitory Control	Bakan/ Block Agent	Bakan/ Block Communion	Creativity Self-Rating	Creativity Affirmative RT	Creativity RT
Males[a]	82	76	50	79	78	47	75	82	86	95	80
Females[b]	74	78	56	79	77	57	66	80	89	94	81
Total[c]	78	77	53	79	77	56	70	79	88	94	79

Note. Cronbach's alpha is the measure of internal reliability. Decimals are omitted.

[a] N = 43.

[b] N = 49.

[c] N = 92.

the external variables are less than .35. The one exception is the correlation between Bakan/Block Agency and Activity, $\underline{r}$ = .50, a correlation low enough to indicate that, although the scales are strongly related, they measure different variables.

An examination of Table 5 indicates that three scales have relatively poor reliabilities. The Other-Directedness scale and the Lack of Inhibitory Control scale have low reliabilities for males and females, and the ESS Patient scale has low reliability for females.

The low alphas of the Other-Directedness scale and the Lack of Inhibitory Control scale are attributable to two factors. First, the scales are measured by few items, a factor which contributes directly to computation of alpha. Second, item-total correlations within the two scales range from approximately .30 to .65. That is, the item-total correlations are good, but inter-item correlations do not form a flat matrix. This indicates all scale items measure the underlying construct, but not with equal intensity, a factor which also contributes to the relatively poor reliabilities of the scales.

The low reliability of the females' ESS Patient scale also is attributable to two factors. First, the scale is measured by few items. Second, scale items are only moderately correlated with the latent construct, i.e., item-total correlations range from .21 to .35. Because all items appeared to measure the latent construct, no improvement in scale composition was possible and all items were retained.

Inter-Rater Reliabilities of the TES

Percent of agreement between the primary investigator and TES assistants was computed on 10 cases randomly selected from each of the male and female TES samples. Percent of agreement on the male sample ranged from 88% to 100%, and the average agreement reached was 93%. Agreement of TES scoring on the female sample ranged from 92% to 100%, and the average agreement reached was 96%.

Kappa, a measure of percent of agreement not attributable to chance, also was computed for each sample. Kappa is 85% for the male sample and 98% for the female sample.

Restriction of Range and Skewness in the ESS Scales

Restriction of range of scores was examined in schematics' ESS self-ratings, and ESS RTs were examined for degree of distribution skewness. With respect to these analyses, the data were judged to be adequate; and no changes in the data were made.

Because the data of a relatively small proportion of respondents were selected for final analyses, restriction of the range of scores on the criterion scale was investigated. The means and standard deviations of schematics' (N = 86) ESS SR scale scores were compared with the same statistics of the full sample of males' (N = 277) ESS SR scale scores. The full sample of female scale scores were not available for analysis.

Visual inspection of the data indicated no important restriction of range in schematics' ESS SR scale scores. Standard deviations of communion scores across groups were almost identical, and the standard deviations of the patient scores were slightly higher for schematics

than the full sample of males. The standard deviation of ESS SR Agent scores were lower for the schematics (sd = 15.40) than the full male sample (sd = 19.63). However, this discrepancy is attributable primarily to a finding of less variance in females' agent scores which is not accounted for in the total male sample statistic. That is, female schematics' standard deviation of ESS SR scores (M 55.69, sd = 13.94) was lower than male schematics' standard deviation of ESS SR scores (M = 56.41, sd = 16.70).

Restriction of range of schematics' ESS SR agent, communion, and patience scores also were investigated in a second way. The ESS SR scale means and standard deviations of the sample of all respondents participating in the RT sessions (N = 121) and the schematics (N = 86) were compared. The means of the schematics' scale scores were somewhat higher than the means of the the full RT sample: a) agent, $\bar{M}_{121}$ = 53.78, $\bar{M}_{86}$ = 56.03; b) communion, $\bar{M}_{121}$ = 73.98, $\bar{M}_{86}$ = 78.17; c) patient, $\bar{M}_{121}$ = 66.25, $\bar{M}_{86}$ = 68.91. There were no differences between the two samples' standard deviations of comparable ESS SR scale scores. The scores were not corrected for range restriction.

Because a few individuals had relatively long RTs to some trait adjectives, long RTs were truncated at 10.00 sec. The skewness of each of the ESS RT scales and Creative RT scale was examined as a check on the sufficiency of the truncation. The Agent scale (skewness = 3.08) and the Communicant scale (skewness = 3.26) were somewhat seriously skewed; the Patient scale (skewness = 1.85) and the Creative scale (skewness = 1.46) were less skewed. However, the maximum agent

RT was 7.19, and the maximum communion RT was 5.90. It was decided that the scores were not extreme enough to warrant truncation farther.

Comparison of the Full Male Sample and the Control Male Sample

The full male sample (N = 277) and the control male sample (N = 44) were compared on the three ESS SR scales, the Bakan/Block Agent and Communion scales, and the Creative scale. No differences existed between the groups on ESS SR agency, $t(309) = .86$, $p = .39$; ESS SR communion, $t(308) = 1.33$, $p = .18$; ESS SR patience, $t(309) = 1.03$, $p = .30$; Bakan/Block agency, $t(310) = -.20$, $p = .84$; Bakan/Block communion, $t(308) = .77$, $p = .44$; nor creativity, $t(308) = -.63$, $p = .53$. That is, no differences were found between the 1981 male sample and the 1982 control male sample.

Validation of Laboratory Controls

ESS Response-Time Data

Schematics' ESS RT agent, communion, and patient scores were examined for effects of hand position, order of adjective presentation, and gender of laboratory assistant. Hand position and adjective order effects were examined on combined male and female data; gender of assistant effects were examined separately on the male and female ESS RT data. Because gender of assistant was not randomly assigned, the distribution of assistant gender across engagement style classifications also was examined separately for males and females.

Two-way analysis of variance (ANOVA) yielded no main effects for hand order or interaction effects of hand order and engagement style classification on ESS RT scale scores (see Table 6). A second two-way

Table 6

Effects of Engagement Style Classification and Laboratory Controls on RT Scores

Effect	ESS Agent RT df	ESS Agent RT F	ESS Communion RT df	ESS Communion RT F	ESS Patient RT df	ESS Patient RT F
ESC[a]	6, 72	.51	6, 72	.85	6, 72	1.06
Hand Position	1, 72	.01	1, 72	.17	1, 72	.42
ESC x Hand Position	6, 72	.79	6, 72	1.91	6, 72	1.10
ESC[a]	6, 64	.40	6, 64	.82	6, 64	.88
Adjective Order	3, 64	.37	3, 64	.18	3, 64	.93
ESC x Adjective Order	12, 64	.33	12, 64	.58	12, 64	.74

Note. No effects were significant at $p < .05$.

[a]ESC: Engagement style classification.

ANOVA calculated on ESS RT scale scores yielded no main effects for adjective order and no interaction effects of adjective order and engagement style classification (see Table 6).

A chi-squared statistic was computed on distribution of gender of RT laboratory assistant across engagement style categories. The full laboratory sample was used in this analysis in order to increase the size of the expected cell frequencies. No differences across engagement style classifications were found in either the male data, $\underline{x}^2$ (6, $\underline{N}$ = 57) = 10.87, $\underline{p}$ = .09, or the female data, $\underline{x}^2$ (6, $\underline{N}$ = 64) = 4.37, $\underline{p}$ = .63.

A two-way ANOVA was used to investigate the effects of RT laboratory assistant gender across engagement style category on ESS RT agent, communion, and patient scores. No main effects of gender of RT assistant and no interaction effects of assistant gender by ESS SR classification were found on any ESS RT scale scores (see Table 7).

Although main effects of engagement style classification on ESS RT scores was not of direct interest in the analyses summarized, the lack of effects is noteworthy (see Tables 6 and 7). It seems that ESS SR classification (which is derived from respondents' ESS self-ratings) cannot be used to predict ESS RT agent, communion, and patient scores, an indication of lack of validity of the ESS measures.

In summary, no main effects and no interaction effects on engagement style RT scale scores were found for hand position, order of adjective presentation, or assistant gender across engagement style classifications. Neither were main effects found for ESS SR classification on ESS RT scores.

Table 7

Effects of Engagement Style Classification and Gender of Laboratory Assistant on RT Scores

	Males					
	ESS Agent RT		ESS Communion RT		ESS Patient RT	
Effect	df	F	df	F	df	F
ESC[a]	6, 28	.60	6, 28	.85	6, 28	1.67
Experimenter Gender	1, 28	.45	1, 28	2.82	1, 28	.02
ESC x Gender	4, 28	2.06	4, 28	.61	4, 28	1.02

	Females					
	ESS Agent RT		ESS Communion RT		ESS Patient RT	
Effect	df	F	df	F	df	F
ESC[a]	6, 32	2.05	6, 32	1.03	6, 32	.88
Experimenter Gender	1, 32	2.51	1, 32	1.21	1, 32	.47
ESC x Gender	6, 32	.46	6, 32	1.29	6, 32	.42

Note. No effects are significant at $p < .05$.

[a]ESC: Engagement style classification.

TES Data

PESC-scored TES data also were examined for effectiveness of control of gender of TES laboratory assistant. Two issues were investigated in the TES data: a) the consistency of distribution of gender of TES laboratory assistant across engagement style categories, and b) the effects of gender of TES laboratory assistant on TES scores across engagement style categories.

No difference in distribution of gender of TES assistant across engagement style categories was found in the male data, $\underline{x}^2$ (6, $\underline{N}$ = 57) = 8.23, $\underline{p}$ = .22, or the female data, $\underline{x}^2$ (6, $\underline{N}$ = 64) = 4.47, $\underline{p}$ = .61.

The results of the two-way ANOVA tests of assistant gender on PESC-scored TES scores are presented in Table 8. One main effect of TES assistant gender was found, i.e., females' average TES communion scores were slightly higher if the assistant were male ($\underline{M}$ = 1.27, $\underline{sd}$ = .18) than if she were female ($\underline{M}$ = 1.16, $\underline{sd}$ = .15). This effect is significant at $\underline{p}$ = .04; no other effects were found for assistant gender. Given the number of test considered, one main effect of assistant gender does not seem substantive.

Although the main effects of ESS SR classification on TES scores were not of direct interest in this analysis, the results are relevant for estimating the validity of ESS self-ratings. It appears that ESS SR classification is not a good predictor of PESC-scored TES scores, especially for females (see Table 8). No main effects of ESS SR classification were found on TES scores in the female data, i.e., ESS self-ratings do not predict females' TES scores. Two effects were

Table 8

Effects of Engagement Style Classification and Gender of Laboratory Assistant on TES Scores

Males						
	PESC TES Agent		PESC TES Communion		PESC TES Patient	
Effect	df	F	df	F	df	F
ESC[a]	6, 28	3.14*	6, 28	.55	6, 28	3.13*
Experimenter Gender	1, 28	1.60	1, 28	.00	1, 28	.75
ESC x Gender	4, 28	2.20	4, 28	.69	4, 28	1.13

Females						
	PESC TES Agent		PESC TES Communion		PESC TES Patient	
Effect	df	F	df	F	df	F
ESC[a]	6, 32	1.75	6, 32	1.07	6, 32	.97
Experimenter Gender	1, 32	.75	1, 32	4.88*	1, 32	1.45
ESC x Gender	6, 32	.20	6, 32	1.09	6, 32	.67

[a]ESC: Engagement style classification.

*$p < .05$.

found in the male data, i.e., ESS SR classification scores are associated with males' TES Agent and Patient scores. Both effects are significant at the .02 probability level; however, the number of calculations of main effects of ESS SR classification should be borne in mind when evaluating the importance of the probability levels.

In order to further understand the nature of the associations among males' ESS self-ratings and their PESC-scored TES Agent and Patient scores, Scheffe post hoc analyses were conducted. Neither post hoc analysis was significant, indicating that no individual ESS SR categories significantly differed from other categories on TES scores. However, the associations among TES scores and ESS SR classifications are of interest when evaluating the validity of the main effects. The average TES Agent scores associated with the ESS SR categories tend to support the validity of the ESS self-ratings: agent/communicant (1.43), agent/patient (1.31), agent (1.26), agent/communicant/patient (1.23), communicant/patient (1.22), communicant (1.18), and patient (1.18). The average TES Patient scores associated with the ESS SR categories also give some support to the validity of the ESS self-ratings: patient (1.61), communicant/patient (1.56), agent/communicant/patient (1.55), communicant (1.55), agent (1.37), agent/patient (1.33), and agent/communicant (1.30).

In summary, in the male data, there is weak evidence of validity of ESS SRs as predictors of some PESC-TES scores; in the female data, there is no evidence of the ability of ESS SRs to predict PESC-TES scores. Other evidence related to the validity of the ESS SRs will be presented and discussed in later sections of this paper.

Validation of Self-Schema Measurement Procedures

Several sources of possible threat to the internal validity of the engagement style self-schema measurements were investigated in the present study. In particular, differences in cognitive style, social desirability, and speed of responding were investigated for contamination of ESS self-ratings and response-times.

Cognitive Style and Social Desirability

Respondents' scores on three words usually endorsed by all college students (thoughtful, loyal, understanding) and three words usually endorsed by few students (malicious, cruel, rude) were investigated for indications of contamination of ESS SR and RT responding due to differences in cognitive style and social desirability. Respondents' scores on the Creative scale were investigated for evidence of ESS SR and RT social desirability responding. The focus of these analyses was evidence of systematic contamination of responding associated with ESS SR classification.

High Acceptance and Low Acceptance Traits. The means and standard deviations of the 121 laboratory participants' self-descriptive ratings of high and low acceptance traits were examined first for confirmation of either high or low acceptance. The descriptive statistics indicated that all traits were endorsed in typical fashion. On a scale of 1 to 11, the means of the high acceptance words ranged from 8.97 to 9.23, and their standard deviations ranged from 1.62 to 1.64. The means of the low acceptance words ranged from 2.38 to 2.80, and their standard deviations ranged from 1.66 to 1.79.

Contamination of self-ratings according to ESS SR classification. One-way ANOVAs computed on schematics' data indicated main effects for ESS SR categorization on self-ratings of thoughtful, $F(6, 79) = 3.81$, $p = .002$, and loyal, $F(6, 79) = 3.10$, $p = .009$. No other effects of ESS SR classification on self-ratings of high or low acceptance words were found.

Scheffe post hoc analysis of ESS SR classification effects on self-ratings on thoughtful indicated that agents had significantly lower self-ratings than did other classifications, and agent/patient/communicants had significantly higher self-ratings than the other classifications. Post hoc analyses indicated no significant effects for any individual classifications on self-ratings on loyal. The ordering of ESS SR classifications according to mean self-ratings on loyal indicates a trend consistent with the ordering of ESS SR classifications according to self-ratings on thoughtful: agent (73.38), patient (74.09), agent/patient (86.40), communicant (92.87), agent/communicant (93.00), communicant/patient (99.79), and agent/communicant/patient (100.44).

Contamination of self-referent decisions and response times according to ESS SR classification. In contrast to self-ratings, one-way ANOVAs indicated no effects of ESS SR classification on any high acceptance or low acceptance RTs (see Table 9). No effects of ESS SR classifications were found for number of "Me" replies to high acceptance words, and no effects of ESS SR classifications were found for number of "Not me" replies to low acceptance words (see Table 9). That is, no effects of ESS SR classification were found for

Table 9

Effects of Engagement Style Classification on Self-Referent Decisions and Response Times to High and Low Acceptive Traits

Trait	Response Times		Self-Referent Decisions[a]	
	df	F	df	F
Thoughtful	6, 76	.47	6, 79	1.15
Loyal	6, 76	1.21	6, 79	.83
Understanding	6, 77	1.05	6, 79	.79
Malicious	6, 72	.35	6, 79	.61
Cruel	6, 77	1.45	6, 79	1.06
Rude	6, 75	.82	6, 79	.90

Note. No effects are significant at $p < .05$.

[a]Self-referent decisions to thoughtful, loyal and understanding refer to number of affirmative decisions. Self-referent decisions to malicious, cruel, and rude refer to number of negative decisions.

self-referent decisions or response times to the high and low acceptance words.

Summary. The data presented above indicate that some ESS SR classifications appear to be associated with self-rating contamination. The data also indicate no association of ESS SR classifications with contamination of self-referent decisions and response-times.

It is also notable that classification differences associated with responding to high acceptance words were not associated with responding to low acceptance words. That is, some ESS categories are associated with relatively extreme self-ratings on high acceptance words, but are not associated with self-ratings on low acceptance words. This appears to indicate that the differences are more likely to be associated with social desirability responding than with true differences in cognitive style, i.e., cognitive differentiation. This possibility was investigated in self-ratings, self-referent decisions, and response-times to the Creative scale.

Creative Traits. One-way ANOVAs were computed for effects of ESS SR classification on the Creative scale self-ratings, number of affirmative replies to the creative traits, and response-times to the Creative scale.

Contamination of self-ratings according to ESS SR classification. Self-ratings on the Creative scale were significantly associated with ESS classification, $F(6, 79) = 3.39$, $p = .005$. Scheffe post hoc analyses indicated that patients had significantly lower Creative self-ratings than all other groups, and agent/communicant/patients had significantly higher Creative self-ratings than all other groups.

Contamination of self-referent decisions and response-times according to ESS SR classification. No effect of classification was found on RTs to the Creative scale, $F(6, 78) = .71$, $p = .65$.

The number of affirmative replies to the Creative traits was significantly associated with engagement style classification, $F(6, 79) = 2.65$, $p = .02$. Using Scheffe post hoc analysis, no significant differences were found among the individual ESS SR classifications. However, the trend in ESS SR classifications associated with number of affirmative replies was generally consistent with previous findings of socially desirable responding: agent (8.00), patient (8.91), agent/communicant (9.00), communicant (9.20), communicant/patient (9.21), agent/communicant/patient (9.56), and agent/patient (9.80).

Summary. The results of several analyses of control traits indicate that social desirability contamination of self-ratings and self-referent replies was associated with some ESS SR classifications. In particular, it appears that social desirability contamination of self-ratings and affirmative replies was associated with high self-ratings on the majority of agent, communicant, and patient traits (ESS SR agent/communicant/ patients). It also seems that ESS SR agent and patients were relatively immune to the effects of social desirability. Response times appeared to be unaffected by social desirability, and no effects of responding due to differences in degree of cognitive differentiation were evident across engagement style classifications.

Speed of Responding

One other possible threat to the internal validity of the ESS response-time measure was investigated. Differences among ESS SR

classifications in general speed of responding were investigated using response times to both affirmative and negative self-referent decisions to the Creative scale.

No differences across ESS SR classifications in RTs to all self-referent decisions on the Creative scale were found, $F(6, 79) = 1.03$, $p = .41$. It appears that differences in general speed of responding were not associated with ESS SR classification.

Convergence of the AESC-TES with the PESC-TES, ESS Self-Ratings and ESS Response Times

In the present study, investigation of the validity of the PESC-scored TES, the ESS self-ratings, and ESS RTs involved several analyses. The first of the three primary analyses investigating the validity of the measures examined the degree of convergence of respondents' scores on the new measures and their scores on the AESC-scored TES.

Respondents' TES scores were calculated according to the AESC and were correlated with respondents' PESC-TES agency, communion, and patience scores, ESS agency, communion, and patience SRs, and ESS agency, communion, and patience RTs to affirmative self-referent decisions. The correlations corrected for attenuation of measurement error are given in Table 10.

The PESC-TES Agent scale correlates positively and perfectly with the AESC-TES, and the PESC-TES Patient scale correlates negatively and perfectly with the AESC-TES. PESC Communion is somewhat positively correlated with the AESC-TES.

Table 10

Correlations Between AESC-Scored TES and Other Measures of Engagement Style

	PESC TES			ESS Self-Rating			ESS Response-Time		
	Agent	Communicant	Patient	Agent	Communicant	Patient	Agent	Communicant	Patient
AESC TES	100	21	-100	17	27	-14	-06	15	07

Note. Correlations are corrected for attenuation. Decimals are omitted.

N = 86.

18 is significant at $p < .05$.

25 is significant at $p = .01$.

32 is significant at $p = .001$.

In this analysis, the ESS measures do not fare so well as the PESC-TES. Evidence for the validity of the ESS SR scales is weak. The low correlations between the AESC-TES and ESS SR agency and patience are problematic, as is the evidence that ESS SR communion is associated with AESC-TES more strongly than is ESS SR agency.

The nature of the response time measure must be considered when evaluating evidence for validity of the ESS RT scales. It must be remembered that a low score indicates a self-schema on the construct being measured, i.e., a negative correlation with the TES indicates convergence of scores. Unfortunately, the data in Table 10 indicate there are no meaningful associations between the AESC-TES and ESS RT scales. That is, these data indicate that the ESS RT scales are not a valid measure of AESC engagement style.

The degree of convergence of the PESC-TES scales and ESS self-rating and RT scales also must be investigated in order to evaluate the convergent validity of the ESS measures, especially given the strong evidence for the validity of PESC-TES Agency and Patience scales. The degree of convergence of the three measures was investigated fully in the analysis of the MTMM matrix, the results of which will be presented next.

Convergent and Discriminant Validity in the MTMM Matrix

Correlations among the PESC-TES, ESS SR, and ESS RT measures of agency, communion, and patience were calculated and corrected for attenuation of measurement error. The resulting MTMM matrix is given in Table 11.

Table 11

Engagement Style Multitrait-Multimethod Matrix

		PESC TES			ESS Self-Rating			ESS Response-Time		
		Agent	Communicant	Patient	Agent	Communicant	Patient	Agent	Communicant	Patient
PESC TES	Agent	(75)								
	Communicant	-47	(75)							
	Patient	-77	-73	(75)						
ESS Self-Rating	Agent	22	-19	-07	(64)					
	Communicant	30	-11	-18	73	(71)				
	Patient	-15	-23	22	21	60	(63)			
ESS Response-Time	Agent	-15	16	-01	-15	01	-06	(84)		
	Communicant	-01	28	-25	-03	-08	-29	83	(75)	
	Patient	-31	31	-18	06	-12	-53	84	94	(78)

Note. Scale reliabilities are in parentheses. Correlations are corrected for attenuation. Decimals are omitted. N = 86.

18 is significant at $p < .05$.

25 is significant at $p = .01$.

32 is significant at $p = .001$.

Evidence for Convergent Validation: The Convergent Validities

The MTMM matrix was analyzed according to Campbell and Fiske's (1959) four criteria. The first criterion concerns evidence for convergence of the three methods and is investigated through examination of the convergent validities. The convergent validities are the correlations between different measures of the same engagement styles, i.e., the diagonals of three heteromethod squares. The first criterion states that the convergent validities should be statistically significant and meaningful.

Examination of the validities indicates that PESC-TES Agent scores and ESS SR Agent scores are correlated significantly, but not strongly. A similar situation exists for PESC-TES Patient scores and ESS SR Patient scores. The PESC-TES Communion scores are negatively and nonsignificantly related to ESS Communion SR scores.

Relationships among the PESC-TES scores and the ESS RT scale scores show a similar, but somewhat weaker pattern. That is, the agency and patience scores tend to convergence, the communion scores do not converge, and all evidence is weak.

The ESS self-rating scores and the ESS RT scores tend to converge, but only the evidence for the patience scales is statistically significant or meaningful. In general, the evidence based on this criterion indicates weak evidence for convergence of agent and patient scores and no evidence for convergence of communion scores.

Evidence for Discriminant Validity: Convergent Validities and Heterotrait-Heteromethod Correlations

The second criterion concerns comparisons of the convergent validities and the heterotrait-heteromethod correlations, i.e., the correlations given in the off-diagonal triangles in the heteromethod squares. According to this criterion, the diagonals in the heteromethod squares (the convergent validities) should be higher than the off-diagonals.

This criterion is not completely met by any trait. It is met best by ESS SR patience which has convergent validities of .22 and -.53 and off-diagonal correlations of -.15, -.23, -.06, and -.29. In the case of agency and communion, each of the two traits are more highly associated with other traits than with other measures of the same trait. For example, the relationship between TES agency and ESS SR communion (r = .30) is stronger than the relationship between TES agency and ESS SR Agency (r = .22). A strong indication of the lack of validity in communion scores occurs between ESS RT scores and TES scores. That is, ESS RT communion converges with TES patience (r = -.25), but does not converge with TES communion (r = .28).

Evidence for Discriminant Validity: Convergent Validities and Heterotrait Monomethod Correlations

The third of Campbell and Fiske's criteria compares the convergent validities and the heterotrait-monomethod correlations. These are the off-diagonals of the monomethod triangle and are marked by dashed lines.

With the exception of correlation between the two ESS measures of patience, all convergent validities completely fail this test. In other words, it appears that each of the methods measures different traits. A further sign of strong method variance is the presence of heterotrait-monomethod correlations which are equal to or larger than the internal reliabilities of the traits, i.e., some heterotrait-monomethod correlations are larger their respective monotrait-monomethod correlations. For example, each of the ESS RT scales is correlated with the other ESS RT scales as strongly or stronger than its own reliability; and ESS SR agency is correlated with ESS SR communion .73, and its alpha is .64.

Evidence for Discriminant Validity: Correlations in the Heterotrait-Monomethod Triangle and the Heterotrait-Heteromethod Triangles

The final criterion states that the patterns of intercorrelations in the heterotrait-monomethod triangles (enclosed with dashed lines) should be similar to the pattern of intercorrelations in the heterotrait-heteromethod triangles (enclosed with solid lines). Clearly this condition is not met by indicants of either strength or direction of intercorrelations among the traits, i.e., no comparisons meet this criterion. This lack of comparability in parallel values of the monomethod triangles and heteromethod triangles indicates the presence of strong contributions of method variance to the scores.

LISREL Analysis of the MTMM

Several LISREL analyses of the MTMM were investigated with respect to the MTMM criteria and the questions raised in this paper. The analyses were not meaningful and will not be reported.

Summary

Evaluations of Campbell and Fiske's four criteria indicate little evidence for convergence of scores across method and very strong evidence for the presence of method variance. That is, based on the evidence in the MTMM matrix, each of the three methods appears to measure a different variable.

Specifically, there is weak evidence that ESS SR agency and patience are associated with TES agency and patience, respectively. Given the weakness of the evidence, it is highly unlikely the two instruments measure the same traits. It is clear the ESS RT scales do not measure engagement style, and the ESS RT scales and the ESS SR scales measured different dimensions. It is not clear if the TES Communion scale is a measure of the trait as outlined according to the PESC. It is evident that TES communion, ESS SR communion, and ESS RT communion are different variables. The meanings of the constructs evaluated in the MTMM will be investigated further through evaluation of the patterns of correlations in the extrinsic validity study.

Convergent and Discriminant Extrinsic Validity

Extrinsic validity predictions based on the AESC were investigated using the AESC-scored TES and measures of eight external variables. The PESC-scored TES and the two ESS measures also were investigated in

the extrinsic validity study. Given the results of the analysis of the MTMM matrix, it is likely that the two ESS instruments did not measure engagement style. Therefore, it is not expected that predictions based on the PESC will be supported by the correlations of the scores of the two ESS measures and other scales. Whereas there is evidence that the PESC-TES Agent and Patient scales measured engagement style, PESC external validity predictions for agency and patience will be investigated in the correlations of PESC-TES agency and patience with the other variables. Based on the previous validity evidence, it is not clear that the PESC-TES Communion scale measured the construct as outlined by the PESC. This issue will be resolved through investigation of the validity of the predictions for the intercorrelations of the PESC-TES Communion scores with the eight external variables.

Support for the AESC

In support of the AESC, six of the eight AESC-based predictions examined in the extrinsic validity study were confirmed by the data (see Table 12). As predicted by the AESC, engagement style as measured by the AESC-TES is unrelated to locus of control, inhibitory control, and Bakan/ Block's communion. Engagement style also is unrelated to self-esteem and other-directedness, as predicted by McKinney (personal communication, October, 1984) and contrary to the predictions of this author. Engagement style is related to activity as expected, public self-consciousness contrary to prediction, and approaches a significant correlation with Bakan/Block's agency.

Table 12

Engagement Style Extrinsic Validity Correlations

External Scales	AESC TES	PESC TES			ESS Self-Rating			ESS Response-Time		
		Agent	Communicant	Patient	Agent	Communicant	Patient	Agent	Communicant	Patient
Locus of Control	10	09	03	-11	-34	07	13	20	37	19
Bakan/ Block Agent	16	28	-26	-03	94	43	-12	-07	10	15
Bakan/ Block Communion	13	10	05	-13	35	90	78	-02	-10	-28
Self-Esteem	-01	-05	07	-01	31	07	-19	-34	-30	-12
Other Directedness	13	06	14	-17	-03	-05	12	03	13	08
Public Self-Consciousness	21	25	-13	-12	36	40	28	13	27	06
Activity	22	25	-15	-13	53	05	-36	-14	-05	-03
Lack of Inhibitory Control	11	00	15	-15	20	-06	-19	13	28	36

Note. Correlations are corrected for attenuation. Decimals are omitted. N = 86.

18 is significant at $p < .05$.

25 is significant at $p = .01$.

32 is significant at $p = .001$.

Support for the PESC

As would be expected from the strong relationship between the AESC-TES and PESC-TES Agency, the relationships of the external variables with PESC-TES agency and the AESC-TES are highly similar. Only one difference between the PESC-TES agency and AESC-TES correlations with the external variables appears to be meaningful. That is, in support of the PESC, PESC-TES agency is more strongly associated with Bakan/Block agency than is AESC-TES. However, only three other correlations among the external constructs and PESC-TES agency support the PESC. As with the AESC-TES, most findings involving PESC-TES agency support the AESC.

Few of the relationships of the external variables with PESC-TES communion and PESC-TES patience were predicted well. As expected communion and patience are unrelated to locus of control; however, only one communion relationship is meaningful, and the direction of the correlation is opposite to prediction. That is, PESC-TES communion is negatively related to Bakan/Block agency. As expected, PESC-TES patience was unrelated to Bakan/Block agency and lack of inhibitory control. No other predictions concerning patience were confirmed.

Although all PESC-TES patience correlations with external scales are non-significant, it is interesting to compare the patterns of PESC-TES agency and patience correlations with the external variables. Comparison of the two sets of correlations tends to indicate bipolarity. For example, agency is positively related to public self-consciousness and activity, but patience is negatively related to these

constructs. Only in the case of correlations with self-esteem do agency and patience show external parallelism.

Investigation of the ESS Self-Ratings

Several interesting relationships among the ESS self-rating scales and the external measures are evident in the data. The most interesting associations are the very strong correlations between ESS agency and Bakan/Block agency, and ESS communion and Bakan/Block communion. These relationships are stronger than the alphas of the two ESS scales, indicating that ESS agency is a measure of Bakan/Block agency and ESS communion is a measure of Bakan/Block communion.

It appears that ESS Agency scores are strongly related to activity, public self-consciousness, Bakan/Block communion, internal locus of control, and self-esteem.

ESS patience scores are strongly related to Bakan/Block communion. With respect to this data, one should recall the strong correlation between ESS communion and Bakan/Block communion and the strong correlation between ESS patience and ESS communion. These data indicate that ESS patience and ESS communion might be measures of the same latent construct. However, the correlation between ESS agency and ESS communion, the correlation between ESS agency and patience, and ESS patience and communion correlations with the external variables indicate that the ESS communion and patience scales do not measure the same construct. Lack of parallelism in the external correlations is evident in the lack of relationship between patience scores and Bakan/ Block agency, a negative relationship between patience and self-esteem, and a negative relationship between patience

and activity. Communion scores are positively related to Bakan/Block agency, and unrelated to self-esteem and activity. ESS agency is strongly related to ESS communion (r = .73) but is only moderately related to ESS patience (r = .21). This correlation indicates that communion and patience also are differentially related to ESS agency, a further sign of independence of ESS communion and ESS patience.

Investigation of the ESS Response Times

Consistent with the high intercorrelations among the ESS RT scales seen in the MTMM matrix, the parallelism in the correlations of the RT scales with the external scales indicates that the ESS RT scales measured one trait. Short response times across individual scales were associated with internal locus of control, self-esteem, low public self-consciousness, and inhibitory control.

DISCUSSION

The data of the present study support both the Test of Engagement Style and its underlying construct, the accepted engagement style construct. Conversely, the data disconfirm the proposed engagement style construct. The data also indicate that the new ESS self-rating and response-time tests measure neither engagement style nor the same dimension. In this section, the results of the present study will be evaluated and interpreted with respect to these conclusions. Implications for future research also will be considered.

Validation of the Engagement Style Construct

The data of the present study confirm the engagement style construct as proposed and developed by McKinney (e.g., 1981) and as measured by the Test of Engagement Style. That is, the results of the present study indicate that engagement style is a bipolar dimension which is anchored by agency and patience and is related to the active-reactive dimension. The data also confirm that the Test of Engagement Style reliably measures agency and patience as defined by the AESC. In further support of the AESC, the TES does not appear to measure a third unique engagement style. The evidence for each these conclusions will be summarized and interpreted.

The validity of a construct and the instrument designed to measure it are tied. If inferences derived from the construct are confirmed using the measurement instrument, the construct is confirmed and the

instrument is confirmed as a measure of the construct. The validity of the unidimensionality of engagement style and the meaning of the agent-and-patient replies to the Test of Engagement Style are central to the major concerns investigated here and are directly related to the structure and scoring of the TES. Because of the close relationships among the issues of the dimensionality of the engagement style construct, the meaning of the agent-and-patient replies, and the TES, the evidence concerning the two construct issues will be discussed first from the perspective of the TES. In later sections of this paper, evidence concerning the validity of the two construct issues which is not tied directly to the TES will be reviewed and interpreted.

The Reliability and Validity of the Test of Engagement Style

Evidence concerning respondents' perceptions of the dimensionality of engagement style and the possibility of a new style of engagement will be discussed here from the perspective of the Test of Engagement Style. Data concerning the reliability of the TES will be presented first, and results associated with the validity of the two construct issues will follow. With respect to the validity of the unidimensionality of engagement style and the meaning of the agent-and-patient replies, the relevant data from the three primary data analyses will be summarized and interpreted.

Reliability of the TES. In the present study the TES was measured in two ways, i.e., as degree of engagement style (AESC-TES) and as sums of each of the three types of replies given to the TES (PESC-TES). Consistent with previous research using the TES with adults

(McKinney, 1978a), the TES had good internal reliability when it was scored as degree of engagement style. The data in this study also show that the TES has good internal reliability when scored for the three types of replies to the TES. That is, the TES also is internally reliable when respondents are given separate scores for agency-only replies, communion replies, and patience-only replies. Consistent with previous research (McKinney, 1980), high inter-rater reliability was reported on both the male sample and the female sample.

Dimensionality of TES Agency and Patience. The intercorrelations among the TES measures of agency and patience strongly indicate that engagement style is a unidimensional, bipolar construct. The TES agency-only scores are positively and perfectly related to the AESC-TES, the TES patience-only scores are negatively and perfectly related to the AESC-TES, and TES agency-only is very strongly and negatively related to TES patience-only. Further, the negative correlation between TES agency-only and TES patience-only is as strong as either scale reliability. These results show that agency and patience are opposite measures of the same construct, implying that engagement style is a single, bipolar dimension anchored by agency and patience.

Interpretation of the Agent-and-Patient Replies. The results of the primary analyses of this study indicate that TES agent-and-patient replies do not measure communion, a unique construct derived from the interaction of two independent dimensions. Rather implications derived from the data indicate that the replies measure both agency and patience, and the agency component of the reply might carry somewhat

more psychological weight than the patience component. The relevant data concern both the issue of the dimensionality of engagement style and the nature of the scores.

Dimensionality of engagement style and the agency-patience replies. The data on engagement style dimensionality reviewed above show that the TES measures a single dimension defined by agency and its opposite, patience. With reference to this finding, it follows that the agency-and-patient replies must be replies that indicate perceptions of agency and patience. That is, if agency and patience are a single dimension, replies which have an agent component and a patient component must be replies which measure the single dimension. Scores derived from the same dimension cannot measure a unique engagement style formed from the interaction of two independent dimensions. The agent-and-patient replies must measure agency and patience and cannot measure PESC communion.

Correlations among the engagement style scales. The data associated with the agent-and-patient scores in the three primary studies tend to converge in support of the conclusions reached above. The association of the AESC-TES and the agent-and-patient scores is one of the strongest pieces of evidence in support of the finding that the agent-and-patient replies measure agency and patience. That is, the agent-and-patient scores are moderately and positively associated with the AESC-TES (Table 10). This finding is to be expected if the scores measure agency and patience because the agency component of the agent-and-patient scores is included in the AESC-TES scores. If the

agent-and-patient scores had measured a unique engagement style, the scores would not have been correlated significantly.

Because of the evidence for the unitary dimensionality of engagement style and the evidence that the agent-and-patient replies are a measure of agency and patience, the replies will no longer be referred to as an agent-and-patient reply or a communion score. (These scores are referred to as TES communion scores in the tables of the previous section.) In keeping with their nature, I will refer to them as an agency-patience score.

The intercorrelations of the TES agency-only, TES agency-patience, and TES patience-only scores support the bipolarity of engagement style, the measurement of agency and patience by the agency-patience scores, and also indicate that the agency component of the agency-patience score carries somewhat more psychological meaning than the patience component of the score. If agency and patience measure opposite ends of one dimension and the three separate TES scores are not determined independently, the intercorrelations of all measures of agency and patience must be negative. That is, if the agency-patience scores measure agency and patience, the agency-patience scores must be negatively related to both agency-only scores and patience-only scores. If the agency-patience scores measure agency and patience equally, the agency-patience scores will be correlated equally with TES agency-only scores and TES patience-only scores.

The agency-patience scores are negatively correlated with both the agency-only scores and the patience-only scores (Table 11). The negative correlation between agency-patience and patience is the same

size as each scales' internal reliability, but the correlation between agency-patience and agency is only moderate. Agency-patience is very strongly opposite patience, indicating the agency component of the agency-patience score is carrying a strong weight of meaning. This interpretation rests on the fact that agency and patience are strongly and negatively related. Agency-patience is only moderately opposite agency, indicating that the patience component of the score also carries weight in the meaning of the agency-patience scores. This interpretation also rests on the fact that agency and patience are strongly and negatively related. It also appears that the patience component of the agency-patience score carries somewhat less meaning than the agency component of the score. In summary, it appears that agency-patience measures agency and patience, and agency carries somewhat more psychological meaning in the score than does patience. The latter finding is unexpected and is based on the greater correlation between patience and agency-patience. Future research is needed to determine the reliability and validity of this finding.

Correlations between agency-patience and external constructs. The evidence in the extrinsic validity study also tends to confirm the findings in the intercorrelations of the TES concerning the nature of the agency-patience replies. Given that agency-patience scores are scores of agency and patience, i.e., two constructs which measure opposite ends of the same dimension, one would expect relatively low correlations between agency-patience scores and other constructs. In further support of the AESC-TES, seven of the eight extrinsic validity

correlations between agency-patience and other constructs are either zero or nonsignificant.

Only one finding refutes the interpretation of the meaning of the agency-patience scores. This finding also refutes the argument presented above that the agency component carries more weight in the score than does the patience component. Agency-patience is moderately and negatively related to Bakan/Block agency. Given the consistence of other evidence in support of the interpretations described above and the large number of correlations computed, it is difficult to judge the meaningfulness of this association; and no interpretation will be made here.

Two other relationships between the agency-patience scores and external dimensions are significant, i.e., agency-patience scores are related to relatively long response times to the ESS scales and relatively low self-ratings to the ESS scales. The meaning of these relationships also is not obvious, but two interpretations account for the data. The first of these accounts better for the associations of the agency-patience scores with ESS reaction times than it accounts for the association between the agency-patience scores and the ESS self-ratings. The second interpretation accounts for all related data and is tied to the meaning of being schematic and its relationship to the scoring of the three measurement instruments.

The first interpretation is focused on the relationship between the agency-patience scores and long reaction times to the ESS scales. This interpretation is not relevant to the association between the agency-patience scores and the ESS self-ratings, and necessitates

interpreting those correlations as non-meaningful. The self-ratings are not strongly related to the agency-patience scores, i.e., the average correlation between the self-ratings and the agency-patience scores is not significant and one could consider the observed correlations as artifacts of sampling error. If these correlations are considered non-meaningful, it can be argued that the association between long reaction times and being agent-patient is spurious. That is, an association between compound replies (agency-patience scores) and relatively long response times could be related to a response style associated with social complexity. Respondents who give agency-patience replies and who also take a relatively long time making self-referent decisions about the descriptiveness of a trait appear to perceive and incorporate multiple aspects of social situations when responding to social stimuli. It is possible that some part of both scores is caused by a response style associated with responding to social stimuli. This interpretation has no foundation in data other than the seemingly spurious association between the agency-patience replies and long response times, and future research is needed to clarify the nature of the finding.

The second interpretation of these data focuses on the meaning of relatively long reaction times and relatively low self-ratings across ESS traits. According to the self-schema notion, both long reaction times and low self-ratings indicate being aschematic on a construct. It is possible that the association among the agency-patience scores, long ESS reaction times, and low ESS self-ratings involves a perception by the respondent of being aschematic across the personality

constructs measured by the three instruments. The data of the present study indicate that the ESS self-ratings measured a construct which was distinct but moderately related to engagement style. The data also indicate that short ESS response times measured a tendency to be schematic across many positive traits. It was argued in an earlier paper (Reinhart, 1983a) that some individuals who tend to give agency-patience replies to the TES could be aschematic on engagement style. This is a notion similar to choosing the neutral position on a semantic differential scale, a position defined as being aschematic on a bipolar dimension. The moderate relationships between agency-patience scores and low ESS self-ratings and long ESS response times could be caused by some respondents who perceive themselves as aschematic across the psychological constructs measured by the instruments.

The interpretation that some agency-patience replies are aschematic in nature is supported further by data in the extrinsic validity study. These data involve the significant correlations between engagement style and external variables (Bakan/Block agency, public self-consciousness, and activity). In each case of significant correlations with external variables, the correlation between the external variable and AESC-TES is weaker than the correlation between the external variable and the TES agency scores. It is possible that the association with the AESC-TES is weaker because the AESC-TES score includes the agency part of the agency-patience reply, a reply which might indicate an aschematic reply for some respondents who give it. The meaning of the relationships among the agency-patience scores and low ESS self-ratings and long ESS response times cannot be clarified

further given the data of the present study. New research is needed to explicate the nature of these findings and evaluate the validity of the two interpretations offered here.

Further Evidence for Engagement Style Unidimensionality

One more test of the dimensionality of engagement style was made in the present study. The external parallelism criterion states that the patterns of the relationships of the constructs with external variables must conform to predictions if the construct is to be confirmed. With respect to the AESC-predicted unidimensionality of engagement style, this criterion states that agency and patience must have similar, but opposite relationships with external variables. An investigation of the correlations of the TES agency-only scores and TES patience-only scores with variables in the extrinsic validity study indicates that the external parallelism test also confirms the unidimensionality of engagement style. That is, the pattern of relationships between the external variables in the extrinsic validity study and TES agency and TES patience indicates that agency and patience have opposite relationships with other constructs.

Some data in the MTMM matrix also indicate unidimensionality of engagement style. The MTMM matrix is discussed here because the data in the three primary analyses strongly indicate that the ESS scales did not measure engagement style. Therefore, with respect to engagement style, the ESS SR and RT scales are external constructs. The ESS scales were evaluated as external constructs in the previous discussion of the meaning of the agency-patience scores, and their correlations with the TES will be included in the data discussed here.

The evidence in both the MTMM and the extrinsic validity matrices will be evaluated for evidence on the dimensionality of engagement style. The evidence in the MTMM matrix will be considered first.

The nature of the latent ESS RT variable is not clear from the data available in this study, and the associations between the ESS RT scores and TES scores show few meaningful patterns. Consequently, these associations will not be discussed from the perspective of the dimensionality of engagement style. The associations between TES agency-patience scores and the ESS RT scores were evaluated above. The associations between the TES scores and the ESS SR scores appear to be meaningful and will be evaluated here for evidence pertinent to the dimensionality of engagement style.

Although the correlations between ESS SR agency and patience and the TES scores are weak to moderate, the direction of association clearly indicates bipolarity in engagement style. The AESC-TES is positively associated with ESS SR agency and negatively associated with ESS SR patience. TES agency-only scores are positively associated with ESS SR agency and negatively associated with ESS SR patience. TES patience-only scores are slightly and negatively related to ESS SR agency and positively related to ESS SR patience.

The correlations in the extrinsic validity matrix are somewhat weak but also tend to support the unidimensionality of agency and patience. Several of the patterns of relationships are not definitive, but a trend in the direction of support is visible in the relationships of TES agency-only scores and TES patience-only scores with the external constructs in all but two cases. That is, agency

and patience have opposite relationships with locus of control, Bakan/Block communion, other-directedness, public self-consciousness, and activity. The two exceptions refer to Bakan/Block agency and lack of inhibitory control. TES agency is moderately related to Bakan/Block agency and TES patience is unrelated to it. TES agency is unrelated to lack of inhibitory control, and the positive correlation of patience with the construct approaches significance. Still, the general patterns of correlations indicate bipolarity of agency and patience.

Of special interest is the positive association between TES agency-only scores and activity and the negative association between TES patience-only scores and activity. This finding confirms two AESC inferences, i.e., the bipolarity of agency and patience and the association between engagement style and the active-reactive dimension.

Relationships Between Engagement Style and Other Constructs

One more source of validity evidence was examined in the present study, i.e., convergent and discriminant extrinsic validity was investigated through the relationships of engagement style with eight external constructs. Several references to this data have already been made but other relationships have not yet been discussed. Validity evidence in the extrinsic matrix will be evaluated for support of the TES agency construct as it has been defined by the AESC. No associations between the external variables and TES patience-only scores reached significant, and none will be discussed. The evidence for TES agency-patience was reviewed above.

With one exception TES agency-only scores were associated with external variables in the direction of prediction. Discriminant validity was shown with locus of control, self-esteem, inhibitory control, and other-directedness. Convergent validity was shown with Bakan/Block agency and activity. Contrary to prediction, agency also was associated with public self-consciousness. The last association will be evaluated later in this paper; it appears that further research is needed to determine the meaningfulness of this association.

TES Agency-Only Scores and TES Patience-Only Scores

In this study a new way of scoring the TES was introduced as one means of sorting the meanings of the replies respondents give to the TES. In general, the utility of scoring agency and patience replies has been supported by this study. The data derived from the separate TES scores contributed a great deal to the understanding of the dimensionality of engagement style and the meaning of agency and patience. It also should be noted that each of the three meaningful associations between agency and the external variables was more evident with the agency score than with the single TES score. The validity of individually summing the agency and patience scores was confirmed in this study through evaluation of their associations with the AESC-TES, and it appears that the researcher's power can be improved by summing the separate scales. Analysis of TES agency-only and TES patience-only scores in engagement style research is one way to further clarify and refine the engagement style construct.

Summary

With minor exceptions, the evidence from correlations of the AESC-TES with the three TES scales, the MTMM matrix, and the extrinsic validity matrix confirms the accepted engagement style construct, and the TES as a valid measure of the construct. Conversely, the PESC has been disconfirmed. The data reviewed above do not support independent dimensions of engagement style; nor do they support the validity of the communion engagement style, which was based on the proposed independence of agency and patience. The implications for scoring the TES are clear. The TES measures one bipolar dimension and can be scored by summing all agency scores or by summing the scores that are only agency and those that are only patience. It was argued that the nature of the anchors of the dimension could be refined further if both scoring procedures were used in future engagement style research.

Analysis of the ESS Self-Ratings and Response Times

The results of the primary analyses indicate that neither the ESS SR scales nor the ESS RT scales measured engagement style. The data also showed that the two ESS instruments measured different dimensions. The meaning of the construct measured by the ESS SR scales is interpretable from the data. The results of the extrinsic validity study indicate that the ESS SR scales measured the same variables as were measured by the Bakan/Block agency and communion scales, and a third, but related variable. These variables are somewhat related to engagement style, but clearly distinct from it. Interpretations of the latent construct measured by the ESS RT scales is problematic. The three ESS RT scales measured one variable which was associated

with a positive self-schema and might have been influenced by a response style associated with processing social information. Interpretations of the lack of shared trait variance among the TES and the two ESS measures will be given, and evidence related to the conclusions listed above will be evaluated.

Relationships Between Trait Variance and Method Variance

The present study presented a rigid test of Campbell and Fiske's (1959) criterion of convergence across methods of measurement. As expected, analysis of the MTMM matrix showed that the semi-projective TES, the ESS self-ratings, and the ESS response times shared no method variance. This is an unusual situation in a MTMM matrix, and strongly contributed to the finding of no shared trait variance. The usual circumstance in a MTMM matrix is positively correlated traits, positively correlated methods, and positive intercorrelations among the traits and methods (e.g., Schmitt, 1978). In the present study none of these conditions were met.

Psychology has a long history of disagreement over the appropriate interpretations of the effects of the presence of method variance in personality tests. Some (e.g., Mischel, 1968, 1969) have argued that personality should be consistent across different measures of personality components; and if it is not, the evidence indicates that personality is not consistent. Others (e.g., McClelland, 1981) have argued equally strongly that psychologists should not expect consistency across different types of measurements. That is, different

types of personality constructs are appropriately measured in different ways, and these should not be expected to be related closely.

Concerning the continuing debate about the meaning of the lack of associations across different measurement instruments, one point is certain. Psychologists on both sides of the issue agree that different methods of measurements usually measure different variables. The data of the present study indicate that the measurement instruments chosen to test engagement style should have been more similar. In keeping with a long history in personality research (e.g., McClelland, 1981) each of the three unique methods measured a unique personality variable. The task now is to determine the nature of the personality variables which were measured by the two new methods which were based on the ESS. The data have confirmed that the TES measured engagement style.

Analysis of ESS Response-Times

The data in the MTMM matrix clearly indicate that the ESS RT scales did not measure engagement style. The correlations also show that the three scales measured one trait which was distinct from the variables measured by the SR scales. Some data reviewed above indicate that the RTs could have been influenced by a response style associated with responding to social information. However, the data do not show a clear pattern, and interpretation of the results is problematic. The results of analyses associated with the RTs will be reviewed in an attempt to clarify these findings.

ESS RTs were not associated with hand position, adjective order, or gender of laboratory assistant. Neither do the data of the present

study indicate that the RTs were seriously affected by the selection procedure used to choose respondents for the primary analyses. Comparison of ESS RTs of the entire sample participating in the laboratory sessions (N = 121) and the schematic sample (N = 86) showed strong similarities in ESS RT scale means and standard deviations.

Short response times across the three ESS scales were associated with internal locus of control, high self-esteem, low public self-consciousness, and inhibitory control--findings which appear to be validation for the self-schematic quality of the measure. The reasoning for the confirmatory nature of the external associations of short RTs is based on the relationship between two points. First, responding quickly to a trait implies a self-schema on the trait, and having self-schemata across three (ESS) scales of socially desirable traits implies a positive self-perception. Second, a positive self perception also is indicated by internal locus of control, high self-esteem, low public self-consciousness, and inhibitory control. It appears that the response times measured a variable associated with having a schemata of general well-being, indirectly confirming the RTs as a self-schemata measure.

However, if the RTs measured a self-schema, the specific nature of the self-schema is not clear. The data in all primary analyses clearly indicate that short RTs to the scales did not measure the same variables as were measured by the ESS SR scales. The data also indicate that little differentiation exists among the RTs to the three scales. If the RTs did measure a self-schemata, the specific nature of the self-schemata is not obvious from the data in this study. The

present data imply only that the self-schema is associated with self-perceived psychological well-being.

In summary, the RTs measured neither engagement style nor the variables measured by the SR scales. The data indicate that only one variable was measured by the RTs, and the specific nature of that variable is unclear from the data. It does appear that the variable is associated with a positive self-schema, as measured by several personality variables which indicate well-being. Long ESS RTs were associated with TES agency-patience, and it was concluded that it is possible that the association is spurious. That is, both long RTs and complex response to the TES could be partially influenced by a tendency to respond in complex ways to social information. The association between the aschematic nature of long RTs and the agency-patience scores also was discussed as a possible reason for the association. Obviously, the nature of the RTs is not clear from the data in this study. Future research is needed to clarify the validity of using RTs to self-referent decisions as a behavioral measure of a personality trait.

Analysis of the ESS Self-Ratings

In order to clarify the nature of the ESS self-ratings, the results of several data analyses will be considered. The meaning of the variables measured by the self-ratings will be derived primarily from the extrinsic validity matrix and the MTMM matrix. Evidence for social desirability contamination of the ratings will be interpreted from the ANOVA tests conducted on the control traits and scales.

Finally, gender-related differences in the measurement models of the self-rating scales, the frequency of endorsement of the ratings, and the associations with engagement style will be evaluated for evidence concerning the validation of the interpretation of the construct being measured by the scales.

ESS Self-Ratings: Measures of Bakan/Block's Agency and Communion. The data in the extrinsic validity matrix indicate that the ESS self-rating scales measure three related variables. Two are the same variables as those measured by the Bakan/Block agency and communion scales; the third measures a related variable.

Several interesting relationships between the SR scales and the external constructs also elucidate the nature of the three scales. The data indicate that ESS SR agency is active in nature and measures the same variable as the Bakan/Block agency variable. ESS SR patience measures a variable which appears to be passive in nature and has relationships with several external variables opposite in direction to those of ESS SR agency. In this study, ESS SR communion is related only to ESS SR agency and ESS SR patience.

It is possible that the three scales measure one bipolar dimension anchored by a variable strongly related to Bakan/Block agency and a variable related to passivity, but not all evidence supports this conclusion. Contrary to the interpretation that the SR scales measured a single, bipolar dimension, the correlations in the MTMM matrix indicate that SR agency, communion and patience are independent dimensions. The data related to the interpretations summarized above

will be reviewed and evaluated, beginning with the correlations in the MTMM matrix.

Three conclusions can be reached from the data in the MTMM matrix: a) SR agency and SR communion are strongly related, but do not measure the same construct, b) SR patience is strongly related to communion but does not seem to measure the same variable, and c) SR patience is distinct from SR agency. The intercorrelations of SR agency, SR communion, and SR patience support these interpretations. SR agency and SR communion are strongly associated, but have different relationships with SR patience. Therefore, they do not appear to measure the same variable. SR patience and SR agency are positively associated, but given shared method variance, are only slightly correlated. That is, SR agency and SR communion are strongly associated, but not the same; and SR patience is strongly associated with SR communion, weakly associated with SR agency and distinct from both.

External parallelism evidence in the MTMM shows that SR patience is correlated with TES agency-only scores in opposite direction from that of SR agency and SR communion. SR patience is correlated with TES patience-only scores in opposite direction from that of SR communion, but SR agency is unrelated to TES patience-only scores. SR patience also has a strong convergent correlation with RT patience; SR communion converges insignificantly with RT patience; and SR agency is unrelated to it. This evidence tends to support the interpretations of the intercorrelations of the three scales. That is, SR agency and SR communion are strongly related, but do not measure the same

variable; SR patience is strongly associated with SR communion, but is distinct from it; and SR patience is distinct from SR agency.

The correlations in the extrinsic validity matrix indicate lack of parallelism of SR agency, SR communion, and SR patience. That is, some correlations in the extrinsic validity matrix imply that the scales measure three distinct variables; other correlations imply that the scales measure one bipolar variable anchored by SR agency and SR patience, with the midrange defined by SR communion.

Perhaps the most interesting relationships of the three SR scales are with Bakan/Block agency and communion. These associations have been reviewed, and the interpretations of the data were threefold: a) the SR agency and Bakan/Block agency scales are measures of the same construct, b) the SR communion and Bakan/Block communion scales are measures of the same construct, and c) SR patience is strongly related to Bakan/Block communion, but does not measure the same construct. These data imply that the scales measure three related, but distinct variables.

Other data in the extrinsic validity matrix tend to confirm the interpretations of a single, bipolar dimension. That is, SR agency is related to high activity, internal locus of control, high self-esteem, and impulsivity. SR communion is unrelated to these constructs. SR patience is related to low activity, external locus of control (non-significant finding), low self-esteem, and inhibitory control. The associations for agency appear to be convergent validity for Bakan/Block's agent. The lack of any correlations between SR communion and external constructs appears to support the single, bipolar dimension

interpretation. The associations for ESS SR patience indicate SR patience is opposite SR agency and is associated with passivity.

In contrast to the findings reported above, two external associations with the variables support neither the uniqueness of the three scales nor a single, bipolar dimension; however, both associations seem to have been caused by measurement problems. The two contradictory associations are between the three SR scales and public self-consciousness and other-directedness. The three SR scales have similar strength and direction of associated with public self-consciousness, and all are unrelated to other-directedness.

Other-directedness was measured poorly in this study, and its low reliability essentially eliminated any chance of finding meaningful results with other constructs. The scale was included in analyses in hope that very powerful associations involving the scale would approach significance. This was not the situation. No correlation of other-directedness with another scale reached significance.

In this study, public self-consciousness seems to be related more to self-presentation during personality evaluation than it appears to be related to the nature of the contents of the instruments. Self-awareness is related to all measures of personality in this study. That is, public self-awareness is associated with higher scores on engagement style, higher scores on each of the three SR scales, and longer reaction times on RT scales. In summary, it is doubtful that the associations between the SR scales and other-directedness and public self-consciousness are evidence of parallelism among the three SR scales.

In summary, the data of the extrinsic validity matrix show that SR agency measures the same variable as the Bakan/Block Agency scale; SR communion measures the same variable as the Bakan/Block Communion scale; and SR patience measures a variable associated with passivity. This final interpretation follows from three related data. First, SR patience has a strong negative correlation with activity. Second, by definition SR agency is active in nature; and SR agency and SR patience have similar relationships with other constructs, but in opposite directions. Third, SR patience is associated with inhibitory control, Bakan/Block communion, and low self-esteem, external associations which appear to validate the passivity interpretation.

Two other sources of data will be evaluated with respect to the nature of the variables measured by the SR scales. Social desirability contamination and gender-related differences associated with the self-ratings will be discussed.

Social Desirability in the ESS Self-Ratings. In this study, social desirability contamination of ESS SR scale scores was investigated. Respondents' self-ratings on three high acceptance words and a scale which contained socially desirable creative traits were compared with respondents' classifications on ESS self-ratings. These data showed that those who rated themselves high on only SR agency or SR patience also rated themselves relatively low on the control traits. Those who rated themselves high on only SR communion had sample mid-range ratings on the control words. As might be expected, respondents who rated themselves high on all SR scales also rated themselves highest on the control traits. Those who rated themselves high on two SR scales

rated themselves higher on the control traits than those who rated themselves high on only one SR scale.

These data support the single, bipolar dimension interpretation of the SR scales in two ways. First, rating oneself high on more than one ESS SR scale indicates greater propensity toward social desirability than rating oneself on only one scale. This tends to invalidate high ratings on multiple ESS SR scales and the reasonableness of the measurement of three independent dimensions. Second, a curvilinear relationship between a single, bipolar dimension and social desirability is noticeable in the data. SR agency and SR patience have low ratings on the control traits; SR communion has higher ratings on the traits. In summary, evidence on social desirability contamination supports the single, bipolar dimension interpretation of the data.

Gender Differences in ESS Self-Ratings. Differences between the male sample and the female sample were found in three sets of data: a) endorsement of SR scales, b) reliability of the SR Patience scale, and c) associations between SR classifications and scores on TES agency and patience. These differences will be discussed with respect to the nature of the variables measured by the SR scales.

Differences between males and females in frequency of SR agency, SR communion, and SR patience endorsement support the relationships of the SR scales and the Bakan/Block agency and communion constructs. More males than females endorsed the agent and agent/communicant scales; and more females than males endorsed the communicant and communicant/patient scales. That is, Bakan (1966) and Block's (1973)

predictions that agency and communion are associated with gender are supported in the ESS SR data.

The difference between the internal consistencies of male's and female's SR Patience scales was notable. The scale had good internal reliability in the male data ($\underline{\alpha}$ = .79), but poor reliability in the female data ($\underline{\alpha}$ = .48). As discussed above, the female's data indicated that the SR Patient scale items were intercorrelated, but not strongly. It appears that the latent variable measured by SR patience is a meaningful construct for males, but not for females. It should also be noted that the internal reliability of the females' SR communion scale ($\underline{\alpha}$ = .66) was lower than that of the males' communion scale ($\underline{\alpha}$ = .76). It appears that the SR communion and SR patience variables are more significant constructs for males than females. More research is needed in order to construct scales for females which measure related, but meaningful variables.

One other difference between the male and female data was noted in this study. Classification on SR ratings was associated with males TES agency and patience scores, but SR classification was not associated with any female TES data. Males' SR agency and patience scores were related predictably to engagement style. For females, it appears no association exists between engagement style and the variables measured by the SR scales. Again, only future research will clarify this finding.

Summary. The data reviewed above indicate that the ESS SR scales measured variables associated with Bakan and Block's notions of agency and communion and a variable associated with passivity. The ESS SR

scales did not measure engagement style as it is defined by the TES. It is not clear whether the scales measured a single bipolar variable or measured related but distinct variables. Gender-related differences support the associations between the ESS SR scales and the Bakan and Block constructs, and show that SR communion and SR patience have more meaning for males than females. Research is needed to construct meaningful scales for females which are related to the variables measured by the ESS SR communion and patience scales, and to clarify further the nature of the variables measured by the scales.

APPENDICES

APPENDIX A

TRAIT ADJECTIVES

APPENDIX A

Trait Adjectives

Engagement Style Scale Adjectives

Doer	Perceptive	Agreeable
Definite	Logical	Obliging
Daring	Attentive	Humble
Persistent	Helpful	Cautious
Vigorous	Concerned	Accommodating
Initiating		Sensitive

Block's Agency Adjectives

Independent	Ambitious	Active
Assertive	Adventurous	Reasonable
Rational	Practical	Vital
Competitive	Critical	Dominating
Shrewd	Self-Centered	

Block's Communion Adjectives

Loving	Affectionate	Considerate
Helpful	Sympathetic	Sensitive
Generous	Artistic	

Creative Adjectives

Sharp-Witted	Creative	Original
Imaginative	Artistic	Clever
Inventive	Talented	Bright
Ingenious	Insightful	Progressive
Intelligent	Resourceful	Versatile

High Acceptance Adjectives

Loyal	Understanding	Thoughtful

Low Acceptance Adjectives

Rude	Cruel	Malicious

Filler Adjectives

Friendly	Sincere	Obnoxious
Competent	Fashionable	Frustrated
Tactful	Innocent	Bragging
Cheerful	Blunt	Bossy
Clean	Average	Messy
Witty	Tough	Follower
Honest	Vulgar	Unscrupulous

Note: Some items were included in two scales. Respondents received one list of trait adjectives and rated each adjective once for degree of self-descriptiveness and once for degree of self-importance.

APPENDIX B

PERMISSION FORMS

APPENDIX B-1

Department of Psychology Permission Form

Michigan State University
Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by Mary Ann Reinhart under the supervision of John McKinney and Ellen Strommen.

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I understand that I am free to discontinue my participation in the study at any time without penalty.

4. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

5. I understand that my participation in the study does not guarantee any beneficial results to me.

6. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed _____

Date _____

APPENDIX B-2

Reaction-Time Permission Form

Self-Perception Study

Reaction-Time Consent Form

I understand that the experimenter has measured the time that I took to respond "Me" or "Not me" to each of the adjectives presented by the slide projector. The experimenter may use this information for the purpose of completing the statistical analysis of the study in which I have just participated.

Signed _____

Date _____

APPENDIX C

DEBRIEFING

APPENDIX C

Self-Perception Study Debriefing

The study that you have participated in is designed to measure in a variety of ways what we call engagement style. Engagement style measures how a person interacts with his (her) environment: a) A person may see himself (herself) as an active doer, as someone who acts upon the world, b) he (she) may see himself (herself) as someone who allows the environment to act upon him (her), or c) he (she) may see himself (herself) as someone who interacts with the environment, i.e., these people see themselves as individuals who consider both themselves and the environment when engaged with it. The environment may refer to other persons, information, objects of any kind, or any other aspects of the world.

We are hoping that that your responses to the trait adjectives will match your responses to the engagement style cards. We also hope that your responses to these two personality tests will match your responses to the other questionnaires that we have given to you. If a personality test is a good one, it should measure what it is designed to measure. We are hoping to find that is exactly the case with the Test of Engagement Style--the test that involved the cards about Billy (Sally). Your responses will help us to know if engagement style is what we think it is or is something different from that.

We also want to make clear to you that when you responded "Me" or "Not me" to the slides presenting the trait adjectives, we not only scored your response. We also measured how long it took you to decide what your answer would be. We would like to use these reaction times to test our personality measure as we have explained it to you. Is it all right with you if we use the reaction times when we do our statistical analyses and later when we report our results to other psychologists? (Wait for answer.) We need you to sign a permission form giving us this approval. Will you do so? (Wait for answer. Have respondent sign form if willing.) Do you have any other questions you would like answered?

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