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Self-Trust: Definition and Creation of the Self-Trust Questionnaire

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ABSTRACT

The concept of self-trust was defined, and theory concerning the development and maintenance of self-trust was generated. Based on the definition and theoretical speculation regarding this construct, a questionnaire was developed, tested, and refined. A sample of 760 undergraduate students at the University of Calgary and 429 participants from the Internet completed an initial 72-item Self-Trust Questionnaire (STQ). A series of univariate tests and factor analyses allowed for the reduction of the STQ to a final 20 items with four intercorrelated factors and an internal consistency alpha of .85. In the next phase of the investigation, 148 undergraduates at the University of Calgary completed the 20-item STQ on two occasions. Test-retest reliability of .81 was established. This same sample also completed several other questionnaires, card sorts, and computer tasks to test constructs theoretically related to self-trust. The STQ was validated through this method by correlations with self-esteem, secure attachment style, emotional expressiveness, ambivalence over the expression of emotion, self-confidence, and self-certainty. Additionally, participants lower in self-trust were found to be influenced by a subliminal prime to a greater extent than were individuals higher on self-trust. Finally, in Phase III of the investigation 1566 responses to a 26-item version of the STQ were obtained through Internet data collection. These data were used to confirm the psychometric properties and oblique factor structure established with the 20-item STQ.

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DEDICATION

TO MY CHILDREN

Nicole Conley, Robyn Conley, Robert Turner, Pamela Turner

You're the Best

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CHAPTER 1

DEFINING SELF-TRUST

Self-trust is a concept often mentioned in the literature concerned with trauma and abuse (e.g. Brothers, 1995; Janoff-Bulman, 1992; O'Brien, 1987; Timmons-Mitchell & Gardner, 1991) and personal growth (e.g. Rogers, 1961). Interestingly, regardless of its frequent mention as an attribute necessary to healing and growth, investigators have expended little effort in defining and testing this construct. Exceptions are early attempts to measure self-trust in terms of trustworthiness (Deutsch, 1958; Kelly & Stahelski, 1970; Strickland, 1958; Swinth, 1967) or self-reliance (Smith, Tedeschi, Brown, & Lindskold, 1973; Tedeschi, Hiester, & Gahagan, 1969), and later in terms of self-efficacy (Earl, 1987). The psychoanalytic perspective offers a more recent definition (Brothers, 1995). In this dissertation I will define self-trust as a psychological concept and operationalize it through the development of a questionnaire that allows empirical measurement of the concept.

Trust

Capturing the Essence of Trust

Investigators have looked at the construct of trust over the past several decades from many perspectives. In an interpersonal context trust is viewed as an important component of family relationships, business transactions, the therapist/patient relationship, and intergroup relationships (Webb & Worchel, 1986). Most recently Holmes (1991) investigated the development of trust in the

context of committed interpersonal relationships (Holmes, 1991). In this section I will review this work in an effort to better understand the nature of trust.

Literature in the area of trust suggests that trust goes beyond expectations and beliefs about the partner, although these play a role in the development of trust (Holmes, 1991; Webb & Worchel, 1986). The core defining feature of trust is faith, defined by Webb & Worchel as involving the "unquestioning and emotionally charged acceptance of someone or something" (1986, p. 216). According to Holmes, this emotionally charged acceptance gives an ephemeral quality to the relationship that goes beyond logic or reason. It is an unconditional kind of responsiveness to the other person that comes from the heart and transcends concerns about reciprocity.

Holmes suggests that the 'leap of faith' taken to consolidate trust allows an illusion of control in the relationship in the face of continued uncertainty about the future. Because there is something going on outside of awareness that allows the individual to function in the relationship without constant questioning of the partner's current or future motives and behaviors, uncertainty vanishes. Thus, trust may be something akin to an assumptive process.

Assumptive Processes

Janoff-Bulman (1992), in fact, suggests that the foundations of trust established very early in life form the cornerstone of the 'assumptive world', a term coined by Parkes (1975). The assumptive world is defined by Parkes as "a

strongly held set of assumptions about the world and the self which is confidently maintained and used as a means of recognizing, planning and acting" (p. 132). These kinds of assumptions have been called by many names, including 'working models' (Bowlby, 1969; 1973), 'structures of meaning' (Marris, 1975), and 'personal theory of reality' (Epstein, 1984).

The general assumptions described by all of the above authors refer to mental structures that are acquired very early in life, beginning in infancy at the preverbal level. As such, they may involve 'procedural memory' (Tulving, 1985), RIGS (representations of interactions that have been generalized; Stern, 1985), or scripts (Abelson, 1976). Procedural memory is concerned with the recall of repeatedly experienced patterns of behavior that become generalized. The actions have been repeated so many times that they have become automatic; no conscious thought is necessary. Stern suggests that the fundamental organization of a core sense of self in infancy is formed in this way. It is the core sense of self that holds the most basic and generalized assumptions (Janoff-Bulman, 1992). In the construction of these basic assumptions, procedural memory might involve interactions with the primary caregiver that lead to a basic sense of trust in self, others, and the world (Colin, 1996).

Two features of the above discussion stand out. First is the fact that these assumptions represent 'generalized' memories of some type. They are not tied to one specific memory or event, but rather represent the overall sense of felt security in the early relationship. Janoff-Bulman suggests that this sense of

felt security is then projected outward so that the world is seen as a generally just and benevolent place to live where people are in control of their own outcomes. Additionally, the individual sees him- or herself as worthy and in control of the self.

Secondly, there is the suggestion that assumptions operate below the level of awareness to guide and direct people's ongoing interactions with themselves and the world. With the acquisition of language, people are able to bring these assumptions to a conscious level and verbalize them. But for directing thoughts, behaviors, and the subjective construction of the world, assumptions appear to be unseen, unheard, preconscious forces or structures that underlie beliefs, expectancies, and actions.

Self-Trust as an Assumptive Process

These generalized assumptions, according to Janoff-Bulman, give rise to both trust and self-trust. She describes trust in a very broad sense as encompassing both self and others. "In an important way . . . a sense of trust involves not only the development of trust in others, but the development of trust in the self" (Janoff-Bulman, 1992, p. 13). It is trust in general that allows one to make the assumption of a benevolent world and a worthy self. Trust in others underpins the assumption that the world provides a just and fair environment that is ultimately controllable. Trust in self underpins the assumption of the self as worthy and controllable.

The Assumption of Self-Trust. According to this analysis, trust in self becomes a generalized assumption in its own right. The individual has a generalized expectancy that he or she will act, think, feel, and perceive objects and events in such a way as to avoid harm and injustice in a world that is less than perfect. One cannot see into the future and base this generalized expectancy on a lifetime of experience. Thus, it is necessary to take a 'leap of faith' and make the *assumptions* that (1) self is worthy, and emotions and perceptions are valid and (2) one is capable of self-control so that one's own actions and feelings elicit the particular type of response sought at any given moment.

In accordance with the nature of trust, once the individual establishes self-trust as a stable component of the assumptive world there exists an unquestioned and emotionally charged acceptance of the self. This is an unconditional kind of acceptance of the self that transcends logic and reason.

What is Self-Trust?

Definitions of Self-Trust

Although Janoff-Bulman speaks of trust and the intertwining of interpersonal and self-trust, she does not explicitly define self-trust. Two recent investigations make a serious attempt to define self-trust, but fail to capture the assumptive nature of trust as outlined above. Earl (1987) defines self-trust in creativity from a behavioral perspective. More recently, Brothers (1995) offers a

definition of self-trust from a psychoanalytic perspective. This section is devoted to a review of these two perspectives.

Self-Efficacy. Earl (1987)[1] offers a very narrow definition of self-trust as a prerequisite to creativity that fails to tap the very essence of trust as an assumptive process. Earl (1987) creates a strong bond between the concepts of self-trust and self-efficacy. His definition of self-trust is ". . .the faith (belief plus action) in one's ability to fulfill a perceived task" (p. 421). Here is a mention of faith, outlined earlier as essential to the nature of trust. But Earl failed to develop this more ephemeral concept. Rather, he created a behavioral definition strongly hinging on self-efficacy, expectations, and outcomes.

Earl gave self-trust a very Westernized definition, equating it with autonomy and independence. Earl's comment that "self-trust seems to be the product of a relationship with the secondary caretaker (father) while the broader, more generalized sense of trust and interactive reliability appear to be tied to a close association with the mother" (p. 419) suggests that self-trust is a masculine concept that is very much separated from interpersonal trust.

A Psychoanalytic Perspective. In contrast to Earl's definition of self-trust as associated with autonomy and independence, Brothers (1995) defines

---

[1]Earl developed a measure of self-trust that was never published. Repeated efforts to contact the author to obtain a copy of this scale have failed, despite the fact that he continues to publish research in other areas. All other efforts to obtain a copy of his thesis and thus his scale have also failed. The thesis was not published and Antioch University, the graduate school that he attended, is unable to locate it.

self-trust as being intricately related to interpersonal trust, so that it is impossible to separate one from the other.

Brothers' definition of self-trust primarily involves individuals' trust that their own actions will elicit the desired response from another person. Her definition, couched in psychoanalytic terms, is specifically: *"the hope or wishful expectation of obtaining and providing the selfobject experiences necessary for the development, maintenance, and restoration of cohesive selfhood"* (p. 33, italics in the original). This definition views self-trust only in terms of self-in-relation-to-others. She further intertwines self-trust with self-as-trustworthy, trust-in-others, and others-as-self-trusting.

Brothers, like Janoff-Bulman, believes that self-trust is something that is developed in infancy as a result of the mother's responsiveness to the infant's needs. Like Janoff-Bulman, Brothers views self-trust as a mental structure, or schema that guides and directs a person's behavior. Like Janoff-Bulman, Brothers views self-trust as closely related to interpersonal trust. Finally, like Janoff-Bulman, Brothers contends that self-trust is lost, or shattered, by trauma. Loss of trust in another, precipitated by a violent act, results in loss of trust in self. In these ways, Brothers' definition of self-trust comes close to the assumptive processes that Janoff-Bulman describes.

As with Earl's definition of self-trust, however, this is a very narrow view. According to Brothers, trust-in-self, by itself, refers to the ability of the individual to invoke a desired response from others. In addition, rather than viewing the

individual as separate and distinct from the relationships in which he or she is involved, this definition finds the individual's trust in self enmeshed with trust in others. At the same time, there is a subtle hint of self-efficacy, such that 'if I trust myself I know that I can rely on myself to elicit the attention I seek from others'.

What these Definitions Lack. Looking back to my discussions of the essential nature of trust and trust as an assumptive process, it is clear that there is something lacking in the above definitions. There is nothing in either Earl's or Brothers' definitions that refers to (1) an unconditional acceptance of self, or (2) a person's capacity to feel affect in themselves and others and to trust that what they are feeling is authentic or valid.

Earl's definition of self-trust in creativity describes self-trust as a generally conscious, action-oriented process involved with one's ability to complete a task. Brothers' definition of self-trust goes further in allowing preconscious forces as a very real part of self-trust. Each may capture something that is going on with self-trust, but neither really captures the essence, or the underlying assumptive self-view.

The *assumption* of self-trust was defined as having two components. First, the individual assumes that the self is worthy and the emotions and perceptions valid. Secondly, the individual assumes the self is capable of self-control so that one's own actions and feelings elicit the particular type of response sought. Brothers' definition addresses only the second of these assumptions and further restricts that assumption to eliciting responses from

other *people*. Earl also addresses only the second of these assumptions, and restricts that assumption to eliciting responses from the *self* in terms of ability. Obviously, this assumption may be broad enough to include trust in eliciting desired responses from either others *or* the self.

Further, neither of the above definitions includes the essential nature of trust as involving the unconditional and emotionally charged acceptance of self from which the assumption of self as worthy derives.

So What is Self-Trust?

In accordance with the above-mentioned work on the nature of trust and assumptive processes, self-trust will be defined as follows:

> An unconditional and unquestioning acceptance of all aspects of the self, including but not limited to self-concept, behavior, judgment, emotions and feelings, abilities, self-knowledge, intuitions, and experience. Self-trust includes an unquestioned acceptance of one's thoughts, feelings, and emotions as valid indicators of the individual's subjective experience. As an assumptive process, self-trust is expected to underpin the above-mentioned aspects of self, guiding and directing behavior, thoughts, expectations, and beliefs.

Self-trust might be thought of more concretely as a leap of faith that 'I am who I am and I feel what I feel' -- a process that serves a self-validating[2] function for the self-concept. It is akin to *knowledge of self* such that one's feelings, emotions, thoughts, beliefs, and values are accepted in a way that makes self-questioning or self-doubt unnecessary.

This definition contains a component of self-esteem in the assumption of self as worthy, and suggests that self-trust serves to underpin this construct. Thus, the following section takes a closer look at this hypothesized relationship between self-trust and self-esteem.

The Relationship between Self-Trust and Self-Esteem

Rosenberg (1965) defines self-esteem as a reflexive attitude about the self that contains an evaluative component, so that the individual views him- or herself as good or bad in relation to some predefined criterion. That criterion may be either socially or individually defined. Current conceptions of self-esteem follow along these lines (e.g. Baumeister, Tice, & Hutton, 1989; Campbell & Lavallee, 1993) although the social constructionist position (Gergen, 1994; Stenner & Eccleston, 1994) argues that both the evaluation and the criterion against which the person is judging him- or herself are a product of the culture in which one is raised.

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[2]When I use the term self-validating in this context, it is a reference to an acceptance of ones subjective experience of self as valid. If, for example, one experiences a feeling of sadness or a sense of self as creative as valid, it is not necessary to question that feeling or trait. Rather, the feeling or trait is accepted as a viable emotion or component of self.

If self-esteem is the evaluative component of the self, self-trust can be conceptualized as the validating, or accepting, component of the self. Self-trust might work to offset threats posed by evaluation of the self through validation of the self as generally, if not contextually, effective and acceptable. So the difference between self-esteem and self-trust is that while one evaluates the other validates.

As evaluator, self-esteem is more closely tied to the cultural and social milieu, the outcome of a process whereby the self is judged on the basis of standards set by society. Self-trust, on the other hand, is the leap of faith that the self, as judged, is valid and acceptable.

In the absence of self-trust, all aspects of the self, including self-esteem, are open to question. With no assumption of self as worthy, the individual may become engaged in a conscious process of questioning and validating the self.

A Review of the Literature

Kernis and his colleagues (1989; 1991; 1992; 1993) offer a perspective of self-esteem stability that establishes a basis for self-trust. Given conflicting evidence in the self-esteem literature that has simply looked at level of self-esteem, Kernis and his colleagues (1989, 1992, 1993) began to investigate individual differences in self-esteem by looking at day-to-day stability. Looking only at the basic level of self-esteem, for example, Campbell and Fairey (1985) found that individuals low in self-esteem accept and are affected by both positive and negative information about the self, while individuals high in self-esteem

accept and are affected only by positive information. Thus, from a level of self-esteem viewpoint, individuals high in self-esteem are not affected by negative information about the self.

Kernis, Grannemann, & Barclay (1989), however, found that some individuals high in self-esteem may not only be affected by negative information about the self, but may react to that information more violently and aggressively than individuals low in self-esteem. Kernis et al. looked at individual differences in anger and hostility as a function of the stability of self-esteem. Besides measuring self-esteem stability, participants were asked to complete several measures of anger and hostility. One of those measures presented different scenarios and asked participants to indicate how they would react in those types of situations.

The results of this investigation indicated that individuals classified as having high but unstable self-esteem also demonstrated the highest levels of anger and hostility. Those classified as having high, stable self-esteem had the lowest levels of anger and hostility. Individuals with low self-esteem, whether low, unstable or low stable, fell somewhere in between the high, unstable self-esteem and the high stable self-esteem individuals in their levels of anger and hostility. Thus, Kernis et al. demonstrated that not only do individual differences exist as a function of self-esteem stability, but that some individuals with high self-esteem are not only affected by negative information about the self contrary to previous reports (Campbell & Fairey, 1985), but that they are affected to an

even greater degree than individuals with low self-esteem. Kernis et al. interpreted this to mean that individuals with high unstable self-esteem possess a more fragile positive sense of self than individuals with high stable self-esteem. Anger and hostility may arise in an effort to protect that positive self-regard when negative conceptions of self are suggested or made salient.

In a second investigation, Kernis, Grannemann, & Barclay (1992) reported on excuse making as a function of stability of self-esteem. Viewing excuses as providing two different functions, that of self-enhancement or that of self-protection, Kernis et al. found no difference in excuse making overall between individuals high and low in self-esteem. Looking at stability, however, he discovered that individuals with high unstable self-esteem were more likely to make excuses following a successful performance, and thus engage in self-enhancement. Individuals with low unstable self-esteem, on the other hand, were more likely to engage in self-protective excuse making following a failure. For example, both high unstable self-esteem and low unstable self-esteem individuals might have used the excuse that they didn't get enough sleep the night before, but the individual with high unstable self-esteem used this excuse after a successful performance, presumably to say "but I did well in spite of..." while the individual with low unstable self-esteem used the excuse to justify a poor performance. Kernis et al.'s interpretation was that individuals with high unstable self-esteem are making an effort to boost an already positive image of

self, while individuals with low unstable self-esteem are making an effort to keep the self from looking more negative.

A third investigation into the effects of unstable self-esteem looked at the effects of positive and negative interpersonal feedback. Kernis, Cornell, Sun, Berry, & Harlow (1993) gave participants either positive or negative feedback after the participant delivered a speech in front of a one-way mirror, and then had them rate the accuracy of the feedback, the diagnosticity of the evaluation technique, the competence of the evaluator, and their attraction to the evaluator. Individuals with high unstable self-esteem had more favorable reactions to positive feedback and less favorable reactions to negative feedback than the other participants. In addition, these participants minimized the relevance of the evaluation and derogated the evaluator in response to the negative feedback condition, effectively externalizing the cause of the interpersonal threats. Individuals with low unstable self-esteem, on the other hand, contrary to expectations, viewed the negative feedback as more accurate and valid than did individuals low stable self-esteem, and viewed the evaluator as more competent and likable. Thus, rather than externalizing the threat as did participants with high unstable self-esteem, participants with low unstable self-esteem appeared to accept the self as deserving of the criticism.

Viewed from a perspective of self-trust, the above three investigations suggest that for individuals with unstable self-esteem, regardless of the valence of that self-esteem, there is a certain amount of self-evaluation and 'work' going

on. In other words, the technique for maintaining self-esteem involves an active process of reevaluation and protection of the self in the face of threat. For individuals with high unstable self-esteem, threats are met with anger and hostility, followed by externalization of the source of the threat. If the negative feedback comes from outside the self, the seemingly fragile sense of high self-esteem can be maintained. These individuals are also more likely to react to successes than are individuals in any of the other three categories, presumably to bolster the positive sense of the self (Kernis, 1993). For individuals with low unstable self-esteem, threats are met with attempts to protect the self from any further negative definition. Rather than attempting to bolster the self-image, these individuals engage in a process of protecting what they have from loss, at least in the personal sphere (Kernis, 1993).

In summary, there is something going on with individuals who have unstable self-esteem that is not manifest in those with stable self-esteem, and that is apparently an active evaluative process through which the individual detects and handles threats to self-esteem. For these individuals it is apparently necessary to engage in a more conscious method of validating the self in order to maintain a sense of stability or continuity. This, in turn, implies that the automatic self-validating mechanism that I call self-trust has failed. These individuals are unable to 'assume' that they are essentially worthy.

Individuals with high unstable self-esteem, for example, appear to be reactive to both positive and negative events, working either to bolster or protect

their fragile positive self-image, respectively. These individuals appear to be unable to trust their self-image as valid, and work continuously to maintain it. In contrast, individuals with high, stable self-esteem appear not to react to either positive or negative events (Kernis, 1993), but to possess a secure sense of positive self-regard. Apparently, they have no need to evaluate or defend the self because the mechanism of self-trust is working to automatically validate the self. Thus, there is no need for conscious reflection, evaluation, or reaction.

Individuals with low unstable self-esteem appear to be working to avoid continuous negative self-feelings, but do not react favorably to positive feedback. This is presumably to avoid the necessity of having to defend a more positive image later (Kernis, 1993). As with individuals with high unstable self-esteem, it appears as if these individuals are on the alert for threats to their sense of self, particularly if those threats are negative. Again, this more conscious evaluative process suggests that the self is not being validated automatically, and the individual must work to obtain that validation. It is interesting, however, that contrary to expectations the individual with low unstable self-esteem is actually accepting of negative information about the self in interpersonal situations. For these individuals, lack of trust in the self might imply a greater need to accept the judgments of others. Or the individual may simply be engaging in self-verification processes. In support of the latter explanation, research on self-verification suggests that people judge information that confirms their self-view as more credible than disconfirming information (Swann & Read, 1981a; 1981b).

Individuals with low stable self-esteem accept themselves as they are. They work neither to protect against a negative self-image nor to gain a more positive self-view. The definition of self-trust includes unconditional acceptance of the self as worthy. While it is possible that individuals with low stable self-esteem may accept themselves unconditionally, the definition of self-esteem mitigates against the assumption of self as worthy if self-esteem is low. Thus, individuals with low self-esteem, regardless of stability, should be low in self-trust.

Self-trust as defined suggests that one's view of the self is positive and stable. This has implications for the relationship between self-trust and the stability of self-esteem, but only for individuals with high self-esteem. Individuals with high self-esteem may exhibit either high or low self-trust, depending on the stability of self-esteem. Individuals with high self-trust, on the other hand, should exhibit only high stable self-esteem, while individuals with lower self-trust may exhibit either high unstable self-esteem or low self-esteem. These questions will be investigated in Phase II of this study.

An interesting question that follows from the definition of self-trust is: How is it that these assumptions are violated so that the developing individual loses the ability to automatically validate the self? This question is taken up in the following chapter.

CHAPTER 2

DEVELOPMENTAL ISSUES IN SELF-TRUST

Issues concerning the development and maintenance of self-trust encompass the process by which self-trust develops, the role of others in the development of self-trust, the methods by which self-trust is maintained, and the processes by which self-trust might become eroded or shattered over the course of an individual's life. The first section of this chapter will address the development of self-trust in childhood and the maintenance of self-trust in both children and adults. The second major section of this chapter addresses issues of erosion of self-trust, and the possibility that self-trust might be shattered through trauma.

Speculations about the Development of Trust in Self

We are born with the basic structures in place that will allow for the growth and development of perceptual abilities (Flavell, 1985), self (Stern, 1985), and trust in self and others (Bowlby, 1969; Brothers, 1996; Erikson, 1968). At a feeling/sensation level even a newborn infant must trust its body to tell it when it's hungry, sleepy, or uncomfortable. But what happens from there? Certainly the self does not grow in a vacuum. The human infant cannot survive without an older and more capable human to look after it — to feed it when it's hungry and tend to it when it's uncomfortable. Thus, hand-in-hand with self-trust must come what Erikson (1963) refers to as basic trust. Basic trust is the trust that the older and more capable other(s) will be there to feed it, change it, and comfort it. But according to Erikson, there is also an element of self-trust:

> The general state of trust . . . implies not only that one has learned to rely on the sameness and continuity of the outer providers but also that one may trust oneself and the capacity of one's own organs to cope with the urges; that one is able to consider oneself trustworthy enough so that the providers will not need to be on guard or to leave. (P. 102)

Given this mutual need to trust self and other, it makes intuitive sense that self-trust grows in the context of social interaction.

Self-trust is conceived as an automatic process that operates outside of awareness to serve a self-validating role for the self-concept. To the extent that self-validation is automatic, self-trust may be resistant to change. Thus, considerable attention will be paid to developmental processes, with an emphasis on Attachment Theory (Bowlby, 1969, 1973, 1980), but also incorporating elements of Rogers' (1961) Humanistic Theory as it applies to child development and self-trust.

Developmental Issues

The dominant view of self-concept formation is that it is socially constructed though the ongoing interactions of the self with others (Hewitt, 1976; Rosenberg, 1979; Stenner & Eccleston, 1994). An early conception of this process was the symbolic interactionist perspective (e.g., Hewitt, 1976;

Rosenberg, 1979) that conceived of the person as a passive recipient of information about the self through the verbal judgments and opinions of important others. More recent formulations (e.g., Stenner & Eccleston, 1994) view the individual as an active agent participating in defining the self, although the importance of language in that process is maintained.

Regardless of the perspective adopted, a young child without language or with only a rudimentary grasp of language does not have the necessary skills or experience to dispute the information about him- or herself that is relayed through social contact with important others. Thus, the self-schema formed is likely to rely heavily on interactions with important others. In early life this is the primary caregiver(s) and/or the parent(s). Bowlby suggests that the young child forms a mental model (basic assumptions) of self and other that contains not just the self-schema, but the self-in-relation-to-others-schema as well. He suggests that throughout childhood and adolescence this mental model becomes set and resistant to change, operating throughout the individual's life to direct interactions with others. These basic assumptions are hypothesized to underlie the individual's ability to trust others, and to mediate the view of the self in terms of self-worth.

Rogers (1961), although not speaking directly to the issue of child development, stresses the importance of valuing and trusting the person to know and to be him- or herself. It is through that process, he maintains, that the individual comes to know and to trust the self. Thus it may be as important to

feel and to be trusted by the other as it is to be able to trust that other.

It is my position that early interactions with important others underlie the ability to trust the self. Self-trust is believed to be the product of a process whereby the individual learns to validate the self and the self-concept, to the extent that this process of self-validation becomes internalized and automatic. The following section will provide an overview of attachment theory and empirical investigations that speak to the process of internalizing a schematic representation of self and other, evidence for the construction of self-worth, and evidence that is suggestive of self-trust in securely attached individuals. This will be followed by an overview of insecure attachment styles and their hypothesized relationship with self-trust.

Attachment Theory and Literature Review

Bowlby (1969; 1973; 1980) describes attachment as an affectional bond between the primary caregiver and the child such that the child has someone to turn to for safety and comfort in times of distress. Mary Ainsworth and her colleagues (1978) extended that definition to include the use of the primary caregiver as a "secure base" from which the child feels free to begin to move out and explore the environment. The beginnings of self-trust are suggested in securely attached children, who are happy to leave their mothers for short periods of time to explore their environments.

These children may grow into adults who are 'open to experience' (Rogers, 1961). Rogers describes openness to experience as the opposite of defensiveness. It is the ability to trust the evidence of one's senses without the need to distort it to fit the image of oneself should the two conflict. He states that:

> In a safe relationship . . . defensiveness or rigidity, tends to be replaced by an increasing openness to experience. The individual becomes more openly aware of his [sic] own feelings and attitudes as they exist in him [sic] at an organic level . . . He also becomes more aware of reality as it exists outside of himself, instead of perceiving it in preconceived categories. (p. 115)

Rogers describes a therapeutic relationship in which the therapist provides a 'secure base' through an assumption of unconditional positive regard for the client. His implication is that by trusting the client to know him- or herself, the therapist fosters an ability for the client to trust him- or herself. This relationship is closely related to that described by Ainsworth et al. between the primary caregiver and the infant/child when the child has a secure attachment.

Ainsworth et al. identified different attachment styles in the context of their "Strange Situation" that were reliably associated with the manner in which the caregiver related to the child in the home environment. Importantly, a secure attachment style was related to caregiving where the caregiver was both sensitive and consistently responsive to the child's needs. Insecure attachment,

where the child was either ambivalent or avoidant of the primary caregiver was related to inconsistent caregiving or neglect and rejection.

These early observations were conducted with children aged 12-18 months, prior to the acquisition of language, and based on behavior patterns. With the acquisition of language, however, the child is able to begin to apply meaning to his or her interactions and to incorporate those meanings into a schematic representation of the self. Thus, it was important to test Bowlby's hypothesis that these early interactions lead to a mental model of self and other that is more or less stable throughout life.

This was accomplished by Main, Kaplan, & Cassidy (1985) who devised a method of testing the mental models in young children (approximate age 6) to determine attachment classification. Main et al. also developed a test of the mental models of adults using the Adult Attachment Interview. Through this process, Main et al. were able to establish connections between attachment style at age six and earlier attachment style as determined in the Strange Situation at age 18 months. More important, from a social constructionist view of self-concept formation, Main et al. found that in 73% of cases, the attachment style of the child, determined at 18 months, agreed with the attachment style of the child's mother several years later. This suggests that the child did, in fact, internalize the parent's method of relating to him or her. If this is the case, it is likely that the child also internalized what he or she perceived to be the parent's view of the child as valued, worthy, and trusted.

Evidence for the Construction of Self-Worth. Researchers find that the evaluative component of self-concept is operative in children as young as age six. Empirical evidence exists that relates attachment style with self-esteem in both children and adolescents. Cassidy (1988) devised several different methods to assess the self-esteem of 6-year-old children. Attachment ratings were assessed across two sessions by viewing the child's behavior in reunion episodes with the mother, and Cassidy looked at the relationship between attachment style and several measures of self-esteem, self-competence, and perceived social acceptance. In all cases, reliable and significant correlations were obtained. Young children rated as securely attached were also likely to have high self-esteem, more perceived self-competence, and greater perceived social acceptance than children that were insecurely attached.

Evidence of an association between attachment style and self-esteem in adolescence has been well established. Rice (1990) conducted a meta-analysis of investigations into adolescent attachment. He found consistent, positive associations between attachment and measures of social competence, self-esteem, identity, and emotional adjustment across these investigations. Individuals securely attached to their parents perceived themselves to be more socially competent, had higher self-esteem, were more likely to be, in Erikson's (1968) terms, 'identity achieved,' and appeared to be better adjusted emotionally than individuals with insecure attachment styles.

These associations between attachment and self-esteem, while robust, do not speak directly to self-trust but, as outlined in Chapter one, self-trust is hypothesized to be the stabilizing factor in self-esteem. Hypothetically, if the self is automatically validated, others' opinions and judgments are not perceived as a threat but, rather, as information to be assessed and assimilated into the self-concept if perceived as accurate and relevant. Thus self-trust, as well as self-esteem, may evolve as a result of the attachment process.

Evidence Suggestive of Self-Trust. While a sense of self-worth may be constructed through the attachment bond to the extent that the caregiver is sensitive and responsive, attachment may enhance or hinder the development of self-trust[3] to the extent that the caregiver is consistent. Consistency in caregiving refers to a generalized tendency by the caregiver to respond in the same manner each time the child seeks proximity or closeness for any reason. As will be detailed in the section on attachment processes gone awry, consistent responsiveness in one or more areas of a child's life may enhance self-trust. Inconsistency, on the other hand, refers to a caregiver's tendency to respond appropriately and sensitively at one time and inappropriately and insensitively the next. While the caregiver occasionally validates the child's needs, she or he leaves the child to question the validity of these same needs at other times.

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[3] This section will emphasize the development of self-trust in the securely attached child. As will be explained in the section on insecure attachment however, it may be that some needs, such as the need for autonomy and exploration, are validated while others, such as emotions and feelings, are not. If this is the case, self-trust may be present for some insecurely attached individuals in some domains and absent in others.

Consistent caregiving that is also sensitive and responsive to the infant or child's needs, caregiving that communicates a sense of trust in the child's ability to know and communicate his or her emotions and needs, and caregiving that communicates a valuing of the child as a person is likely to enhance both high self-esteem and high self-trust. Self-esteem will be enhanced to the extent that the child feels valued. Self-trust will be enhanced by two processes. First, the caregiver's trust in the child allows the child to honestly express emotion and/or needs without fear of reprisal. The caregiver avoids projecting her or his own feelings and needs onto the child and, by trusting the child to communicate her or his emotions and/or needs transmits the message that those feelings and needs are trustworthy and valued. In effect, the message is given that these emotions and/or needs are valid components of the child's self-concept.

Secondly, the caregiver's consistency in response sends the message that the child's feelings and needs are valid, or real. Consistent validation by the caregiver results in acceptance of these feelings and/or needs by the child such that there is no need to question them. This results in a leap of faith that the feelings and needs are valid. With the resulting assumption of validity, the child is no longer dependent on the caregiver or others to provide validation.

Evidence of self-trust in the attachment literature is provided by Kobak and Sceery (1988), who looked at emotional regulation in attachment. These investigators found that securely attached individuals were able to acknowledge distress and turn to others for support when needed. In comparison, those

dismissing of attachment relationships were likely to deny distress and to repress negative childhood memories, while preoccupied individuals were most likely to be hypervigilant and to direct their attention to others in a way that inhibited their development of autonomy and self-confidence. This research suggests that securely attached individuals are able to trust and accept their feelings of distress. The fact that dismissing individuals tend to deny or bury these feelings suggests that they may not trust themselves to acknowledge or express them. Further, the propensity to repress negative childhood memories also suggests that these individuals may not be trusting their experience. Finally, it appears as if preoccupied individuals may be unable to trust themselves or their ability to regulate their emotional responses, and thus rely heavily on others.

Secondly, evidence from the Humanistic perspective links retrospective memories of unconditional positive regard, or consistently sensitive and trusting responsiveness, by the parents with both self-worth and self-acceptance. Forsman (1989) found that unconditional positive regard contributed 32% of the variance in self-worth, and 39% of the variance in self-acceptance. Thus, an important component of self-trust, unconditional and unquestioned self-acceptance, may be related to the ability of the primary caregiver(s) to accept and trust the child.

When Attachment goes Awry

The attachment literature clearly suggests that it is the sensitive responsiveness of the primary caregiver and other influential adults in a child's

life that lays the groundwork for secure attachment and a clear sense of self. Colin (1996) has conducted an extensive literature review in the area of developmental and adult attachment. The following descriptions of each of the insecure attachment styles are based on this literature review.

Anxious/Ambivalent Attachment

Colin's work clearly suggests that anxious ambivalent attachment in children is the end product of a caregiving style that is insensitive to the infant/child's needs, and is clearly inconsistent. The caregiver may turn away from the emotionally needy child one day and be particularly responsive the next. Alternatively, the caregiver may pick the child up when the child would clearly rather be involved in exploration and play. What is happening here is that the child is receiving inconsistent messages from the caregiver. When he or she is hurting, emotionally or physically, the message is sometimes validating and at other times is not. When the child would rather be engaged in play, but the caregiver picks him or her up and removes him or her from that activity, the child receives a message that the important thing is not his or her needs but those of the caregiver. At other times when the child is engaged in play, the caregiver may sit down and play with him or her, or in other ways allow the child to explore his or her own needs and feelings. Again, in one instance the child's needs and feelings are validated and in another similar instance they are not.

When situations such as this occur, what is a child to believe? First, because a sense of self and self-trust is only in the process of developing in the

very young child, he or she may be looking to the caregiver to help in the definition of his- or herself. If that self-definition, in terms of feelings, needs and desires, is only intermittently validated, it may be that the very young child learns not to trust those feelings, needs and desires. This child may learn to look to others, seemingly older, wiser and stronger, to help her or him decide what it is that he or she is feeling. It follows that the more inconsistency the less self-trust, and that the earlier in life this begins, the less opportunity the individual has to develop self-trust at all. On the other hand, if the caregiver has an occasional bad day when his or her sensitive responsiveness slips but is otherwise consistent and sensitive, there should be little or no erosion of self-trust.

The adult attachment pattern corresponding to anxious ambivalent attachment has been termed preoccupied attachment (Main & Solomon, 1986). These individuals have been described as clingy, needy, and over-dependent, have a low sense of self-worth, and are indiscriminately trusting of their partners (Bartholomew, 1989; Hazan & Shaver, 1987). Bartholomew (1989) actually found no correlation between participants' self-esteem scores as measured by the Rosenberg Self-Esteem Inventory and self-ratings on a continuous scale of attachment style for preoccupied individuals. Regardless, given the inconsistency in the responsiveness of the caregiver in validating the child's needs and feelings, self-trust should be low for these individuals.

Anxious/Avoidant Attachment

A literature review of anxious/avoidant attachment suggests that these individuals have caregivers who are consistently rejecting in their caregiving style (Colin, 1996), especially in the area of emotional sensitivity. These caregivers are quick to join in when the infants or children are already engaged in play. They are just as quick to turn away if the child's attachment system is activated and the child subsequently needs comfort and closeness. Thus when he or she is actively engaged in behaviors that suggest autonomy and mastery, the infant or child is validated. But when she or he is in need of comfort and security, his or her feelings and needs are negated and rejected.

How might this relate to self-trust? It would seem that this child would learn to validate and trust her- or himself in areas concerned with mastery, autonomy and accomplishment. In the area of feelings and needs, however, this child may learn that such emotional expression is inappropriate and likely to distance others rather than bring them closer. This child, then, may learn not to trust that particular expression of the self. Self-worth may be high in terms of accomplishment but because of a lack of validation of the innermost expression of the self and the self's needs, self-trust may be low due to an inability to validate the self in the area of feelings and emotion. This individual might thus be easily threatened, especially at those times when emotions threaten to surface, thereby exhibiting instability of self-esteem.

The adult counterpart to anxious/avoidant attachment has been termed dismissing attachment (Main, Kaplan, & Cassidy, 1985). These are individuals who dismiss their need for close relationships and exhibit more cold, rational behavior. This attachment style is also associated with hostile interpersonal problems (Bartholomew, 1989), suggesting a defensive orientation that is potentially working to maintain self-worth. Importantly, Kernis, et al. (1989), found that individuals with high but unstable self-esteem were more likely to display overly aggressive and hostile behavior. As with preoccupied attachment, Bartholomew (1989) found no correlation between dismissing attachment and self-esteem as expected. Individual differences in self-trust would predict a positive correlation between self-trust and self-esteem *stability* for these individuals, but no necessary correlation between self-esteem and dismissing attachment style.

Disorganized/Disoriented Attachment

Disorganized/disoriented attachment behavior is a relative newcomer to the attachment literature. This particular attachment style was first described by Main & Solomon (1986). Infants and children classified with this particular style were reported to have no organized attachment behavior. Their behavior appeared to be disoriented, with the child beginning an approach toward the caregiver but then stopping and pausing for several seconds or minutes before continuing. The child often appeared dazed or depressed. More recent formulations of this attachment style (Colin, 1996) suggest that this behavior is

not disorganized at all, but defensive in the sense of stopping to assess the situation and mood of the caregiver prior to continuing. These children often came from homes that were abusive physically and emotionally, and it makes sense that if a child has a caregiver who is intermittently explosive the best defense is an assessment of that caregiver's mood prior to contact.

In this situation, the caregiver's behavior is consistent, but insensitive and nonvalidating. The child is continuously rejected physically and emotionally. There is no praise forthcoming for accomplishments or a sense of autonomy as for the anxious/avoidant individual, and there are no times of emotional validation as for the anxious/ambivalent individual. The actions of the caregiver give a consistent message that the child is bad, thereby negating a sense of self as worthy. Additionally, the child consistently views the actions of the caregivers as hurtful, thereby negating a sense of other as trustworthy. Because of this, I would suspect that the child with a disorganized/disoriented attachment style would exhibit low and stable self-esteem, and would also be low in self-trust.

The adult counterpart to this attachment pattern may be what Bartholomew (1989) has termed fearful avoidant. Bartholomew found a negative correlation between self-reported fearful attachment and self-esteem as would be expected if self-esteem was low and stable. She also found associations between this attachment style and measures of introversion and subassertiveness, and no association with hostility. This suggests a lack of defensive responsiveness and thus supports the idea of an individual who has

low and stable self-esteem. My hypothesis is that these individuals will also show lower self-trust ratings.

Speculations about the Maintenance or Loss of Self-Trust in Adulthood

The foregoing discussion suggests that inconsistent and/or insensitive responsiveness by caregivers in early childhood can hinder the development of self-trust. But what about people who enter adulthood with a stable sense of self-trust? How do they maintain it? Under what circumstances could they lose their trust in themselves? The following sections will speculate about possible answers to these questions. First, I look at the maintenance of self-trust, and then move onto processes that may erode or shatter self-trust.

The Maintenance of Self-Trust in Adulthood

Day-to-day functioning and interactions with others present many opportunities for feedback that does not necessarily conform to the individual's conception of self. For example, a poor performance review at work, a less than acceptable grade on an exam, or perceived rejection by a friend may all give rise to a questioning of the self regarding self-perceived traits such as ability, role, or likeability. Similarly, a good performance review, an above average grade, or the perceived acceptance of another may also create a ripe atmosphere for questioning the self. The connection these evaluative forms of feedback have

with self-esteem is obvious. Their connection with self-trust lies in their ability to create temporary fluctuations in self-esteem. In the first instance, a person may experience a dip in their normally high self-esteem. In the second instance, a person with low self-esteem may experience a temporary rise.

Self-trust theory suggests, however, that persons high in self-trust will maintain high stable self-esteem. If this is the case, evaluative feedback should have little or no effect on either self-esteem or self-trust for these individuals. The question that arises is, how do individuals high in self-trust maintain it in a world potentially fraught with self-disconfirming feedback?

Maintaining a Stable Sense of Self

Swann (1990) suggests that the answer to this question lies in processes of self-verification. Self-verification theory assumes that, for purposes of perceived predictability and control of their worlds, people will work to maintain a consistent self-view. One method of doing so involves creating a personal environment that consists of others who share that view of the self. For example, a person who thinks of him- or herself as likeable will surround him- or herself with intimates and friends that indicate in various ways that they like and accept him or her. The person who thinks of him- or herself as unlikeable, on the other hand, will surround him- or herself with friends and intimates that behave in rejecting ways, thus verifying that the person is disliked.

Another way to verify the self-view is to engage in behaviors that reflect

that self-view. So a person who believes him- or herself to be likeable, for example, will act in ways that are especially complimentary with a person that they believe thinks they are not likeable. Still other ways that people engage in self-verification involve things such as selective attention, selective encoding of information, and selective interpretation. People attend to information that confirms their self-conception more closely that information that disconfirms it. They selectively encode information so that self-confirming feedback is more easily recalled than disconfirming feedback. And, people endorse the validity of feedback only to the extent that it agrees with their self-view.

Importantly for self-trust, Swann finds that people are more likely to seek self-verifying feedback and self-verifying interaction partners for self-views of which they are certain. This suggests that people low in self-trust whose uncertainty causes them to question their self-views will be less likely to self-verify, and thus less likely to (1) create a self-view of which they are certain, and (2) maintain a stable sense of self. Thus, for people initially low in self-trust, who are not certain of their self-view, a *lack* of effort to self-verify may result in maintenance of low self-trust.

Erosion or Shattering of Self-Trust

If, as self-verification theory suggests, people engage in practices that actively work to maintain their self-concept, what kinds of relationships or circumstances might work against self-trust? What about situations of domestic

violence? The above discussion would suggest that only women with very low self-esteem might enter into such relationships. The literature on domestic violence, however, clearly shows that the control tactics that some men use are subtle at first and act in a way that slowly draws the partner into a highly controlling and abusive relationship (Rosen, 1995). Is it possible for someone with a clear sense of self-trust and high self-esteem to (1) enter such a relationship in the first place, and (2) lose self-trust as a result?

I will speculate on the answer to that question and others regarding the erosion or shattering of self-trust in this section. I will first look at the possible erosion of self-trust in the adult relationship. Following that, I will speculate on the possibility of self-trust being shattered as a result of childhood trauma or a single episode of violence.

The Erosion of Self-Trust in Adult Relationships

Given the evidence provided by self-verification theory, it appears as if once self-trust has been firmly established in childhood it is difficult to erode self-trust in adulthood. If self-trust is, indeed, an automatic process of self-validation, and if one of the ways that we maintain our view of self is through self-verifying techniques (Swann 1990), then it is unlikely that an individual with a highly certain self-concept would put her- or himself in a position or a relationship where the self would not be continually validated. But what about relationships

that seem to be validating when first entered into, or relationships that we have no choice but to be involved with?

The first of these, relationships that start out as self-verifying partnerships, might encompass anything from close friendships to couples living together to marital relationships. Any close relationship that an individual enters into by choice is subsumed in this category. In the earliest stage of relationships, each partner in the relationship is focused on the positive qualities of the other, and on the rewarding qualities of the relationship that make staying together worthwhile (Eidelson, 1980; Rusbult, 1983). Self-disclosure grows increasingly intimate as the relationship progresses (Altman & Taylor, 1973). These activities early in the relationship are likely to provide many opportunities for self-verifying feedback, so there is no need to question the self. As these relationships progress, individuals begin to make a series of commitments to each other and to the relationship that grow stronger over time (Kiesler, 1971). Commitment makes it more difficult to leave a relationship if things are no longer going well, and also affects the way people respond to their partners. As Brehm (1992) states, ". . . commitment tends to wed us to a relationship — as we cut off outside options, resist efforts by outsiders to make us change our position, and become more susceptible to influence from the partner" (p. 173).

Indeed, anecdotal evidence provided through the retrospective accounts of women involved in battering relationships is testimony to the way that commitment can go horribly wrong (Rosen, 1995). It is important to note that

researchers have found no distinct personality cluster that distinguishes women involved in these relationships from other women (Harway & Hansen, 1994). I believe it is just as likely that women initially high in self-trust have become enmeshed in unhealthy relationships through the processes described above as it is for women with lower levels of self-trust.

It is also important to note that a relationship does not have to involve physical violence, or even overt emotional abuse, for an erosion of self-trust to occur. All that needs to happen is for an individual to have a commitment to a relationship in which they trust and respect their partner's opinion. If feedback from the partner changes gradually over time from self-verifying feedback to continual criticism, the individual may begin to question him- or herself. If one partner also begins to silence the other through various techniques (e.g., DeFrancisco, 1991), the individual may be made to feel distrusted and as if her or his opinion or even basic mode of being is being negated and called into question. This may sow the seeds for erosion of self-trust, especially within the context of that particular relationship. Whether or not low self-trust generalizes outside of the relationship may depend on how the individual is treated in other aspects of his or her life.

One other very important aspect of many people's lives is their job. People often spend 50% or more of their waking hours engaged in activities outside the home and away from their primary relationships. These working hours are not spent in isolation. Relationships abound at different levels, and

depending on how closely one works with any other given individual and on the power structure involved, the potential for criticism and abuse exists. Difficulties with subordinates and co-workers can often be resolved much more easily than abuse handed down from above (Keashly, Trott, & MacLean, 1994). Just as a child turns to her or his mother for confirmation and validation, a worker often looks to a superior for validation of the self in the workplace. As with an important personal relationship, if that validation is not forthcoming and/or negated, self-doubt is likely to begin creeping in and self-trust may begin to erode. And, as with important personal relationships, it is often not easy to just walk away. The individual often has commitments not only to the employer, but to family as well.

Trauma: A Quick and Easy Way to Lose Self-Trust

Self-trust might also be swept away quickly through one or more acts of violence, although the extent to which that might be possible depends on the age of the traumatized individual and the types of support systems that are in place. A child, for instance, who is sexually assaulted by a neighbor but is able to go to her caregivers and tell them about it without fear of reprisal is likely to have her traumatic experience and the bad feelings surrounding that experience validated. In this case self-trust may be strengthened rather than shattered.

On the other hand, a single incident may be a catalyst for the loss of self-trust if the primary caregiver or other individual(s) to whom the child might turn

refuses to believe that the incident happened and negates the child's story and negative feelings. The younger the child, the more likely that she or he will begin to question him- or herself about whether the incident actually did occur. Without outside validation, the child might question perceptions, feelings, judgments, abilities, and actions (O'Brien, 1987; Timmons-Mitchell & Gardner, 1991).

This type of abuse may occur over an extended period of time. The experiences of victims of childhood sexual assault have been well documented (Cole & Putnam, 1987; Feinauer, 1989; Hays, 1987; Mennen & Pearlmutter, 1993; O'Brien, 1987; Timmons-Mitchell & Gardner). In cases of incest, for example, the abuser may refuse tc acknowledge that anything "special" was going on outside of the actual abusive incidents themselves. He or she may actually ignore or otherwise refuse to acknowledge the child when others are present. To further complicate matters, the child may be told that what feels like an act of abuse is an act of love: that what feels bad is good. Everything the child is thinking and feeling may be negated and turned around by the abuser so that she or he is left wondering what is real and what is not. And there are secrets to be kept. If what is going on behind closed doors cannot be revealed to anybody else under threat of reprisal, there is nobody the child can turn to for self-verification and validation. If the child does finally try to tell her story and it is negated, the situation is only compounded.

The younger a child is when abuse begins, the more likely it may be that self-trust is actually shattered during the first incident or two rather than eroded

over an extended period of time. There are two reasons for this belief. First, the younger a child is, the more fragile his/her sense of self (Cole & Putnam, 1992) and self-trust is. Secondly, the younger a child is, the more the child looks to the abuser for guidance and protection, and the more likely she/he is to believe the older person when that person tells the child that what he/she is feeling is good.

If, on the other hand, there is a single incident of overt violence, such as a rape, where the abuser is obviously intending to inflict harm there are no conflicting messages being sent. What feels bad is bad. Nobody is there to tell the victim otherwise. With the proper support systems, it is far less likely that this person's feelings and perceptions will be invalidated, thus less likely that self-trust will be eroded (Kinzl & Biebl, 1992; Timmons-Mitchell & Gardner, 1991).

This applies to adult victims of single acts of violence as well. Given a strong sense of self-trust to begin with, it is likely that the adult trauma victim will have the proper support system in place and that self-trust can be maintained. How well this sense of self-trust might hold up under pressure from social structures that tend to blame the victim, however, is an empirical question. Regardless of her ability to automatically validate herself over the course of a lifetime, a rape victim who is treated callously by police departments, court systems and defense attorneys may find herself beginning to question her own perceptions, actions, and feelings.

PHASE I

SELF-TRUST QUESTIONNAIRE

CHAPTER 3

DEVELOPMENT OF THE SELF-TRUST QUESTIONNAIRE

The questioning of one's perceptions, actions, and feelings suggests that self-trust may manifest in ways that are measurable in a questionnaire format. Although self-trust is believed to be an automatic process that operates outside of conscious awareness, questioning oneself is likely to be a conscious process. People who consistently question themselves, their feelings, judgments, abilities, and so forth, are likely to be very aware of that process. Thus, the next step in this investigation was to operationalize self-trust through the development of the Self-Trust Questionnaire (STQ). This scale was created as a continuous measure of self-trust with questions set on a 5-point Likert-type scale ranging from 'Strongly Disagree' to 'Strongly Agree'.

Manifestation of Self-Trust

On the basis of theory presented in Chapters one and two, a prototype of an individual high in self-trust was created, and is presented in Appendix A. This prototype suggests that people may look for self-validation in all areas of their lives. As such, it makes sense that self-trust many manifest in a variety of ways and in a variety of circumstances. Some of these were mentioned above, culled from the literature on child sexual abuse (O'Brien, 1987; Timmons-Mitchell & Gardner, 1991). Others, such as intuition, self-knowledge and experience, were suggested by this prototype. A total of seven domains in which self-trust might be operative were used in the development of the STQ. These include judgment, feelings, experience, intuition, self-knowledge, behavior, and abilities.

Descriptions of individuals low in self-trust are based on the descriptions given in the attachment literature for insecure attachment styles (e.g., Bartholomew, 1989; Colin, 1996; Main, 1985). These are the individuals that are hypothesized to have received inconsistent or insensitive caregiving, particularly in the validation of their needs and feelings (see Chapter 2). Dismissing individuals are hypothesized to be high in self-worth, low in interpersonal trust, and low in self-trust. Because validation was not received at the emotional level, these individuals may be highly protective of themselves and thus rigid in self-views, protective of emotional expression, and highly selective in perceptions and memories. Preoccupied individuals, on the other hand, are hypothesized to be low in both self-esteem and self-trust, and high in interpersonal trust. Because of excessive inconsistency in validation of all areas of the self, these individuals are overly dependent, clingy, and emotional. Where dismissing individuals might deny emotional experience, preoccupied individuals may hold onto emotion, and thus feel it very intensely. While the former tend to restrict the self and expressions of the self, the latter tend to exaggerate the self and expressions of the self. Finally, individuals with a Fearful Avoidant attachment style were hypothesized as low in self-esteem, self-trust, and interpersonal trust. These individuals received consistent but insensitive caregiving that impeded validation of feelings and needs in all areas of their lives. Thus, these individuals may be particularly low in self-trust, in comparison with preoccupied and dismissing individuals.

Judgment

Subsumed in the concept of judgment is the individual's ability to trust that her or his own opinions and decisions are valid expressions of the self-concept. Because they trust themselves, high self-trusting individuals might be resistant to change in these judgments and opinions. However, they should also be open to the opinions and judgments of others to the extent that they are willing to listen to those opinions and judgments with an open mind, and to the extent that they are willing to incorporate those opinions and judgments into their own opinions if appropriate.

An individual low in self-trust is likely to react in one of two different ways when holding opinions or making decisions. Some individuals may have a very rigid and structured self-concept that is not open to the opinions and judgments of others at all. These individuals might therefore hold very strong opinions that are resistant to change under any circumstances. When making a decision, they may have a great deal of difficulty in turning to others for advice, even when that advice is warranted, such as when input is needed regarding a field outside the area of expertise of the decision-maker. These people may believe that they trust themselves when they are really defensively oriented, motivated to protect themselves from the possibility of outside questioning.

Other individuals who are low in self-trust may trust their own decisions and opinions so little that they rely heavily on others to make decisions for them. The self-concepts of some people low in self-trust may be so loosely organized

that they are unsure of who they are or what they stand for. These people may be consciously aware of their difficulties in trusting themselves and/or motivated to protect themselves from that awareness by clinging protectively to the opinions and judgments of an important other.

Feelings

Trusting one's feelings implies that one is open to the identification and expression of emotions. A person high in self-trust should not only be open to these feelings, but unambivalent about expressing them. Further, because of an ease in recognizing and expressing emotion combined with a greater acceptance of self, those high in self-trust should be comfortable in feeling and expressing emotion.

On the other hand, an individual low in self-trust may have difficulty in feeling and expressing emotion to begin with or conversely, may feel and express emotion with a great deal of exaggerated intensity. These individuals are likely to be very ambivalent about the expression of emotion due either to a fear of ridicule or an inability to identify the emotion aroused.

Experience

The conceptualization of developmental issues in self-trust combined with Rogers' (1961) definition of openness to experience, suggest at least two different ways that self-trust might operate in the domain of experience. First, trust of experience might include issues revolving around past experience, and

the ability to integrate past experience with present functioning. Secondly, trust of experience might include trust in the moment-to-moment experience of living in the present.

Issues revolving around past experience might include the ability to trust one's experience given the possibility of tremendous discrepancies and inconsistencies between what the individual perceives and what that person is told to believe about their experience (e.g., incest). Whereas an individual who has had painful experiences acknowledged and validated is likely to trust that experience and the emotions surrounding it, an individual who has been invalidated, whose experience has been negated, and who is told that she or he experienced something quite different from what their own perceptions allow is likely to have much difficulty in trusting their own experiences. These individuals might be more keenly attuned to social cues to help them in defining particular situations and feelings than individuals who trust their experience.

Secondly, Rogers (1961) has defined openness to experience as the ability to be more aware of what is going on around oneself. This person is less defensive in excluding stimuli that threaten self-concept, and more open to new ways of thinking about the self. Rogers suggests that in this process, clients in therapy are able to expand their self-definitions, integrate new self-concepts, and become more complex and less rigid.

If we accept that self-trust includes the openness to experience given by Rogers (1961), and we also accept that individuals higher in self-trust are more

likely to engage in Swann's (1990) self-verification processes, it would appear that we have a paradox. According to Rogers openness to experience, high self-trusting individuals should be *less* selective in the stimuli that they choose to attend to, while according to self-verification theory, high self-trusting individuals should be *more* selective in attending to stimuli. Swann has empirical support for his theory, while Rogers does not.

It should be noted, however, that Rogers is speaking of individuals in therapy, who may be exceptionally defensive and may therefore have very rigid self-definitions. It may be that in the *process* of expanding the self-concept and learning to trust oneself it is necessary to attend to a wider variety of stimuli. Those already high in self-trust, on the other hand, may already have rather complex self-concepts that are being maintained by self-verification techniques, including selective attention to outside stimuli. If this is the case, individuals *low* in self-trust may actually be more open to, and influenced by, their environments.

In summary, individuals high in self-trust should be more open to past experience, such that they are more likely to trust their perceptions than individuals low in self-trust. Individuals low in self-trust, on the other hand, should be more open to present experience, such that they are more likely to be influenced by outside sources.

Intuition

Intuition is defined here as any deeply felt thought or hunch that the individual experiences and recognizes. These are thoughts that appear to come out of nowhere, since a conscious thought process was not involved prior to the recognition of an intuitive thought. Included here are first impressions, or the instinctive response or reaction to a person upon first meeting that has as yet no basis in experience, and hunches, or a knowledge that something is right even if it goes against rational thought processes. The self-trusting individual may pay attention to these ways of knowing and take them seriously. In terms of first impressions, for example, the self-trusting individual might acknowledge a strong feeling of dislike and remain open to the possibility that this feeling may be grounded in reality. The person low in self-trust, on the other hand, might discredit this first impression and close themselves off to the possibility that somebody is not a nice person.

Self-Knowledge

It seems intuitively correct to think that people who are high in self-trust are also likely both to know themselves and to recognize that they are capable of this self-knowledge to a greater degree than others, no matter how close those others might be. An openness to self implies insight, knowledge of strengths and weaknesses, and acceptance of self. Those low in self-trust might be filled with self-doubt concerning identity issues, strengths, and weaknesses. These

people might have an overly negative or overly positive self-view. They may feel a need to blend in, conform, or mentally construct an identity that is very similar to those that others have constructed for them. A lack of insight into the self may serve as a catalyst for a belief that other people know them better than they know themselves.

Behavior

Trusting behavior suggests that people should trust that they will act appropriately according to a situation or circumstance. These may be people who, for whatever reason, don't need rules and moral codes to use as conscious guidelines to correct behavior. High self-trusting individuals may be less aware of strict social etiquette and as a result may at times be seen as a bit odd or eccentric. At the same time they may see that oddness or eccentricity as an intricate part of their self-identity and trust that it is the correct behavior for them as individuals. Individuals low in self-trust, on the other hand, may have more difficulty in trusting themselves to behave in ways that do not harm others. These individuals may need strict rules, guidelines, and moral codes to guide their actions. They may feel more of a need to conform to peer pressure and a set of social norms governing their behavior.

Abilities

Finally, self-trust may be manifest in the domain of abilities. People high in self-trust may seldom question their ability (or lack of ability) to do something,

especially if they have had experience with something similar in the past. These individuals should know what their abilities and talents are and trust that they will be able to accomplish whatever it is that they set out to do. At the same time, they should recognize areas in which they lack ability and be comfortable with their decision not to engage in those activities.

Those low in self-trust, on the other hand, may be confused as to what their abilities and talents are, and may even deny a talent that others can see clearly. For example, a person might write a very well thought out and organized paper on a topic, but have difficulty in accepting that she or he is a good writer or an intelligent individual. These people may be hesitant to try new things in general, or may jump into activities that are beyond their abilities without realizing that they are possibly setting themselves up for failure.

Questionnaire Development

Based on the theory presented above, a questionnaire was developed to measure self-trust in these seven different domains. This questionnaire was generated in three steps. First, as many items as possible were generated by the author. This involved looking at the seven possible domains and brainstorming ways in which to query an individual's self-trust in those domains.

Second, an open-ended question was given to graduate students, faculty, and undergraduates in the author's advanced statistics lab. This question asked how self-trust might manifest in the seven domains described above (see

Appendix B). Participants were not asked to disclose personal information or experiences, but rather where and how they thought self-trust might manifest. Additional items were generated based on the responses received.

Finally, 148 items were compiled and presented to the experimental social psychology research group at the University of Calgary. Over the course of two sessions, the members of this research group went through the questionnaire item by item to assess the face validity of the items. Items were dropped if they appeared to be measuring another construct, such as self-esteem, or if they were not obviously measuring self-trust as defined above. Through this process, 76 items were dropped, leaving a total of 72 items on the initial questionnaire. Additionally, several of those items were reworded to the satisfaction of the group.

This questionnaire was then given to undergraduates in several introductory and lower level psychology classes at the University of Calgary. Additionally, the questionnaire was posted on the World Wide Web for data collection outside the University of Calgary. A large sample was collected so that the items could be scrutinized for their internal consistency. Factors that played a role in the decision of whether or not to keep an item included the item mean, the item-total correlation, and the item's factor loading in a factor analysis.

The method by which data was collected and the results of this initial data collection are presented in the following chapters.

CHAPTER 4

METHOD

Participants

University of Calgary

Participants were recruited from two sources. First, male and female participants were recruited at the University of Calgary through solicitation in undergraduate classes. Through this method, 1,565 questionnaires were distributed and 760 returned, for a 48.5% return rate. Participant age for this portion of the sample ranged from 17 to 54, with a mean of 21.91, standard deviation 6.53. There were 167 males (mean age 22.54, standard deviation 7.47), 591 females (mean age 21.73, standard deviation 6.23), and 2 failed to report their gender.

Internet: World Wide Web

A second group of participants was recruited via the World Wide Web (WWW). The 72-item questionnaire was published on the WWW, and participants were recruited through e-mail requests sent to 740 relationship researchers. E-mail addresses for these professionals were obtained through membership directories. These individuals were asked to contribute in two ways. First, they were asked to spend a few minutes completing the questionnaire themselves. Secondly, they were asked to pass the location of the questionnaire (URL) on to their colleagues and students and ask them to participate as well.

Approximately three weeks after the e-mail campaign links were created between the Self-Trust Questionnaire (STQ) and Yahoo (a popular Internet

search engine), and between the STQ and the American Psychological Society's (APS) web page entitled *Psychological Research on the Net*. Since Yahoo tends to attract participants outside of the academic community, this sample may have included participants with varying levels of education and more diverse cultural backgrounds[4].

Sample Comparison

Table I gives a summary description of the sample of participants from the WWW compared with the university population. The total WWW sample consisted of 162 males, 265 females, and two individuals who did not report gender for a total of 429 responses. Ages ranged from 13-62, with a mean age of 27.46, standard deviation 9.70 . Because the scale was designed for late adolescents and adults, eighteen respondents under the age of 16 were dropped from the analysis. This left 157 males and 252 females, mean age 28.04, standard deviation 9.51. Responses were collected from around the globe, with the majority from Canada and the United States.

In all, a total of 1,189 responses to the Self-Trust Questionnaire were collected, consisting of 856 females and 329 males. Data were dropped for 18 individuals under the age of 16, leaving an initial sample of 843 females, 324 males, and 4 individuals who did not report gender for a total count of 1,171.

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[4] Respondents on the Internet were not asked for level of education, and respondents at the University of Calgary were not asked for cultural background. Thus, the two samples could not be compared on those variables.

Table I. **Comparison of University and Internet Samples on Basic Demographics.**

	University			Internet		
	Valid N		**%**	**Valid N**		**%**
Age	754			406		
Mean		21.91			28.04	
Std. Dev.		6.53			9.51	
Gender	758			409		
Male		167	22%		157	38%
Female		591	78%		252	62%
Marital Status	756			409		
Single		645	85%		256	63%
Married		60	8%		119	29%
Living Together/Not Married		51	7%		34	8%
Cultural Background**						
Country Participant Grew Up	0			407		
Africa					2	.5%
Asia					17	4%
Australia/New Zealand					13	3%
Europe					45	11%
Canada/United States					318	78%
Mexico					4	1%
South America					4	1%
Middle East					4	1%
Current Residence	760		100%	406		
Africa					1	.25%
Asia					5	1%
Australia/New Zealand					11	3%
Europe					27	7%
Canada/United States	760		100%		353	87%
Mexico					2	.5%
South America					5	1%
Middle East					2	.5%

* N varies depending on missing data

** Cultural background was not collected from participants at the University of Calgary

Questionnaire

As described in Chapter 3, the Self-Trust Questionnaire consisted of 72 items representing 7 domains (see Table II for sample items in each domain). Forty-two percent (30) of the items were reverse scored, and questions were set on a 5-point Likert-type scale with responses ranging from "Strongly Disagree" to "Strongly Agree."

Procedure

Paper and Pencil Questionnaire

A paper-and-pencil version of the Self-Trust Questionnaire was constructed for administration to the undergraduate population at the University of Calgary. The investigator visited a total of 12 classrooms, consisting of three introductory classes and 9 upper level classes. Each class was visited twice – first to introduce the study, request volunteers, and distribute the questionnaires, and again two days later to collect questionnaires that had been completed. Students who failed to return a questionnaire were told that they could drop it off at the Department of Psychology Office.

Internet

The Self-Trust Questionnaire was also posted on the WWW along with an informed consent (Appendix C). Participants were recruited through an e-mail campaign (Appendix D) and through links to two popular sites on the Internet, Yahoo and the APS page for *Psychological Research on the Net*. A total of 61

Table II. Sample Items from Original 148-Item Self-Trust Questionnaire.

Domain	Item
Judgment	When I have to make a decision I always look to others for advice.
	My opinion is the only one that matters in the end.
Feelings	Regardless of any feedback I may get, I know I can trust my own feelings.
	Sometimes I become confused about what I am feeling.
Experience	I believe there is a lot to be learned from personal experience.
	I don't always trust what I see.
Intuition	When I get a strong hunch about somebody on first meeting them, I tend to pay attention to it.
	Sometimes I just know I'm right, even in the face of opposition.
Self-Knowledge	I often think that people who are close to me know me better than I know myself.
	I believe that the only person who can be an expert about me is me.
Behavior	I believe that religion is very important, since it sets moral standards for my behavior.
	It doesn't bother me if others see me as a bit different or eccentric.
Abilities	Even when I know the material well, I find myself going back and changing, or wanting to change, answers on multiple choice exams.
	I trust my ability to accomplish something, especially if I have had previous experience with it.

responses were garnered as the result of the e-mail campaign, prior to the addition of the two links three weeks later. An additional 368 responses were gathered prior to a predetermined cutoff date, for a total of 429. Participants on the WWW were first given an electronic version of an informed consent which gave them the same information the undergraduates received with the paper-and-pencil questionnaire. This informed consent provided a description of the investigation and informed potential respondents of their rights as research participants. Rather than a signature, it was clearly stated on the informed consent that proceeding beyond that page constituted their informed consent. Next, they accessed a page that asked some basic demographic questions, including age, sex, marital status, country in which they grew up, and the country in which they were currently residing. They then were given the questionnaire and asked to respond on the same 5-point scale used on the paper version. Upon completion of the questionnaire, WWW participants were given the opportunity to access further information, consisting of an explanation of the study and a prototype of a self-trusting individual (Appendix E). This information was not available until after participants had completed the questionnaire.

CHAPTER 5

RESULTS

Questionnaire Item Reduction

The first step in scale reduction involved an analysis of the univariate statistics of each item on the questionnaire. These univariate statistics were run for the full data set collapsing across gender (n = 1051)[5]. Because this research was concerned with producing a questionnaire that reliably discriminates between individuals based on self-trust, it was important that items have something approximating a normal distribution (Ghiselli, Campbell, & Zedeck, 1981). Thus items with obviously skewed distributions (means greater than 4 or less than 2 on the five-point scale) were deleted. In addition items with little variability, suggested by a standard deviations less than one, were deleted. Based on these criteria, a total of 35 items were deleted, leaving 37.

The remainder of the analyses were conducted separately for males and females and will thus be reported separately by gender.

Males

A principal axis factor analysis (PAF) with no rotation and eigenvalues set at the default value of 1 was conducted on the 37 items remaining after the initial univariate analysis (n = 306)[6]. Twelve factors with eigenvalues in excess of 1

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[5] Using a criteria of 10 respondents per item on a 72-item scale, a minimum of 720 males and 720 females were needed in order to run the initial analyses separately for males and females. With a sample of only 311 males, I could not meet the minimum requirement of 10 respondents per item prior to further item reduction.

[6] Because listwise deletion of missing values was used, N's will vary according to missing data at each step of the analysis. As additional items are dropped more cases are added to the subsequent analyses.

emerged. A factor loading of at least .30 on at least one factor was required for inclusion of an item on the scale. On this basis, an 4 items with factor loadings less than .30 were deleted. Two additional items were dropped on the basis of univariate statistics. One had a mean greater than 4, and a second had a standard deviation of less than one. This left a total of 31 items on the scale.

Next, items were checked for item-total correlations (n = 308). To enhance scale homogeneity and the probability that all items were measuring the same thing, item-total correlations of .30 or higher were required (Ghiselli, et. al, 1981). A final 8 items with item-total correlations less than .30 were deleted, leaving 23 items on the scale.

Statistics run on this final version revealed a scale that was psychometrically sound, with a mean of 75.56 (n = 311) and standard deviation 13.42. The mean inter-item correlation was .22 with a minimum correlation of -.03 and maximum correlation of .60. Internal consistency was high, with a Cronbach's alpha of .86.

Females

The same procedure and criteria were used for females as for males. A PAF with no rotation and eigenvalues set at the default value of 1 was conducted on the 37 remaining items after the initial univariate analysis (n = 789). Ten factors with eigenvalues in excess of 1 emerged. Four items were deleted on the basis of the univariate statistics. Three of these had standard deviations less than 1, and one had an item mean less than 2. Five additional items had factor

loadings less than .30 and were deleted. With 9 items deleted, the scale was left with 28 items.

Items were next checked for item-total correlations (n = 796). A further 5 items with item-total correlations less than .30 were deleted, leaving 23 items on the scale.

A final reliability analysis (n = 806) for these 23 items revealed scale statistics very similar to those of the males. The scale mean was 73.80 which was somewhat lower than that of the males, but the standard deviation remained very similar at 13.48. The mean inter-item correlation was .22 with a minimum correlation of .03 and maximum correlation of .57. Again, internal consistency was high with a Cronbach's alpha of .87.

Male/Female Scale Comparison

A 23-item scale was obtained for both males and females, with 20 items identical across genders. Each had an additional 3 items that were unique to that gender. See Table III for a comparison of items across gender. Because of the large number of items that coincided across genders, it was decided to adopt a 20-item scale, using only those items shared by men and women.

Examination of Final Scale

Following Tabachnick and Fidell (1989) cases were prepared for further analysis as follows. First, missing data were replaced by the mean response for the particular item for each gender separately. If greater than 2 items (10%) for a particular respondent contained missing data, that case was excluded from

further analysis. Seven female respondents, 5 male respondents, and one respondent with unknown gender were excluded by this criteria.[7]

The assumption of normality within items was checked using expected normal probability plots (Tabachnick & Fidell, 1989). These plots check each case against an expected value based on rank order in a normal distribution. All items appeared to have a normal distribution, with only minor deviations from the diagonal.

Responses were checked for outliers by total score (Tabachnick & Fidell, 1989). Cases with scores given as extremes on stem-and-leaf displays were excluded from further analysis. Six females and 5 males were excluded by this criteria. The final N's for all further analyses were 829 females, 314 males and 3 with unknown gender.

Gender Differences

Two-tailed t-tests of sex differences were conducted on total STQ scores and age. Significant differences between males and females were found on both total score ($t_{(1142)} = 2.222$, $p = .027$) and age ($t_{(1135)} = 2.644$, $p = .008$). Males scored higher than females on self-trust and males respondents were older than female respondents (see Table IV for means and standard deviations).

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[7] Of these, 6 were females who had completed the pencil and paper questionnaire at University of Calgary, mean age 20.33. One female and 5 males had responded on the electronic Internet version, mean age 21.67. Those who did not complete the questionnaire on the Internet were composed of one Asian, one Mexican, two European, and two individuals from Canada or the United States. It is quite possible that the four individuals outside of North America did not have a good enough command of the English language to understand the questions asked.

It is possible that as individuals become older and more comfortable in varying situations, they also develop a greater degree of self-trust. If this is the case, the difference in age between males and females may account for the difference in scores on the STQ. To test the possibility that age was acting as a covariate, a mixed-model regression analysis was first performed to test the assumption of homogeneity of regression coefficients. With STQ total as the criterion variable, an interaction term was computed between age and gender and entered hierarchically to these two predictors. This interaction was statistically significant ($F\Delta_{(1,1133)} = 5.117$, $p = .024$). As Figure 1 indicates, the difference in total scores between males and females was most pronounced for those individuals under the age of 21, with women obtaining lower scores than men. From the age of 21 forward, both men and women obtained a linear pattern with scores that do not appear to differ by gender, and increase steadily with age.[8] Because of the significant interaction, an ANCOVA with age as covariate was not performed, but simple effects tests were performed. Two additional regression analyses were run, for males and females individually. The regression of total STQ score on age for males was not significant, indicating that age did not account for a significant proportion of variance in STQ scores for men. The regression of total STQ score on age for females, however, was

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[8] Because there were only 5 males and 5 females older than age 50, these scores were included in the means calculated for individuals over the age of 40.

Table III. 23-Item Self-Trust Questionnaire with Gender Comparison.

Orig.[a]	M[b]	F[c]	
1.	1.	1.	I often seek reassurance from others that my ideas are sound.
4.	2.	2.	Often after I talk to people, I question whether I have understood them correctly.
6.	3.	3.	When I have to make a decision I often look to others for advice.
9.	4.		I'm seldom certain of my judgments of other people.
14.		5.	People close to me know me better than I know myself.
16.	6.	6.	I don't need feedback very often to know that I'm doing a good job.
18.	7.	7.	Sometimes I wonder if what I've seen is really what it appears to be.
22.	8.		I don't have to stop and think about how to act.
24.	9.	9.	I often find I can't trust my feelings.
25.		10.	Other people's opinions are very important to me.
26.	11.		When my interpretation of events differs from other people's I seldom question myself.
27.	12.	12.	I seldom question whether I have seen something correctly.
31.	13.	13.	Insight into myself comes easily to me.
33.	14.	14.	I often find myself questioning my version of reality.
34.	15.	15.	I rarely have difficulty in identifying my own emotions.
35.	16.	16.	I seldom talk about my feelings because I'm afraid that they are wrong or stupid.
36.	17.	17.	Sometimes I become confused about what I am feeling.
37.	18.	18.	I count on other people to help me identify my strengths and weaknesses.
39.	19.	19.	It doesn't bother me if I see myself differently from how others see me – it's my view that counts.
40.	20.	20.	I have a great deal of difficulty in knowing when something is right for me.
41.	21.	21.	When I see myself differently from the way others see me I tend to doubt myself.
50.		22.	I seldom make excuses for my mistakes.
57.	23.	23.	I often find myself second-guessing my own decisions.
58.	24.	24.	Sometimes I have difficulty knowing what it is that I'm feeling.
64.	25.	25.	It doesn't take much to get me to question myself.
67.	26.	26.	I seldom need reassurance from others about my capabilities.

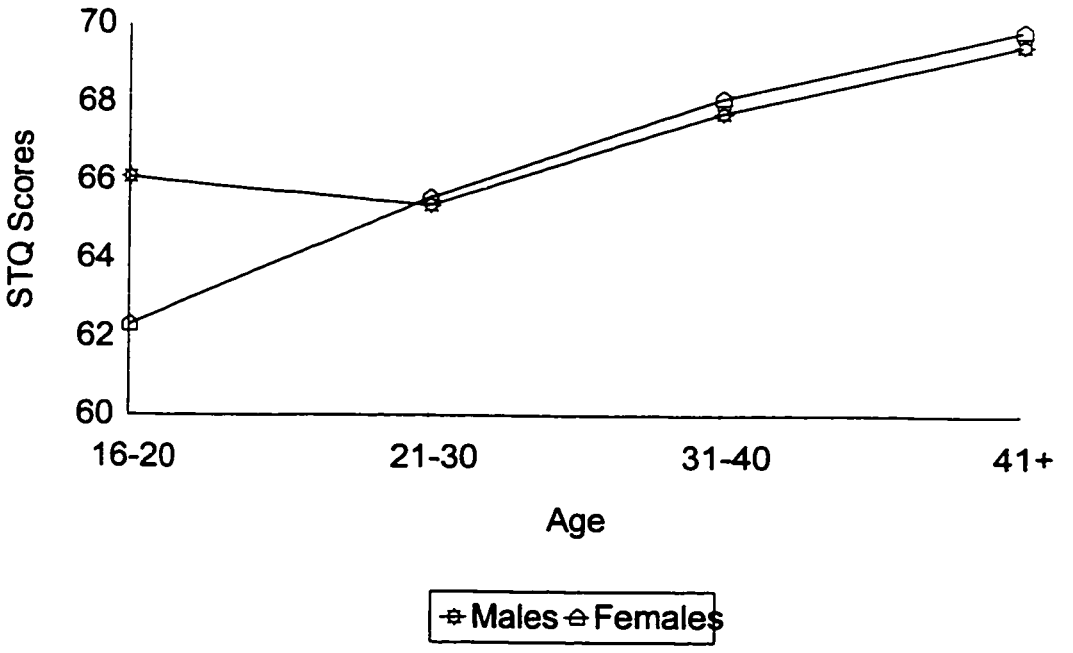
[a] Item number from the original 72-item scale.
[b] Male items
[c] Female items

significant ($F_{(1,822)} = 34.37$, $p < .001$). Age accounted for 4% of the variance in STQ scores for women.

Table IV. Means and Standard Deviations for Total STQ Scores and Age by Gender.

	N	Mean	Std. Dev.
Total			
Males	315	66.20	11.47
Females	829	64.47	11.89
Age			
Males	313	25.13	8.69
Females	824	23.68	8.04

Figure 1. Self-Trust as a function of Age and Gender.



Factor Analyses

Separate factor analyses were conducted for each gender to allow for differences in factor structure between men and women (Tabachnick & Fidell, 1989).

Males

Following Tabachnick and Fidell (1989), a principal components factor analysis was first conducted to determine the number of factors with eigenvalues in excess of the default value of one. This initial factor analysis indicated that for males, there were five factors present. An analysis of the scree plot, however, indicated a maximum of four factors, so further exploration was indicated. A PAF with varimax rotation was conducted requesting 5 factors, and post-rotation eigenvalues were calculated. This analysis indicated the presence of 5 factors with eigenvalues in excess of one. Because of the nature of the items on the STQ, factors were expected to correlate. Accordingly, a PAF with Direct Oblimin rotation was conducted for the 5 factors, and the factor correlation matrix confirmed the use of oblique rotation.

Using the pattern matrix (Tabachnick & Fidell, 1989) sums of squared loadings were again calculated as a check on the number of factors, and indicated that there were only four factors with eigenvalues in excess of one for this rotation. A third PAF with Direct Oblimin rotation for 4 factors and subsequent calculation of post-rotation eigenvalues confirmed the four factors.

Residuals were checked and determined to be acceptable, with 15% that had absolute values greater than .05.

The factor correlation matrix is shown in Table V. While the correlation between Self-Trust and Experiential Trust is weak, the correlations between Self-Trust and Emotional Trust, and between Self-Trust and External Validation are moderately strong.

Table V. Factor Correlation Matrix for Male's Principal Axis Factor Analysis with Direct Oblimin Rotation.

	Self-Trust	Experiential Trust	Emotional Trust	External Validation
Self-Trust	1.00			
Experiential Trust	0.28	1.00		
Emotional Trust	-0.41	-0.20	1.00	
External Validation	0.47	0.16	-0.20	1.00

These factors were interpreted according to the pattern matrix, after items were sorted on the basis of the simple structure criterion. The nature of the items loading on each of the four factors suggests a factor for general self-trust, one for experiential trust, and one for emotional trust. The final factor appears to represent a component for external validation, with self-trusting individuals requiring less external validation than individuals lower in self-trust. Table VI lists the questionnaire items and their loadings on the four factors.

Reliability analysis of the final 20-item scale for male participants gives a mean of 66.20, standard deviation 11.47. The mean inter-item correlation is .20 with a minimum of -.04 and maximum of .59. Cronbach's alpha is .84.

Table VI. Items and Factor Loadings on Pattern Matrix for Males.

Item	ST[a]	Ext	Emt	EV[d]
19. It doesn't take much to get me to question myself.	**.76**	.17	.14	-.05
16. When I see myself differently from the way others see me I tend to doubt myself.	**.59**	-.03	.03	.14
17. I often find myself second-guessing my own decisions.	**.49**	.12	-.01	.20
15. I have a great deal of difficulty in knowing when something is right for me.	**.44**	.04	-.14	.04
11. I seldom talk about my feelings because I'm afraid that they are wrong or stupid.	**.43**	-.04	-.17	-.09
6. I often find I can't trust my feelings.	**.39**	.07	-.09	.03
14. It doesn't bother me if I see myself differently from how others see me—it's my view that counts.	**.34**	-.23	-.09	.15
5. Sometimes I wonder if what I've seen is really what it appears to be.	-.01	**.69**	-.12	-.05
9. I often find myself questioning my version of reality.	.20	**.54**	-.12	-.14
7. I seldom question whether I have seen something correctly.	.04	**.47**	.01	.11
2. Often after I talk to people, I question whether I have understood them correctly.	-.01	**.41**	-.04	.16
18. Sometimes I have difficulty knowing what it is that I'm feeling.	.11	.23	**-.66**	.01
12. Sometimes I become confused about what I am feeling.	-.01	.22	**-.52**	.04
10. I rarely have difficulty in identifying my own emotions.	.10	.06	**-.50**	-.03
8. Insight into myself comes easily to me.	.07	-.12	**-.43**	.15
20. I seldom need reassurance from others about my capabilities.	.04	-.08	-.11	**.63**
4. I don't need feedback very often to know that I'm doing a good job.	-.07	-.01	-.15	**.53**
1. I often seek reassurance from others that my ideas are sound.	.22	.08	.15	**.50**
3. When I have to make a decision I often look to others for advice.	.10	.14	.16	**.42**
13. I count on other people to help me identify my strengths and weaknesses.	.13	.18	-.17	**.38**

[a]Self-Trust; [b]Experiential Trust; [c]Emotional Trust; [d]External Validation

Females

Factor analyses for females were conducted using the same procedures as for males. The initial factor analysis indicated that for females, there were five factors. Again, an analysis of the scree plot indicated a maximum of four factors. A PAF with varimax rotation was conducted requesting 5 factors, and post-rotation eigenvalues were calculated. This analysis indicated the presence of 5 factors with eigenvalues in excess of one. Next, a PAF with Direct Oblimin rotation was conducted for the 5 factors, and the factor correlation matrix confirmed that the factors were correlated. Using the pattern matrix (Tabachnick & Fidell, 1989) sums of squared loadings were again calculated as a check on the number of factors, and indicated that there were only four factors with eigenvalues in excess of one for this oblique rotation. A third PAF with Direct Oblimin rotation for 4 factors and subsequent calculation of post-rotation eigenvalues confirmed the four factors. Residuals were checked and determined to be acceptable, with 8% that had absolute values greater than .05. The factor correlation matrix is shown in Table VII.

These factors were interpreted according to the pattern matrix, after items were sorted on the basis of the simple structure criterion. The nature of the items loading on each of the four factors suggests the same four factors as found for men (see Table VIII). This pattern of correlations for women is more complex than that for men. For women, there are moderate correlations between Self-Trust and Emotional Trust and between Self-Trust and External

Table VII. Factor Correlation Matrix for Female's Principal Axis Factor Analysis with Direct Oblimin Rotation.

	Self-Trust	Experiential Trust	Emotional Trust	External Validation
Self-Trust	1.00			
Experiential Trust	0.23	1.00		
Emotional Trust	-0.40	-0.42	1.00	
External Validation	0.43	0.33	-0.27	1.00

Validation as for the men. The women also have moderate correlations between Experiential Trust and Emotional Trust and Experiential Trust and External Validation. Thus, for women all factors are intercorrelated, while for men the factor of Experiential Trust appears to be orthogonal to the rest of the scale with no correlations in excess of .30.

Reliability analysis of the final 20-item scale for women participants gives a mean of 64.47, standard deviation 11.89. The mean inter-item correlation is .22 with a minimum of .01 and maximum of .57. Cronbach's alpha is .85.

Male/Female Factor Comparison

With the exception of the pattern of correlations between factors, with women showing what appears to be more complex pattern, the factor structure for males and females appears to be very similar. Given this apparent similarity, PAF analyses with varimax rotation were run separately for men and women and Cattell's salient similarity index, *s*, was calculated to compare patterns of loadings (Tabachnick & Fidell, 1989). All similarity coefficients were significant,

Table VIII. Items and Factor Loadings on Pattern Matrix for Females.

Item	ST[a]	Ext[b]	Emt[c]	EV[d]
16. When I see myself differently from the way others see me I tend to doubt myself.	**.57**	.19	-.03	.13
19. It doesn't take much to get me to question myself.	**.53**	.28	-.02	.11
14. It doesn't bother me if I see myself differently from how others see me – it's my view that counts.	**.45**	-.13	-.01	.15
15. I have a great deal of difficulty in knowing when something is right for me.	**.39**	.21	-.13	.00
17. I often find myself second-guessing my own decisions.	**.37**	.32	-.06	.14
11. I seldom talk about my feelings because I'm afraid that they are wrong or stupid.	**.25**	.08	-.23	-.03
5. Sometimes I wonder if what I've seen is really what it appears to be.	-.13	**.66**	-.02	-.02
9. I often find myself questioning my version of reality.	.06	**.61**	-.02	.02
7. I seldom question whether I have seen something correctly.	.08	**.44**	.06	.03
2. Often after I talk to people, I question whether I have understood them correctly.	.01	**.42**	-.09	.05
6. I often find I can't trust my feelings.	.19	**.30**	-.20	-.03
18. Sometimes I have difficulty knowing what it is that I'm feeling.	-.16	.12	**-.80**	.07
10. I rarely have difficulty in identifying my own emotions.	.06	-.07	**-.60**	-.05
12. Sometimes I become confused about what I am feeling.	-.14	.20	**-.49**	-.18
8. Insight into myself comes easily to me.	.21	-.06	**-.36**	.00
3. When I have to make a decision I often look to others for advice.	-.09	.05	.01	**.68**
1. I often seek reassurance from others that my ideas are sound.	-.06	.03	.02	**.66**
4. I don't need feedback very often to know that I'm doing a good job.	.20	-.06	.03	**.50**
13. I count on other people to help me identify my strengths and weaknesses.	.13	.05	-.15	**.40**
20. I seldom need reassurance from others about my capabilities.	.31	-.07	-.10	**.38**

[a]Self-Trust; [b]Experiential Trust; [c]Emotional Trust; [d]External Validation

exceeding the critical value listed in Cattell's table of V_s probabilities. This suggests that males and females do not differ in factor structure. Data were collapsed across gender for all further analyses.

Self-Trust Questionnaire: The Final Version

Psychometric Properties

See Table IX for the item characteristics of the final version of the STQ. This 20-item scale has a mean of 64.93, standard deviation 11.79. The mean inter-item correlation is .22 with a minimum of .00 and a maximum of .57. Cronbach's Alpha is .85.

Comparison of Paper-and-Pencil and Internet Scores

Comparisons between the data collected on paper at the University of Calgary and the electronic version of the STQ on the Internet were conducted for total score and age of sample. There was no significant difference between the University of Calgary (M = 64.77, SD = 11.30) and the Internet (M = 65.22, SD = 12.66) for total STQ score. Significant differences were found for age ($t_{(1135)}$ = -12.926, $p < .001$), with the Internet population (M = 28.13, SD = 9.48) being older and more diverse than the University population (M = 21.93, SD = 6.56).

Factor Analysis

A final PAF, collapsed across gender, was conducted with Direct Oblimin rotation (n = 1,147). The four factors extracted were nearly identical to those extracted separated for males and females. The major difference was that factor

2, external validation, was negatively correlated with all other factors (see Table X) whereas in the separate factor analyses run for males and females factor 3, emotional trust, was negatively correlated with all other factors (see Tables V and VII). In the earlier factor analyses, the items for factor 3 loaded negatively on the factor, thus the negative correlation between factor 3 and the remaining factors was actually positive. In this analysis, the same relationship applies with factor 2. The items loaded negatively on factor 2, which created a negative correlation between that factor and all others. This relationship is demonstrated in Table XI, which gives correlations obtained between factors on the actual scores. In all cases, obtained scores on one factor correlate positively with obtained scores on the other three factors.

Table XII shows post-rotation eigenvalues and total variance accounted for by each of the four factors, for both the pattern and structure matrices. Table XIII shows factors loadings on each of the four factors.

Table IX. Item Characteristics of the Final Version of the Self-Trust Questionnaire

	Item	Item Total *r*	Item Mean	*SD*
19.	It doesn't take much to get me to question myself.	.59	3.4	1.2
17.	I often find myself second-guessing my own decisions.	.58	3.0	1.2
16.	When I see myself differently from the way others see me I tend to doubt myself.	.57	3.5	1.1
18.	Sometimes I have difficulty knowing what it is that I'm feeling.	.53	3.2	1.3
13.	I count on other people to help me identify my strengths and weaknesses.	.49	3.4	1.2
15.	I have a great deal of difficulty in knowing when something is right for me.	.47	3.7	1.1
20.	I seldom need reassurance from others about my capabilities.	.46	3.0	1.2
12.	Sometimes I become confused about what I am feeling.	.46	2.6	1.2
9.	I often find myself questioning my version of reality.	.43	3.6	1.2
6.	I often find that I can't trust my feelings.	.42	3.9	1.1
1.	I often seek reassurance from others that my ideas are sound.	.39	2.5	1.1
4.	I don't need feedback very often to know that I'm doing a good job.	.38	2.9	1.1
3.	When I have to make a decision I often look to others for advice.	.37	2.3	1.1
2.	Often after I talk to people, I question whether I have heard them correctly.	.36	3.3	1.2
11.	I seldom talk about my feelings because I'm afraid that they are wrong or stupid.	.35	3.9	1.2
10.	I rarely have difficulty in identifying my own emotions.	.34	3.5	1.3
5.	Sometimes I wonder if what I've seen is really what it appears to be.	.34	2.8	1.2
8.	Insight into myself comes easily to me.	.34	3.6	1.1
7.	I seldom question whether I have seen something correctly.	.34	3.2	1.1
14.	It doesn't bother me if I see myself differently from how others see me – it's my view that counts.	.31	3.6	1.1

Table X. **Factor Correlation Matrix for Principal Axis Factor Analysis with Direct Oblimin Rotation.**

	Self-Trust	External Validation	Experiential Trust	Emotional Trust
Self-Trust	1.00			
External Validation	-0.44	1.00		
Experiential Trust	0.23	-0.27	1.00	
Emotional Trust	0.44	-0.26	0.36	1.00

Table XI. **Correlation Matrix between Factors on Obtained Scores.**

	Self-Trust	External Validation	Experiential Trust	Emotional Trust
Self-Trust	1.00			
External Validation	0.52**	1.00		
Experiential Trust	0.39**	0.28**	1.00	
Emotional Trust	0.48**	0.33**	0.36**	1.00

** $p < .01$

Table XII. **Post-rotation eigenvalues and total variance accounted for on four factors.**

	Pattern Matrix		Structure Matrix	
Factor	**Eigenvalue**	**Pct of Var**	**Eigenvalue**	**Pct of Var**
Self-Trust	1.42	.07	2.97	.15
External Validation	1.79	.09	3.02	.15
Experiential Trust	1.46	.07	2.41	.12
Emotional Trust	1.44	.07	2.80	.14
Total Variance		.30		.56

Table XIII. Items and Factor Loadings on Pattern Matrix for STQ.

Item	ST[a]	EV[b]	Ext[c]	Emt[d]
19. It doesn't take much to get me to question myself.	**.58**	-.15	.24	-.06
16. When I see myself differently from the way others see me I tend to doubt myself.	**.51**	-.26	.08	.00
15. I have a great deal of difficulty in knowing when something is right for me.	**.42**	-.05	.13	.12
17. I often find myself second-guessing my own decisions.	**.41**	-.21	.24	.02
11. I seldom talk about my feelings because I'm afraid that they are wrong or stupid.	**.34**	.05	.04	.19
14. It doesn't bother me if I see myself differently from how others see me – it's my view that counts.	**.33**	-.27	-.19	.03
6. I often find I can't trust my feelings.	**.30**	.04	.22	.16
1. I often seek reassurance from others that my ideas are sound.	-.03	**-.62**	.07	-.04
3. When I have to make a decision I often look to others for advice.	-.07	**-.60**	.10	-.05
4. I don't need feedback very often to know that I'm doing a good job.	.05	**-.55**	-.07	.03
20. I seldom need reassurance from others about my capabilities.	.16	**-.53**	-.11	.11
13. I count on other people to help me identify my strengths and weaknesses.	.07	**-.44**	.07	.16
5. Sometimes I wonder if what I've seen is really what it appears to be.	-.08	.02	**.67**	.05
9. I often find myself questioning my version of reality.	.12	.00	**.58**	.04
7. I seldom question whether I have seen something correctly.	.08	-.05	**.43**	-.04
2. Often after I talk to people, I question whether I have understood them correctly.	.07	-.04	**.41**	.07
18. Sometimes I have difficulty knowing what it is that I'm feeling.	-.11	-.08	.14	**.78**
10. I rarely have difficulty in identifying my own emotions.	.11	.09	-.03	**.54**
12. Sometimes I become confused about what I am feeling.	-.15	-.20	.19	**.52**
8. Insight into myself comes easily to me.	.20	-.03	-.10	**.36**

[a]Self-Trust; [b]External Validation; [c]Experiential Trust; [d]Emotional Trust

Psychometric Properties of the Factors

Reliability analyses were run for each of the four factors to check internal consistency. Item means, inter-item correlations, and internal consistency alphas for each are shown in Table XIV. Given the apparent lower value of the item mean for External Validation, a 2 (gender) X 4 (factor) repeated measures ANOVA was conducted to determine whether this difference was significant. Significant differences were found within factors ($F_{(3,3426)} = 71.26$, $p < .0001$), qualified by a significant gender by factor interaction ($F_{(3,3426)} = 10.77$, $p < .0001$) as depicted in Figure 2.

This interaction was followed up with t-tests to determine whether there were gender differences on each of the four factors. T-tests revealed no differences between males and females on the factors for general self-trust, experiential trust, or emotional trust. With a Bonferonni adjustment of the alpha level to .0125, significant differences were found for the factor concerning external validation ($t_{(1142)} = 5.306$, $p < .001$, two-tailed).

Table XIV. STQ Item Characteristics.

FACTOR	ITEM MEAN	MEAN INTER-ITEM CORRELATION	INTERNAL CONSISTENCY α
Self-Trust	3.56	.30	.75
External Validation	2.83	.34	.72
Experiential Trust	3.24	.32	.65
Emotional Trust	3.24	.33	.67

Given the role that age played in gender differences on total score, a mixed model regression was conducted to determine whether there was a significant interaction between gender and age on external validation. As depicted in Figure 3, this interaction was significant ($F\Delta_{(1,1133)} = 4.08$, $p = .044$). Simple effects demonstrated that age predicted scores on external validation for females ($F_{(1,822)} = 25.70$, $p < .001$), but not for males ($F_{(1,311)} = .942$, $p = .333$). For females, scores on external validation increased as age increased, indicating that as women aged they had less need for external validation of judgments, behavior, and self-concept.

Figure 2. Gender by Factor Interaction.

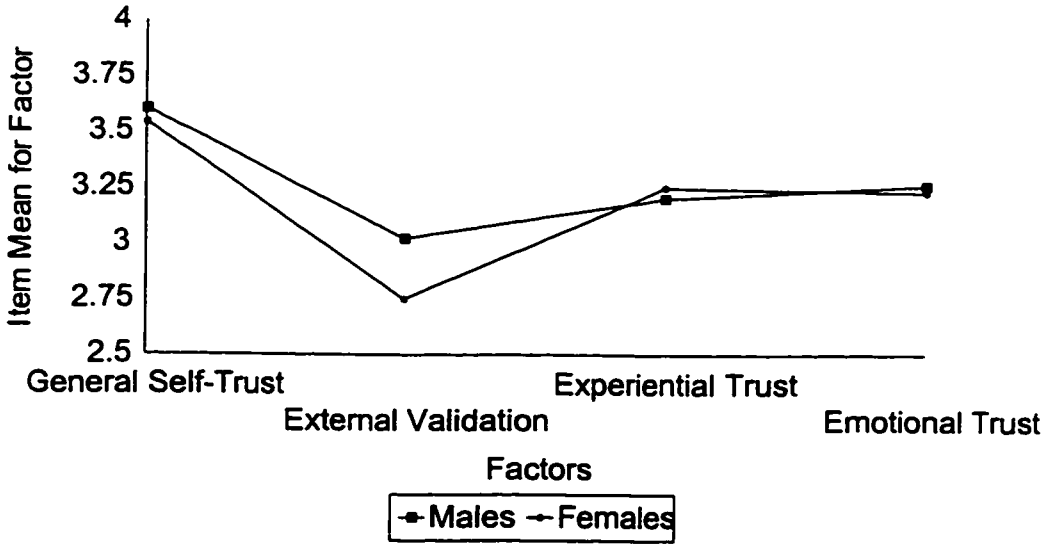
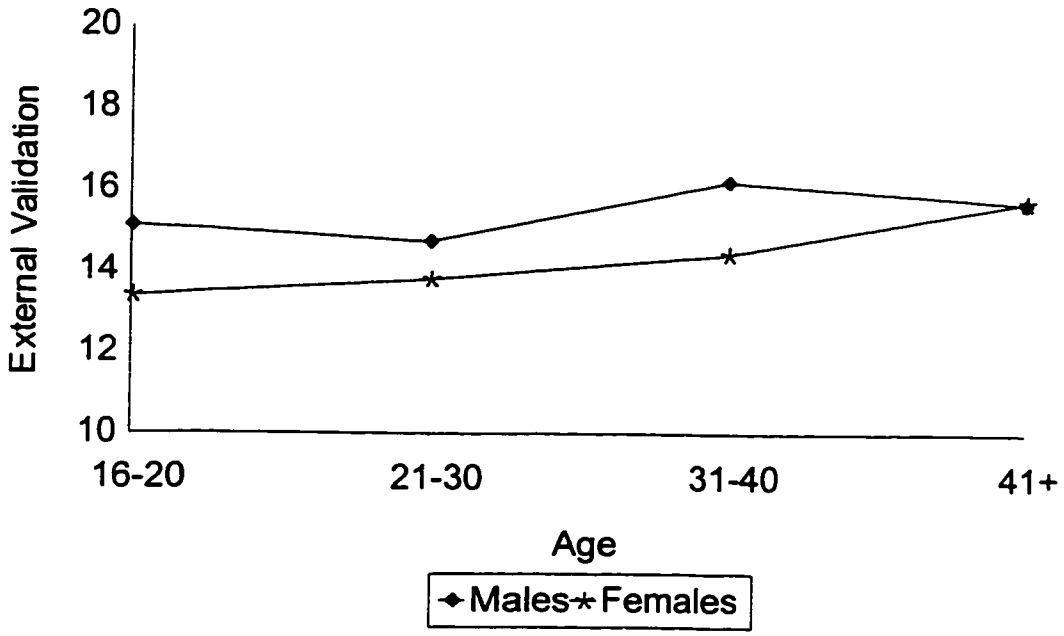


Figure 3. External Validation as a function of Age.



CHAPTER 6

DISCUSSION

Discussion

Through a series of steps, it was possible to construct a psychometrically sound questionnaire with good internal consistency and inter-item and item-total correlations, and strong factor loadings that worked equally well across genders. The large initial sample provided enough power to factor analyze the items separately for males and females once the initial steps in item reduction had been completed.

Item Reduction

Initial steps in item reduction included dropping items that were obviously skewed, those with little variability, and those that did not correlate well with the scale itself. This resulted in 23-item scales for males and females respectively, and was then further reduced to the 20 items that were common to both genders.

Gender Differences in Total STQ Score

T-tests conducted on STQ scores revealed reliable gender differences in total score. However, further tests indicated that these gender differences interacted with age, so that by the age of 21 they had disappeared.

If girls are raised in a more collective mode and given less freedom of action than boys as suggested by self-in-relation theory (Chodorow, 1978; Gilligan, 1982; Miller, 1976), this makes sense. If young women are more sheltered and protected from the world they have less opportunity to move in,

and learn to validate themselves in the public sphere. A focus on and valuation of connection over autonomy may affect many areas of a young girl's life, and may include many of the seven domains specified as areas in which self-trust might operate. If the focus is on connection rather than autonomy for example, they may not only learn to value other's opinions, but also fail to learn to validate their own. Relationships may be valued more highly than achievement, and young girls might miss opportunities to validate themselves in terms of abilities. Inability to connect in relationship may result in feared loss of the relationship, resulting in an inability to trust the expression of emotions such as anger (Jack, 1991). If intuition can be defined as a sensing-feeling aspect of self that allows empathic connection with others, trust in intuition might actually be heightened for women as a result of a connected upbringing.

But intuition and connection may not serve these young women well when they move away from family of origin and out into the world. Faced with the reality of an independent and autonomous mode of action in school and at work, women may quickly adjust and begin to validate themselves in ways that are consistent with the overriding value of our culture. If this is the case gender differences may disappear as the individual grows out of adolescence.

Male/Female Factor Comparison

Gender differences were not present in separate factor analyses of the 20-item version of the Self-Trust Questionnaire in terms of factor structure. Both males and females emerged with four factors that represented a general sense

of self-trust, a need for external validation of the self, trust of feelings and emotions, and experiential trust. There was little variation in the items that loaded on these factors between males and females, and a similarity index indicated that they were nearly identical.

Self-Trust Questionnaire: The Final Version

Given the similarities in factor structure indicated above, the Self-Trust Questionnaire was collapsed across gender. Final psychometrics indicated a tight questionnaire with good internal consistency, inter-item correlations, and item-total correlations. A comparison of the STQ between the two different samples of participants, one from the University of Calgary and the other from the Internet, yielded no significant differences in total score.

Factor Structure

A factor analysis collapsed across gender gave the same results as had been obtained for males and females separately. The same four factors emerged and all were intercorrelated to some degree, although the directionality of the correlations changed from the pattern found for males and females separately. Further investigation of the negative correlations, however, resulted in a conclusion that the sign was merely an artifact of the way the items initially loaded on the factor. When items loaded negatively on the factor, the factor correlated negatively with the other factors, essentially indicating a positive correlation. This was confirmed through examination of the pattern of

intercorrelations between the factors on actual scores. In that case, all correlations were positive.

Experiential trust, which had stood alone in the male pattern of correlations and had moderately strong correlations to two of the other three factors for females, correlated with just one other factor, that of emotional trust. Intercorrelations ranged in absolute value from .23 to .44, indicating that although it may be helpful at times to look at the individual factors, it is perhaps best to talk about this scale as measuring one thing: self-trust. In order to understand better what this scale is measuring, however, it is helpful to look more closely at the individual factors.

Factor versus Domains. As outlined in chapter three, self-trust was hypothesized to manifest through seven different domains, and questionnaire items were constructed accordingly. This raised a possibility of seven different factors emerging from the final Self-Trust Questionnaire, but this was not the case. Two of the final four factors did mimic the structure of the domain specificity of items. These were the factors for Emotional Trust and Experiential Trust. The other two factors, that for Generalized Self-Trust and the one called External Validation, contained a mixture of items for different domains. Table XV compares the final scale and its four factors with the seven hypothesized domains.

The factor of Emotional Trust contained three items from the domain for feelings and one item from the domain for self-knowledge. All items were

concerned with recognizing emotions and feelings. As such it was concerned more with the ability to know and recognize one's emotions than with the ability to validate those emotions. Items concerned with validating emotions fell into the factor for Generalized Self-Trust. This factor had respectable internal consistency with $\alpha = .67$.

The second factor that mimicked the hypothesized domains was the factor for Experiential Trust. All four items on this scale came from the domain of experience. Interestingly, all four items tap perceptual experiences; they all relate to an individual's ability to trust his or her experience as it relates to their interactions with the world about them. One additional item from the domain of experience was included on the scale in the Generalized Self-Trust factor, and referred more to validation of the self than to interaction with the world. The internal consistency for this factor was also acceptable, with $\alpha = .65$.

The factor concerning External Validation of self combined items from the domains of judgment, abilities, and self-knowledge. All were concerned with a need to be validated by someone other than the self. This factor thus appeared to be tapping a need for an outside source to validate judgments, abilities, and the individual's strengths and weaknesses. Higher scores on this factor were related to a lower need for external validations of self. This factor had good internal consistency, with $\alpha = .72$.

Table XV. Factor/Domain Comparison of Self-Trust Questionnaire Items.

DOMAIN	SELF-TRUST QUESTIONNAIRE ITEMS
	FACTOR 1 — GENERAL SELF-TRUST
Experience	It doesn't take much to get me to question myself.
Self-Knowledge	When I see myself differently from the way others see me I tend to doubt myself.
Intuition	I have a great deal of difficulty in knowing when something is right for me.
Judgment	I often find myself second-guessing my own decisions.
Feelings	I seldom talk about my feelings because I'm afraid that they are wrong or stupid.
Self-Knowledge	It doesn't bother me if I see myself differently from how others see me – it's my view that counts.
Feelings	I often find I can't trust my feelings.
	FACTOR 2 — EXTERNAL VALIDATION
Judgment	I often seek reassurance from others that my ideas are sound.
Judgment	When I have to make a decision I often look to others for advice.
Ability	I don't need feedback very often to know that I'm doing a good job.
Ability	I seldom need reassurance from others about my capabilities.
Self-Knowledge	I count on other people to help me identify my strengths and weaknesses.
	FACTOR 3 — EXPERIENTIAL TRUST
Experience	Sometimes I wonder if what I've seen is really what it appears to be.
Experience	I often find myself questioning my version of reality.
Experience	I seldom question whether I have seen something correctly.
Experience	Often after I talk to people, I question whether I have understood them correctly.
	FACTOR 4 — EMOTIONAL TRUST
Feelings	Sometimes I have difficulty knowing what it is that I'm feeling.
Feelings	I rarely have difficulty in identifying my own emotions.
Feelings	Sometimes I become confused about what I am feeling.
Self-Knowledge	Insight into myself comes easily to me.

Finally, the factor for Generalized Self-Trust contained seven items that covered a total of five different domains. Included were items from the domains of feelings, self-knowledge, intuition, judgment, and experience. All items appear to be concerned with the ability to validate the self in these different domains. This was the first factor to be extracted and does, indeed, come closest to the definition of self-trust as serving a self-validating function for the self-concept. This factor has moderately strong correlations with the factors of External Validation and Emotional Trust, but only a weak correlation with Experiential Trust. This is a further indication that the factor for Experiential Trust is measuring something closer to trust in one's interactions with the world, while the other three factors may measure trust in one's interactions with, or ability to know, the self. Internal consistency for this factor was very good, with $\alpha = .75$.

In summary, these four factors are apparently measuring different aspects of self-trust, or different ways of trusting the self. As such, and given good internal consistency considering the small number of items comprising the different factors, researchers could look at these as separate subscales of self-trust if they were particularly interested in one such aspect. However, it must be kept in mind that the factors are rather strongly intercorrelated and use of separate subscales will thus result in loss of information. By compartmentalizing one factor, its relationship to the other factors, and their contribution to the whole, is lost.

Gender Differences Among Factors. Looking at the other psychometric properties of the separate factors yielded interesting results. The pattern of means suggested a possible significant difference between the factor for external validation and the other three factors. A between-within ANOVA verified this, qualified by a significant interaction with gender. Gender, in turn, interacted with age, such that women, but not men, were more likely to look for external validation at younger ages, while self-trust on this factor increased with age.

This helps to clarify the argument made above for the differences encountered in adolescence between males and females. The lower scores on external validation found for adolescent women might be related more to growth in connection with others than to actual lack of self-trust. For an individual whose self-focus encompasses her relations with important others, trust in self may well be equated with trust in others. Since no gender differences were found on any of the other three factors, we can conclude that the age by gender interaction found for total score was a direct result of the age by gender interaction for the factor of External Validation of Self. Figure 3 further suggests that this gender difference between males and females might continue through young adulthood. This possibility was explored further in Phase III of this investigation.

Summary

In sum, a good, psychometrically sound questionnaire was constructed with an internal consistency α of .85. This 20-item scale combines male and

female responses in the most parsimonious manner so that the scale measures self-trust equally well for both genders. Four factors emerged from the STQ composed of a general factor for Self-Trust, External Validation, Experiential Trust, and Emotional Trust. Gender differences on the scale appeared to be specific to adolescents and very young adults, and related mainly to the factor of External Validation of self. In this, young women were found to be more likely to turn to others for advice and validation than were young men.

The strongest factor was the factor for Generalized Self-Trust. All factors were intercorrelated fairly strongly, however, suggesting that the scale be considered as a whole rather than as four separate subscales. While this scale has been referred to as measuring something called Self-Trust, the specific construct being measured was not determined in this phase of the investigation. Phase II, concerned with validation of the STQ, addressed that question.

PHASE II

VALIDATION OF THE SELF-TRUST QUESTIONNAIRE

CHAPTER 7

HYPOTHESIZED RELATIONSHIPS

To this point, the Self-Trust Questionnaire has shown itself to be a reliable measure of something which, when looking at the individual factors and the items that are involved, looks like self-trust as defined in Chapter One of this manuscript. While Phase I established the reliability and face validity of the STQ, construct validity had yet to be tested. Phase II of this investigation was concerned with establishing the construct validity of the Self-Trust Questionnaire. To this end, relationships between self-trust as defined and other individual difference variables theoretically related to self-trust will be scrutinized, and hypothesized relationships stated.

Hypothesized Relationships Between Self-trust and Other Individual Difference Variables

Self-trust would seem to be related to many aspects of the self-concept, including self-schema, self-esteem, possible selves, self-complexity, emotionality, and self-contingencies. There are also implications for the way an individual relates to the world. Some of these areas include interpersonal contingencies, adult attachment styles, need for approval, and self-monitoring. Two of these, need for approval and adult attachment styles are related to developmental concerns, and will be presented first. The second part of this chapter is devoted to examining individual difference variables that are oriented to the self. In the second part, I will look at relationships with individual difference variables that relate to interpersonal and social aspects of the self.

Variables with Response Set or Developmental Implications

Need for Approval

Self-trust assumes self-acceptance, thus individuals high in self-trust should have minimal need for outside approval of the self. Individuals low in self-trust, on the other hand, unable to trust their own judgments, emotions, perceptions, and feelings, may look to external sources for validation and approval of the self. Need for approval was operationalized through the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960).

Although Crowne & Marlowe (1964) have stressed that this scale measures need for approval rather than social desirability, the scale has traditionally been utilized as a measure of a socially desirable response set, as its name implies. Thus, it is unclear whether the scale will measure need for approval as defined by this investigation or whether the scale will actually measure social desirability. If the scale is measuring need for approval, the following hypothesis is suggested:

1. There will be a negative relationship between self-trust and need for approval such that individuals scoring lower in self-trust will score higher on the Marlowe-Crowne Social Desirability Scale.

If the scale is measuring social desirability, there should be a positive correlation with self-trust, particularly with the subscale for external validation of

self. Thus, if the hypothesized relationship with self-trust fails to materialize, the Marlowe-Crowne Scale will be examined as an indicator of social desirability along with the attendant implications of a socially desirable response set for all other analyses.

Relationship Style

The adult relationship style, or attachment style, is believed to be based on childhood experiences and to remain fairly stable throughout life (Bowlby, 1969; 1973; 1980). In testing the mental models of young children, Main and her associates (1985) have offered evidence of some stability in attachment style over time. No longitudinal studies have yet demonstrated a continuity of attachment style into adulthood. The following speculations are thus based on the descriptions of attachment style and the kinds of experience demonstrated in infancy and childhood that are theoretically related to self-trust as described in Chapter two.

Relationship style was measured using Bartholomew's (1989) measure of attachment style. This measure asks respondents to rate themselves categorically on one of the four attachment styles based on a short vignette. Additionally, respondents are asked to rate themselves on a 5-point Likert-type scale for each of the four different relationship styles. Specific hypotheses are:

2. Individuals who rate themselves as higher on secure relationship style will also rate themselves higher on self-trust;

3. Individuals who rate themselves as higher on preoccupied, fearful, or dismissing relationship styles will rate themselves lower on self-trust.

Self-Oriented Variables

Self-Schema

In the context of this dissertation, self-schema refers to the different ways that people think of themselves (Markus, 1977; 1983). A definition of self-trust as an openness to oneself and one's experience suggests that people who are high in self-trust should also be open to viewing themselves in many different ways (Linville, 1982; 1987; Markus & Nurius, 1986; Markus & Wurf, 1987). This suggests that they should be aware of both the positive and negative aspects of themselves. Further, since they were theoretically raised in a responsive and accepting manner, they should be more accepting of themselves and hold more definite views of the self that are neither overly positive nor overly negative.

Individuals low in self-trust may hold more polarized views of the self resulting from less openness to the self. As was argued in the section on development, individuals low in self-trust are likely to have been raised with insecure attachment styles. Attachment researchers have demonstrated that these children are less likely to explore their environments due to an anxious preoccupation with attachment and safety concerns (Ainsworth, et al., 1978). If

this is the case, it is also unlikely that these individuals have spent as much time exploring the different aspects and facets of themselves as individuals with secure attachment styles, leading to a paucity of self-knowledge, and lower levels of cognitive complexity regarding the self.

Linville and her colleagues (1980; 1982) have demonstrated that lower levels of complexity about an object, person, or group lead to more polarized and extreme evaluations of that object, person, or group. Thus, an inability to trust the self may lead to lower levels of cognitive complexity, and more polarized definitions of the self.

This may lead to a conscious process of self-validation that is defensive, such that these individuals develop views of the self that are either overly positive or overly negative. Low self-trusting individuals with high self-esteem, for example, may hold very rigid positive views of the self that are necessary to maintain a high level of self-esteem. Similarly, those with low self-esteem may hold very rigid negative views of the self.

In sum, low self-trusting individuals may be less certain of who they are, be more defensive in the way that they present themselves to others, and may be likely to endorse more extremely favorable or unfavorable opinions of themselves than individuals who are high in self-trust.

Self-schema was operationalized using the Adjective Check List (Gough & Heilbrun, 1965). The Adjective Check List was used in its entirety as a paper-and-pencil instrument. In addition, a Self-Concept Task on the computer

employed subsets of the Adjective Check List for positive, negative, and neutral self-referent scales.

Adjective Check List (ACL; Gough & Heilbrun, 1965). The ACL provides subscales for favorability, unfavorability, self-confidence and defensiveness. In this study, the ACL was used to measure the balance between positive and negative self-views, self-confidence, and defensiveness.

If individuals high in self-trust are also high in self-esteem as hypothesized, they should also have a more positive view of the self than individuals lower in self-trust. At the same time, an unconditional acceptance of the self is an integral part of the definition of self-trust. This suggests that those higher in self-trust may be more capable of accepting themselves as less than perfect than are individuals high in self-esteem but low in self-trust. Thus high self-trusters may also endorse a number of negative self-referent adjectives, thus demonstrating a greater balance between positive and negative views of the self than low self-trusters. This balance between positive and negative self-views was operationalized as the absolute value of the discrepancy score between positive and negative subscales of the ACL. Larger discrepancies represent more distance between positive and negative subscales, and thus a less balanced self-view.

The second dimension measured using the ACL was self-confidence. Self-confidence implies less need to question the self in terms of ability, and thus more trust in self in this domain. Gough and Heilbrun (1965) describe a self-

confident individual as one who has an action orientation, is dominant and assertive, is impatient with others who stand in his or her way, and is forceful, determined, and opportunistic. Given the definition of self-trust in this dissertation, however, the high self-truster may be just as comfortable with a more passive presentation of self. An individual high in self-trust accepts him- or herself for who she or he is, regardless of how the self is presented. Thus, while it is hypothesized that an individual high in self-trust should also be more self-confident, it is hypothesized that the operationalization of self-confidence as given by Gough and Heilbrun in the ACL will not correlate with self-trust[9].

Finally, the ACL also contains a subscale for defensiveness. This subscale measures a tendency toward socially desirable responding, and thus a tendency of the individual to make the self "look good," at least on paper. Gough and Heilbrun claim, however, that the scale is bipolar, such that low scorers may be attempting to present the self as maladjusted. In either case, the individual is viewed as responding in a manner that is less than honest, presumably because they are seeking approval and/or attention. Persons high in self-trust who are comfortable with themselves and able to accept themselves unconditionally may have less need to present the self defensively in this way. Thus, self-trust should predict defensiveness, with individuals lower in self-trust scoring at the extremes

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[9] Unfortunately, this was the only measure of self-confidence that I was able to locate. Self-confidence has more often been measured as a single item, asking respondents to rate their confidence in a particular response or task than as an individual difference variable. In the computer task described in the following section, self-confidence was measured more directly.

of the defensiveness scale of the ACL while those higher in self-trust should score in the midrange of this subscale.

Self-Concept Computer Task. The self-concept computer task was designed to further test the predilection to seek and accept external validation of the self. In addition, this task measured both the stability and the certainty of the self-schema.

To test the participant's inclination to accept external validation of the self, subliminal primes were embedded so that the participant was primed to respond either "yes" or "no" to positive, negative, or neutral self-referent adjectives. It was hypothesized that individuals who were higher in self-trust would be less influenced by these primes and thereby demonstrate a lower correlation between the nature of the prime (yes or no) and the nature of their response to the question of whether or not they felt the adjective described them (yes or no).

A second correlation, this one between the participant's endorsement of a self-referent adjective on the computer task (yes or no) and their endorsement of the same adjective on the paper-and-pencil version of the Adjective Check List, was used to test the stability of the self-schema. Developmental processes that relate self-trust with sensitive responsiveness and consistency in caregiving suggest that a stable and consistent self-view may be derivative of self-trust. A caregiver who is both sensitive and consistent, for example, will consistently validate the child's view of the self so that the child comes to form a self-schema that is relatively stable. On the other hand, a caregiver who is inconsistent and

insensitive, who responds differently each time the child seeks assurance, may activate different self-views at different times for the same behaviors. This child may have a very unstable view of self, jumping back and forth between traits, and finding it difficult to state definitively, "this is who I am." It was therefore hypothesized that individuals higher in self-trust would have more consistent self-concepts. Thus, individuals higher in self-trust were expected to have stronger correlations between the subset of adjectives presented on the computer task and those same adjectives on the pencil-and-paper task than individuals lower in self-trust.

A greater degree of consistency in self-concept would also suggest that high self-trusting individuals should be more certain of their self-views (Campbell, 1990). Thus, those higher in self-trust should also have more confidence in their responses as reflected by response latencies. Specifically, this hypothesis states that individuals higher in self-trust will have faster reaction times than those lower in self-trust.

The response latency measure is also considered to be the most accurate direct measure of self-trust[10]. A certain amount of self-questioning and self-doubt may be present for individuals low in self-trust. To ask participants to rate their responses to self-concept questions on a scale of self-confidence leaves

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[10] It was initially planned to include a more direct manipulation of self-trust using a false feedback manipulation. This experimental manipulation had to be excluded, however, due to concerns by the Ethics Committee at the University of Calgary regarding the ethics of lying to participants in the form of inaccurate feedback.

room for conscious reflection and evaluation, and thus is more likely to be contaminated by response bias or self-presentation concerns. The reaction time measure is intended to capture the process of questioning outside of conscious awareness thus eliminating the interference of conscious reflection and evaluation. In this task, respondents were asked to respond as quickly and accurately as possible whether the adjective presented on the screen described them. These instructions left little room for conscious reflection about the self.

Response latency, has been demonstrated to measure the degree of schematicity for a particular trait (Markus, 1977). People who are schematic on a particular trait (i.e. independence) will respond faster than those who are schematic on the opposite trait (i.e. dependency) and will respond faster than those who are aschematic on that particular dimension. In this study, the mean reaction time across all traits presented was correlated with a measure of self-trust. Faster reaction times are hypothesized to represent less self-questioning, operationalized as faster processing time, and thus more trust in the self.

Summary. In summary, the relationship between self-trust and self-schema was measured using the Adjective Check List (Gough & Heilbrun, 1965) on a pencil-and-paper task and a computer task. For individuals high in self-trust, self-schema was expected to be more balanced between the positive and negative aspects, more stable, less easily influenced, and more certain as measured by response latency. Individuals high and low in self-trust were expected to differ on defensiveness. Individuals high in self-trust were expected

to score around the mean on defensiveness, while those low in self-trust were expected to score at the extremes (either high or low). No relationship is predicted between Self-Trust and self-confidence as measured by the ACL. The specific hypotheses to be examined follow:

4. Individuals higher in self-trust will have a more balanced self-view as measured by the discrepancy scores between positive and negative self-referent adjectives. Individuals lower in self-trust will be more likely to have either a strongly positive or strongly negative view of the self, with greater discrepancy scores (in absolute value) between the two subscales.
5. A relationship is hypothesized to exist between self-trust and defensiveness, such that individuals low in Self-Trust will score at the extremes of defensiveness, while individuals higher in self-trust will score close to the mean on the defensiveness scale.
6. Individuals higher in self-trust will demonstrate smaller correlations (in absolute value) between their responses of yes or no to the self-referent adjectives presented on the self-concept computer task and the subliminal primes of yes or no that were presented in conjunction with these adjectives. Individuals lower in self-trust will either be more influenced by the primes, thus demonstrating larger positive correlations, or will react in a negative and defensive manner to the prime and demonstrate larger negative correlations.

7. Individuals higher in self-trust will show a greater correspondence between the adjectives they endorse on the Adjective Check List and those they endorse on the self-concept computer task than will individuals lower in self-trust.
8. Individuals higher in self-trust will have faster reaction times in response to the self-referent adjectives displayed on the computer task than will those lower in self-trust, thus demonstrating a more organized and certain view of the self.
9. No relationship will be found between the STQ and self-confidence as measured by the ACL.

Self-Esteem

The hypothesized relationship between self-trust and self-esteem was discussed in detail in Chapter one of this paper. In summary, it is expected that individuals high in self-trust may automatically self-validate a positive view of the self, and do so on a consistent basis. Individuals with high self-esteem but low in self-trust, on the other hand, may engage in more conscious evaluative processes that are susceptible to outside influences. Self-esteem scores may be more likely to fluctuate than the scores of those higher in self-trust.

For individuals low in self-esteem, stable self-esteem may suggest an unconditional acceptance of the self from a more negative viewpoint, suggesting high self-trust. On the other hand, the absence of an assumption of self as worthy is suggestive of low self-esteem. If self-trust is an assumptive process,

and if an assumption of self-worth is intrinsic to self-trust, then individuals low in self-esteem should also be low in self-trust, regardless of whether or not self-esteem is stable. Thus, a relationship was expected between self-trust and self-esteem, and there should also be a relationship between self-trust and the stability of self-esteem in the condition of high self-esteem only.

Self-esteem stability was operationalized using a procedure developed by Kernis and his colleagues (1989). Participants were asked to complete the Rosenberg Self-Esteem Scale (Rosenberg, 1965) twice a day for a period of four days. Self-esteem was operationalized as the mean of the eight assessments, and self-esteem stability was operationalized as the standard deviation of the eight self-esteem measures for each participant. The specific hypotheses follow.

10. A moderate relationship will exist between self-trust as measured by the STQ and self-esteem.
11. There will be a relationship between self-trust and the stability of self-esteem in the high self-esteem condition only, such that higher levels of self-trust will correspond with smaller standard deviations, reflecting greater stability.

Possible Selves

An important component of self-knowledge, according to Markus (1983), is the dynamic nature of the self. This component of the self allows plans, goals, and actions to be based on both past experience and future possibilities. For example, a person who can envision the possibility of becoming a 'bag lady' at

some time in the future may be more motivated to attend university and obtain good marks than an individual who denies or excludes the possibility of this occurrence. Possible selves involve the ideal selves we would like to become, the selves that it is possible we could become, and the selves we are afraid of becoming (Markus & Nurius, 1986).

An individual open to the self, one who knows and trusts him- or herself, may be more open to the possibility of a wider variety of possible selves than a person low in self-trust who is busy protecting a more narrowly-defined self-image. Just as the high self-truster may have a more balanced view of positive and negative aspects of the self, this person may also have a more balanced view of positive and negative possible selves, as evidenced by smaller discrepancy scores between positive possible selves and negative possible selves.

A low self-trusting person with a more polarized conception of self may endorse possible selves indiscriminately but with a focus on either positive possible selves or negative possible selves, thus obtaining larger discrepancy scores than individual higher in self-trust.

Additionally, if individuals higher in self-trust are more likely to endorse a greater variety of possible selves, positive as well as negative, and if these individuals have generally high self-esteem, they should be better able to acknowledge that the *possibility* of a life event, personality trait, occupation, ability, and so forth as measured by Porter, Markus, and Nurius' (reported in

Markus & Nurius, 1986) Possible Selves Questionnaire is generally higher than the *probability* of that occurring than individuals lower in self-trust. For example, while it may be possible for an individual to become a bag lady at some time in the future, it is most likely not very probable that the individual actually will take up that occupation. An individual with both high self-esteem and high self-trust might be more likely to endorse the possibility of this occupation than an individual with high self-esteem and low self-trust, while both would likely not find that outcome as highly probable. Individuals with low self-trust and low self-esteem, on the other hand, might feel that both the possibility and the probability of becoming a bag lady were equally likely. The specific hypotheses that follow from this are:

12. There will be a negative relationship between self-trust and the absolute value of positive/negative possible self discrepancy scores, such that higher self-trust will be diagnostic of smaller discrepancies between positive and negative possible selves.
13. There will be a positive relationship between self-trust and the discrepancy score between possible selves and probable selves, such that higher scores on self-trust will correlate positively with higher discrepancy scores.

Self-Complexity

Linville (1987) defines cognitive self-complexity as a combination of the number of self-aspects, or domains, an individual is able to identify in conjunction with the amount of redundancy of personality traits among those domains. People with more complex self-concepts have more elaborate cognitive structures. These people are able to identify a greater number of aspects of the self, such as roles, relationships, activities, goals, and superordinate traits than people with lower self-complexity. Further, they are subject to less redundancy among aspects of the self, so that what occurs in one domain, such as work, does not necessarily carry over into another, such as the home life. In other words, if an individual thinks of him- or herself as highly competitive at sports and highly competitive at school, and that same person has identified only the athlete and the student as important self-aspects, a defeat at sports will carry over and generalize to whatever is going on in school. For an individual with a more complex self-structure, the associative networks between these two self-aspects will not be as strong because there may be many other aspects of self in which the individual does not see her- or himself as competitive. In this case, there is a greater possibility that one of these other self-aspects will become activated and thus serve to buffer the negative events in sports.

Greater cognitive complexity is developed through greater familiarity with the object of interest. Linville (1982), for example, found that the more exposure an individual was given to different aspects of a stimulus such as race, age, or

even a cookie, the greater complexity developed. By increasing the number and range of experiences, participants were able to abstract more independent features. The same should hold for self-structures. The more exposure an individual has to different aspects of him- or herself, and the more experience the same person has with different ways of thinking, feeling, and being, the greater the self-complexity. Indeed, Markus and Wurf (1987) conclude that the self-concept forms through a variety of sources, including inferences people make through watching their own actions, physiological reactions, cognitions, emotions, and motivations, and through information received about the self from others in the form of social comparisons and direct interactions.

These self-representations and consequent self-complexity should be derivative of self-trust, if self-trust entails automatic validation of the self and openness to experience. This is supported by the attachment literature (Ainsworth, et al., 1978; Bartholomew, 1989; Colin, 1996; Main, 1985) and the theory that self-trust develops to the extent that relationships with caregivers are both accepting and consistent. If caregivers respond inconsistently to a child's behaviors, physiological reactions, cognitions, emotions, and motivations, information received from the self is likely to conflict with information received from others. The child may react in one of three ways. First, in the case of preoccupied attachment, the child may react by putting her or his trust in others (Colin, 1996) in the formation and definition of self. Because these others' actions and responses are inconsistent over time, the self-structure may be very

loosely defined with no clear self-aspects, resulting in highly redundant or generalized trait descriptors.

Second, in the case of dismissing attachment, the child may react by forming a very narrow and rigid definition of self. In this self-concept, self-aspects may be highly compartmentalized but also highly restricted. Experiences with caregivers may be defensively excluded from awareness (Bartholomew, 1990; Main, et al., 1985) along with coincident self-aspects.

Finally, individuals with fearful attachment styles were seldom validated in childhood (Colin, 1996), and may not know what to believe. As with preoccupied individuals, the self-structure may be very loosely defined with no clear self-aspects. But for these individuals, an inability to trust others combined with inability to trust the self may leave the individual not knowing what to believe. The self-structure may be both overly elaborative and redundant, suggesting higher self-complexity, but a self-concept that is also highly changeable and unstable.

All individuals with insecure attachment styles, regardless of the particular form that the insecurity takes, are hypothesized to have spent less time exploring their world than those with secure attachment (Ainsworth, et al., 1978; Colin, 1996). Greater anxiety and preoccupation with safety and attachment concerns considerably limits opportunities to develop cognitive complexity in terms of the environment, objects, or the self. Thus, the development of an insecure attachment style may result in lower self-complexity as well as in lower self-trust.

Individuals who were raised with secure attachment styles, on the other hand, theoretically had experiences that were consistent with their self-perceptions. They were given more opportunities to define themselves through a variety of roles, relationships, activities, and goals (self-aspects), and in many different ways. These individuals should have well-elaborated self-concepts that are domain specific. These are individuals who do not find it necessary to describe themselves in very similar terms for all aspects of the self. For example, a high self-trusting individual who describes him- or herself as competitive intellectually may not find it necessary to be competitive in other areas, such as in relationships or sports.

Self-complexity was operationalized following a procedure devised by Linville (1987). Each participant was given a deck of 33 cards, each containing a possible self-descriptive adjective. They were asked to sort the cards into groups that belong together, based on their perception of different aspects of themselves. The specific hypothesis follows:

14. Individuals scoring higher in self-trust will obtain higher scores on self-complexity than individuals scoring lower on self-trust.

Emotional Experience

Emotional expressivity refers to the way that emotion is expressed. The assumption of self-trust implies that people know and trust their emotions, while the lack of self-trust may indicate an inability to trust the experienced emotion, fear of emotions and emotional expression, or an inability to control emotional

expression. People who grew up with caregivers who were inconsistent in validating the child's emotions (i.e. preoccupied), who were unresponsive to the child's emotions (i.e. dismissing), or who were insensitive and possibly negatively responsive to the child's emotions (i.e. fearful) may find it particularly difficult to trust their emotions. For example, an individual who does not trust themselves may have a strong need to gain the approval of others and thus over-react to both positive and negative feedback from important others, especially if there is a possibility that the emotion will garner attention. Others may not trust the expression of emotion because that emotion has historically been rejected, or at least not consistently validated.

Those high in self-trust should be comfortable with emotions and with the expression of emotions, and be capable of expressing their emotions in appropriate situations. Individuals low in self-trust, however, may display extremes of emotion, be either overly controlled and uncomfortable with the expression of emotion or overly reactive and display intense emotion. The ability to be comfortable with emotional expression may be derivative of self-trust, if inappropriate expression or ambivalence regarding expression of emotion results from the inability to trust the self.

Emotional expressivity was operationalized through the use of three different measures of emotion to capture the elements of emotional intensity (Larsen, 1984), emotional expressiveness, (King & Emmons, 1990), and ambivalence concerning the expression of emotion (King & Emmons, 1990). As

defined by Larsen (1984), affect intensity is a "stable and consistent tendency for some individuals to react more strongly than others to emotion-provoking stimulation, regardless of what specific emotions are evoked" (p. 2). As such, this questionnaire may tap the tendency of individuals low in self-trust to exhibit the extremes of emotions, being either overly intense in the expression of emotion or, conversely, overly controlled.

Comfort with, and the ability to express emotion was measured using two scales developed by King & Emmons (1990). The Ambivalence over Emotional Expressiveness Scale was designed to measure the ambivalence felt when an individual would like to be able to express emotion but is afraid that such expression will create a vulnerability. The Emotional Expressiveness Scale measures the extent to which an individual actually does express emotion. Together, these scales should tap the expression of emotion and the individual's comfort with that emotional expression. Those low in self-trust should be more ambivalent with the expression of emotion, and consequently have lower scores on emotional expressiveness. The specific hypotheses are:

15. Self-trust should predict emotional intensity, such that those lower in self-trust will receive either very low or very high scores on this measure, while individuals higher in self-trust should score closer to the mean on emotional intensity.
16. Low self-trusters will score higher on ambivalence over the expression of emotion than individuals higher in self-trust.

17. Individuals scoring lower on self-trust will score lower on a measure of emotional expression than will individuals higher in self-trust.

Self-Contingencies

Self-trust, as defined, implies an unconditional acceptance of self, based on a consistently accepting upbringing as described in the attachment literature (Ainsworth, et al., 1978; Bartholomew, 1989; Colin, 1996; Main, 1985). If this is the case, individuals high in self-trust should not evaluate and accept the self only conditionally as a result of positive experiences such as success. These individuals should as readily accept the self under any conditions. The self-acceptance of those low in self-trust, on the other hand, may be tied much more closely to self-contingencies.

Given the theoretical relationships between Dismissing Attachment and high self-esteem and between Dismissing Attachment and low self-trust, I have theorized that individuals low in self-trust could be either high or low on self-esteem. Thus, the particular circumstances under which individuals low in self-trust accept the self may be further qualified by the valence of self-esteem. For individuals low in self-trust who have high self-esteem, self-acceptance may be conditional upon experiences of success, while for those with lower self-esteem, self-acceptance might be conditional upon experiences of failure.

Self-contingencies were investigated using a lexical-decision computer task modeled after that used by Baldwin and Sinclair (1996) to measure

interpersonal contingencies. In this lexical decision task participants are primed by a context word reflecting either success or failure. Following this prime, participants are asked to identify whether a stimulus presented on the computer screen is a word or a nonword. The stimuli presented following the context word, when it was a word, was a positive or negative self-referent adjective representing a subset of the Adjective Check List (Gough & Heilbrun, 1965). With a lexical-decision task, using a single word to prime context disallows the respondent time to consciously process information concerning the self. The resulting response is believed to represent automatic processes that occur outside of conscious awareness (Baldwin & Sinclair, 1996).

To measure self-contingencies, respondents completed a 3 (context) X 3 (target) within-subject task. Participants were presented first with a context word representing success, failure, or a neutral context. This context word was followed by a target word consisting of a positive self-referent adjective, a negative self-referent adjective, or a nonword. Between-subject factors of esteem and self-trust were added to test these factors. This resulted in a Self-Esteem X Self-Trust X 3 (context) X 3 (target) moderated within-subject regression analysis, with self-view and self-trust representing between-subject factors, and context and target representing within-subject factors.

It is hypothesized that there will be a 4-way interaction between self-trust, self-esteem, context, and target such that:

18. Individuals low in both self-trust and self-esteem will exhibit a contingent view of self, with a negative self-view contingent on failure experiences;
19. Individuals low in self-trust but high in self-esteem will exhibit a contingent view of self, with a positive self-view contingent on experiences of success;
20. Individuals high in self-trust and thus self-esteem, will not have a self-view that is contingent on experiences of either success or failure.

Other-Oriented Variables

Interpersonal Contingencies

Just as individuals low in self-trust may make acceptance of the self contingent on perceptions of success or failure, their perceptions of acceptance by others may be contingent on perceptions of success or failure. Baldwin and Sinclair (1996) have demonstrated that individuals low in self-esteem are more likely to perceive others as accepting of them based on their experiences of success. These results were not consistent, however; the authors were unable to replicate the effect in a second experiment. It may be that individuals high and low in self-esteem react differently depending on level of self-trust.

Individuals high in self-trust, for example, may not demonstrate a contingent view of interpersonal relationships regardless of the valence of self-

esteem. Because these individuals accept themselves unconditionally, a false consensus effect (Ross, Greene, & House, 1977) may be in operation such that they assume that others accept them just as unconditionally. In a similar vein, it may be that individuals low in self-trust but high in self-esteem, and those low in self-trust and low in self-esteem, perceive the acceptance or rejection of others to be contingent on their own successes or failures.

This possibility was tested using the same design as that used in the self-contingencies task. The only difference was that target words were words suggestive of interpersonal acceptance or rejection rather than positive or negative self-referent adjectives. Again, a 4-way interaction was expected, such that:

21. Individuals low in both self-trust and self-esteem will exhibit a contingent view of interpersonal relationships, with an expectation of rejection contingent on failure experiences;
22. Individuals low in self-trust but high in self-esteem will exhibit a contingent view of interpersonal relationships, with the acceptance of others contingent on experiences of success;
23. Individuals high in self-trust and thus self-esteem, will not view interpersonal relationships as contingent upon experiences of either success or failure.

Self-Monitoring

High self-monitors, according to Snyder (1986), are individuals who are very conscious of self-presentational strategies and who easily adjust their behavior to fit the situation. Low self-monitors, on the other hand, are individuals who are content to be themselves and who act in ways that always reflect the person that they believe themselves to be. At first glance, it would seem that individuals high in self-trust would be much like the low self-monitor, trusting their ability to present themselves to the world as the person they really believe they are. Low self-trusting individuals, on the other hand, might want to put on different 'faces' depending on the situation, not trusting themselves to allow the world to see them as they are.

The one item that Snyder claims discriminates best between high and low self-monitors, however, is one that reads "I would probably make a good actor." To be a good actor implies the ability to draw on the emotions and feelings they need to truly take on the role and the character in which they are enmeshed. This, in turn, implies an ability to trust the self as the emotions and feelings needed for a successful performance must be sincere. Additionally, there must be high self-monitors who come across as very insincere and not at all the person they are trying to be, suggestive of low self-trust. Thus, the resulting hypothesis is:

24. No relationship will exist between self-trust and self-monitoring.

CHAPTER 8

METHOD

Participants

Participants consisted of 148 graduate and undergraduate students at the University of Calgary. Participants were recruited by phone through use of the Department of Psychology Participant Pool, and though flyers posted throughout the university campus. Volunteers were given the opportunity to participate in a lottery for a $100 main prize and two $50 secondary prizes.

Because gender differences on STQ scores were obtained for younger participants only, phone solicitation focused on individuals aged 20 and older. The final sample consisted of 52 males and 94 females ranging in age from 18 to 54, mean 25.54, standard deviation 6.86. Two participants failed to report their gender. Males ranged in age from 18 to 54 with a mean age of 24.75, standard deviation 6.10. Females ranged in age from 18 to 49 with a mean age of 25.97 and standard deviation of 7.23. Three participants were age 18 and the remainder were age 20 or older. See Table XVI for further characteristics of this sample.

Two individuals dropped out of the study after the first meeting. These participants completed the initial Self-Trust Questionnaire and the self-complexity task, but failed to return the package of questionnaires or complete the computer tasks. One additional person completed and returned the package of questionnaires, but did not return for the second meeting to complete the computer tasks or the second Self-Trust Questionnaire.

Table XVI. Demographic Characteristics of Participants in Phase II.

Description	Valid N	Percentage
Gender		
Male	52	35.6
Female	94	64.4
Marital Status		
Single	101	69.2
Married	24	16.4
Living Together/Not Married	21	14.4
Level of Education		
Some College or University	128	87.7
Bachelor Degree	17	11.6
Master's Degree	1	.7
Culture where Participant Grew Up		
Asia	4	2.7
Europe	8	5.5
North America (Canada/United States)	126	86.3
South America	2	1.4
South America	2	1.4
Other	5	3.4
Native Language		
English	120	82.2
Cantonese/Chinese	9	6.2
Dutch	2	1.4
French	2	1.4
Spanish	2	1.4
Other	11	7.5

Equipment

Equipment used consisted of one 386 HeadStart/SX Magnavox Computer with a 13-inch VGA monitor and a Logitech 3-button mouse. All stimuli were presented in white letters on a black background in the center of the monitor. The mouse had the word "Yes" printed on the left-hand button, and the word "No" printed on the right-hand button to facilitate instructions to participants. The middle button was disabled. Computer tasks were programmed using Quick Basic 4.5 and all were programmed by the author.

Measurement

Measurement of Self-Trust

Self-trust was measured with the Self-Trust Questionnaire (STQ). As a validity check of the STQ, self-trust was also measured by means of a computer task designed to influence participants through the use of subliminal primes. With the computer task, two measures of self-trust were obtained. First, because it is hypothesized that individuals low in self-trust are more likely to look outside the self for definition, the phi coefficient between subliminal primes and the participants' responses was calculated. Second, the reaction time to self-referent adjectives was calculated. Individuals high in self-trust should have more certain definitions of the self, reflected as faster reaction times (Campbell, 1990).

Self-Trust Questionnaire (STQ)

Self-trust was measured using the 20-item STQ that resulted from Phase I of this investigation. Responses were set on a 5-point Likert-type scale ranging from "Strongly Disagree" to "Strongly Agree" to items such as "It doesn't take much to get me to question myself." This scale demonstrated an internal consistency alpha of .85, and was psychometrically sound. This portion of the investigation was designed to validate the STQ as a measure of self-trust.

Self-Concept Computer Task

This task was designed to measure self-trust as directly as possible through the use of subliminal primes and response latencies. The hypothesized relationship between responses and subliminal primes is that individuals lower in self-trust will be more influenced by the prime and thus display a stronger correlation, measured by a phi coefficient, between their responses and the primes. Further, it was hypothesized that individuals higher in self-trust would exhibit a more stable self-schema as measured by the correlation (phi coefficient) between their responses on the computer task and their responses to the same items on a paper-and-pencil version of the Adjective Check List (Gough & Heilbrun, 1965) completed earlier. Response latencies were hypothesized to be shorter for individuals higher in self-trust given the hypothesis that these individuals would be more certain of their self-concepts and thus need less time to process the meaning of the adjective.

In this task participants were seated at a computer and read task instructions from the computer screen prior to beginning the task (Appendix F). The instructions asked them to respond as quickly and accurately as possible whether or not the adjective presented on the screen described them. Participants initiated a trial by clicking either mouse button in response to the prompt "Are you?". Upon initiation of the trial, a subliminal prime of 'yes' or 'no', presented randomly, was shown. The prime was sandwiched between two masks of the form "######". The forward mask was presented in the middle of the screen for 28 milliseconds (ms.), followed by the prime for 14 ms., followed by a backward mask for 28 ms. The backward mask was immediately covered by the target word which stayed on the screen until the participant responded 'yes' or 'no' by clicking a mouse button, ending the trial.

All words and primes were randomized by the computer program by seeding the randomization with the participant's identification number. Thus, each participant received a unique ordering of words and primes. Participants were given 12 practice trials, followed by 45 actual trials. The 45 actual trials consisted of 15 trials with positive self-referent adjectives, 15 trials with negative self-referent adjectives, and 15 trials with neutral self-referent adjectives (see Appendix F). Each of these three groups of adjectives represented a subset of the Adjective Check List from the separate subscales for positive, negative, and neutral self-perspectives as judged by undergraduate psychology students at the

University of California (Gough & Heilbrun, 1965). All words were matched for length and frequency of use in the population (Kucera & Francis, 1967).

Response latency (reaction time) was calculated from the time the target word appeared on the screen until the respondent clicked a mouse button to end the trial. Reaction times were transformed using a reciprocal transformation of the form 1 / [X + 1] to reduce variability and enhance normality of distribution within subjects. This procedure results in a mean that is a more accurate reflection of the central tendency of the distribution (Fazio, 1990). With this transformation, higher numbers represent faster reaction times.

Measurement of Other Constructs Theoretically Related to Self-Trust

Several markers of self-trust were identified (see Chapter 7) and measured. Self-trust is hypothesized to operate in all areas of an individual's life, and so markers were identified for both intrapersonal and interpersonal functioning. To minimize the possibility of shared-method variance, self and interpersonal functioning were measured by pencil-and-paper questionnaires, by social cognitive computer tasks, and with a card-sorting task. In addition, the construct of self-monitoring, theorized to be unrelated to self-trust, was measured to check for discriminant validity.

Measurement of Intrapersonal Functioning

Self-Esteem

The Self-Esteem Scale (Rosenberg, 1965). This is a widely used 10-item scale designed to measure an individual's global self-esteem. Responses to each of 10 questions (e.g. I feel that I have a number of good qualities) were collected by use of a 5-point Likert-type scale ranging from "Strongly Disagree" to "Strongly Agree." Participants were asked to complete this scale twice a day for 4 days, for a total of 8 administrations. The global self-esteem score was calculated as the mean of the 8 scales completed by the participant. Stability of self-esteem was measured by calculating the standard deviation of the eight administrations of the scale for each participant (Kernis & Waschull, 1995). If a participant failed to complete a minimum of 7 scales, that participant's data on the stability portion of the self-esteem measure was dropped from further analysis.

The Rosenberg Self-Esteem Scale has an internal consistency alpha of between .77 and .88, and test-retest reliability ranging between .82 after a one-week interval, to .85 after a two-week interval. Convergent validity has been demonstrated between the Rosenberg Self-Esteem Scale and other measures of self-esteem, with correlations ranging from .55 to .72. Discriminant validity has also been well-established. Researchers have found no reliable relationship between the Rosenberg Self-Esteem Scale and locus of control, grade point

average, the Scholastic Aptitude Test, gender, age, work experience, marital status, birth order, or vocabulary (Blascovich &Tomaka, 1991).

Self-Concept

Adjective Check List (ACL; Gough & Heilbrun, 1965). The ACL was used to measure self-schema. This is a commonly utilized 300-item questionnaire that asks respondents to place a checkmark next to adjectives that they believe describe them. The ACL has subscales for positive and negative self-concept, and for defensiveness. Subscales are scored by adding the total number of adjectives checked on each scale and converting this to a standard score.

Test-retest reliability ranges from .39 after 5 ½ years to .86 after 10 weeks. Validity was established through correlations with the California Psychological Inventory and the Minnesota Multiphasic Personality Inventory (Gough & Heilbrun, 1965).

Possible Selves Questionnaire (Porter, Markus & Nurius, reported in Markus & Nurius 1986). This is an 80-item questionnaire representing a subset of items originally contained on a 150-item questionnaire. The original questionnaire had items derived from six categories including personality descriptors, physical descriptors, life-style possibilities, general abilities, occupational possibilities, and possibilities of others' impression of the individual. The 80-item questionnaire contains these same categories, but they are not evenly distributed. Some, such as occupational possibilities contain only 1 or 2

items. Thus, the 80-item questionnaire was treated as a single measure, with subscales for positive (42 items) and negative (38 items) possible selves. Participants were asked to rate each item on a 5-point Likert-type scale ranging from "not at all " to "very much" to the questions of "How much does this describe you now?", "How much would you like this to describe you in the future?", "How probable is it this will describe you in the future", and "How possible is it that this will describe you in the future?".

Scores on the scale were computed as the item mean to facilitate comparisons between positive and negative subscales since they contained different numbers of items. Scores were computed for Possibility of Positive selves, Possibility of Negative selves, mean Probable self, and mean Possible self. The discrepancy score for the difference between the positive possible self and the negative possible self was calculated as the absolute value of the score for the positive self minus the score for the negative self. Two discrepancy scores for the difference between the mean possible and the mean probable self were calculated as the mean possible self minus the mean probable self. These were computed separately for positive and negative possible/probable selves.

The test-retest reliability of the Possible Selves Questionnaire has been measured at .72 for positive selves and .89 for negative selves. Validity of the scale has been established through positive correlations between positive possible selves and optimism for the future (r = .72), self-esteem (r's = .34 to .42), and locus of control (r = .27) (Markus, 1987).

Self-Complexity Card Sorting Task (Linville, 1982). The self-complexity task was developed by Linville (1982) to measure the degree of cognitive complexity involved in stereotyping. Self-complexity involves both elaboration (the number of adjectives endorsed) and redundancy (the number of different aspects of self each adjective is used to describe). This task was used to measure complexity of the self-concept.

Each participant was given a deck of 33 randomly ordered cards, each containing a possible self-descriptive adjective. This set of 33 adjectives was developed by Linville (1987) to represent a wide range of dimensions students used to think about themselves. The adjectives were initially selected from an open-ended self-description task. Participants were read instructions (see Appendix G) that asked them to sort the cards into groups that belong together based on their own perception of different aspects of themselves.

Complexity was scored using a scoring program produced by the Microsoft Fortran compiler (Linville, 1992, personal communication). Card sorts were scored based on the formula $H = \log_2 n-(1/n)\Sigma n_i \log_2 n_i$, where n is equal to the number of traits endorsed, and n_i is equal to the number of traits that appear in a particular combination of groups. This formula takes both elaboration and redundancy into account in the computation of the H statistic, a measure of dimensional complexity (Linville, 1982). Higher scores on H represent greater dimensional complexity.

Test-retest reliability of self-complexity over 2 weeks is reported as .70. Self-complexity is differentiated from a measure of complexity using only the number of groups cards are sorted into, ignoring the redundancy of traits across groups. While self-complexity was shown to buffer the effects of stress on depression, the measure of number of groups failed to show this effect (Linville, 1987).

Emotional Experience

Affect Intensity Measure (AIM; Larsen, 1984). This is a 40-item scale designed to measure the intensity with which participants typically experience positive and negative emotions. Items such as "When I accomplish something difficult I feel delighted or elated" and "My emotions tend to be more intense than most people" are rated on a 5-point Likert-type scale ranging from "not at all like me" to "very much like me." Reliability and validity have been adequately established (Diener, Sandvik, & Larsen, 1985; Flett, Blankstein, Bator, & Pliner, 1989; Flett, Boase, McAndrews, Pliner, & Blankstein, 1986; Goldsmith & Walters, 1989). Internal consistency alphas range from .88 (Goldsmith & Salters, 1989) to .94 (Larsen, 1984). Test-retest reliability over a 3-month period was .81 (Larsen, 1984). Convergent validity was established with positive correlations between the AIM and autonomic peripheral measures of emotion, other self-report measures of emotional intensity, peer and family reports of emotional intensity (Diener et al., 1985), emotional expressivity, emotional sensitivity, and a negative correlation with emotional control (Flett, et al., 1989).

Ambivalence over Emotional Expressiveness Questionnaire (AEQ; King & Emmons, 1990). This is a 28-item scale that measures an individual's ambivalence regarding the expression of emotion. Items such as "I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt" and "I try not to worry others, even though sometimes they should know the truth" are rated on a 5-point Likert-type scale ranging from "not at all like me" to "very much like me." The AEQ has demonstrated an internal consistency alpha of .89 (King & Emmons, 1990; Katz & Campbell, 1994) and test-retest reliability of .78. Construct validity was established through a negative correlation with an emotional expression questionnaire and a positive correlation with the Raulin Intense Ambivalence Scale, which measures pathological ambivalence (King & Emmons, 1990). Katz and Campbell (1994) also find a significant correlation between the AEQ and daily diary entries regarding ambivalence.

Emotional Expressiveness Questionnaire (EEQ; King & Emmons, 1990). This is a 16-item scale that measures the individual's ability to express emotions as they occur. The EEQ has demonstrated an internal consistency alpha of .78 (King & Emmons; Katz & Campbell, 1994). Construct validity was established through a positive association between the EEQ and peer ratings of emotional expressiveness, the Family Expressiveness Questionnaire (Halberstadt, 1986), and the Affective Intensity Measure (Larsen, Diener, & Cropanzano, 1987), as well as a negative association with the AEQ.

Self-Contingencies

Based on the methodology employed by Baldwin and Sinclair (1996), this task is designed to tap the perception of self as contingent on success or failure. In this task, participants were seated in front of a computer, and presented with pairs of words presented in the center of the computer screen. Participants initiated a trial by clicking either mouse button in response to the prompt "Ready?". Upon initiation of the trial, the first of the two words was presented. This was a context word that fell into one of the three categories of success, failure, or neutral. The context word remained on the screen for 700 ms., followed by a 300 ms. interval, followed by the target stimulus. The target stimulus consisted of one of (1) a positive self-referent adjective, (2) a negative self referent adjective, or (3) a nonword. The target remained on the screen until the participant responded 'yes' or 'no' by clicking a mouse button to end the trial.

Positive and negative self-referent adjectives were taken from the subscales of the Adjective Check List (Gough & Heilbrun, 1965) and matched for length and frequency of use in the population (Kucera & Francis, 1967). Nonwords were formed by dropping one letter from an actual word (i.e., formation became formtion). Success and failure words were selected from Roget's thesaurus. Neutral context words and nonwords were randomly selected from the *Computational Analysis of Present-Day American English* (Kucera & Francis, 1967), and matched for length. All had frequencies ranging from 25-50 per million.

Sixteen words synonymous with success were randomly paired with 8 positive and 8 negative self-referent adjectives, and again with 16 nonwords as were 16 words synonymous with failure and 16 neutral words. Thus, each of the context words (success, failure, or neutral) was presented twice, once with a self-referent adjective (positive or negative) and again with a nonword. In total, participants were exposed to nine different conditions, consisting of (1) success/positive, (2) success/negative, (3) success/nonword, (4) failure/positive, (5) failure/negative, (6) failure/nonword, (7) neutral/positive, (8) neutral/negative, (9) neutral/nonword.

All words were randomized, such that the target words and nonwords were randomly matched to the context words, and the pairs were presented in random order. All computer randomization used the participant identification number as a seed, thus ensuring that each participant received the words and the pairs in unique arrangement and unique order. Participants were given 20 practice trials in which the context words consisted of 10 words synonymous with self (i.e., ego, mirror) to prime thoughts of self. There were 96 actual trials in which participants were instructed to attend to the second word, and asked to indicate as quickly and accurately as possible whether they were presented with a word or a nonword. All instructions were given by the computer so that each participant received the same instructions (see Appendix H for instructions and words used).

The dependent variable was response latency, calculated as the time the target word appeared on the screen until the respondent clicked a mouse button to end the trial. Reaction times were transformed using a reciprocal transformation of the form 1 / [X + 1] to reduce variability and enhance normality of distribution within subjects. This procedure results in a mean that is a more accurate reflection of the central tendency of the distribution (Fazio, 1990). With this transformation, high numbers reflect faster response latencies.

Measurement of Interpersonal Functioning

Interpersonal Contingencies

Based on the methodology employed by Baldwin and Sinclair (1996), this task is designed to tap the perception of the acceptance of the self by other people as contingent on the participant's success or failure. This task proceeded exactly as the self-contingency task described above, with the exception of the target word in all trials, and the context word in the practice trails. For interpersonal contingencies, the target word consisted of one of (1) a word implying acceptance by others, (2) a word implying rejection by others, or (3) a nonword that was randomly selected from the *Computational Analysis of Present-Day American English* (Kucera & Francis, 1967) and formed by dropping one letter. Success, failure, acceptance, and rejection words were all selected from Roget's thesaurus.

The context word in the practice trials for this task consisted of one of 10 words selected to denote other people (i.e. friend, mother) in order to prime the interpersonal context. Appendix I contains instructions given to participants and a list of words used for this task.

Response latencies were again transformed using a reciprocal transformation of the form 1 / [X+1] (Fazio, 1990). Higher numbers indicate faster reaction times.

Relationship Style

Relationship Styles Questionnaire (Bartholomew, 1990). This questionnaire assess the extent to which individuals feel secure in their relationships with others. Participants are asked to review four vignettes and to indicate which of the four they feel comes closest to the way they feel about relationships. They are also asked to rate the extent to which they believe each description corresponds to their general relationship style on a 5-point Likert-type scale ranging from "not at all like me" to "very much like me."

Construct validity was demonstrated in relation to Hazan and Shaver's (1987) attachment typology. A principal components factor analysis confirmed the dimensional underpinnings of this scale (Brennan, Shaver, & Tobey, 1991).

Need for Approval

Marlowe-Crowne Social Desirability Scale (Crowne & Marlow, 1960). This is a widely used 33-item scale that measures social desirability as a

psychological entity, specifically, need for approval. Items such as "before voting I thoroughly investigate the qualifications of all the candidates" and "I sometimes try to get even, rather than forgive and forget" are measured in a true-false format and summed after reversing the appropriate items to obtain a final score. Higher scores on this questionnaire indicate a higher need for approval.

This scale has demonstrated internal consistency alpha ranging from .73 to .88, and has test-retest reliability coefficients of .88 after 1 month and .84 after 1 week (Paulhus, 1991). Convergent and discriminant validity of this questionnaire as a measure of need for approval has been adequately established through relationships with various measures of social influence, avoidance of evaluation by others, and only a weak relationship with other measures of social desirability (Paulhus, 1991).

Self-Monitoring

The Self-Monitoring Scale (Snyder, 1987). This is an 18-item true-false scale that has been widely used as a measure of participants' predispositions to present themselves differently as the situation demands, or as the person they believe they are regardless of the situation. Items, such as "I find it hard to imitate the behavior of other people" and "I would probably make a good actor", that are marked 'true' are given a value of one, and summed after the appropriate reversals have been made to yield a total score. Higher scores relate to higher self-monitoring.

This scale has demonstrated acceptable reliability and validity (Snyder, 1987) over a number of investigations. Both the internal consistency alpha and the test-retest reliability coefficients ranged from .70 to .79.

Procedure

After having agreed to participate in the investigation, participants met with the investigator twice. The first time, participants were given an explanation of the study, read and signed an informed consent, completed the Self-Trust Questionnaire for time 1, completed the Self-Complexity task, and were given a package of questionnaires to complete at home over the course of the following two weeks. The questionnaires included in the package were counterbalanced to control order effects. A second appointment was arranged for 14-21 days later at the convenience of the participant. At the second meeting participants returned the completed questionnaires, completed the Self-Trust Questionnaire for time 2, and completed three computer tasks. The computer program randomized the order of presentation of the three tasks to control order effects.

Upon completion of the computer tasks, participants were given a funnel interview to probe whether or not they became suspicious at any time concerning the subliminal primes. Following this interview they were debriefed (see Appendix J for funnel interview and debriefing). The concept of self-trust was explained and participants were given a copy of the debriefing, which included a prototype of a self-trusting individual. They were given an explanation of the

subliminal cues and the lexical decision-making tasks. They were then given the opportunity to ask further questions, thanked for their participation, and had their names entered into a lottery draw.

Upon conclusion of data collection, the names of the three winners of the lottery were drawn by an independent party, and witnessed by two members of the author's social research group. The first name to be drawn was awarded the grand prize of $100, and the second two individuals were each given $50. Winners were notified immediately by telephone.

CHAPTER 9

RESULTS

PRELIMINARY ANALYSES

Self-Trust Questionnaire

Table XVII gives the psychometric properties of the Self-Trust Questionnaire at Time 1 and Time 2. These statistics are similar to those obtained for the STQ in Phase I of this investigation, although the scale mean is slightly higher. Cronbach's Alpha continues to show excellent internal consistency in this sample of participants. The test-retest reliability coefficient was strong at .82.

Table XVII. Psychometric Properties of the Self-Trust Questionnaire.

		STQ Time 1 (n = 148)	STQ Time 2 (n = 145)
Scale	Mean	67.93	68.34
	Standard Deviation	11.96	12.41
Inter-Item Correlations			
	Mean	.23	.30
	Minimum	-.00	.03
	Maximum	.58	.68
Cronbach's Alpha		.86	.90

Screening Data

Prior to hypothesis testing, data were screened for accuracy of input, missing data, normality, and outliers as recommended by Tabachnick and Fidell (1989).

Missing Data

Missing data within questionnaires was replaced by the item mean except in cases where there were more than two questions left unanswered. In every case where the participant left more than two items open, the questionnaire was begun but left incomplete. In these cases, the questionnaire was dropped from the analysis. One participant completed and returned the packet of questionnaires but failed to return to complete the computer tasks. Two additional participants dropped out of the investigation after the initial visit. These participants each completed the Self-Trust Questionnaire and the Self-Complexity Card Sorting Task, and that data is included.

Normality

The assumption of normality for all measures was examined through normal probability plots and detrended normal probability plots. These analyses plot the expected value based on the distribution against the obtained score for each participant. A normal distribution is indicated by a fairly tight cluster of scores about the diagonal on the normal probability plot, and a fairly regular cluster about the mean of zero on the detrended normal probability plot. (Tabachnick & Fidell, 1989).

Distributions that appeared to deviate substantially from normal were further examined for skewness and kurtosis, and data transformations were performed based on the shape of the distribution as recommended by

Tabachnick & Fidell (1989). Distributions that were transformed by this procedure were (1) self-esteem stability score (logarithmic), (2) total checked on the Adjective Check List (logarithmic), (3) Favorability Scale of the Adjective Check List (square root), (4) Unfavorability Scale of the Adjective Check List (reciprocal), (5) the Defensiveness Scale of the Adjective Check List (logarithmic), and (6) the score for Negative Possible Selves (logarithmic). All variables had normal distributions following transformation.

Because these variables were used only in correlation analyses, correlations between these variables were compared with and without the transformations. No appreciable differences were found between the two correlations matrices[11] so the original values on these variables were used in interpretation.

Response latencies from the computer tasks were transformed using a reciprocal transformation of the form 1/(X +1) as suggested by Fazio (1990). All data analyses employing responses latencies were run both with and without data transformations. In every case there were significant differences found in the results of analyses with and without data transformation. Thus, all response latency data was analyzed based on reciprocal scores.

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[11] Although there were minor variations in the strength of association, there was no difference in level of significance for any pair of variables affected by the transformation.

Identification of Outliers

For all variables, outliers were defined as scores in excess of 3 standard deviations above or below the mean of standardized z-scores (Tabachnick & Fidell, 1989). Fourteen outliers were identified, scattered among 7 variables and across 10 participants. Statistical tests were conducted with outliers included and excluded and the results were compared. Since the correlation matrix showed differences in correlations with outliers excluded[12], all further analyses were conducted with outliers removed[13].

For all within-subject response latencies, outliers were identified within-subject and defined as the extremes given on the stem-and-leaf analysis. For the self-concept data, outliers represented 1% of trials with positive self-referent adjectives, 2% of trials with negative self-referent adjectives, and 2% of the trials with neutral self-referent adjectives. For the self-contingencies, outliers represented 3% of the word trials and 1.5% of the nonword trials. For the interpersonal contingencies, outliers represented 2.4% of the word and 1.5% of the nonword trials. All outliers were deleted prior to further analysis[14].

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[12] Dropping outliers served to strengthen correlations and change significance levels for some pairs of variables.

[13] N was not reduced by 10 individuals in all analyses. Individual participants were not dropped, rather their scores on individual variables where outliers existed. Thus, N's will differ by analysis depending on whether one or more outlying scores were dropped from the analysis.

[14] All participants were retained so the N remained constant. Outliers were dropped from within cells, so the mean of the cell was based on fewer observations.

Error trials within the lexical decision-making tasks were also identified and eliminated. For the self-contingencies, error trials represented 3.6% of the word trials and 7.5% of the nonword trials. For interpersonal contingencies, outliers represented 5.3% of the word and 6.4% of the nonword trials.

Preliminary Bivariate Analyses

Self-Esteem and Self-Trust

A strong correlation was found between the STQ and self-esteem (r = .69, $p < .01$), suggesting that a large component of self-esteem is included in self-trust. Because this correlation was so large, any further results were likely to be contaminated by self-esteem. Thus, the variability accounted for in self-trust by self-esteem was removed through regression analysis and the standardized residuals saved as an uncontaminated measure of self-trust. Correlations between these residuals and all other variables are presented in Appendix K.

Need for Approval and Self-Trust

Hypothesis 1: There will be a negative relationship between self-trust and need for approval such that individuals scoring lower in self-trust will score higher on the Marlowe-Crowne Social Desirability Scale than will individuals higher in self-trust.

The hypothesized negative relationship between need for approval as given by the score on the Marlowe-Crowne Social Desirability Scale (Crowne &

Marlowe, 1960) and self-trust did not materialize. Instead, a moderate *positive* correlation was obtained ($r = .33$, $p < .01$). As scores on the STQ increased, scores on the Marlowe-Crowne Social Desirability Scale also increased.

Relationship between Need for Approval and Need for External Validation. Given the nature of need for approval, it should correlate most strongly with the subscale for need for external validation of the self, but in a *negative* direction, such that greater need for approval would indicate a greater need for external validation. This was not the case. While need for approval did correlate most strongly with the factor for external validation (see XVIII), the correlation was in a positive direction. Thus, the higher respondents scored on the Marlowe-Crowne Scale, the higher they scored on external validation indicating less need for external validation of the self.

Table XVIII. Correlations between Need for Approval and the Subscales of the STQ, broken down by gender.

	Need for Approval		
	Total Sample	**Male**	**Female**
STQ Residual Scores	0.33**	0.43**	0.26*
General Self-Trust	0.27**	0.34*	0.20‡
External Validation	0.35**	0.37**	0.36**
Experiential Trust	0.21*	0.32*	0.14
Emotional Trust	0.04	0.14	-0.01

‡ $p < .10$; * $p < .05$; ** $p < .01$

Gender Differences. Breaking these correlations down by gender, the correlation between need for approval and self-trust is significantly stronger for

men than for women overall[15] ($z = 2.58$, $p < .01$, two-tailed). The pattern of correlations between the Marlowe-Crowne Social Desirability Scale and the individual factors for men follows the pattern established for the overall sample, with significant correlations between need for approval and the first three factors of self-trust. For women, on the other hand, need for approval correlates significantly only with the factor for external validation of the self, while the correlation with general self-trust approaches significance (see Table XVIII). There was no significant difference between the correlations for need for approval and external validation for men and women.

Summary. An examination of the relationships between the Marlowe-Crowne Social Desirability Scale and External Validation and that between the Marlowe-Crowne Social Desirability Scale and the individuals factors of the STQ broken down by gender is consistent with an interpretation of this scale as a measure of social desirability, rather than as a measure of need for approval. An examination of the items included on the STQ reveals a highly Westernized, autonomous definition of self-trust. If it is more important for men than for women to identify with an autonomous, independent self (Chodorow, 1978; Gilligan, 1982; Miller, 1976), this pattern of correlations supports an interpretation of the Marlowe-Crowne Scale as a measure of social desirability rather than a measure of need for approval.

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[15] Based on Fisher's *r* to *z* transformation as given in Howell, 1987.

Given these results, social desirability was also removed from self-trust through regression analysis. This second set of residuals was retained as the final measure of self-trust to be used in all further analyses unless otherwise noted. Correlations are presented in Appendix K.

Demographic Variables

Demographic variables were examined for their relationship with self-trust.

Age. The correlation between age and self-trust (r = .19, p < .02) remained significant after removing the effects of self-esteem and social desirability. A regression analysis, regressing the standardized residuals of self-trust on age, indicated that age accounted for 4% of the variance in self-trust ($F_{(1,140)}$ = 5.411, p = .02). Age was thus considered a covariate and controlled in all analyses where self-trust served as a dependent variable. Partial correlations among all variables were computed, controlling for age and are presented in Appendix L.

All Others. The remaining demographic variables were categorical, and differences were examined through t-tests. In the cases of marital status, culture, and language where more than two categories existed, the N's for the subcategories were all very small. For that reason, married individuals were combined with individuals living with their partners for marital status and compared with single individuals. Individuals growing up outside of North America were combined for culture, and compared with North Americans. And individuals with a native language other than English were combined for

language and compared with English speakers. Participants were also compared by gender.

No significant differences were found for any of the above variables on self-trust. See Table XIX for means and standard deviations. Means are given as standardized residual scores.

Table XIX. Means and Standard Deviation for Demographic Variables.

	N	%	Mean	Std. Dev.
Gender	**144**			
Male	50	35%	-0.005	1.00
Female	92	65%	0.002	0.99
Marital Status	**144**			
Single	97	69%	-0.046	0.96
Married or Living Together	45	31%	0.099	1.06
Culture	**143**			
North America	122	87%	-0.007	1.03
All Other	20	13%	0.040	.71
Language	**144**			
English	116	82%	0.009	1.03
All Other	26	18%	-0.038	.84

MAIN ANALYSES[16]

Variables Related to Development

Relationship Styles

Hypothesis 2, Secure: Individuals who rate themselves as higher on secure relationship style will also rate themselves higher on self-trust;

Hypothesis 3, Insecure: Individuals who rate themselves as higher on preoccupied, fearful, or dismissing relationship styles will rate themselves lower on self-trust.

As predicted there was a positive correlation between secure attachment style and self-trust controlling for age ($r = .22$, $p < .01$), and a small significant negative correlation between fearful attachment style and self-trust ($r = -.16$, $p < .03$, one-tailed). There was no relationship between self-trust and preoccupied or dismissing attachment.

Figure 4 shows a graphical representation of the mean residual score on the Self-Trust Questionnaire based on participants' self-reported attachment classification. All three insecure attachment classifications obtained scores below the mean on the Self-Trust Questionnaire, while participants who classified themselves as primarily secure obtained scores above the mean.

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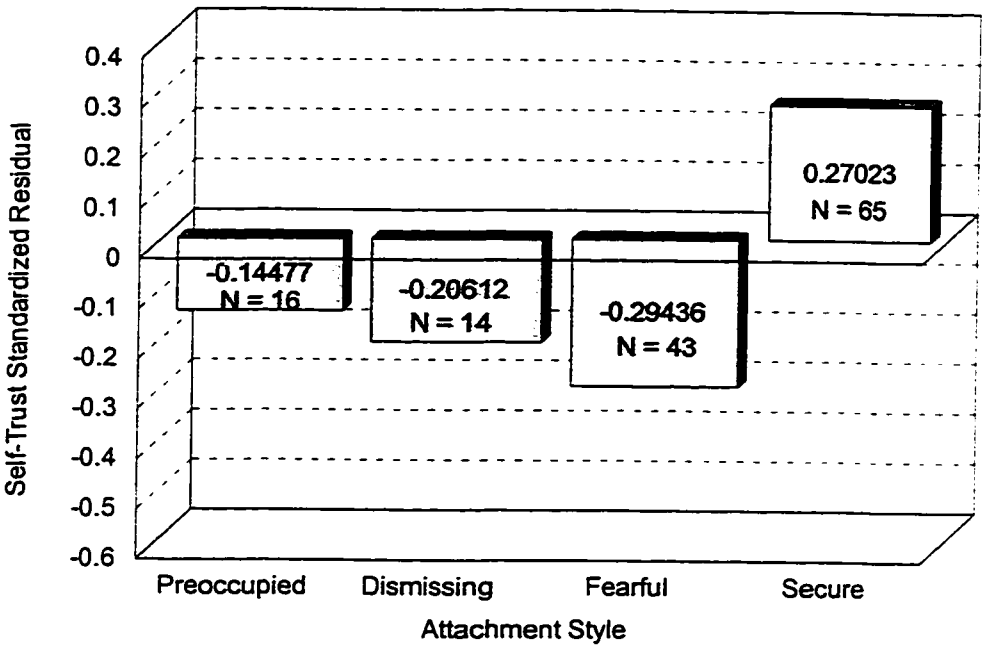
[16] All correlations reported from this time forward are based on correlations between self-trust residuals and the variable of interest, controlling for age. These correlations are reported in Appendix L.

Figure 4. Self-Trust as a function of Attachment Style using Standardized Residual means for Self-Trust.



The correlational analysis was followed with a Self-Trust by Attachment Style moderated regression analysis, with Attachment Style as a within-subject variable. The within-subject effect of Attachment Style was significant ($F\Delta_{(3,421)}$ = 24.99, $p < .01$, $r^2\Delta = .11$). This significant main effect was qualified by a significant interaction between Attachment Style and Self-Trust ($F\Delta_{(3,418)} = 5.60$, $p < .01$, $r^2\Delta = .03$).

Self-trust was categorized into three roughly equal groups, representing high, medium, and low scores on the Self-Trust Questionnaire and within-subject ANOVAs were conducted to examine Attachment Style separately at each level of Self-Trust (Means and standard deviations are given in Table XX).

Table XX. Means and Standard Deviations for Attachment Style at each Level of Self-Trust.

	Self-Trust		
Attachment Style	**Low (N = 45)**	**Medium (N = 49)**	**High (N = 51)**
Preoccupied			
Mean	2.47	2.41	2.16
Standard Deviation	1.29	1.31	1.21
Dismissing			
Mean	2.47	2.80	2.73
Standard Deviation	1.22	1.04	1.27
Fearful			
Mean	3.27	2.82	2.45
Standard Deviation	1.39	1.39	1.22
Secure			
Mean	3.20	3.33	3.96
Standard Deviation	1.24	1.16	1.00

Significant differences among the means on Attachment Style existed for all levels of self-trust after a Bonferonni adjustment of the alpha value to $p <$ .006. These post hoc comparisons provided support for Hypotheses 2 and 3, showing that for high STQ scorers, scores on the secure attachment style measure were significantly higher than scores on any of the three insecure attachment style measures (See Table XXI for *F* statistics and probabilities). For those scoring near the mean on self-trust, scores on secure attachment style were significantly higher than scores on preoccupied attachment, and marginally higher than scores for dismissing. Low STQ scorers' highest scores were on the Fearful attachment style measure. These individuals' scores on fearful

attachment were significantly higher than those for preoccupied attachment and dismissing attachment, but there was no significant difference between Secure and Fearful attachment style for low scorers.

Table XXI. Tests of Within-Subjects Contrasts.

	Low Self-Trust			Medium Self-Trust			High Self-Trust		
Secure Attachment Contrasted With:	***F***	**Sig.**	η^2	***F***	**Sig.**	η^2	***F***	**Sig.**	η^2
Preoccupied	8.40	.006	.16	12.12	.001	.20	58.42	.000	.54
Dismissing	6.88	.012	.14	6.12	.017	.11	29.22	.000	.37
Fearful	.04	.847	.00	2.43	.126	.05	32.89	.000	.40
Fearful Attachment Contrasted With:	***F***	**Sig.**	η^2	***F***	**Sig.**	η^2	***F***	**Sig.**	η^2
Secure	.04	.847	.00	2.43	.126	.05	32.89	.000	.40
Preocccupied	7.40	.009	.14	2.00	.164	.04	1.49	.229	.03
Dismissing	10.81	.002	.20	.01	.937	.00	1.63	.208	.03

Because the four relationship styles demonstrate different ways of relating to others (Bartholomew, 1989), it is possible that they may correlate differently with the different factors of the STQ. For example, individuals with a preoccupied relationship style might have a greater need for external validation, and thus score low on that subscale while individuals with a dismissing relationship style might score higher on external validation indicating a lower propensity to turn to others. Correlations between the four factors of the STQ and the four relationship styles are presented in Table XXII.

As expected, there was a relationship between preoccupied attachment and external validation, such that those rating themselves higher on preoccupied attachment obtained lower scores on external validation. Lower scores represent a greater need to turn to others for validation of the self. The expected relationship between dismissing attachment and external validation was positive and significant. Dismissing attachment did not correlate with any other factor of the STQ. Overall, the relationships between the individual factors and relationship styles were generally in the expected directions. Interestingly, none of the relationship styles correlated with either experiential or emotional trust.

Table XXII. Correlations of the STQ Factors with Relationship Style.

STQ Factors	Secure	Preoccupied	Dismissing	Fearful
General Self-Trust	.33**	-.17*	.09	-.21*
External Validation	.12	-.26**	.17*	-.07
Experiential Trust	.13	.04	.01	-.10
Emotional Trust	.05	.04	-.07	-.06

Variables Related to Self

Self-Schema

Self-schema was analyzed through correlations with the Adjective Check List, and with a Self-Concept computer task.

Hypothesis 4, Balance: Individuals higher in self-trust will have a more balanced self-view as measured by the discrepancy scores between positive and

negative self-referent adjectives. Individuals lower in self-trust will be more likely to have either a strongly positive or strongly negative view of the self, with greater discrepancy scores (in absolute value) between the two subscales.

This hypothesis was not supported. Although negatively valenced as predicted, there was only a very small and nonsignificant correlation between scores on the STQ and the absolute value of the discrepancy score between favorable and unfavorable response sets on the ACL (r = -.02). The correlation between self-trust and the obtained discrepancy score was positive (r = .08), suggesting that if anything, those higher in self-trust have a more positive orientation toward the self. This correlation was also nonsignificant.

Viewing the relationship between the STQ and the favorable and unfavorable subscales of the ACL separately, it is apparent that higher self-trust is more likely to correspond with a positive self-view. Although small and nonsignificant, the correlation between self-trust and the favorable subscale is positive (r = .11, n.s.), while that between self-trust and unfavorable subscale of the ACL is nonexistent (r = -.02).

Hypothesis 5, Defensiveness: A relationship is hypothesized to exist between self-trust and defensiveness, such that individuals low in Self-Trust will score at the extremes of defensiveness, while individuals higher in self-trust will score close to the mean on the defensiveness scale.

Gough and Heilbrun (1965) have postulated that the defensiveness subscale of the ACL is a measure of social desirability, and a moderately strong

correlation does exist between defensiveness and social desirability ($r = .39$, $p < .000$). Thus, because this hypothesis concerns the existence of a socially desirable response set, this particular analysis was run using the residuals of self-trust with the effects of self-esteem only removed.

If individuals scoring lower on self-trust were likely to score either very high or very low on defensiveness while high self-trusters' scores clustered more tightly about the mean as hypothesized, the variability of scores for individuals low in self-trust should be greater than that for individuals high in self-trust. To test whether the variability of scores for individuals lower in self-trust was significantly different than the variability of scores for individuals high in self-trust, residual scores on the STQ were divided into two groups based on a median split (*MED* = .067). The variance of the group representing the lower half of the sample (*SD* = 10.58) appeared higher than the variability of the group in the upper half of the sample (*SD* = 8.65). Levene's Test for Equality of Variances revealed that the difference was significant ($F_{(1,136)} = 4.72$, $p < .031$). The difference in the mean score on defensiveness between those high and low on self-trust was also significant ($t_{(136)} = 2.141$, $p = .034$), however. Thus, this hypothesis was only partially supported.

Hypothesis 6, Influencibility: Individuals higher in self-trust will demonstrate smaller correlations (in absolute value) between their responses of yes or no to the self-referent adjectives presented on the self-concept computer task and the subliminal primes of yes or no that were presented in conjunction

with these adjectives than individuals lower in self-trust. Individuals lower in self-trust will either be more influenced by the primes, thus demonstrating larger positive correlations, or will react in a negative and defensive manner to the prime and demonstrate larger negative correlations.

The partial correlation between the STQ residuals and the absolute value of the Phi coefficient between the subliminal primes of 'yes' or 'no' and the actual responses given by participants on the self-concept task, controlling for age, is small and does not reach significance (r = -.08), although it is in the right direction.

This task presented adjectives in three conditions based on Gough and Heilbrun's (1965) subscales for highly favorable and unfavorable trait descriptors. Positive adjectives were selected from the favorable subscale, negative adjectives from the unfavorable subscale, and neutral adjectives were selected from the remainder of the adjectives presented on the ACL. Given that the positive and negative scales had been rated as most strongly favorable and unfavorable, respectively, it is possible that these particular adjectives were more schematic for all respondents, regardless of level of self-trust. If this is the case, it is likely that outside influences, such as a subliminal prime will have little or no effect on an individual's response. Neutral adjectives, on the other hand, may not be as schematic, or as affectively important (Fiske & Taylor, 1991), as the positive and negative adjectives, and thus may be more open to outside influences.

To test this possibility, phi coefficients between the subliminal prime and the participant's response were calculated for each individual in each of the three conditions and the absolute value was correlated with self-trust (see Table XXIII). Self-trust had correlations close to zero with both the positive and negative adjectives, as expected. Also as expected, the correlation of self-trust with the neutral adjectives was strengthened. Although still small, it approached significance with a one-tailed test ($p < .06$)[17].

Table XXIII. Partial Correlations between the absolute values of Prime/ Response PHI coefficients and the STQ residuals, controlling for age.

	1	2	3	4	5
1. Self-Trust Questionnaire	1.00				
2. PHI Positive Adjectives	-0.01	1.00			
3. PHI Negative Adjectives	0.04	0.04	1.00		
4. PHI Neutral Adjectives	-0.13‡	0.04	-0.00	1.00	
5. PHI Overall	-0.08	0.12‡	0.29**	0.26**	1.00

‡ $p < .10$ ** $p < .01$

Hypothesis 7, Stability: Individuals higher in self-trust will show a greater correspondence between the adjectives they endorse on the Adjective Check List and those they endorse on the self-concept computer task than will individuals lower in self-trust.

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[17] With a Bonferonni adjustment of the alpha level to .017, this correlation does not approach significance.

This hypothesis was not supported. There was only a very small correlation between scores on the STQ and the Phi coefficient representing the correspondence between adjectives checked on the paper-and-pencil version of the ACL and adjectives checked on the computer task (r = .05). Although this correlation is in the right direction with higher scores on the STQ corresponding to larger Phi coefficients, it is not significant.

Again, because of the possibility that all individuals, regardless of level of self-trust, might be more schematic and thus more highly correspondent across tasks for positive and negative self-reference adjectives, data were further broken down by condition. Phi coefficients between the ACL and responses on the computer task were calculated individually for positive, negative, and neutral self-referent adjectives and correlated with the STQ. All correlations approached zero, and thus the post hoc speculation that individuals higher in self-trust would have stronger relationships between these two measures of the ACL than individuals lower in self-trust was not supported.

Floor and ceiling effects were not evident. Regardless of condition, the mean phi coefficient came close to the midpoint (overall M = .55; positive M = .47; negative M = .45; and neutral M = .41)

Hypothesis 8, Self-Certainty: High self-trusters will have faster reaction times in response to adjectives displayed on the computer task than those lower in self-trust, demonstrating a more organized and certain view of the self.

This hypothesis was supported. The overall response latency for self-referent adjectives ($r = .25$, $p < .01$), as well as the response latencies for each condition (r's = .27 and .20, p's < .01 and .05 for positive and negative adjectives respectively, and $r = .21$, $p < .01$ for neutral adjectives) were positively correlated with the self-trust residuals and significant with the more conservative two-tailed test. In all cases, individuals higher in self-trust responded faster to the question of whether or not each adjective described them than did individuals lower in self-trust[18].

Alternative Hypothesis, Social Desirability. Because participants were instructed to "respond as quickly and accurately as possible" to the self-referent adjective that was displayed on the screen, the possibility existed that social desirability was a confounding variable in this analysis. However, since this variable was controlled initially by removing its variability from the STQ scores, this is not the case.

Hypothesis 9, Self-Confidence: No relationship will be found between the STQ and self-confidence as measured by the ACL.

This hypothesis was not supported. A small but significant relationship does appear between the self-trust residuals and self-confidence ($r = .19$, $p < .05$), controlling for age. This suggests that individuals higher in self-trust also report more self-confidence as measured by the Adjective Check List.

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[18] The correlation given here is the partial correlation between the STQ residuals and the reciprocal transformation of the response latencies, controlling for age. Thus, larger response latencies represent faster reaction times.

Self-Esteem

Hypothesis 10, Self-Esteem: A fairly strong relationship will exist between self-trust as measured by the STQ and self-esteem.

This hypothesis was confirmed, although the relationship was stronger than expected ($r = .62$, $p < .01$), controlling age and social desirability. A curve fit analysis regressing self-trust on self-esteem and controlling age and social desirability revealed that the relationship between self-trust and self-esteem is linear ($F\Delta_{(1,137)} = 84.32$, $p < .000$). Neither the quadratic nor the cubic components were significant.

Hypothesis 11, Self-Esteem Stability: There will be a relationship between self-trust and the stability of self-esteem for individuals with high self-esteem only, such that higher levels of self-trust will correspond with smaller standard deviations, reflecting greater stability.

Initial correlation analyses between self-trust residuals and the stability of self-esteem suggested that there was no linear relationship between self-trust and self-esteem stability ($r = .03$). A curve fit analysis was conducted, controlling for age, and revealed a significant quadratic relationship between the self-esteem stability score and the self-trust residuals ($F\Delta_{(1,132)} = 4.38$, $p < .038$). Following the procedures outlined by Aiken and West (1991), data for self-esteem and self-esteem stability were centered, and a moderated regression analysis was conducted, with the original values on self-trust as the criterion variable, controlling age and social desirability. The regression revealed a

significant interaction between self-esteem and the quadratic component of self-esteem stability ($F\Delta_{(1,126)} = 4.29$, $p = .04$).

Again, following procedures suggested by Aiken and West (1991), predicted scores on self-trust at intervals of self-esteem stability were plotted for three levels of self-esteem: one standard deviation below the mean, at the mean, and one standard deviation above the mean (see Figure 5).

Figure 5 suggests that at for individuals with high self-esteem, self-trust scores increase as variability increases until the mean on variability is reached. Self-trust scores then begin to decrease as variability increases, as hypothesized. Conversely and unexpectedly, for individuals with low self-esteem, self-trust decreases as variability increases until the mean on variability is reached. At that point, self-trust scores begin to *increase* with increases in variability.

Simple slope analysis of the regression of self-trust on self-esteem stability at high and low self-esteem, controlling for age and social desirability, indicated that in neither case was either the linear or the quadratic component of self-esteem stability significant. Self-trust scores did not vary significantly as a function of self-esteem stability for individuals either high or low in self-esteem.

To further explore the lack of significance for the hypothesized negative slope of self-trust on self-esteem stability for individuals high in self-esteem, self-esteem was divided into two groups based on a median split and descriptive statistics for self-trust were examined (see Table XXIV) . Given the magnitude of

the correlation between self-trust and self-esteem, it is possible that there are few individuals with high self-esteem who are low in self-trust.

Figure 5. **The relationship between Self-Trust and the Quadratic Component of Self-Esteem Stability as a function of the Level of Self-Esteem, controlling age and social desirability.**

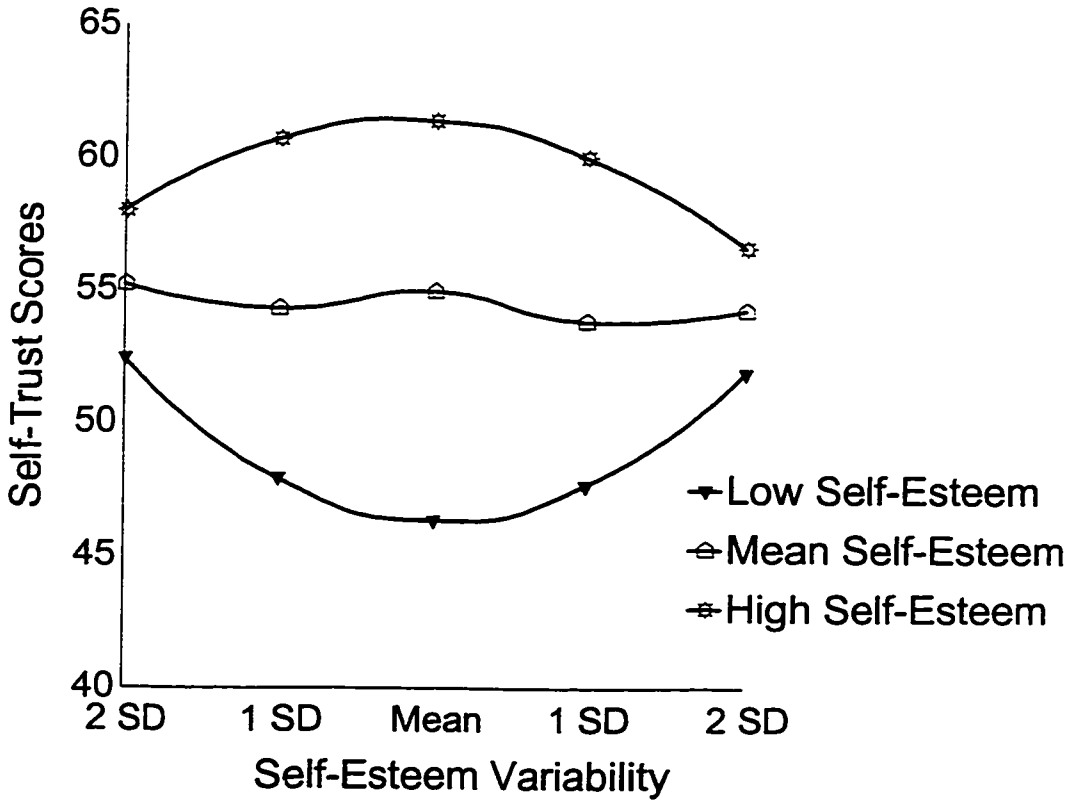


Table XXIV. Descriptive statistics for Self-Trust at levels of Self-Esteem.

	N	Mean	SD	Minimum	Maximum	Range
Low Self-Esteem	72	62.43	10.04	38.5	80.5	42.0
High Self-Esteem	76	73.69	10.42	37.5	100	62.5

As shown in Table XXIV, there is a greater range of scores for individuals high in self-esteem as this hypothesis would predict. But, while for the low self-esteem group, 47 individuals had scores on the STQ lower than 68 (the overall mean on the STQ), only 17 individuals with high self-esteem had STQ scores below 68 (see Figures 6a and 6b). Looking at scores only in the lower third of the sample (approximately less than 63 on the STQ), 39 individuals with low self-esteem scored low on self-trust, while only 10 with high self-esteem scored in the lower third on self-trust. Thus, it appears that, while there are individuals with a combination of high self-esteem and low self-trust, there are very few (13%) compared with individuals with both low self-esteem and low self-trust (54%). Thus, given the relative scarcity of individuals with low self-trust in the high self-esteem group, there may not have been enough power to obtain the expected results.

Figure 6a. **The distribution of self-trust scores for individuals with low self-esteem.**

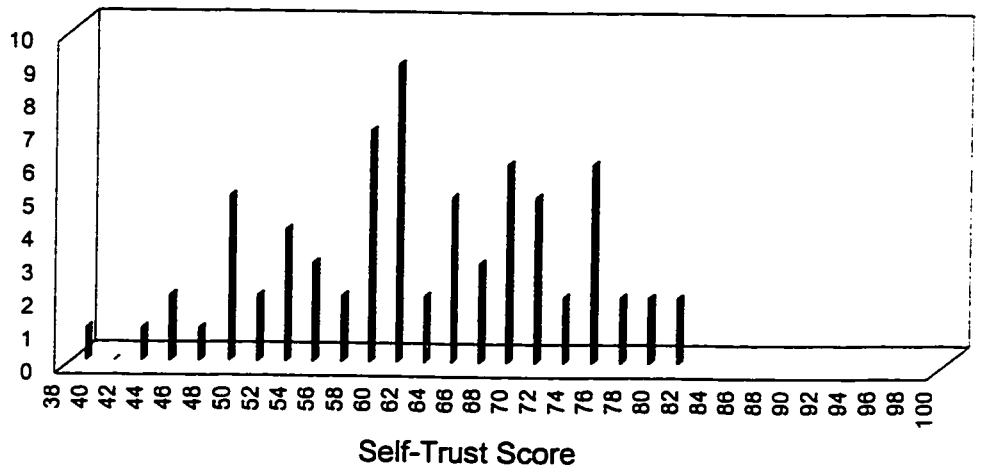
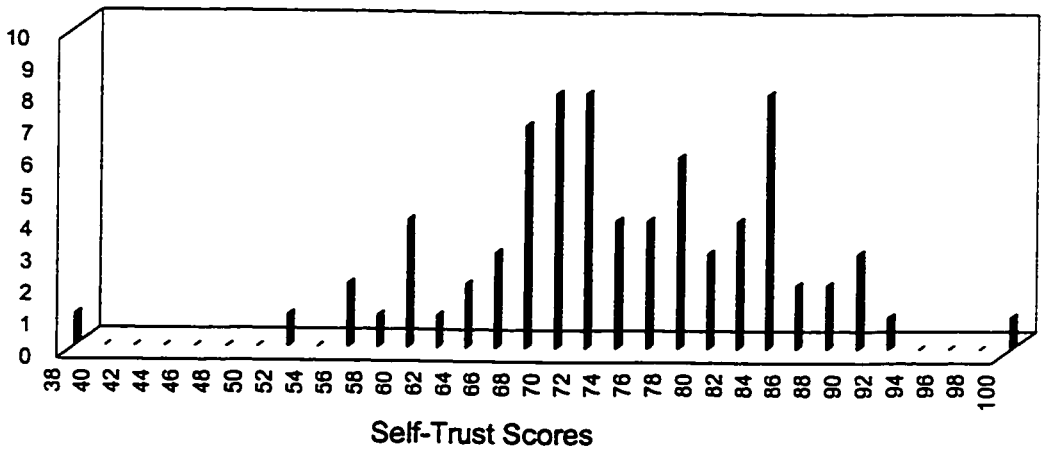


Figure 6b. **The distribution of self-trust scores for individuals with high self-esteem.**



Possible Selves

Hypothesis 12, Positive/Negative Discrepancy: There will be a negative relationship between self-trust and the absolute value of positive/negative possible self discrepancy scores, such that higher self-trust will be diagnostic of smaller discrepancies between positive and negative possible selves.

This hypothesis was not supported. There was a very small positive correlation obtained between self-trust and the absolute value of the positive-negative possible self discrepancy score ($r = .11$, n.s.). This correlation did not change very much when the actual values of the discrepancy score were substituted ($r = .12$, n.s.), suggesting a tendency to lean towards a positive view. This was confirmed by the existence of a small positive correlation between self-trust and positive possible selves ($r = .18$, $p < .04$), and an extremely small negative correlation with negative possible selves ($r = -.03$, n.s.).

Hypothesis 13, Possible/Probable Self Discrepancy: There will be a positive relationship between self-trust and the discrepancy score between possible selves and probable selves, such that higher scores on self-trust will correlate positively with higher discrepancy scores.

As predicted, there was a small positive correlation between self-trust and the discrepancy score between positive possible and positive probable selves ($r = .15$, $p < .04$ one-tailed). This suggests that individuals higher in self-trust were more likely to see positive events and circumstances as more possible than

probable. There was no correlation between self-trust and the discrepancy score between negative possible and negative probable selves. Thus, Individuals higher in self-trust were no more likely to view negative events and circumstances as more possible than probable than were individuals lower in self-trust. Thus, this hypothesis was only partially supported.

Self-Complexity

Hypothesis 14, Self-Complexity: Individuals scoring higher in self-trust are expected to obtain higher scores on self-complexity than individuals scoring lower in self-trust.

There was only a very small and nonsignificant relationship between the STQ and self-complexity (r = .10, n.s.). This suggests that individuals higher in self-trust do not exhibit greater self complexity than do individual lower in self-trust. Thus, this hypothesis was not supported.

Emotional Experience

Hypothesis 15, Intensity: Self-trust should predict emotional intensity, such that those lower in self-trust will receive either very low or very high scores on this measure, while individuals higher in self-trust should score closer to the mean on emotional intensity.

If individuals scoring lower on self-trust were likely to score either very high or very low on emotional intensity while high self-trusters' scores clustered more tightly about the mean as hypothesized, the variability of scores for

individuals low in self-trust should be greater than that for individuals high in self-trust. To test whether the variability of scores for individuals lower in self-trust was significantly different than the variability of scores for individuals high in self-trust, residual scores on the STQ were divided into two groups based on a median split (*MED* = .082). The variance of the group representing the lower half of the sample (*SD* =17.58), appeared equivalent to the variability of the group in the upper half of the sample (*SD* = 17.22). Levene's Test for Equality of Variances revealed that this difference in variability was, in fact, not significant (p = .612). Thus, this hypothesis was not supported.

Hypothesis 16, Ambivalence: Individuals scoring lower on self-trust will score higher on ambivalence over the expression of emotion than will individuals higher in self-trust.

As hypothesized, a moderate negative correlation was obtained between the residual scores on self-trust and emotional ambivalence (r = -.35, p < .01), such that individuals scoring higher in self-trust obtained lower scores on the Ambivalence over Emotional Expressiveness Questionnaire (King & Emmons, 1990). This suggests that individuals higher in self-trust are less ambivalent, and thus more comfortable, with the expression of emotion.

Hypothesis 17, Expressiveness: Individuals scoring lower on self-trust will score lower on a measure of emotional expression than will individuals scoring higher in self-trust.

A small positive correlation was obtained between self-trust and the Emotional Expressiveness Questionnaire (King & Emmons, 1990). As hypothesized, there was a tendency for individuals higher in self-trust to be more emotionally expressive than individuals lower in self-trust ($r = .15$, $p < .04$ one-tailed).

Self-Contingencies

Hypothesis 18, Low Self-Trust/Self-Esteem: Individuals low in both self-trust and self-esteem will exhibit a contingent view of self, with a negative self-view contingent on failure experiences;

Hypothesis 19, Low Self-Trust/High Self-Esteem: Individuals low in self-trust but high in self-esteem will exhibit a contingent view of self, with a positive self-view contingent on experiences of success;

Hypothesis 20, High Self-Trust/Self-Esteem: Individuals high in self-trust and thus self-esteem, will not have a self-view that is contingent on experiences of either success or failure.

Sample Characteristics. Three participants dropped out of the study prior to completion, 8 participants were dropped because they indicated in a debriefing interview that they were suspicious regarding the nature of the lexical decision-making tasks, 6 participants' data were dropped due to excessive error rates (in excess of 20%), there was one equipment failure, three participants had missing data on self-esteem, and two participants had missing data on age. This left a final sample size of 125.

Main Analysis. The main analysis consisted of a Self-Trust by Self-Esteem by Context by Target Valence moderated within-subject regression analysis with self-trust and self-esteem as moderator variables, and context (success/failure/neutral) and target valence (positive/negative/nonword) as within-subject factors.

The hypotheses suggested for self contingencies were not supported. There was a significant within-subject effect for target valence ($t_{(988)}$ = -16.831, p < .000, $r^2\Delta$ = .06). Participants responded fastest to nonwords (M = .512, SD = .06) and negative adjectives (M = .508, SD = .07), and slowest to positive adjectives (M = .473, SD = .08). Within-subject data for target valence were entered into a Repeated Measures ANOVA. Within-subject contrasts revealed that participants' response times were significantly slower for positive adjectives than for either negative adjectives ($F_{(1,129)}$ = 134.59, p < .000) or nonwords ($F_{(1,129)}$ = 91.53, p < .000). Reaction times between negative adjectives and nonwords did not differ.

Variables Related to Others

Interpersonal Contingencies

Hypothesis 21, Low Self-Trust/Self-Esteem: Individuals low in both self-trust and self-esteem will exhibit a contingent view of interpersonal relationships, with an expectation of rejection contingent on failure experiences;

Hypothesis 22, Low Self-Trust/High Self-Esteem: Individuals low in self-trust but high in self-esteem will exhibit a contingent view of interpersonal relationships, with the acceptance of others contingent on experiences of success;

Hypothesis 23, High Self-Trust/Self-Esteem: Individuals high in self-trust and thus self-esteem, will not view interpersonal relationships as contingent upon experiences of either success or failure.

Sample Characteristics. Three participants dropped out of the study prior to completion, 8 participants were dropped because of suspiciousness regarding the nature of the lexical decision-making tasks, 3 participants' data were dropped due to excessive error rates (in excess of 20%), 3 participants had missing data on self-esteem, and 2 participants had missing data on age. This left a final sample size of 129.

Main Analysis

The main analysis consisted of a Self-Trust by Self-Esteem by Context by Target Valence moderated within-subject regression analysis with self-trust and self-esteem as moderator variables, and context (success/failure/neutral) and target outcome (acceptance/rejection/nonword) as within-subject factors.

The hypotheses suggested for interpersonal contingencies were not supported. There was a significant within subject effect for Outcome only ($t_{(1020)}$ = -5.77, $p < .000$; $r^2\Delta = .01$). Participants responded fastest to nonwords (M = .505, SD = .08), followed by acceptance words (M = .491, SD = .08), and slowest

to rejection words (M = .474, SD = .06). Within-subject data for target outcome were entered into a Repeated Measures ANOVA. Within-subject contrasts revealed that participants' response times were significantly slower for rejection words than for either acceptance words ($F_{(1,133)}$ = 64.04, p < .000) or nonwords ($F_{(1,133)}$ = 89.27, p < .000). Reaction times between acceptance words and nonwords also differed significantly ($F_{(1,133)}$ = 13.36, p < .000).

Self-Monitoring

Hypothesis 24, No Relationship: There will be no relationship found between self-trust and self-monitoring.

As hypothesized, there was no relationship between self-trust and self-monitoring (r = -.03, n.s.).

CHAPTER 10

DISCUSSION

Variables with Response Set or Developmental Implications

Need for Approval

Not only was the hypothesis that a negative relationship would exist between self-trust and need for approval not supported by the data, but the obtained correlation was significant and positive. Individuals who scored higher on the STQ tended also to score higher on the Marlowe-Crowne Social Desirability Scale. One explanation for this may be shared-method variance. Those who score higher on the Social Desirability Scale may score higher on all self-report, pencil-and-paper questionnaires regardless of the individual difference being measured.

This explanation is supported by the positive correlation between need for approval and the STQ subscale for external validation. It makes intuitive sense that if individuals seek self-validation from external sources they should also be higher in need for approval. But given the way that external validation was measured, a positive correlation between these two variables suggests a negative relationship. Higher scores on need for approval were associated with *less* of a self-reported tendency to seek external validation. Since independence and autonomy are socially desirable traits in North America, it is likely that individuals scoring higher on the Marlowe-Crowne scale will have a greater tendency to respond to the questions on the STQ in a socially desirable manner.

Thus, it appears as if the Marlowe-Crowne Social Desirability Scale is indeed measuring social desirability rather than need for approval, and it was treated as such in further analyses. Interestingly, a glance at the difference between correlations obtained between self-trust and those variables associated with a valenced view of self (e.g. ACL favorability/unfavorability scales and discrepance scores between positive and negative possible selves) with and without social desirability controlled reveals that any kind of positive response bias disappears when social desirability is controlled.

This raises an interesting question: If individuals higher in self-trust are more likely to respond with a positively valenced view of the self, are they responding with a self-presentation strategy or do they genuinely and automatically view themselves in a more positive light? One of the assumptions of self-trust is the assumption of self-worth. One way to maintain that sense of self-worth, according to Swann (1990), is through automatic processes such as selective attention, selective encoding of information, and selective interpretation. Thus, maintenance of trust in self may be partially dependant on individuals' attending only to positive information regarding the self. If this is the case, it seems likely that questions such as those posed by the Marlowe-Crowne Social Desirability Scale would evoke memories consistent with a positive response set. This possibility deserves further investigation, possibly in conjunction with the concept of positive illusions (Taylor & Brown, 1988), prior to any firm conclusions being drawn regarding self-trust and social desirability.

Relationship Style

The hypothesized relationships between self-trust and relationship style were partially confirmed. The interaction between self-trust and attachment was significant, with the mean on secure attachment significantly higher than the means on the insecure attachment styles at higher levels of self-trust. In addition, the mean for fearful attachment was significantly higher than the means for preoccupied and dismissing attachment styles at lower levels of self-trust, although it did not differ from the mean on secure attachment. Of the three insecure attachment classifications, fearful attachment was the one hypothesized to receive the least amount of validation developmentally and was thus expected to be especially prone to low self-trust. Secure and fearful attachment styles also emerged as having the strongest correlations with self-trust.

Interestingly, when attachment styles were correlated with the individual factors of the STQ, the correlations between the factor for *general* self-trust and preoccupied attachment became significant. The factor for general self-trust contains items such as 'It doesn't take much to get me to question myself' and 'I often find myself second-guessing my own decisions' that refer specifically to self-doubt or questioning the self. This factor emerged as the first and strongest factor of the STQ.

In addition, preoccupied attachment evidenced a significant negative correlation with the factor for external validation. Low scores on this factor

suggest a *higher* need for external validation, suggesting that individuals who rate themselves as higher on preoccupied attachment have a greater need for external validation. This is consistent with the portrayal of the preoccupied individual as having a lower sense of self-worth and higher levels of interpersonal trust (Bartholomew, 1989; Colin, 1996). The factor for external validation contains items covering judgment (i.e., I often seek reassurance from others that my ideas are sound), ability (i.e., I seldom need reassurance from others about my capabilities), and self-knowledge (i.e., I count on other people to help me identify my strengths and weaknesses). This suggests that preoccupied individuals have difficulty validating the self in many ways, and is consistent with developmental literature suggesting an absence of consistency and sensitivity in the responsiveness of the primary caregiver (Colin, 1996).

For respondents scoring higher on fearful attachment, there was no relationship with external validation, experiential trust or emotional trust. The lack of relationship with external validation may be due to the difficulty these individuals have in trusting others (Bartholomew, 1990; Colin, 1996). A profound distrust of others may make it less likely that the individual will *expect* others to validate them. At the same time, a lack of trust in the self may make it difficult to engage in processes of self-validation. These individuals may thus vacillate between self and other in attempts at self-validation, in the end trusting no one. This question deserves further empirical investigation.

For respondents scoring higher on dismissing attachment, there was a significant positive correlation with external validation, consistent with theoretical speculation that these individuals are highly autonomous persons who believe they do not need relationships with others (Bartholomew, 1989; Colin, 1996). These individuals thus report feeling no need to turn to others for validation of the self.

Finally, for individuals scoring higher on secure attachment, the hypothesized relationship with general self-trust was moderately strong and significant. Consistent with the reappearance of significant relationships between preoccupied and fearful attachment and self-trust, this correlation was considerably strengthened when looking only at this one factor. Interestingly, secure attachment did not correlate with external validation. It may be that for these individuals, turning to others for validation does not necessarily correspond with a lack of self-trust. Perhaps for those secure in their relationships with others, the opinions of others are equally important as the person's own opinion. This would be consistent with work conducted in the area of gender differences and self-in-relation (Chodorow, 1978; Gilligan, 1982; Miller, 1976). In that perspective, the interconnectedness with others may blur the boundaries between self and other so that the other's view or perspective is incorporated as one's own.

It is interesting that the factors for experiential trust and emotional trust failed to correlate significantly with *any* of the four attachment styles. These

factors are more personalized, referring specifically to trust in one's own feelings and perceptions. Feelings and perceptions may be more subjective states that are not easily validated by others. If so, the development of self-validation in these areas may revolve more around experiential factors and have less involvement with the individual's relationship with the primary caregiver or others in the environment.

Conclusions

This investigation supports the STQ as a valid measure of self-trust when viewed from the perspective of developmental and relationship processes. In particular, the first factor of the STQ, that of general self-trust, was moderately correlated with secure attachment and had small but reliable correlations with both preoccupied and fearful attachment styles after controlling for self-esteem and social desirability.

Speculations concerning the relationship of attachment styles to external validation deserve further investigation. The pattern of these correlations (or lack of correlations) suggests that there may be some involvement and interaction between self-trust and interpersonal trust. Individuals strong in interpersonal trust may be more open to the opinions of others if they are also high in self-trust. If they are low in self-trust, on the other hand, they may rely indiscriminately on the opinions of others. The latter is supported by the correlation between preoccupied attachment and external validation. For individuals who lack both interpersonal trust and self-trust, there may be

vacillation, confusion, and a defensiveness that possibly cause them to seek external validation while at the same time minimizing its importance.

Variables Related to Self

Self-Schema

Direct Measurement of Self-Trust

Of the many variables that went into the validation component of this investigation, two measurements of self, uncontaminated by conscious thought processes, were believed to come the closest to being direct measurements of self-trust. These were the measurements of self-certainty though the reaction time measure on the self-concept computer task, and influencibility, given by the correspondence between the subliminal primes with the participant's actual response on that same task.

Self-Certainty. Self-certainty refers to the extent to which people are clear about and confident in their own self-definitions (Campbell, 1990). It makes intuitive sense that if an individual is clear and confident that a particular trait describes him or her, that the individual has also accepted that trait as being part of the self. Since self-acceptance is integral to the concept of self-trust, faster reaction times may be measuring self-trust as well as self-certainty. If this is the case, the significant positive correlations obtained between the Self-Trust Questionnaire and reaction times serve to validate the STQ as a measure of self-trust.

Influencibility. The second measurement, that of influencibility given by the correlation between self-trust and the phi coefficient between the subliminal prime and response of the individual on the self-concept task, may have been measuring self-acceptance from a different perspective. In this case, the task may have been measuring a *process* of self-acceptance, with the subliminal cues acting to create self-doubt in those instances where the prime did not agree with what might have been the participant's actual belief about the self. If an individual accepts a particular self-referent adjective as being unconditionally related to his or her own self-definition (i.e. high self-trust), there should be little effect of the prime on response and thus no correlation. For those lower in self-trust, on the other hand, the creation of self-doubt may lead the individual to be more easily influenced thus creating a greater correspondence between the prime and response.

In this task prior to responding 'yes' or 'no' to whether a self-referent adjective described them, participants were primed subliminally to respond 'yes' or 'no'. These subliminal primes were randomized, and may or may not have reflected the participants actual belief. The hypothesis that participants higher in self-trust would be less influenced by these primes than individuals lower in self-trust received weak support. For the positive and negative self-referent adjectives, there was no correlation between self-trust and the prime. This may have been because these words were either strongly desirable (i.e., ambitious, curious) or strongly undesirable (i.e., cruel, complaining). Markus (1977)

suggests that people are more schematic on traits that are important to them. Thus, the strong desirability or undesirability of a trait may make it more likely that individuals are more schematic on these traits regardless of level of self-trust. With a greater degree of schematicity, according to Markus, participants are more likely to be certain of whether or not the trait describes them.

For the neutral category (i.e., outspoken, preoccupied), however, there was a very small correlation with self-trust that approached significance. As hypothesized, individuals higher in self-trust were less likely to be influenced by the subliminal prime than were participants lower in self-trust. Thus, individuals lower in self-trust may be more easily influenced by outside sources in defining the self than those higher in self-trust. Although the correlation is small, individuals are potentially influenced, at least a little, by the subliminal prime. Further research, possibly using stimuli that are not likely to be as closely related to self or by doing ideographic research where the actual schematicity for each attribute is controlled, might help to clarify this effect.

Other Measures of Self

Of the remaining four hypotheses one, defensiveness, was supported, while the hypotheses regarding a more balanced self-view, greater stability, and a lack of relationship with the self-confidence scale of the ACL were not supported.

Balanced Self-View. Those higher in self-trust were no more likely to view themselves in either a positive light or in a negative light than individuals lower in self-trust, after controlling the effects of self-esteem and social desirability. There was no relationship with the absolute value of the discrepancy score between favorable and unfavorable self-referent adjectives. There was a very small positive relationship between self-trust and the favorability subscale of the ACL and no correlation between self-trust and the unfavorability subscale of the ACL. Although not significant, these correlations hint that those higher in self-trust are more likely to view themselves in a positive light than individuals lower in self-trust. The complete lack of relationship between self-trust and the unfavorable subscale, on the other hand, suggests that those higher in self-trust are no more or less likely to endorse these negative attributes than those lower in self-trust. This is partially consistent with the hypothesis that those higher in self-trust would have a more balanced view of self. While leaning toward a positive orientation, they appeared to be as accepting of negative traits as those with lower self-trust.

As discussed earlier in the context of social desirability, it appears as if those higher in self-trust have a positive response bias, tending to a more positive image of self when completing self-report measures. It may be that this hypothesis was not supported as a result of that particular response set. However, even after controlling the effects of social desirability, there appears to be a positive bias in responsiveness.

These results might be explained by the assumption of self-worth inherent in the definition of self-trust. The leap of faith that the self is worthy may work to filter out negative definitions of self and emphasize the positive. It is also possible that a more positive orientation to the self acts to facilitate self-acceptance. I speculated in Chapter Two that self-acceptance was the end product of sensitive and responsive caregiving that created an atmosphere of unconditional positive regard. In this context, I felt that both the positive and negative aspects of self would be accepted without question. It may be, however, that unconditional positive regard does not preclude emphasizing the positive while downplaying the importance of the negative. If this is the case, the caregiver validates the positive view of self only, leading to a positive self-schema.

Additionally, as argued above, the maintenance of the self-schema, self-worth, and self-trust may be dependent on self-validation processes such as selective attention and selective encoding of information (Swann, 1990). If this is the case, the high self-trusting individual may routinely screen out negative information about the self, preventing it from becoming part of the self-definition. Ultimately, if the individual is scoring higher on positive traits and lower on negative traits, the correlation with the absolute value is likely to be nonexistent.

Defensiveness. This hypothesis was partially supported. Gough and Heilbrun (1965) point out that this particular scale is also a measure of social desirability with those scoring high evidencing a socially desirable response set

and those scoring low evidencing a reaction against social mores. In fact, a moderately strong positive correlation does exist between the ACL defensiveness scale and the Marlowe-Crowne Social Desirability Scale.

It is interesting that the Marlowe-Crowne Social Desirability Scale correlated positively with self-trust, indicating that those *higher* in self-trust were more likely to respond in a socially desirable manner. Individuals scoring higher in self-trust also had higher scores on the ACL defensiveness scale. Yet this scale evidenced greater variability for those *lower* in self-trust, indicating that those lower in self-trust were also more likely to respond in a socially desirable manner. The ACL defensiveness scale includes a defensive orientation opposite to social desirability. It allows for a response bias that says, in effect, "look at what a rotten person I am" as well as the equivalent of the positive response bias of the Marlowe-Crowne Social Desirability Scale. As such, it may be more closely capturing a truly defensive kind of response bias than the Marlowe-Crowne Social Desirability Scale. This lends further support to the suggestion that for those higher in self-trust, a positive response set may be more closely aligned with a positive manner of viewing the self than a defensive self-presentation strategy.

Stability. Those higher in self-trust were no more likely than low self-trusters to present a stable self-view across tasks. The measurement of stability used was the phi coefficient between adjectives checked on the pencil-and-paper version of the ACL and those indicated as self-descriptive on the computer

task. As with the correlations between prime and response, the socially desirable characteristics of the positive and negative self-referent adjectives may have been such that individuals were more likely to respond the same across tasks regardless of level of self-trust. However, there was a fairly normal distribution of scores across conditions, and there was no significant correlation between the phi coefficient and self-trust for the neutral adjectives as there was with the prime-response measurement. This suggests that another explanation is likely.

Because participants completed these tasks at two different times, it is likely that different situations and events triggered different representations of self in working memory (Damon & Hart, 1986; Gergen & Gergen, 1988; Markus & Kunda, 1986; Markus & Nurius, 1986; McGuire, McGuire, & Cheever, 1986). The paper-and-pencil task and the computer task were undertaken at two different times. The questionnaire packages were distributed to participants early in the semester, prior to assignments coming due and the inception of mid-term exams. By the time these participants returned to complete the computer task, however, they had begun to write mid-terms, assignments, and papers. It is likely that feedback from exams and assignments created a different mindset, whether positive or negative, and that participants thus had a different conception of self in working memory. Even if this were not the case, even fluctuations in day-to-day activities and relationship ups and downs might trigger different representations of self.

This does not mean that an individual's self-concept is not stable, but rather that individuals may have different aspects or representations of self salient at any given time. Thus stability, as measured in this investigation, may not be a valid indicator of self-trust.

Campbell (1990) did find that stability of the self-concept was related to self-certainty and clarity. The fact that self-trust is also related to self-certainty suggests that it should also be related to stability. Perhaps, because self-trust is hypothesized to work outside of conscious awareness, stability of self-conception also needs to somehow be tracked or tested outside of conscious awareness. This might be accomplished, for example, through the use of lexical decision-making tasks presented on two different occasions, separated by time.

Self-Confidence. Finally, contrary to prediction, a relationship was found between self-trust and self-confidence as measured by the ACL. In hindsight, looking at the attributes that went into the measurement of self-confidence (e.g., confident, independent), it is apparent that these may easily describe high self-trusting individuals. Thus, self-trust may in fact overlap with this measure of self-confidence to some extent. But other characteristics described by this scale (e.g., dominance, impatience) may not describe all individuals high in self-trust. As discussed in Chapter 7, a high self-truster may be as likely to adopt a more passive presentation of self. If this is the case, these particular individuals might have scored lower on the self-confidence scale, thus bringing the correlation down. This suggests that self-acceptance, implicit in the definition of self-trust,

and self-confidence as defined by this scale are unrelated constructs. While some individuals high in self-trust might accept themselves as dominant and impatient others may not.

A better measure of self-confidence may be that found implicit in the definition of self-certainty. As Campbell (1990) demonstrated, an individual who is more certain of who they are is also more confident in their responses. This measure of self-certainty was, in turn, related to self-trust and thus to self-acceptance. The high self-trusting individual was found to be more certain of the self and thus, by definition, more confident in their responses regarding their own self-definitions.

Self-Esteem

As predicted, there was a relationship between self-trust and self-esteem, but the correlation was stronger than expected. Individuals scoring higher in self-trust were likely to score high on self-esteem as well.

The second hypothesis, concerning the relationship between self-esteem stability and self-trust was not supported. For individuals either high or low in self-esteem, self-trust scores did not vary as a function of self-esteem stability. The large positive correlation between self-esteem and self-trust suggests that individuals high in self-esteem are also likely to be high in self-trust. There may be one of three explanations for these null results. First, it may be that those high in self-esteem are by definition also high in self-trust. But the correlation

between the two, while large, is not perfect indicating that high self-esteem is not necessarily the equivalent of high self-trust.

The second possibility is that individuals who are high in self-esteem and low in self-trust are likely to display a socially desirable response set. If this is the case, then scores on both the STQ and self-esteem may be inflated, leading to a false interpretation of the results. Social desirability was controlled, however, so it is unlikely that this is the explanation.

Finally it may be that, just as individuals with genuinely low self-esteem are hard to find (Baumeister, et al., 1989), individuals with a combination of high self-esteem and low self-trust are also rare. If the analysis were more heavily weighted by individuals with a combination of high self-esteem and high self-trust, any effects of self-esteem stability for those with low self-trust would be masked. In fact, it is the case that there were very few individuals in the upper half of self-esteem that also scored in the lower third of self-trust. This possibility deserves further attention.

Possible Selves

The hypothesis that individuals higher in self-trust would exhibit a greater balance between positive and negative possible selves than would individuals lower in self-trust was not supported. The small positive correlation between self-trust and the absolute value of the discrepancy score between positive and negative possible seives suggested that individuals high in self-trust might be

more, rather than less, polarized in their views of the self. Examination of the correlation between self-trust and the actual value of discrepancy scores confirmed that this polarization was likely to be in a positive direction, with those higher in self-trust more likely to endorse positive possible selves than those with lower self-trust.

Hypothesis ten, suggesting a positive relationship between self-trust and the discrepancy score between possible selves and probable selves, was partially supported. There was a small but significant positive relationship between the STQ and the discrepancy between positive possible and positive probable selves. This suggests that individuals higher in self-trust are more likely to view positive selves as more possible than probable than individuals lower in self-trust. For negative possible selves, however, there was no relationship between the discrepancy score and self-trust. Individuals higher in self-trust were no more likely than those low in self-trust to view negative selves as more possible than probable.

These findings are consistent with a more positive view of self for individuals with higher self-trust, and remain significant with self-esteem and social desirability controlled.

Self-Complexity

The hypothesis that individuals higher in self-trust would also score higher on a measure of self-complexity was not supported. Individuals higher in self-

trust were only slightly more likely than those low in self-trust to score high on the self-complexity task.

It is possible that the self-complexity task was not administered correctly. Rather than rely strictly on the instructions given by Linville (1982), it was found that a research assistant was answering participants' questions concerning the meaning of self-aspects by giving examples (i.e., different roles or ways of being you). This may have contaminated the measure to the extent that participants who would otherwise have scored low were led to think about themselves in different ways. This possibility is supported by the lack of correlation between self-esteem and self-complexity, a relationship that has been demonstrated elsewhere (i.e., Campbell, Chew, & Scratchley, 1991).

Finally, it is possible that some individuals low in self-trust have more complex self-views, and some individuals higher in self-trust have less complex self-views. If this is the case, it may be that there are individuals low in self-trust who show greater self-complexity as a result of being less clear about their own self-concept. Campbell (1990) found that individuals with low self-esteem were less consistent in responses to self-descriptive adjectives, responding either "me" or "not me" to both members of opposite pairs. Lower self-certainty or lower self-trust may thus correspond with a greater number of self-descriptive traits in working memory at any given time. If, for example, an individual is required to make a decision as to whether or not the trait "studious" decribes her or him, an individual high in self-trust might immediately recall times spent

studying. A low self-trusting individual, on the other hand, who stops to question whether or not they are studious, may recall evidence supporting both studious and nonstudious aspects of the self, thus creating greater cognitive complexity.

This is not to say that individuals higher in self-trust should be lower in self-complexity. It may be simply that these individuals are more focused on the task at hand, responding more quickly when required to make an immediate decision and putting more thought into tasks such as the self-complexity card sorting task that require them to do so.

Emotionality

Emotionality was measured through the use of three different measurement instruments. Two of these, developed by King & Emmons (1990) measure the components of emotional expression and ambivalence regarding the expression of emotion. The third, developed by Larson (1984) measures the felt intensity of expressed emotion.

Two of the three hypotheses given for emotionality were supported. First, individuals who scored higher on self-trust tended to score lower on ambivalence over the expression of emotion. Second, those scoring higher on self-trust also scored higher on a measure of emotional expressiveness. Taken together, this suggests that high self-trusting individuals are more comfortable with feeling and expressing their emotions while those low in self-trust have difficulty in this area.

The hypothesis that individuals lower in self-trust would be either more intense in the expression of emotion or more restricted in emotional expression was not confirmed. No differences in variability of the STQ scores were found between high and low self-trusters. It appears as if individuals higher in self-trust are just as variable in the experienced intensity of emotions as those lower in self-trust. Rather than being connected with *intensity* of emotional expression, self-trust may be more related to the ability to identify, feel, and express emotion comfortably, as demonstrated by significant correlations between self-trust and the first two measures of emotion.

Self Contingencies

The lack of a four-way interaction, or any other significant interactions with self-trust suggests that the participants' view of themselves was not contingent on their experiences of success or failure as a function of self-trust, self-esteem, or a combination of these two variables. Further, there were no significant effects at all to suggest that people's self-view was contingent on their experiences of success or failure as those contingencies were measured in this investigation. As I will discuss in more detail in the following section, this may be an artifact of the way contingencies were measured or analyzed, and thus warrants further investigation.

Overview of Self Findings

Table XXV summarizes the hypotheses concerning the self and the degree of support each received.

Table XXV. Summary of Hypotheses concerning the Self.

Hypothesis	Yes	Partial	No	Unknown
Self-Schema				
Balance			X	
Defensiveness	X			
Influencibility		X		
Stability			X	X
Certainty	X			
Self-Confidence			X	
Self-Esteem				
Level of Self-Esteem	X			
Self-Esteem Stability			X	
Possible Selves				
Positive/Negative Possible Self Discrepancy			X	
Possible/Probable Self Discrepancy		X		
Self-Complexity			X	X
Emotional Experience				
Emotional Intensity			X	
Emotional Ambivalence	X			
Emotional Expression	X			
Self Contingencies				
Low Self-Trust/Low Self-Esteem				X
Low Self-Trust/High Self-Esteem				X
High Self-Trust/High Self-Esteem				X

Positivity Bias?

It is interesting that among those hypotheses that did not receive full support, three pulled towards a positivity bias, with small correlations suggesting that high self-trusting individuals were more likely to think of themselves in a positive manner even after controlling for both self-esteem and social desirability. Thus, "openness to experience" which was postulated to be associated with high self-trust may have little to do with a balanced view of self as hypothesized. Rather, these individuals may be open to hearing negative viewpoints but may automatically process such information in a way that is selective in both attention and encoding (Swann, 1991). They may, in other words, hear negative feedback but not listen to it.

A second method of maintaining this positive bias might come in the form of positive illusions. Taylor and Brown (1988) have demonstrated that positive illusions are associated with feeling good about the self, which is linked to high self-esteem. Perhaps it is this ability to overlook the "reality" of the more negative aspects of self that fosters the leap of faith necessary to the establishment of self-trust. But, if self-trust is established at a very early age, how might the child who has yet to understand the self and the world in terms of "good" and "bad" develop positive illusions?

While not providing a direct answer to this question, Murray, Holmes, and Griffin (1996a; 1996b) provide a clue. In their investigation into the role of positive illusions in intimate relationships, they found that individuals were

happier in their relationship if their partner's overlooked the personal self-perceived "realities" and saw the best in them (Murray et al., 1996a). Over time, this translated to more positive perceptions of self and, especially for women, more security in attachment style (Murray et al., 1996b). This supports a Rogerian (1961) perspective on developing self-worth and self-trust through unconditional positive regard. It also suggests that secure attachment style is the result not only of consistent and sensitive responsiveness by the primary caregiver, but also of an emphasis on the positive qualities in the child.

This emphasis on the positive from birth might breed positive illusions about the self that in turn help to foster self-trust. Additionally, caregiver validation of the positive aspects of self while negating the negative may lead to the automatic self-validation processes necessary to self-trust. In this instance, rather than validating all actual aspects of self, the individual may learn to automatically self-validate the *presence* of the positive aspects and the *absence* of the negative aspects.

Final Image of High Self-Trusting Individual Compared with Initial Prototype

The biggest change in the image of self presented in the initial prototype of a high self-trusting individual (Appendix A) and picture that has emerged here concerns the positivity bias found for those with a higher level of self-trust. This positivity bias was evident in many of the measures, including self-esteem, the

Adjective Check List, and possible selves. Thus, rather than finding a greater balance between the positive and negative aspects of the self, high self-trusting individuals appear to think of themselves in positive terms.

This individual also appears to be certain of self-worth, but stability of self-esteem does not appear to influence self-trust scores. While possibly remaining open to experience, the high self-trusting individual may selectively attend to and encode positive events and viewpoints, maintaining a high level of positive illusions that serves to perpetuate a positive view of self. Emotional expression appears to come freely and naturally and with little or no ambivalence, but there appears to be no relation to the intensity of the felt emotion. This person appears to be certain of the self-concept, but the results for self-concept stability were equivocal. The null results obtained in this investigation are not consistent with the relationship between self-certainty and self-concept stability. Thus, this aspect of self will require further investigation.

High self-trusting individuals also show some tendency to be less influenced by outside sources as hypothesized. This effect was weak, however. The absence of stronger results may have been an artifact of the self-concept task used to measure it. It may be very difficult to manipulate an individual's conception of self and, as with the stability measure, further investigation is indicated.

The hypotheses regarding self-acceptance require modification to the extent that high self-trusters appear to accept the *positive* aspects of themselves

unconditionally, while possibly accepting the *absence* of negative aspects of self unconditionally. The latter is supported by reaction time results in which individuals higher in self-trust were likely to respond more quickly both to positive and negative aspects of self. The faster reaction times to negative aspects of self suggests that less processing time was required prior to responding to these adjectives. It is unknown whether or not the adjectives were automatically rejected, but given the positivity bias found elsewhere it is fair to speculate that perhaps they were.

Finally, equivocal results were found for self-complexity and self contingencies, which may have been contaminated by errors in design or administration. Further research is required with both of these constructs before any inferences regarding their relationship with self-trust can be determined.

Variables Related to Others

Interpersonal Contingencies

There were no significant effects associated with the manipulation designed to measure interpersonal contingencies. This investigation also failed to replicate Baldwin and Sinclair's (1996) finding that expectations of the responses of others are based on an interaction between self-esteem and success or failure experiences. Baldwin and Sinclair obtained a three-way interaction between context, outcome, and self-esteem, such that participants with low self-esteem showed evidence of outcome (acceptance or rejection)

being contingent on context (success or failure). Although this investigation attempted to replicate the methodology employed by Baldwin and Sinclair exactly, the words used by those investigators were not readily available, and comparable words were selected from a thesaurus. This may have accounted for the failure to replicate.

A second possibility for failure to replicate may have been in the differences in the way the data were analyzed. Baldwin and Sinclair categorized self-esteem based on a median split, and performed a repeated measures analysis of variance. This may be an ineffective strategy for analyzing self-esteem data for two reasons. First, scores on the Rosenberg (1965) self-esteem scale are typically skewed, with both mean and median fairly high on the scale (Baumeister, et al., 1989). Thus, the "low" self-esteem group incorporates many individuals that might be better classified as "high," or at the least "medium" in self-esteem. The second reason is directly related. Any time a median split is used to categorize continuous data the "moderate" scores, which may be a combination of high and low scores, are indiscriminately assigned to one category or the other and tend to confuse the issue and produce misleading conclusions (Sorrentino & Short, 1977). Even if the continuous variable were divided into three categories to get a clear picture of high versus low scorers, much variability and information are lost through categorization (Pedhazur, 1982).

For these reasons, this investigation employed a moderated within-subject regression analysis to analyze the effects of both continuous and within-subject variables. If the methodology adopted and the words used to test the effects were not significantly different that those employed by Baldwin and Sinclair (1996), it is likely that the more powerful analysis that was used in this investigation gives a closer estimate of the actual effects obtained.

Thus, the failure to obtain the hypothesized effects in this investigation may have been an artifact of the methodology but at the same time raises important questions about the replicability of the Baldwin and Sinclair findings. Perhaps the use of a single word does not have the capability of priming context to the desired degree. If this is the case, no conclusions can be drawn at this time regarding the relationship between self-trust and interpersonal contingencies. This particular hypothesis thus requires further investigation.

Self-Monitoring

As hypothesized, there was no relationship between self-trust and self-monitoring, thus providing discriminant validity in this context. Self-monitoring is very much a self-presentational strategy while self-trust is involved with self-validation at all levels. This may involve validating the self as a truly gifted actor on the one hand, or validating a truly unique self with no need or desire to fit the presentation of self to different situations.

Summary

In sum, the profile of a self-trusting individual that has emerged through this analysis is that of a person with a very positive orientation toward the self, in the conceptualization of both current and future selves. This individual has a greater degree of self-confidence, is more certain of the self-concept, and is less easily influenced by outside sources than is the individual with lower self-trust. This person is comfortable with both the experience and expression of emotion and has greater felt security in ongoing interpersonal relationships.

Results concerning defensiveness are equivocal. On the one hand, individuals lower in self-trust displayed greater degrees of defensiveness as measured by the defensiveness scale of the ACL. This suggests that these individuals are more likely to either seek attention or have a greater need for approval that individuals who score higher in self-trust. On the other hand, there was a positive relationship between social desirability and *high* self-trust, suggesting that individuals high, rather than low, in self-trust have a more defensive style of responding. The question of whether this is a genuine self-presentation strategy or is a result of a naturally positive response bias for individuals high in self-trust remains open.

Further work also needs to be conducted with influencibility, self-concept stability, self-complexity, and self- and interpersonal contingencies prior to drawing inferences regarding their relationship with self-trust.

PHASE III

CONFIRMATION OF THE STQ

CHAPTER 11

CONFIRMATION OF PSYCHOMETRIC PROPERTIES AND FACTOR STRUCTURE OF THE SELF-TRUST QUESTIONNAIRE

Acceptable psychometric properties were established for the Self-Trust Questionnaire in Phase One of this investigation. These statistics were confirmed, and somewhat strengthened, with the small sample collected in Phase Two at the University of Calgary. Phase One also looked at the factor structure of the STQ and established four correlated factors. The purpose of Phase III was to confirm both the psychometric properties and the factor structure of the STQ with the help of a large sample of participants.

Method

Participants

A total of 1,657 individuals completed the STQ on the Internet. Of those, 4 were dropped for missing data on more than 10% of the items, 2 were dropped because of extremely low scores on the STQ, and 85 were dropped because they were under age 16. This left a final sample of 1,566 ranging in age from 16 to 78, mean 26.55, standard deviation 9.24. Of these, 638 (42%) of the 1,531 respondents who reported their age were over the age of 25. Thirty-one percent were between the ages of 16 and 20, and the remaining 27% were aged 21-25. Detailed sample characteristics are given in Table XXVI.

Procedure

The 26-item version of the STQ, which included the three items each unique to males and females, was posted to the Internet, and links were

Table XXVI. Demographic Characteristics for Phase 3 Sample.

			Valid N	Percentage
Age				
Males	Mean	27.30	444	28.3%
	Standard Deviation	9.69		
Females	Mean	26.15	1079	68.9%
	Standard Deviation	8.99		
Gender				
	Males		445	28.4%
	Females		1088	69.5%
Marital Status				
	Single		1044	66.7%
	Married		345	22.0%
	Living Together/Not Married		149	9.5%
Education				
	Less Than High School		49	3.3%
	High School Diploma		234	14.9%
	Technical/Trade School		43	2.7%
	Some College/University		649	41.4%
	Bachelors Degree		328	20.9%
	Masters Degree		169	10.8%
	Ph.D.		39	2.5%
Current Residence				
	Africa		5	.3%
	Asia		71	4.5%
	Antarctica		1	.1%
	Australia/New Zealand		43	2.7%
	Europe		176	11.2%
	Canada/United States		1197	76.5%
	Mexico		9	.6%
	Central America		6	.4%
	South America		16	1.0%
	Middle East		13	.8%
	West Indies		4	.3%

established with the American Psychological Society and Yahoo. Data were collected through the use of Form Saver, a software package available through Shareware for MacIntosh computers. Form Saver captured the data submitted by the participants and saved it to file. No identifying characteristics such as name or e-mail address were requested or saved to file. The software used did, however, automatically save the date and time of submission, as well as the Domain Name Server (DNS) of the respondent. Since this information had the potential of identifying particular individuals, the data file was cleaned weekly and the DNS was deleted at that time.

Data collection began early November, 1996, and proceeded through mid-June, 1997. During this 7 ½ month period 1,657 responses were gathered.

Results

Because the STQ had been reduced to 20 items after this version was posted to the Internet, the six items dropped from the original questionnaire were dropped from the Internet data prior to proceeding.

Examination of the Final Scale

Following Tabachnick and Fidell (1989) cases were prepared for further analysis as follows. First, missing data were replaced by the mean response for the particular item. If greater than 2 items (10%) for a particular respondent contained missing data, that case was excluded from further analysis. Two male respondents and two female respondents were excluded by this criteria. Of

these four, one was Asian and one was European, although all four were currently residing in North America.

The assumption of normality within items was checked using expected normal probability plots (Tabachnick & Fidell, 1989). These plots check each case against an expected value based on rank order in a normal distribution. All variables appeared to have a normal distribution, with only minor deviations from the diagonal.

Responses were check for outliers by total score (Tabachnick & Fidell, 1989). Cases with scores given as extremes on stem-and-leaf displays were excluded from further analysis. Two 16-year-old females were excluded by this criteria. The final N's for all further analyses were 1,088 females, 445 males, and 33 with unknown gender.

Gender Differences

Two-tailed t-tests of sex differences were conducted on total STQ scores and age. Significant differences between males and females were found on both total score ($t_{(883.70)}$ [19]= 3.879, $p < .000$) and age ($t_{(1521)}$= 2.175, $p < .03$). An inspection of group means suggested that the scores of men were higher and more variable than those of women, and male respondents tended to be older than female respondents. See Table XXVII for means and standard deviations.

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[19] Levene's Test for Equality of Variances indicated that males and females did not have equal variances. Thus, the t-test reported is based on a violation of the assumption of homogeneity, and the df were adjusted accordingly.

Table XXVII. Means and Standard Deviations on age and total STQ scores for males and females.

	N	Mean	Std. Dev.
AGE	1523		
Female	1079	26.17	8.99
Male	444	27.30	9.69
TOTAL SCORE STQ	1533		
Female	1088	64.72	14.71
Male	445	67.77	13.66

Because an interaction between age and gender was discovered in the initial sample of participants, this possibility was again explored. A mixed-model regression analysis was performed to test the assumption of homogeneity of regression coefficients. With STQ total as the criterion variable, an interaction term was computed between age and gender and entered hierarchically to these two predictors. In this case the interaction approached, but did not reach significance ($p = .10$). Therefore the predictors of age and gender were examined to see whether gender accounted for a significant amount of variance over and above that accounted for by age. With age entered first as a covariate, gender was found to account for a significant amount of variance ($F\Delta_{(1, 1520)} = 10.97$, $p < .001$). It might be noted, however, that the effect size was very small ($r^2\Delta = .007$) with gender accounting for less that 1% of the variance in total STQ scores. Because the effect size was so small, the final scale was examined with data collapsed across gender.

Psychometric Properties

This 20-item scale had a mean of 65.66, standard deviation 14.61. The mean inter-item correlation was .27 with a minimum of .11 and a maximum of .63. Cronbach's alpha is .88. A comparison of these statistics with those obtained in Phase One and Phase Two of data collection is given in Table XXVIII. It can be seen that with the "noise" contributed by the 46 items that were dropped removed, the scale is somewhat strengthened, with stronger internal consistency and inter-item correlations. This is most pronounced for the data collected during Phase Three from the Internet. Scores are more variable than those obtained in the first two samples. See Table XXIX for item characteristics.

Table XXVIII. A Comparison of the Psychometric Properties of the STQ between Phase 1 and Phase 3 of Data Collection.

	Phase I N = 1189	Phase II N = 148	Phase III N = 1566
Scale			
Mean	64.93	67.93	65.66
Standard Deviation	11.79	11.96	14.61
Inter-Item Correlations			
Mean	.22	.23	.27
Minimum	.00	.00	.11
Maximum	.57	.58	.63
Cronbach's Alpha	.85	.86	.88

Table XXIX. Item Characteristics of the Final Version of the Self-Trust Questionnaire.

	Item	Item Total *r*	Item Mean	SD
19.	It doesn't take much to get me to question myself.	0.60	3.4	1.2
17.	I often find myself second-guessing my own decisions.	0.58	3.0	1.2
16.	When I see myself differently from the way others see me I tend to doubt myself.	0.57	3.5	1.1
18.	Sometimes I have difficulty knowing what it is that I'm feeling.	0.53	3.2	1.3
13.	I count on other people to help me identify my strengths and weaknesses.	0.49	3.4	1.2
15.	I have a great deal of difficulty in knowing when something is right for me.	0.47	3.7	1.1
20.	I seldom need reassurance from others about my capabilities.	0.46	3.0	1.2
12.	Sometimes I become confused about what I am feeling.	0.46	2.6	1.2
9.	I often find myself questioning my version of reality.	0.43	3.6	1.2
6.	I often find that I can't trust my feelings.	0.42	3.9	1.1
1.	I often seek reassurance from others that my ideas are sound.	0.39	2.5	1.1
4.	I don't need feedback very often to know that I'm doing a good job.	0.38	2.9	1.1
3.	When I have to make a decision I often look to others for advice.	0.37	2.3	1.1
2.	Often after I talk to people, I question whether I have heard them correctly.	0.36	3.3	1.2
11.	I seldom talk about my feelings because I'm afraid that they are wrong or stupid.	0.35	3.9	1.2
10.	I rarely have difficulty in identifying my own emotions.	0.34	3.5	1.3
5.	Sometimes I wonder if what I've seen is really what it appears to be.	0.34	2.8	1.2
8.	Insight into myself comes easily to me.	0.34	3.6	1.1
7.	I seldom question whether I have seen something correctly.	0.34	3.2	1.1
14.	It doesn't bother me if I see myself differently from how others see me – it's my view that counts.	0.31	3.6	1.1

It is possible that the differences in the psychometric statistics from Phases one and two to Phase three can be accounted for by greater variability in the sample. Participants from the Internet exhibited greater diversity in all areas, including age, educational background, and marital status. To test whether the differences could be accounted for by this greater diversity, a sample of respondents from the Internet population were matched for gender, age, education, marital status, and culture with participants from Phase Two. Three participants in phase two failed to report age or gender and were dropped from this analysis, leaving a final sample of 145 University of Calgary undergraduates and 145 matched respondents from the Internet.

Table XXX gives the comparative psychometric properties of the two groups of participants. Scores on the Internet population remain more variable, and psychometric properties remain stronger than those from the University population. T-tests were conducted on total score between the two groups of respondents, and differences between the Internet and the University were not significant. Differences between the coefficients for inter-item correlations and Cronbach's alpha were tested using Fisher's *z*, as given in Howell (1987). There were no significant differences in any of these statistics. Levene's test for equality of variances (Howell, 1987) indicated that the Internet population was significantly more variable than the University population ($F_{(1,144)} = 8.17$, $p < .005$), even with this matched sample.

Table XXX. A Comparison of the Psychometric Properties of the STQ between Phase 2 and a sample from Phase 3 matched for demographic characteristics.

	U of C N = 145	Internet N = 145
Scale		
Mean	67.80	65.28
Standard Deviation	11.83	14.67
Inter-Item Correlations		
Mean	.23	.29
Minimum	-.02	-.05
Maximum	.58	.60
Cronbach's α	.86	.89

To discover whether the difference in variability was generally pervasive throughout questionnaire or whether it could be attributed to one or more of the separate factors, t-tests were conducted for each of the four factors. After adjusting the alpha level with Bonferonni's correction to .0125, Levene's test for equality of variances suggested significant differences in the variability between samples for the factors of External Validation ($F_{(1,143)} = 9.60$, $p < .002$) and Emotional Trust ($F_{(1,143)} = 16.31$, $p < .000$) only. The variability between samples for the factor of General Self-Trust approached significance ($F_{(1,143)} = 5.70$, $p < .018$), and the two samples were clearly homogenous on the factor of Experiential Trust ($p < .21$).

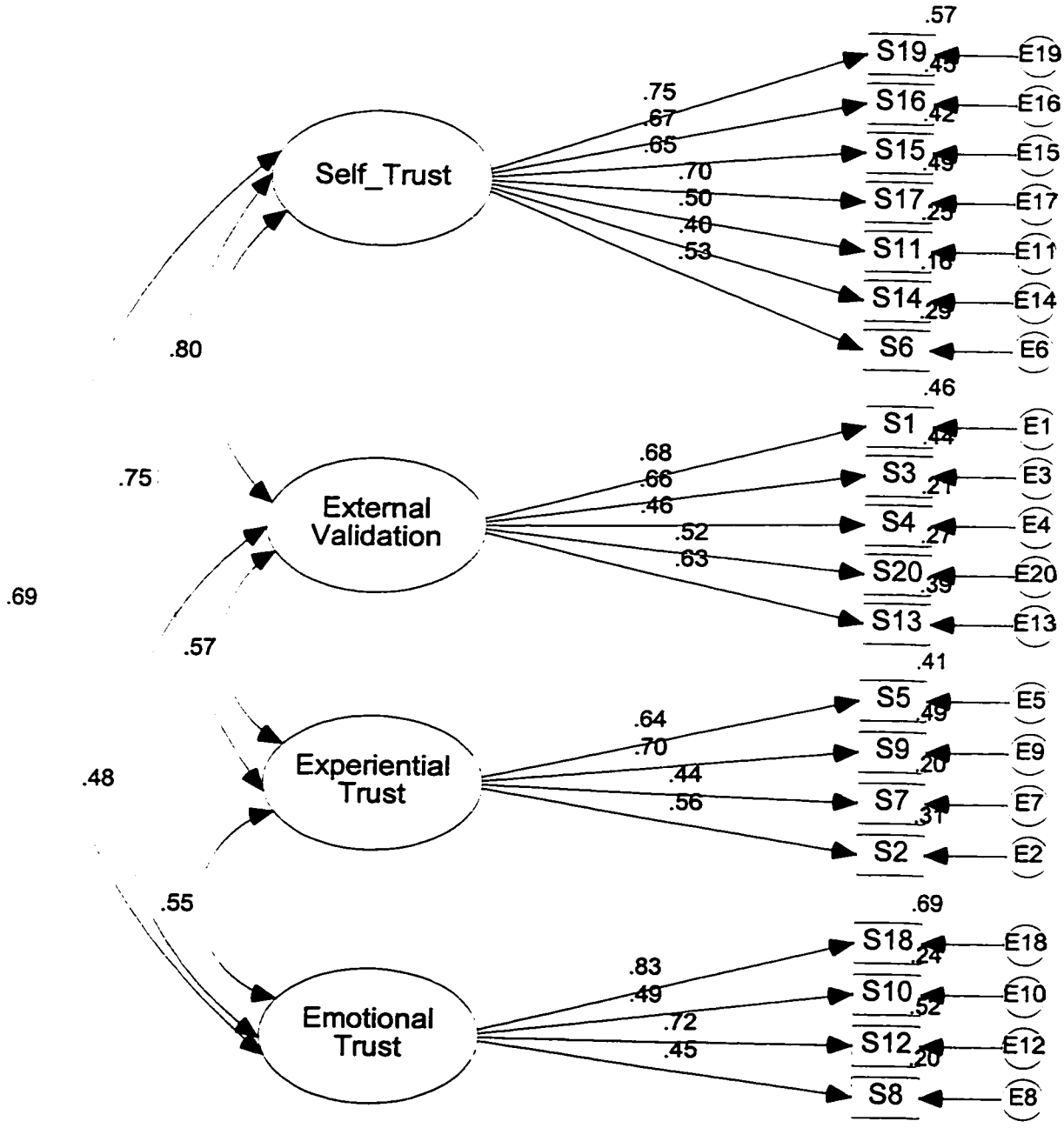
Confirmatory Factor Analysis

A confirmatory, Maximum Likelihood factor analysis was conducted to test the factor structure obtained in Phase One. Using Amos, a structured equation modeling statistical package, four latent variables were created for each of the four factors originally obtained, and each was loaded with it's respective items according to the results of the initial factor analysis (see Figure 7). The latent variables were allowed to correlate.

A first glance at the statistics obtained suggested that the data did not fit the model ($x^2_{(164)} = 1017.63$, $p < .000$). However, given the very large sample tested, it is highly likely that the x^2 statistic picked up small and unimportant departures from the null hypothesis (Arbuckle, 1997; Bentler & Bonett, 1980; Browne & Mels, 1992; Cochran, 1952; Gulliksen & Tukey, 1958; Jöreskog, 1969). Thus, alternative indices of fit, the Goodness of Fit Index (GFI; Arbuckle, 1997; Jöreskog & Sörbom, 1984; Tanaka & Huba, 1985) , and the Adjusted Goodness of Fit Index (AGFI), were examined. The AGFI takes into account the degrees of freedom available for testing the model. The GFI ranges from zero to one, with one indicating a perfect fit. The AGFI also has an upper limit of one, but may drop below zero. Values close to one suggest a good fit to the data.

In this case both the GFI (*GFI* = .93) and the AGFI (*AGFI* = .92) indicated that the data provided a reasonable fit to the model. Factor loadings are reasonable high, ranging from .44 to .83, and the oblique factor structure was confirmed with intercorrelations among factors ranging from .48 to .80.

Figure 7. Model Structure and Results of Confirmatory Factor Analysis.



Discussion

Psychometric Properties and Factor Structure

Both the psychometric properties and the factor structure of the STQ were confirmed. The psychometric properties of this questionnaire were strengthened somewhat, with stronger inter-item correlations and internal consistency. Scores were significantly more variable than those obtained in either of the first two samples. This may have been due to the fact that all data were obtained from the Internet, which provided an older and more diverse sample than that obtained among undergraduates in a University environment. In the first phase of data collection, the sample was comprised of 64% university students and only 36% from the Internet. In the second phase, all respondents were obtained from the University of Calgary.

This was not the case, however. Data from Phase III was matched according to the demographic characteristics of the Phase II University population, and psychometric properties were compared. Even when matched for educational level, age, gender, and culture, data from Phase III remained significantly more variable than data from Phase II. Interestingly, the significant differences in variability were confined to the factors of External Validation, Emotional Trust, and possibly General Self-Trust. There were no differences for the factor of Experiential Trust. This makes sense, since it is probably in

experience as defined by this factor (e.g., sensation and perception) that individuals would be expected to be the least variable in their scores.

It is not possible, given this data set, to determine why there was more variability in Internet scores. Just because participants were matched as closely as possible for age, gender, culture, and education does not mean that respondents were all alike. It is a fact that all respondents from the University of Calgary were currently students when they responded to the questionnaire. Given the fact that the data were collected during the day, it can probably be assumed that all were full-time, serious students, as compared with students attending night or weekend courses to upgrade their skills in a particular area. Whether or not this was the case with the matched sample is unknown. Respondents who indicated that they had completed some college or university may or may not have currently been students. If they were not, variability in their life experiences or individual differences could easily account for variability in scores. For example, those that started college or university and subsequently dropped out may have differed in desire to succeed, socioeconomic status, life circumstances, or any number of characteristics that could account for differences in self-trust.

Conclusions. Given these particular considerations, I believe that it is fair to say that the Internet sample differs considerably from the University sample in the composition of individuals contained within each. Variability in test

scores most likely reflects the rich diversity of individuals tapped through Internet research.

Internet Applications

Use of the WWW as a tool for data collection facilitated the collection of data in all phases of questionnaire construction. Large samples were collected from culturally diverse populations with educational levels ranging from less than a high school degree through Ph.D. This method of data collection has allowed us to generalize the psychometric properties of the Self-Trust Questionnaire beyond the typical University population of late adolescents to a world-wide population of computer literate adults. A second advantage was the ability to collect large amounts of data with a minimum of time and effort expended.

Comparisons across Samples

In a comparison of the Internet version with a paper-and-pencil version in Phase I the student sample was found to be comparable to the more heterogenous Internet sample, with respect to the basic properties of the scale. In Phase III, a matched sample of scores from the Internet and the paper-and-pencil responses from Phase II were compared. Again, there was no difference in total scores. The Internet sample demonstrated somewhat stronger cohesiveness and internal consistency, and there were significant differences in variability between the two samples. It is unknown whether these differences are caused by a lack of veridicality in the Internet sample or represent valid

differences between the two populations. Differences may have been the result of the Internet sample having been "contaminated" by the addition of six items that were not included on the pencil-and-paper version in Phase II. Although these six items were dropped prior to computation of final scores and comparisons with the University sample, the additional six items could conceivable have triggered a different mind-set so that items were interpreted and/or responded to differently.

Drawbacks

The major difficulty encountered on the Internet was in the respondents' propensity to submit the questionnaire more than once. On one occasion, a participant submitted the questionnaire a total of 10 times. These multiple submissions were found and duplicate data was deleted when the forms were submitted in close proximity in time. It is possible that these respondents expected feedback in the form of a score and when that was not forthcoming submitted the form a second and third time, up to the maximum found of ten. Although the informed consent clearly stated that participants would not receive scoring information, many may not have read the informed consent in its entirety.

It is possible that other respondents submitted the form more than once and it was not caught. This would have been the case if the forms were submitted hours or days apart where other information was submitted between times. Because of ethical guidelines prohibiting any type of identifying characteristics, the DNS (identification of the server) was the only data submitted

that could identify the respondent. This was deleted regularly, and thus it was not possible to screen data for multiple submissions that did not immediately follow one another.

Participants may also have given false information on some of the demographic questions. For example, at least one 16-year-old participant indicated that he/she had obtained a Ph.D. Some time and effort were needed to locate and delete obviously erroneous data such as this. Other false information, such as incorrect age, gender, and so forth, is not amenable to detection.

Ethical Considerations

The drawbacks discussed above, particularly in terms of multiple submissions, suggest that there may be different ethical considerations when collecting data on the Internet than when collecting data in person. Of course, we are still concerned with issues such as informed consent, voluntary participation, and confidentiality. But new issues arise in terms of expected scores and accessibility of the researcher to answer questions.

Informed Consent. Informed consent is a staple of doing any kind of research, whether under the auspices of a university or other organization. Until now, however, it has been possible to give that informed consent in person, verbally as well as in writing. When a participant is sitting across from a researcher, there is a social pressure to read through the informed consent, regardless of length. For the occasional participant who feels it unnecessary to

do so, the researcher can launch a verbal explanation of the participant's rights thus insuring that the participant is properly informed.

On the Internet, the consent form precedes the questionnaire, and upon its conclusion participants are required to click on a button that says "I Agree." While this is a legally binding agreement as attested to by the preponderance of on-line applications such as software agreements and credit card information, it by no means forces the participant to read the document prior to continuing on to the questionnaire or survey. Some of this information, such as a participant's right to voluntarily withdraw his/her participation will be taken as self-evident. There is nothing embedded in the questionnaire format itself that forces a respondent to complete it. They can, at any time, click the "back" button to exit the application or scroll to the bottom of the questionnaire and click the "submit" button without completing the questionnaire.

In other ways, not reading the informed consent *can* be a problem. In this case, the fact that participants would not receive a score on self-trust was information embedded in the informed consent that was crucial to the voluntary nature of the participant's responses. If the reason a participant volunteered to complete the questionnaire was out of a curiosity as to their own level of self-trust, they may have elected not to continue had they actually read up front that this score would not be forthcoming. It may have been their frustration at not receiving that score that led to multiple submissions of the STQ. Do our ethical

responsibilities stop here because we have "informed" them prior to completion of the questionnaire that they would not receive a score?

My answer to that question is a firm "no." I believe that it is our ethical responsibility as researchers to take the minimal likelihood of respondents actually having read the informed consent into account and build in checks and balances. One way to resolve this problem would be to have a link leading to a "score" page embedded that would come up upon submission of the questionnaire. But rather than having a score given on that page, the participant would first receive a reminder that the informed consent mentioned no score would be given followed by an explanation of why it is not ethically advisable for us to provide this information. The former will circumvent any kind of resentment at having completed the questionnaire prior to being "informed" that no score would be given, and the latter would hopefully satisfy their curiosity as to why it was not forthcoming.

Voluntary Participation. The issue of voluntary participation was addressed in the preceding section. Difficulties encountered in getting the Internet participant to actually read the informed consent make the voluntary nature of their responses questionable, especially if they are expecting something that they do not receive. Procedures outlined above can be used to ensure that this situation is ethically treated. Other ethical considerations concerning the voluntary nature of participation are not a problem. The Internet participant who does not like the nature of questions being asked feels social

pressure to answer a particular question, and dropping out of the study is only a mouse-click away.

Anonymous Participation and Confidentiality of Responses. Again, there are new issues that arise as the result of putting research on the Internet. Anonymity can be assured, on the one hand, by using software designed to collect responses instead of using an e-mail survey, and by not asking for any identifying information such as name or e-mail address. On the other hand, software packages designed to collect information from the Internet may automatically add fields for DNS, date, and time. Date and time are fine, and these alone could help to identify potential multiple submissions of the form. The DNS entry, however, is problematic. Even in its most benign form, such as "AptivaM71 198.146.135.41" it has the potential of identifying the respondent if a person with access to the file has the motivation and technical knowledge to track it down. More problematic, however, are those DNS entries that include a name, such as "Pasveer.Aptiva.M71 198.146.135.41." Windows 95 provides an option for naming the computer and that name is included in the DNS entry as illustrated above.

Inimical to this problem is the problem of duplicate data. The DNS was used in this investigation as a way of identifying multiple submissions. Unfortunately, given ethical constraints regarding confidentiality of the data, only those multiple questionnaires that were submitted close in time could be identified and removed. Immediately afterwards, the DNS was removed from the

file. Those identified in this way could as easily have been identified using only the date and time.

More importantly, if we are to ensure the veridicality of the data collected by this method we need to find a way of identifying potential duplicate submissions that have been separated by time. To do this would require that the DNS entry be retained until the end of data collection so that multiple submissions from any one DNS could be examined for potential duplicates. This in itself poses a problem, since there are many computers that exist for public use. A computer lab at a university, for example, may be accessed by as many students as attend the university. Thus, it is entirely possible, and highly probable, that some servers will have multiple users and there will be multiple submissions from that server. This is compounded by the fact that it is highly unlikely that any one person will respond the exact same way at two different times. It does, however, give us a starting point in identifying potentially problematic data and thus deserves further attention.

Scores. Finally, there is the ethical problem surrounding scores. While I have addressed this issued in the section on Informed Consent, I think it fair to add a caveat. In North America, at least, we live in a society where we can pick up a magazine, complete a survey, and get a score on something. We can get scores on anything from what color preferences have to say about our

personality to sex appeal or how we rate in the romance department.[20] This is compounded by the many questionnaires, and particularly questionnaires regarding personality and IQ that are not only available for completion of the Internet, but do in actuality give the respondent a score and in some cases an explanation of what that score means. This may lead to a population of respondents who search the Internet for questionnaires in the interest of finding out more about themselves, and *expecting* to receive a score for each questionnaire they complete.

This not only poses the ethical considerations discussed above, but leads to questions about the sample itself. We know the sample to be older and more diverse than that collected from a University population. We know it to be fairly educated as testified by the demographics collected in this investigation, and computer literate. Finally, it is highly unlikely that all respondents are self-selected on the basis of trying to learn something about themselves. But this does raise an interesting question, and one that might be addressed in future research on the Internet: What is the motivation of people who respond to questionnaires on the Internet?

Conclusions

On balance, data collection through use of the Internet was successful. Active recruitment of participants was not necessary, and data were collected in

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[20] I have not recently seen surveys regarding these particular examples, but these are the kinds of things that come to mind when thinking about magazine surveys.

a form suitable for data analysis. Although drawbacks were encountered, the advantages of a large sample size justify using the Internet as a data collection source. Having entirely "clean" data sets is always a challenge, but the virtual impossibility of checking the veridicality of data on the Internet requires researchers to use data from the Internet cautiously. Procedures for minimizing inaccurate or fraudulent data reporting should involve at minimum including sufficient demographic questions to catch transparent inconsistencies (e.g., sixteen-year-old PH.D. holders) and studies run in parallel using non-Internet samples to corroborate conclusions drawn using Internet-based data. In order to more fully exploit the Internet as a data collection resource, researchers will need to explore additional mechanisms for checking data veridicality, such as the inclusion of questions designed to tap social desirability or even a simple question asking if the participant had completed the questionnaire previously. The effort involved in addressing the data accuracy issue will be well spent given the potential size and diversity of Internet samples.

CONCLUSIONS

CHAPTER 12

GENERAL DISCUSSION

The Self-Trust Questionnaire

Psychometric Properties

The Self-Trust Questionnaire has demonstrated excellent psychometric properties that generalize across samples of at least two populations: a university population and a more diversified computer-literate population. It has strong internal consistency and acceptable test-retest reliability. The oblique four-factor structure was confirmed, suggesting that the instrument can be viewed as measuring one concept, self-trust, with four different components contributing to the total score.

Validation

Direct Measurement. The STQ was validated as a self-report measure of self-trust, although with some caveats. Demonstrated correlations were found between the STQ and two measures of self-trust that could be considered to be more direct due to the more automatic, outside of conscious awareness nature of the tasks. First, participants higher in self-trust responded more quickly to self-referent adjectives suggesting a greater degree of self-certainty. Campbell (1990) found self-certainty to vary as a function of self-esteem. Since self-trust also correlates strongly with self-esteem, it may have been the case that it was self-esteem, not self-trust, that was accounting for the variability. However, the correlations between reaction times and self-trust remained significant, even with the variance from self-esteem removed.

Second, participants lower in self-trust were more likely to be influenced by a subliminal prime embedded in a self-concept computer task suggesting a greater propensity to be influenced by outside sources. It may be that the subliminal prime, which encouraged participants to respond either 'yes' or 'no' to self-referent adjectives, acted to trigger self-doubt when the prime did not agree with the participants chosen response. Low correlations between the phi coefficient and self-trust might be accounted for by the fact that the primes were randomized so that it was possible that the prime did coincide with the participants' chosen responses at least fifty percent of the time. But even the small correlations obtained give some evidence that there is something going on related to self-trust and thus encourage future research in this area.

Related Concepts. Evidence of convergent validity of the self-trust construct comes through evidence of relationships with defensiveness as measured by the Adjective Check List, self-confidence, self-esteem, a possible/probable selves discrepancy score, measures of emotional expressiveness and ambivalence, and relationship styles. Divergent validity was established through the lack of a relationship with self-monitoring.

Interestingly, the relationship between self-trust and defensiveness as measured by the ACL defensiveness scale did not correspond with the relationship between self-trust and defensiveness as measured by the Marlowe-Crowne Social Desirability Scale. While the ACL scale suggested that those *lower* in self-trust were more likely to seek attention or to have a more socially

desirable response set, the Marlowe-Crowne Social Desirability Scale suggested that individuals *higher* in self-trust were more likely to either have a greater need for approval or evidence a more socially desirable response set. This raises questions as to what, exactly, the Marlowe-Crowne Social Desirability Scale is measuring. Given the nature of intercorrelations with the External Validation subscale of the STQ, it is apparently not measuring need for approval as suggested by Crowne and Marlowe (1964). However, it may be that it is also not measuring social desirability as commonly assumed, or at least not for all individuals. It may be that for some individuals a positive orientation to self is a very real part of their self-concept. These individuals may accept the positive and reject the negative aspects of self or self's functioning automatically. If this is the case, high scores obtained on a measure designed to tap a self-presentation strategy reflecting a positive response bias may not be an accurate reflection of socially desirable responsiveness for individuals with a strong positive orientation to self. The implications of this possibility are extensive, given the number of social psychological investigations that have held this variable constant with assumption that it was measuring a presentation strategy.

Caveats. Perhaps the most important caveat, then, concerns the fact that the variability associated with social desirability as measured by the Marlowe-Crowne scale *was* removed from the STQ scores prior to viewing the relationship between the STQ and other variables of interest. If, in fact, individuals high in self-trust scored high on this scale as the resule of a genuine positive orientation

to self, valuable information concerning the relationship of self-trust to other variables might have been lost.

Secondly, the relationship between the phi coefficient for the subliminal prime on the self-concept task and the STQ was very small, and obtained only with the self-referent adjectives that were not judged to be highly socially desirable or undesirable. The small coefficients might be the result of a combination of two things. First, self-trust might be related more to process than to structure, a notion that will be explored in more detail later in this discussion. If this is the case it might be very difficult to influence *anybody*, regardless of level of self-trust to change their self-definition on the basis of a subliminal prime. Second, as noted above, there may have been some methodological problems with the randomization of the primes. It might be fruitful in the future to create a design where the primes are selected to be opposite of what might be judged to be most participants' responses, or to select target words that are more ambiguous in meaning for participants.

Finally, there was no direct manipulation of self-trust. Given ethical constraints in place at the University of Calgary that disallowed any kind of false feedback manipulation, regardless of the benign nature of the task, it was not possible to manipulate self-trust in the validation of this questionnaire. Until such time as this type of task can be undertaken, it cannot be stated unequivocally that this is a valid measure of the construct under consideration.

Process versus Structure

Looking at the results of the validational component of this investigation it becomes clear that self-trust is a *process-oriented* construct, as opposed to being part of the structural organization of the self-system. Hypothesized relationships that failed to materialize were those between self-trust and self-structure or schema, such as self-complexity and the stability of the self-concept across time and measures. The constructs that self-trust was most strongly related to, on the other hand, involved some kind of process. The role of self-trust in relationships, for example, was clearly demonstrated through its relationship with relationship style. Not only was self-trust confirmed as an important component of secure relationships, but implications were presented for the development of self-trust and secure attachment as the result of developing positive illusions, and for interactions between self-trust and interpersonal trust. This is particularly important, since developmental pathways to self-trust were drawn on the basis of pioneering work done by early childhood attachment theorists (Ainsworth, et al., 1978; Bowlby, 1969, 1973, 1980; Main and her associates, 1985, 1986), and others who have brought this work into the realm of adult attachment (e.g. Bartholomew, 1989, 1990; Hazan & Shaver, 1987).

In short, self-trust is believed to be an automatic *process* that operates outside of conscious awareness. As such, it may be part of what Epstein (1994) refers to as an experiential system, where stimuli are first processed

automatically and outside of conscious awareness by virtue of being filtered through a tapestry of unique, individual experience.

The difference between Epstein's formulation of the experiential system and self-trust is that in Epstein's formulation, emotional experience or reactivity is integral to the experiential system. The results of this investigation hint at the possibility that self-trust is also integral part of the experiential system. As such it may moderate the relationship between whether the emotion or intuition is recognized and/or accepted and the individual's subsequent behaviors and responses. Thus, all individuals, regardless of level of self-trust, have an experiential component to their self-system. But the way this system is utilized, whether the individual works with it or against it, may be dependent on self-trust.

Implications

The implications of this research are potentially far-reaching. First, and most obvious, it has the potential of explaining what is going on behind the scenes. If self-trust mediates the individuals response to the experiential system there are potential clinical implications. For example, there were moderate correlations obtained between self-trust and emotions, so that individuals lower in self-trust were less expressive and less comfortable in expressing emotions. This could potentially have psychopathological consequences, particularly in the repression and subsequent inappropriate expression of anger.

In terms of an experiential way of thinking and knowing, Epstein (1994) has suggested that it might be more adaptive to use a combination of emotional/ intuitive and rational thinking processes. But if part of that experiential system is low self-trust, the ability to effectively hear and respond to the experiential system itself may be lost. In other words, part of low self-trust might mean an inability to trust the intuitive, leading to an over-reliance on the rational. At the other extreme, low self-trusting individuals might have a greater tendency to over-react from an emotional base if they also tend to block awareness of the experiential system.

Finally there was an implication regarding the role of relationships in developing and possibly maintaining self-trust. Murray et al. (1996a; 1196b) have demonstrated a connection between relationship satisfaction and the partner's unconditional positive regard for the self. Further, longitudinal investigations by these authors provided a direct like between the positive regard in which the individual is held by the partner and both secure attachment and well-being. If the positive bias apparently maintained by high self-trusting individuals is in part or in whole maintained by positive illusions, and if those positive illusions are maintained and strengthened by the unconditional positive regard of others, the highly judgmental attitudes maintained by some individuals in positions of authority (i.e., police) may serve only to perpetuate a lowered sense of self-trust and negative view of self.

Drawbacks

There were several drawbacks to this investigation. First, there was a question as to the validity of methodology used to measure self-complexity. While the lack of relationship between self-trust and self-complexity was proposed as a result of the structural nature of self-complexity versus the process-oriented nature of self-trust, the result remains equivocal due to possible experimenter influence. In addition, the contingency tasks were problematical. This may have been due to methodological error, differences in data analysis, or problems with Baldwin and Sinclair's (1996) original conceptualization of the task. Therefore, no conclusions can be drawn concerning the relationship between contingencies and self-trust.

The major drawback to this investigation is the fact that there was no real direct manipulation of the construct of self-trust. Without true experimental manipulation of self-trust, it cannot be unequivocally stated that the Self-Trust Questionnaire is measuring what it was designed to measure. Just as it is very difficult to convict an individual of first-degree murder based on purely circumstantial evidence, so it is impossible to say that the Self-Trust Questionnaire is measuring self-trust without a reasonable doubt.

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APPENDIX A

PROTOTYPE OF AN INDIVIDUAL HIGH IN SELF-TRUST

A self-trusting individual may have no need to actively and consciously evaluate the self in terms of worth. She or he may be quite certain of self-worth and may thus present with very stable self-esteem. This person may be open to experience in a manner that allows knowledge of hurtful events to exist such that these events are well-integrated with the emotion surrounding them and reconciled in such a way as to evoke a balanced emotional response that is neither overly intense nor overly restrictive. Emotional expression should come freely and naturally, and with little or no ambivalence. This person should be possessed of a degree of certainty regarding the self-concept, so that while he or she is flexible and open to different definitions of self-concept in different situations, the self-concept is neither exceptionally restricted nor consistently vacillating. The self-trusting individual should be open to negative aspects of, and possibilities for, the self, presenting with a more balanced view of the self in terms of positive and negative traits and positive and negative future possibilities.

Following the lines of thinking of earlier researchers (e.g., Earl, 1987; Smith et al., 1973), self-trust may contain a component of self-reliance, such that in situations where one's own decisions or opinions conflict with those of important others, the individual is able to trust her or his intuitive feeling regarding the decision rather than relying heavily on outside resources. This definition of self-trust differs from the concept of self-reliance in that the self-trusting individual does not compulsively rely only on his or her decisions or opinions, but is open to the opinions and decision processes of others. In the

process of coming to a decision, the person high in self-trust would not be averse to integrating the thoughts and opinions of others into his or her own perspective. Rather, when it came time to make a final decision the person high in self-trust would rely on her or his own intuitive process concerning the 'rightness' of that opinions or that decision. Thus, there is no tension between trust of self and trust in others, or between autonomy and connection, inherent in this definition.

In interactions with themselves and others, high self-trusting people are likely to accept the self unconditionally. They are able to accept themselves, their mistakes, and their accomplishments without generalizing an overly negative or positive view of the self from one situation to other aspects of the self or other contexts. Along these lines, high self-trusting people are likely to have more complex views of the self with fewer redundancies of self-concept from one context to the next.

APPENDIX B

OPEN-ENDED QUESTION CONCERNING SELF-TRUST EXPERIENCES

I have created a questionnaire to measure Self-Trust, but would like to add as many more items as possible. My definition of self-trust is:

> The capacity to be open to one's self and one's experience in a nonevaluative and nonjudgmental fashion such that, while retaining the propensity to evaluate and judge one's actions and experiences in a particular domain, these actions and experiences are not generalized to other aspects of the self. That is, a self-trusting individual can allow her- or himself to make a mistake without feeling as if the self is 'stupid' or 'bad' as either the result or the cause of that error.

Self-trust may operate in a variety of domains. Some that I have attempted to tap on the questionnaire are judgment, feelings, experience, intuition, self-knowledge, behavior, and abilities.

Please take a few minutes to think about experiences of self-trust (or the lack of it), and tell me how you think you might see evidence or lack of evidence for self-trust in the above domains.

Thank you for your help.

APPENDIX C

INFORMED CONSENT FOR INTERNET

Consent for Research Participation

Self-Trust: Development and Measurement of a Concept

Investigators: Karen Pasveer and John Ellard, Department of Psychology, University of Calgary

This consent is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you can contact the investigator at 403-220-5217 or by e-mail kpasveer@acs.ucalgary.ca. Please take the time to read this form carefully and to understand any accompanying information.

This is a pilot study designed to test the reliability and consistency of a self-trust questionnaire that has been constructed by the investigator. You will be required to respond to 148 items concerning your ability to trust yourself in a variety of domains, such as judgment, feelings, and behaviors. In addition, you will be asked several general questions about yourself, such as age and sex. This questionnaire will take approximately ½ hour to complete, and participation is open to anyone willing to take the time to complete the questionnaire.

Participation is completely voluntary. You are free to refuse to respond to any of the items presented, and you may withdraw from the study at any time, without penalty.

This project is not expected to involve risks of harm any greater than those ordinarily encountered in daily life. While it is not possible to identify all potential risks in any procedure, all reasonable safeguards have been taken to minimize the potential risks.

Your responses to the questionnaire will remain completely confidential. The results of this project will be coded in such a way that your identity will not be physically attached to the final data that is produced. The results of this research may be published, but your name will not be associated in any way with any published results.

It is not possible to provide participants with individual results, but if you are interested in obtaining the overall results of this study or of the larger study of self-trust, notify the experimenter and the results will be made available to you. If you have any further questions between now and the time the research is completed, you are free to contact the investigator when they arise. The investigator may be contacted at the following e-mail address: kpasveer@acs.ucalgary.ca.

Continuation with the questionnaire indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to not answer specific items or questions in interviews or on questionnaires. You are free to withdraw from the

study at any time without penalty. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact:

Karen Pasveer or John Ellard.

If you have any questions concerning your participation in their project, you may also contact the office of the Vice-President (Research) at the University of Calgary and ask for Karen McDermid, 403-220-3381.

APPENDIX D

E-MAIL ANNOUNCEMENT

Dear Colleague,

I have recently published a questionnaire to the World Wide Web, and would like to ask your cooperation in gathering responses. This is a first draft version of a Self-Trust scale, currently at 72 items. Upon collection of a normative sample I would like to narrow it down to 25 items.

Please take a few minutes of your time to

(a) complete the questionnaire yourself, and/or

(b) encourage your colleagues/students/friends to do the same

All information submitted is completely confidential - no personally-identifying factors are included in the data file.

This questionnaire will be posted through October 31st at:

http://www.psych.ucalgary.ca/People/GradStudents/kpasveer/SelfTrust.html

Thank you so much for your help.

Karen Pasveer

Ph.D. Candidate

University of Calgary

APPENDIX E

DEBRIEFING ON THE INTERNET

What This Questionnaire Is All About

Thank you very much for participating in this research. This investigation was concerned with testing a questionnaire that will be used in the future in an investigation of self-trust. This questionnaire is currently in somewhat of a "rough draft" stage. Many items have been generated by the investigator to be included in the questionnaire. After we have gathered responses in this pilot study, we will be able to see which items are best to keep, and which can be dropped to shorten the questionnaire. In the end we hope to get it down to 25 items or less.

After completion of this pilot study, a larger study of self-trust will be conducted. In this larger study participants will be asked to complete several computer tasks, including the self-concept task described above, and several other measures of self-concept. All of these measures are based on a Prototype of a Self-Trusting Person.

If you have any questions or concerns about this investigation, please feel free to ask. e-mail (kpasveer@acs.ucalgary.ca).

Prototype of a High Self-Trusting Person

A person high in self-trust is likely to have had a secure relationship with his/her parents and significant others as a child, and to have felt loved and validated. If not, the high self-truster has worked through any negative childhood experiences in such a way that they are able to understand and accept the

hurtful actions of the other person. The high self-trusting individual is one who can give a consistent definition of the self across context and situation, and recognize that aspects of the self may vary according to situation or role. This person is also able to expand on definitions of the self so that the self is well-defined with a balance of positive and negative adjectives. Emotions are expressed properly, and these people are comfortable in expressing their emotions. Self-esteem is high and stable. The self-concept is balanced and is more complex than the self-concepts of low self-trusters. The self-trusting person is also able to express a greater degree of individuality in reference to self-concept, meaning that they look to themselves, rather than to others, to find their image of themselves. Along with this greater degree of individuality, these individuals are less likely to think of themselves conditionally. In other words, they are able to accept themselves and their mistakes without feeling as if they were bad or stupid. Rather, because they are open to experience, they are able to use any mistakes they might make as learning experiences. Self-trusters are aware of their feelings at any given moment, and they are more aware of subjective states such as first impressions than are low self-trusters. These individuals do not rely on, or place a great amount of emphasis on, the judgments and opinions of others in maintaining their self-concept.

APPENDIX F

SELF-CONCEPT COMPUTER TASK

INSTRUCTIONS TO PARTICIPANTS

AND WORDS USED

Instructions for Participants

In this task you will be shown a series of words and asked to indicate whether or not the word describes you. You will first see a 'mask' that looks like '######', followed by a second 'mask'. The second mask will be followed by the target word. Your task is to look at the target word and to indicate whether or not you believe that it could be used to describe you. Click the left mouse button (Yes) if you believe the word describes you. Click the right mouse button (No) if you believe the word does not describe you. Please respond as quickly and as accurately as possible. You will be given 12 practice trials, followed by 45 actual trials. You can control the speed at which these items are presented. The item will not be shown until you give a mouse click in response to the 'Are you?' prompt. You will be prompted with the words 'Are you?' prior to each trial.

If you have any questions, ask the experimenter now. CLick either mouse button when you feel you understand the instructions and are ready to begin.

Words Used

Positive	*Negative*	*Neutral*
Forgiving	Irritable	Outspoken
Adventurous	Complaining	Reflective
Enterprising	Frivolous	Pessimistic
Dependable	Unfriendly	Dignified
Tolerant	Immature	Contented
Cheerful	Careless	Witty
Energetic	Self-pitying	Wholesome
Thoughtful	Coarse	Preoccupied
Poised	Impatient	Daring
Sincere	Indifferent	Stubborn
Curious	Shallow	Restless
Humorous	Cruel	Relaxed
Ambitious	Foolish	Polished
Clever	Hostile	Tense
Loyal	Rigid	Thorough

APPENDIX G

SELF-COMPLEXITY

INSTRUCTIONS TO PARTICIPANTS

Instructions for Participants*

In this study we are interested in how you describe yourself. In front of you are 33 cards and two recording sheets. I'll let you look through the cards when I finish giving you the instructions. Each card contains the name of a trait or characteristic. Your task is to form groups of traits that go together, where each group of traits describes an aspect of you and your life. You may sort the traits into groups on any meaningful basis —but remember to think about yourself while doing this. Each group of traits might represent a different aspect of yourself. Form as many or as few groups as you desire. Continue forming groups until you feel that you have formed the important ones. I realize that this task could be endless, but we want only what you feel is meaningful to you. When you feel that you are straining to form more groups, it is probably a good time to stop.

Each group may contain as few or as many traits as you wish. You do not have to use every trait, only those that you feel are descriptive of you. Also, each trait may be used in more than one group, so you may keep reusing traits as many times as you like. For example, you may find that you want to use the trait relaxed in several groups. If you wish to use a trait in more than one group, you may use one of these blank cards on the table. Simply write the trait and its number on a blank card and then proceed to use it as you would the other cards.

The sheet with the columns is your recording sheet. Use the recording sheet to indicate which traits you have put together. Each column will

correspond to one of your groups. Notice the number in the corner of each card. Write only the trait's number in the column, not the name of the trait. In each column, place the numbers of the traits that form a group. A natural way to perform this task is to form one or several groups and record them, then mix up the cards and see if there are other groups that you wish to form and then record them. Repeat this procedure until you feel that you have formed the groups that are important to you. Remember to use the blank cards if you wish to use the same trait in more than one group. We are only interested in which traits you put together. It is not necessary to label the groups unless you wish. Do not put your name on the recording sheet. Your responses are strictly anonymous and confidential. So be as honest as you can.

As you are doing the task, I'd like you to keep a few things in mind. Remember that you are describing yourself in this task, not people in general. You do not have to use all of the traits, and you may reuse a trait in several groups. Take as much time as you like on the task. Do you have any questions about this task? Now look at each of the traits and let me know if you need a clarification of the meaning of any trait. When you are finished, please turn over your recording sheet, and let me know that you are done.

*From Linville, 1987

APPENDIX H

SELF CONTINGENCY COMPUTER TASK

INSTRUCTIONS TO PARTICIPANTS

AND WORDS USED

Instructions for Participants

In this task you will be presented with two items for each trial. The first will always be a word. This word will be followed by either another word or a nonword, composed of a word with one letter removed. It is your job to attend to the second item, and to respond as quickly and accurately as possible whether this is a word or not. Click the left mouse button (Yes) if it is a word. Click the right mouse button (No) if it is not a word.

You will be given 20 practice trials first, followed by 96 actual trials. You can control the speed at which these items are presented. The first of the two items will not be shown until you give a mouse click in response to the 'Ready?' prompt. You will be prompted with the word 'Ready?' prior to each trial. If you have any questions, ask the experimenter now.

Click either mouse button when you feel you understand the instructions and are ready to begin.

Context Words

SUCCESS	*FAILURE*	*NEUTRAL*
Accomplish	Blunder	Articles
Advance	Botch	Branch
Advantage	Defeated	Detergent
Gain	Drown	Fence
Master	Fail	Lists
Outwit	Fall	Bench
Overcome	Flunk	Output
Profit	Fruitless	Folklore
Progress	Frustrated	Recording
Prosper	Lose	Tasks
Succeed	Mistake	License
Surmount	Ruined	Markets
Surpass	Stumble	Blanket
Triumph	Trip	Piano
Victory	Unfortunate	Conductor
Win	Victim	Roles

Outcome Words

Positive Adjectives

Adaptable	Good-looking
Adventurous	Good-natured
Ambitious	Humorous
Appreciative	Imaginative
Cheerful	Industrious
Clever	Intelligent
Courageous	Inventive
Curious	Optimistic
Energetic	Rational
Enterprising	Resourceful
Enthusiastic	Sincere
Gentle	Versatile

Negative Adjectives

Affected	Immature
Arrogant	Impatient
Careless	Irritable
Coarse	Loud
Cowardly	Moody
Cynical	Opinionated
Disorderly	Quitting
Dull	Rigid
Foolish	Self-centered
Frivolous	Shallow
Gloomy	Spineless
Greedy	Weak

Nonwords

Allotmnt
Asembly
Assmption
Blankt
Burdn
Chalenge
Cocktal
Communties
Continuty
Controvrsy
Corportions
Diffculties
Dignty
Dollr
Elctron
Encountr
Exhibt
Formtion
Frendship
Improvment
Instrction
Intrference
Kingdm
Legnd
Limtations
Magzines
Mantl
Metrpolitan
Netwrk
Newpapers
Oprator
Paintngs
Percption
Powdr
Presentaton
Recogntion
Reltive
Remrk
Repubicans
Sampls
Settlment
Sheltrs
Solutons
Suggstion
Temprature
Theat
Velocty
Warfar

APPENDIX I

INTERPERSONAL CONTINGENCY COMPUTER TASK INSTRUCTIONS TO PARTICIPANTS AND WORDS USED

Instructions for Participants

In this task you will be presented with two items for each trial. The first will always be a word. This word will be followed by either another word or a nonword, composed of a word with one letter missing. It is your job to attend to the second item, and to respond as quickly and accurately as possible whether this is a word or not. Click the left mouse button (Yes) if it is a word. Click the right mouse button (No) if it is not a word.

You will be given 20 practice trials first, followed by 96 actual trials. You can control the speed at which these items are presented. The first of the two items will not be shown until you give a mouse click in response to the 'Ready?' prompt. You will be prompted with the word 'Ready?' prior to each trial. If you have any questions, ask the experimenter now.

Click either mouse button when you feel you understand the instructions and are ready to begin.

Context Words

SUCCESS	*FAILURE*	*NEUTRAL*
Accomplish	Blunder	Articles
Advance	Botch	Branch
Advantage	Defeated	Detergent
Gain	Drown	Fence
Master	Fail	Lists
Outwit	Fall	Bench
Overcome	Flunk	Output
Profit	Fruitless	Folklore
Progress	Frustrated	Recording
Prosper	Lose	Tasks
Succeed	Mistake	License
Surmount	Ruined	Markets
Surpass	Stumble	Blanket
Triumph	Trip	Piano
Victory	Unfortunate	Conductor
Win	Victim	Roles

Outcome Words

ACCEPTANCE		*REJECTION*	
Accepted	Honored	Abandoned	Humiliated
Acclaimed	Interesting	Attacked	Negated
Admired	Likable	Avoided	Opposed
Affirmed	Lovable	Bypassed	Rebuffed
Applauded	Praised	Condemned	Refused
Appreciated	Prize	Despised	Rejected
Approved	Respected	Discarded	Repulsed
Cherished	Rewarded	Discredited	Ridiculed
Chosen	Selected	Dishonored	Scorned
Complimented	Valued	Disliked	Shunned
Congratulated	Welcomed	Disregarded	Unaccepted
Esteemed	Worthy	Excluded	Unloved

Nonwords

Anxity	Deprtments	Limtations	Reltive
Artry	Doctrne	Marshl	Residnce
Automoble	Doctrs	Misiles	Satsfaction
Balet	Emergncy	Montains	Scientsts
Benfits	Emplyment	Observatins	Senstivity
Canidate	Endng	Oposition	Sentor
Chambr	Findngs	Paralel	Stockhoder
Charactrs	Frequncies	Perfrmance	Sufering
Conclusons	Heven	Personalty	Telvision
Confsion	Impresion	Powdr	Tradrs
Constituton	Jursdiction	Readrs	Varables
Critc	Librals	Recretion	Virgn

APPENDIX J

FUNNEL INTERVIEW AND DEBRIEFING

Funnel Interview

First of all, I just have a couple of general questions that I'd like to ask you about the study.

1. Do you have any questions about the procedure as it went along that went unanswered?

   If their reply leads you in any way to think they might have been suspicious about the experiment, ask these 2 branch questions:

   a. What is it they are suspicious about (is it important?)?

   b. When did this occur to you? (while working on a particular task?)

2. Was there any part of the procedure that wasn't quite what you expected for a study of this kind? If yes (suspicious) then 2 branch questions:

   a. What?

   b. When?

3. At any point in the procedure did you think there may be more to this study than you were told at the outset? If yes (suspicious) then 2 branch questions:

   a. What?

   b. When?

Do not evaluate their answer – just get it down.

Do not offer anything to them (information) until you have the last answer to the last question.

Debriefing

Thank you very much for participating in this research project. This investigation was concerned with testing a measure of Self-Trust to find out if it is, indeed, measuring self-trust. To do that we will be looking at the relationship between your responses on the Self-Trust Questionnaire with your responses on the other six questionnaires you completed, as well as with your responses in the card-sort task and the four computer tasks. Each one of these should be related to self-trust in some way.

One of the computer tasks was designed to measure self-trust directly. In the self-concept task, you were asked to tell us whether or not an adjective described you personally. In this task, the words "Yes" or "No" were presented subliminally just prior to the word being put on the screen. This was done by sandwiching the word in between two masks of the form "######". We expect that people who are low in self-trust will be more likely to respond "Yes" if the word "Yes" was presented, and "No" if the word "No" was presented. The reason for this is that we think that people who don't trust themselves may look to others or to outside influences to help them to verify who they are.

All of the questionnaires and tasks that you have completed were chosen because they relate theoretically to a "Prototype of a Self-Trusting

Individual" that is the basis for this research study. That prototype is on the back of this form, and you are welcome to keep it for your records.

If you have any questions or concerns about this investigation, please feel free to ask.

Prototype of a High Self-Trusting Individual

The high self-trusting individual is likely to have experienced a secure relationship with his/her parents and significant others as a child, and to have felt loved and validated. If not, the high self-truster has processed any negative childhood experiences in such a way that the hurtful individual's actions have been put into perspective. The high self-trusting individual is one who can give a coherent definition of the self across context and situation, and recognize that aspects of the self may vary according to situation or role. This person is also able to elaborate definitions of the self so that the self is well-defined (but not over-defined) with a balance of positive and negative self-descriptors. Emotions are expressed appropriately, and these individuals are comfortable with the expression of emotion. Self-esteem is high and stable. The self-concept is balanced and is more complex than the self-concepts of low self-trusters. The self-trusting individual is also able to express a greater degree of individuality in reference to self-concept, meaning that they look to themselves, rather than to others, to find their conception of self. Along with this greater degree of individuality, these individuals are less likely to think of themselves conditionally.

They are able to accept themselves and their mistakes without generalizing a negative feeling about the self. Rather, because they are open to experience, they are able to use any mistakes they might make as learning experiences. Self-trusters are subjectively aware of their feelings at any given moment, and they are more aware of subjective states such as first impressions than are low self-trusters. These individuals do not rely on, or place a great amount of emphasis on, the judgments and opinions of others in maintaining their self-concept.

APPENDIX K

CORRELATIONS BETWEEN SELF-TRUST RESIDUALS AND ALL VARIABLES OF INTEREST

Variable	STQ[a]	STQ-R1[b]	STQ-R2[c]
Age	0.19*	0.17*	0.19*
Self-Complexity	0.04	0.05	0.10
Self-Esteem	0.69**	0.00	0.00
Self-Esteem Stability	-0.16	0.02	-0.00
Preoccupied Attachment	-0.24*	-0.16	-0.14
Dismissing Attachment	0.08	0.07	0.10
Fearful Attachment	-0.38**	-0.24**	-0.19*
Secure Attachment	0.46**	0.33**	0.26**
Need for Approval	0.47**	0.33**	0.00
Self-Monitoring	0.04	-0.14	-0.05
Emotional Intensity	-0.07	-0.00	-0.02
Emotional Expression	0.38**	0.18*	0.17*
Emotional Ambivalence	-0.58**	-0.38**	-0.37**
Adjective Check List Total Checked	-0.03	-0.05	-0.00
Adjective Check List Favorability Scale	0.44**	0.20*	0.13
Adjective Check List Unfavorability Scale	-0.39**	-0.17*	-0.06
Discrepancy between Favorability and Unfavorability Scores	0.48**	0.21**	0.11
Discrepancy between Favorability and Unfavorability Scores (Absolute value)	-0.25**	-0.07	-0.01
Adjective Check List Defensiveness Scale	0.33**	0.09	0.01
Adjective Check List Self-Confidence Scale	0.37**	0.23**	0.21*
PHI coefficient bet. adjectives on paper-and-pencil task and those checked on computer task	0.14	0.06	0.05
Positive Possible Selves	0.55**	0.24**	0.18*
Negative Possible Selves	-0.51**	-0.12	-0.04
Positive Probable Selves	0.42**	0.08	0.07
Negative Probable Selves	-0.40**	-0.05	0.02

Variable	STQ[a]	STQ-R1[b]	STQ-R2[c]
Discrepancy bet. Positive Possible & Positive Probable Selves	0.37**	0.24**	0.15
Discrepancy bet. Negative Possible & Negative Probable Selves	-0.00	0.01	0.01
Discrepancy between Positive and Negative Possible Selves	0.58**	0.21*	0.13
Discrepancy between Positive and Negative Possible Selves - Absolute Value	0.59**	0.20*	0.12
Phi coefficient between the prime and response given on the Self-Concept task (Absolute Value)	-0.07	-0.12	-0.08
Overall Response Latency for the Self-Concept task	0.38**	0.25**	0.22**
Response Latency for Positive adjectives on Self-Concept task	0.37**	0.24**	0.23**
Response Latency for Negative adjectives on Self-Concept task	0.39**	0.27**	0.20*
Response Latency for Neutral adjectives on Self-Concept task	0.29**	0.17*	0.17*
Response Latency for Success Context/Positive Outcome on Self-Contingency Task	0.08	0.03	-0.02
Response Latency for Success Context/ Negative Outcome on Self-Contingency Task	0.09	0.04	0.01
Response Latency for Success Context/ Nonword Outcome on Self-Contingency Task	0.15	0.08	0.06
Response Latency for Failure Context/Positive Outcome on Self-Contingency Task	0.13	0.07	0.06
Response Latency for Failure Context/Negative Outcome on Self-Contingency Task	0.05	0.01	0.00
Response Latency for Failure Context/Nonword Outcome on Self-Contingency Task	0.15	0.08	0.07
Response Latency for Neutral Context/Positive Outcome on Self-Contingency Task	0.18*	0.07	0.04

Variable	STQ[a]	STQ-R1[b]	STQ-R2[c]
Response Latency for Neutral Context/Negative Outcome on Self-Contingency Task	0.05	-0.02	-0.03
Response Latency for Neutral Context/Nonword Outcome on Self-Contingency Task	0.06	0.01	-0.02
Response Latency Success Context on Self-Contingency Task	0.09	0.03	-0.01
Response Latency for Failure Context on Self-Contingency Task	0.10	0.04	0.03
Response Latency for Neutral Context on Self-Contingency Task	0.12	0.03	0.03
Response Latency Positive Outcome on Self-Contingency Task	0.10	0.05	0.02
Response Latency Negative Outcome on Self-Contingency Task	0.08	0.02	0.01
Response Latency for Success Context/ Acceptance Outcome on Interpersonal-Contingency Task	0.06	0.07	0.04
Response Latency for Success Context/ Rejection Outcome on Interpersonal-Contingency Task	0.06	0.07	0.03
Response Latency for Success Context/ Nonword Outcome on Interpersonal-Contingency Task	0.09	0.06	0.04
Response Latency for Failure Context/ Acceptance Outcome on Interpersonal-Contingency Task	0.10	0.05	0.03
Response Latency for Failure Context/Rejection Outcome on Interpersonal-Contingency Task	0.15	0.08	0.06
Response Latency for Failure Context/Nonword Outcome on Interpersonal-Contingency Task	0.06	0.06	0.01
Response Latency for Neutral Context/ Acceptance Outcome on Interpersonal-Contingency Task	0.14	0.13	0.10

Variable	STQ[a]	STQ-R1[b]	STQ-R2[c]
Response Latency for Neutral Context/Rejection Outcome on Interpersonal-Contingency Task	0.12	0.08	0.06
Response Latency for Neutral Context/Nonword Outcome on Interpersonal-Contingency Task	0.07	0.08	0.07
Response Latency for Success Context on Interpersonal-Contingency Task	0.06	0.07	0.04
Response Latency for Failure Context on Interpersonal-Contingency Task	0.13	0.07	0.05
Response Latency for Neutral Context on Interpersonal-Contingency Task	0.13	0.08	0.06
Response Latency for Acceptance Outcome on Interpersonal-Contingency Task	0.07	0.04	0.01
Response Latency for Rejection Outcome on Interpersonal-Contingency Task	0.11	0.06	0.02

* $p < .05$; ** $p < .01$; [a]Self-Trust Questionnaire; [b]Standardized Residuals of the STQ with self-esteem removed; [c]Standardized Residuals of the STQ with both self-esteem and social desirability removed.

APPENDIX L

CORRELATIONS AMONG ALL VARIABLES OF INTEREST

	1	2	3	4	5	6	7	8
1. STQ Residual Scores	1.00	0.10	-0.01	0.03	-0.13	0.12	-0.16	0.22**
2. Self-Complexity	0.10	1.00	-0.02	-0.01	0.07	0.08	0.06	-0.24**
3. Self-Esteem	-0.01	-0.02	1.00	-0.25**	-0.15	-0.02	-0.35**	0.34**
4. Self-Esteem Stability	0.03	-0.01	-0.25**	1.00	0.09	0.01	0.08	-0.03
5. Preoccupied Attachment	-0.13	0.07	-0.15	0.09	1.00	-0.39**	-0.07	-0.06
6. Dismissing Attachment	0.12	0.08	0.02	0.01	-0.39**	1.00	0.10	-0.01
7. Fearful Attachment	-0.16	0.06	-0.35**	0.08	-0.07	0.10	1.00	-0.53**
8. Secure Attachment	0.22**	-0.24**	0.34**	-0.03	-0.06	-0.01	-0.53**	1.00
9. Need for Approval	0.00	-0.13	0.37**	-0.07	-0.13	-0.07	-0.30**	0.37**
10. Self-Monitoring	-0.03	-0.05	0.24**	-0.03	-0.07	0.13	-0.08	0.07
11. Emotional Intensity	-0.02	0.04	-0.08	0.20*	0.22**	-0.10	-0.00	0.13
12. Emotion Ambivalence	-0.35**	-0.04	-0.45**	0.20*	0.04	0.03	0.33**	-0.34**
13. Emotional Expression	0.15	0.01	0.36**	0.01	0.10	-0.08	-0.28**	0.49**
14. ACL Total Score	0.01	0.12	0.02	-0.01	0.14	0.13	0.09	-0.12
15. ACL Favorable Scale	0.11	-0.06	0.43**	-0.14	-0.11	0.00	-0.19*	0.32**
16. ACL Unfavorable Scale	-0.02	0.07	-0.37**	0.01	0.15	0.10	0.21*	-0.27**
17. Favorable/Unfavorable Discrepancy Score	0.08	-0.07	0.46**	-0.08	-0.15	-0.06	-0.23**	0.35**
18. ACL Defensiveness	-0.01	-0.03	0.39**	-0.27**	-0.12	-0.01	-0.21*	0.24**

	1	2	3	4	5	6	7	8
19. ACL/Computer PHI Coefficient	0.05	0.02	0.15	-0.11	0.09	-0.01	-0.10	0.14
20. Positive Possible Self	0.18*	-0.05	0.53**	-0.00	0.06	-0.02	-0.24**	0.39**
21. Negative Possible Self	-0.03	0.12	-0.60**	0.06	0.20*	-0.08	0.31**	-0.34**
22. Positive Probable Self	0.07	-0.09	0.49**	0.07	0.04	0.02	-0.15	0.33**
23. Negative Probable Self	0.02	0.18*	-0.51**	0.02	0.20*	-0.06	0.29**	-0.38**
24. Positive Possible/Probable Discrepancy	0.15	0.03	0.30**	-0.12	0.01	-0.05	-0.22*	0.25**
25. Negative Possible/Probable Discrepancy	0.03	-0.06	-0.01	-0.03	-0.03	-0.04	-0.07	0.07
26. Positive/Negative Possible Selves Discrepancy	0.12	-0.10	0.64**	-0.04	-0.08	0.04	-0.31**	0.41**
27. Computer Prime/Participant Response Phi Coefficient	0.10	-0.03	0.04	-0.05	-0.04	0.26**	-0.07	0.05
28. Self-Concept Overall Response Latency	0.25**	0.05	0.31**	0.16	0.04	-0.11	-0.16	0.29**
29. Self-Concept Positive Adjective Response Latency	0.27**	0.05	0.32**	0.13	0.03	-0.10	-0.14	0.28**
30. Self-Concept Negative Adjective Response Latency	0.20*	-0.01	0.28*	0.12	0.05	-0.15	-0.18*	0.25**
31. Self-Concept Neutral Adjective Response Latency	0.21**	0.09	0.26**	0.18*	0.03	-0.06	-0.11	0.26**

	9	10	11	12	13	14	15	16
1. STQ Residual Scores	0.00	-0.03	-0.02	-0.35**	0.15	0.01	0.11	-0.02
2. Self-Complexity	-0.13	-0.05	0.04	-0.04	0.01	0.12	-0.06	0.07
3. Self-Esteem	0.37**	0.24**	-0.08	-0.45**	0.36**	0.02	0.43**	-0.37**
4. Self-Esteem Stability	-0.07	-0.03	0.20*	0.20*	0.01	-0.01	-0.14	0.01
5. Preoccupied Attachment	-0.13	-0.07	0.22**	0.04	0.10	0.14	-0.11	0.15
6. Dismissing Attachment	-0.07	0.13	-0.10	0.03	-0.08	0.13	0.00	0.10
7. Fearful Attachment	-0.30**	-0.08	-0.00	0.33**	-0.28**	0.09	-0.19*	0.21*
8. Secure Attachment	0.37**	0.07	0.13	-0.34**	0.49**	-0.12	0.32**	-0.27**
9. Need for Approval	1.00	-0.19*	-0.02	-0.26**	0.19*	-0.13	0.40**	-0.44**
10. Self-Monitoring	-0.19*	1.00	-0.02	-0.01	0.16	0.25**	0.08	0.05
11. Emotional Intensity	-0.02	-0.02	1.00	0.04	0.35**	-0.01	0.02	0.09
12. Emotion Ambivalence	-0.26**	-0.01	0.04	1.00	-0.52**	0.05	-0.25**	0.14
13. Emotional Expression	0.19*	0.16	0.35**	-0.52**	1.00	-0.01	0.28**	-0.09
14. ACL Total Score	-0.13	0.25**	-0.01	0.05	-0.01	1.00	0.03	0.27**
15. ACL Favorable Scale	0.40**	0.08	0.02	-0.25**	0.28**	0.03	1.00	-0.47**
16. ACL Unfavorable Scale	-0.44**	0.05	0.09	0.14	-0.09	0.27**	-0.47**	1.00
17. Favorable/Unfavorable Discrepancy Score	0.49**	0.02	-0.05	-0.23**	0.21*	-0.14	0.86**	-0.86**
18. ACL Defensiveness	0.39**	-0.07	-0.06	-0.19*	0.15	-0.04	0.85**	-0.54**

	9	10	11	12	13	14	15	16
19. ACL/Computer PHI Coefficient	0.11	0.13	0.05	-0.12	0.22**	0.25**	0.22*	-0.28**
20. Positive Possible Self	0.39**	0.17*	0.10	-0.39**	0.43**	0.14	0.54**	-0.32**
21. Negative Possible Self	-0.45**	-0.17*	0.01	0.28**	-0.24**	0.12	-0.40**	0.53**
22. Positive Probable Self	0.21*	0.22**	0.19*	-0.30**	0.38**	0.17*	0.43**	-0.23*
23. Negative Probable Self	-0.41**	-0.21*	0.06	0.23**	-0.26**	0.06	-0.38**	0.39**
24. Positive Possible/Probable Discrepancy	0.38**	0.07	-0.09	-0.21*	0.20*	0.07	0.40**	-0.28**
25. Negative Possible/Probable Discrepancy	0.03	0.03	-0.07	-0.02	0.09	-0.02	0.08	-0.17
26. Positive/Negative Possible Selves Discrepancy	0.47**	0.20*	0.05	-0.37**	0.37**	0.01	0.52**	-0.48**
27. Computer Prime/Participant Response Phi Coefficient	-0.08	0.16	-0.07	-0.08	0.08	0.13	0.09	0.06
28. Self-Concept Overall Response Latency	0.23**	0.03	0.11	-0.30**	0.38**	-0.02	0.39**	-0.18*
29. Self-Concept Positive Adjective Response Latency	0.19*	0.03	0.12	-0.30**	0.38**	0.05	0.46**	-0.18*
30. Self-Concept Negative Adjective Response Latency	0.32**	-0.00	0.06	-0.29**	0.32**	-0.15	0.35**	-0.25**
31. Self-Concept Neutral Adjective Response Latency	0.12	0.04	0.13	-0.23**	0.33**	0.04	0.28**	-0.07

	17	18	19	20	21	22	23	24
1. STQ Residual Scores	0.08	-0.01	0.05	0.18*	-0.03	0.07	0.02	0.15
2. Self-Complexity	-0.07	-0.03	0.02	-0.05	0.12	-0.09	0.18*	0.03
3. Self-Esteem	0.46**	0.39**	0.15	0.53**	-0.60**	0.49**	-0.51**	0.30**
4. Self-Esteem Stability	-0.08	-0.27**	-0.11	-0.00	0.06	0.07	0.02	-0.12
5. Preoccupied Attachment	-0.15	-0.12	0.09	0.06	0.20*	0.04	0.20*	0.01
6. Dismissing Attachment	-0.06	-0.01	-0.01	-0.02	-0.08	0.02	-0.06	-0.05
7. Fearful Attachment	-0.23**	-0.21*	-0.10	-0.24**	0.31**	-0.15	0.29**	-0.22**
8. Secure Attachment	0.35**	0.24**	0.14	0.39**	-0.34**	0.33**	-0.38**	0.25**
9. Need for Approval	0.49**	0.39**	0.11	0.39**	-0.45**	0.21*	-0.41**	0.38**
10. Self-Monitoring	-0.02	-0.07	0.13	0.17*	-0.17*	0.22**	-0.21*	0.07
11. Emotional Intensity	-0.05	-0.06	0.05	0.10	0.01	0.19*	0.06	-0.09
12. Emotion Ambivalence	-0.23**	-0.19*	-0.12	-0.39**	0.28**	-0.30**	0.23**	-0.21*
13. Emotional Expression	0.21*	0.15	0.22**	0.43**	-0.24**	0.38**	-0.26**	0.20*
14. ACL Total Score	-0.14	-0.05	0.25**	0.14	0.12	0.17	0.06	0.07
15. ACL Favorable Scale	0.86**	0.85**	0.22**	0.54**	-0.40**	0.43**	-0.38**	0.40
16. ACL Unfavorable Scale	-0.86**	-0.54**	-0.28**	-0.32**	0.53**	-0.23**	0.39**	-0.28**
17. Favorable/Unfavorable Discrepancy Score	1.00	0.81**	0.29**	0.50**	-0.54**	0.38**	-0.44**	0.40**
18. ACL Defensiveness	0.81**	1.00	0.15	0.33**	-0.39**	0.26**	-0.33**	0.29**

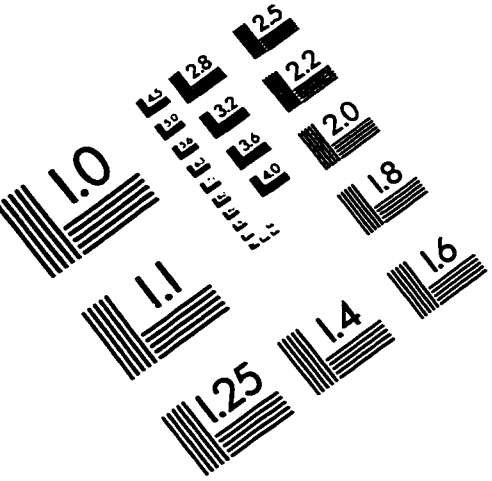
	17	18	19	20	21	22	23	24
19. ACL/Computer PHI Coefficient	0.29**	0.15	1.00	0.29**	-0.17*	0.16	-0.27**	0.27**
20. Positive Possible Self	0.50**	0.33**	0.29**	1.00	-0.59**	0.80**	-0.51**	0.62**
21. Negative Possible Self	-0.54**	-0.39**	-0.17*	-0.59**	1.00	-0.48**	0.72**	-0.38**
22. Positive Probable Self	0.38**	0.26**	0.16	0.80**	-0.48**	1.00	-0.30**	0.02
23. Negative Probable Self	-0.44**	-0.33**	-0.27**	-0.51**	0.72**	-0.30**	1.00	-0.53**
24. Positive Possible/Probable Discrepancy	0.40**	0.29**	0.27**	0.62**	-0.38**	0.02	-0.53**	1.00
25. Negative Possible/Probable Discrepancy	0.14	0.08	0.20*	-0.04	0.14	-0.28**	-0.46**	0.31**
26. Positive/Negative Possible Selves Discrepancy	0.58**	0.41**	0.26**	0.89**	-0.90**	0.71**	-0.69**	0.56**
27. Computer Prime/Participant Response Phi Coefficient	0.01	0.09	0.06	-0.00	-0.05	-0.01	-0.11	0.03
28. Self-Concept Overall Response Latency	0.33**	0.23**	-0.02	0.37**	-0.19*	0.30**	-0.15	0.25**
29. Self-Concept Positive Adjective Response Latency	0.37**	0.29**	0.03	0.40**	-0.18*	0.35**	-0.15	0.24**
30. Self-Concept Negative Adjective Response Latency	0.34**	0.21*	-0.00	0.35**	-0.25**	0.23*	-0.21**	0.29**
31. Self-Concept Neutral Adjective Response Latency	0.20*	0.14	-0.08	0.27**	-0.09	0.26*	-0.08	0.16

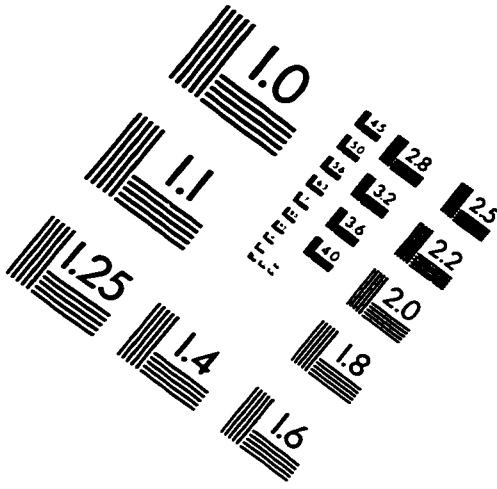
	25	26	27	28	29	30	31
1. STQ Residual Scores	0.03	0.11	0.10	0.25**	0.27**	0.20*	0.21**
2. Self-Complexity	-0.06	-0.10	-0.03	0.05	0.05	-0.01	0.09
3. Self-Esteem	-0.01	0.64**	0.04	0.31**	0.32**	0.28**	0.26**
4. Self-Esteem Stability	-0.03	-0.04	-0.05	0.16	0.13	0.12	0.18*
5. Preoccupied Attachment	-0.03	-0.08	-0.04	0.04	0.03	0.05	0.03
6. Dismissing Attachment	-0.04	0.04	0.26**	-0.11	-0.10	-0.15	-0.06
7. Fearful Attachment	-0.07	-0.31**	-0.07	-0.16	-0.14	-0.18*	-0.11
8. Secure Attachment	0.07	0.41**	0.05	0.29**	0.28**	0.25**	0.26**
9. Need for Approval	0.03	0.47**	-0.08	0.23**	0.19*	0.32**	0.12
10. Self-Monitoring	0.03	0.20*	0.16*	0.03	0.03	-0.00	0.05
11. Emotional Intensity	-0.07	0.05	-0.07	0.11	0.12	0.06	0.13
12. Emotion Ambivalence	-0.02	-0.37**	-0.08	-0.30**	-0.30**	-0.29**	-0.23**
13. Emotional Expression	0.09	0.37**	0.08	0.37**	0.38**	0.32**	0.33**
14. ACL Total Score	-0.02	0.01	0.13	-0.02	0.05	-0.15	0.04
15. ACL Favorable Scale	0.08	0.52**	0.09	0.39**	0.46**	0.35**	0.28**
16. ACL Unfavorable Scale	-0.17	-0.48**	0.06	-0.18*	-0.18*	-0.25**	-0.07
17. Favorable/Unfavorable Discrepancy Score	0.14	0.58**	0.01	0.33**	0.37**	0.34**	0.20*
18. ACL Defensiveness	0.08	0.41**	0.09	0.23**	0.28**	0.21*	0.14

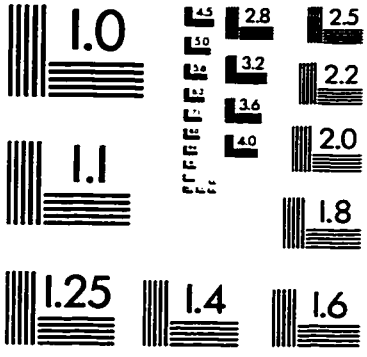
	25	26	27	28	29	30	31
19. ACL/Computer PHI Coefficient	0.20*	0.26**	0.06	-0.02	0.03	-0.00	-0.08
20. Positive Possible Self	-0.04	0.89**	-0.00	0.37**	0.39**	0.35**	0.27**
21. Negative Possible Self	0.14	-0.90**	-0.05	-0.19*	-0.18*	-0.25**	-0.09
22. Positive Probable Self	-0.28**	0.71**	-0.01	0.30**	0.35**	0.23**	0.26**
23. Negative Probable Self	-0.46**	-0.69**	-0.11	-0.15	-0.15	-0.21**	-0.08
24. Positive Possible/Probable Discrepancy	0.31**	0.56**	0.03	0.25**	0.24**	0.29**	0.16
25. Negative Possible/Probable Discrepancy	1.00	-0.10	0.11	0.07	0.09	0.09	0.01
26. Positive/Negative Possible Selves Discrepancy	-0.10	1.00	0.03	0.31**	0.32**	0.34**	0.20
27. Computer Prime/Participant Response Phi Coefficient	0.11	0.03	1.00	-0.02	-0.03	-0.02	-0.00
28. Self-Concept Overall Response Latency	0.07	0.31**	-0.02	1.00	0.95**	0.89**	0.92**
29. Self-Concept Positive Adjective Response Latency	0.09	0.32**	-0.03	0.95**	1.00	0.77**	0.83**
30. Self-Concept Negative Adjective Response Latency	0.10	0.34**	-0.02	0.89**	0.77**	1.00	0.71**
31. Self-Concept Neutral Adjective Response Latency	0.02	0.20*	-0.00	0.92**	0.83**	0.71**	1.00

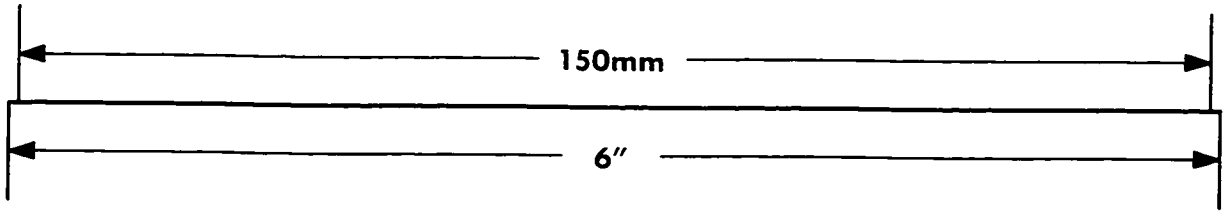
* $p < .05$ ** $p < .01$

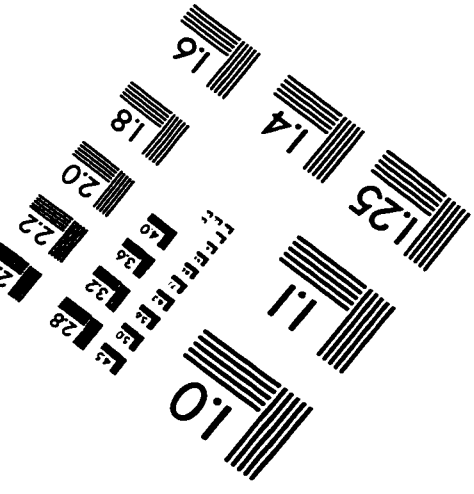
IMAGE EVALUATION
TEST TARGET (QA-3)

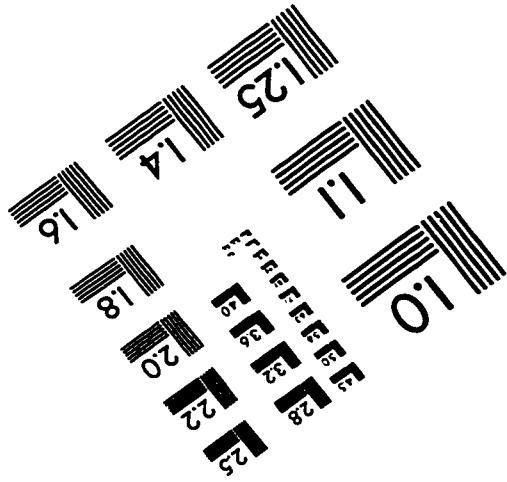












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