

The Experienced Self and Other Scale:  
A technique for assaying the experience of one's self in relation to the other

Erel Shvil

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## ABSTRACT

### The Experienced Self and Other Scale:

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This study tests the construct validity of the Experienced Self and Other Scale (E-SOS), which is a self report measure that assesses the experience of one's self in relation to others. Statistical analyses were conducted using Exploratory factor analysis with an orthogonal rotation, and Confirmatory factor Analysis. The internal consistency was determined using Cronbach's alpha coefficient for each subscale from the factor analysis. Bivariate correlations, as well as multiple linear regression analyses, were used to assess the relationship between the E-SOS and other measures. Three hundred and twenty-seven subjects completed the E-SOS. The factor analysis resulted in a five-factor structure explaining 49.02% of the total variance and with a high internal reliability. While results indicated no relationship between the E-SOS and Psychological Mindedness Scale, the E-SOS subscales were significantly correlated with the corresponded NEO-FFI factors, as well as with the RSQ factors. Preliminary analyses suggest a promising future for the E-SOS as an approach to measuring one experience of self.

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## Introduction

The concept “self” has been used in a variety of manners across psychological and philosophical theories. It is generally seen as a fundamental part of human nature that represents a broad and essential part of a person that highlights the tendency to see oneself as distinctive in some way (Reber & Reber, 2001). The concept of self is sometimes used as a representation of the thoughts, insights, and ideas that one possesses about oneself. Self is also used to refer to the overall personality or organism. According to Margolis (1987), the self is experienced through a sense of agency and ability to affect the environment. It is also known through a sense of harmony between the present experience, the ability to link the present experience to the past, and through a sense of agency or ability to affect one’s surroundings (Margolis, 1987).

William James’ (1890/1983) assumption was that whatever the definition of self, it is certainly a subject of experience. James asserted that the self is the center of the person’s psychological universe and the lens through which other aspects of the world are perceived.

Since the time of Descartes and Locke, the self has generally been viewed in relation to three distinctive lenses in Western cultures – the bodily (or material), the relational (or social), and the reflective (Seigel, 2005). Gordon and Gergen (1968), for example, suggest that one’s self-concept reflects one’s views of others’ perceptions of and responses to him or herself. In general, this understanding of self-concept or self-knowledge questions the assumption that each individual has a unitary unchangeable self that represents his/her unique and personal experiences and personality features (Brewer & Chen, 2007; Turner & Onorato, 1999; Tyler, Kramer, & John, 1999). It emphasizes the

fact that the individual self depends on specific social context. From this lens, there is no such thing as a “solo self,” but rather a “social self” or multiple selves that reflect the various individual’s group memberships and associated identities (Gordon, 1968).

A similar conclusion emerges from social psychological research. In particular, Higgins (1996) argues that self- knowledge is not primarily sought in isolation or for its own sake. He claims that in order to understand the building blocks of the self one should not ask, “Who am I?” but rather, “What is my relation to the world?” In this view, self knowledge is pursued for the sake of adaptive benefits of improving person-environment fit. According to Robins, Tracy, and Trzesniewski (2008) each person has various representations that consist of many identities - personal, relational, social, and collective. These “different identities” or “multiple selves” (Markus & Nurius, 1986) permit the individual to differentiate himself from others, giving him a sense of continuity and unity over time, and helping him adapt better in complex social situations (Robins, Tracy, & Trzesniewski, 2008). According to Gergen (1972) the experience of multiple selves is a crucial aspect of our existence and it plays a significant role in each human psychological well- being. Thus, from the above perspective, the self is not a simple object, but rather a construct. It is not directly perceived or known; instead, the person (with the help of others) aggregates a body of beliefs about him or herself (Higgins, 1996).

Baumeister (1998), on the other hand, urges that the core idea of the notion of self would lose its meaning if a person had multiple selves. According to Baumeister, the essence of self involves integration of diverse experiences into a unity and “the discussion of multiplicity should be regarded as heuristics or metaphors” (p. 682). Thus,

Baumeister (1998) suggests that self- knowledge begins when attention turns toward its source, a phenomenon often called “reflexive consciousness” in social psychology. Moreover, self- knowledge cannot be “observed in quiescent isolation” (p. 699) and it cannot be known directly. One can create detailed self knowledge based in observing the self in action and knowing one’s thoughts and feelings (Baumeister, 1998).

The cognitive revolution found the concept of self to be useful in understanding a myriad of related self variables, such as self-concept (Wylie, 1974- 1979), self-schema (Markus, 1977), self-esteem (Rosenberg, 1979), and self-monitoring (Snyder, 1987). Furthermore, some of the more recent psychologically meaningful uses of the concept may be better represented by more specific terms such as “self- representation” (conscious and unconscious views of the self), “sense-of-self” (experience of continuity, consciousness, and agency), and “identity” (commitment to aspects of self as defining and meaningful over time). However, Jensen, Huber, Cundick, and Carlson (1991) suggest that the range of constructs used to describe and understand the self has been too restrictive in social and behavioral research. The authors recommend that a more adequate understanding of the self will occur only when a more complete range of self- dimensions is examined (Jensen, Huber, Cundick, & Carlson 1991). Seigel (2005) urges people to not focus on the self, but, rather, to focus on the ways people search to establish effective and meaningful relations among the various elements of their lives. “Concern about the self is concern about how we put the diverse parts of our personal being together into some kind of whole (p.11)” (Seigel, 2005)

Thus, it appears that there is no consensus regarding a specific definition of self across time. There is no agreement regarding the way it can be used to understand other



phenomena as well. In fact, it seems that whenever one tries to define this notion, one either describes it in the negative (what it is *not*) or attaches other terms to it (as suffix) in order to make new meaning out of it. However, for the most part, there is a consensus regarding the *existence* of self, in whichever specific way one defines it. Researchers agree that trying to understand, define, or explain the experience of self will further one's understanding of the uniqueness of human experience. Furthermore, when trying to understand, define, or explain the experience of self, it seems that the self is always explained in relation to others.

### **Experience of Oneself in Relation to Others**

One possible explanation for the lack of consensus in the definition of the notion "self" is too many different "others" that have been used in relation to the specific experience of self that the theorist was seeking. Traditionally, the other that different theories describe is either an external other, in terms of different people one is in relation to, or a subjective other, in terms of internal constructs, such as different schemas or "internal working models" (Bowlby, 1969).

From a psychological standpoint, most researchers (social and behavioral scientists included) do not believe that a person *is* a self but rather that each person *has* a self (Olson, 1999). Other writers have used self to refer to all or part of an individual's personality. For example, when Maslow (1954/1987) wrote about "self-actualization," he was referring to the actualization of a person's personality – a personality that was integrated, non-defensive, and optimally functioning (Leary & Tangney, 2003). Klein urged that our relationship to an object (internal or external) is the only way one can experience the self. She writes that "there is no anxiety situation, no mental process

which does not involve objects external and internal” (Klein, 1952, p. 52). In a similar vein, Sullivan (1953) suggested that people may have as many selves as they have interpersonal relationships. Carl Jung (1925/1959) used the term self as a latent guiding force that flourished slowly over time; he emphasized the role of relationship partners as providing unavailable aspects of self, so as to help make the self whole.

### **Sense of Self**

For Strawson (1997, 1999), an essential characteristic of human life is when one realizes that one’s thoughts or mental representations are unobservable by others. Strawson (1997) calls this “the sense of the mental self.” It is a normal process that is usually formed and first experienced during and throughout the childhood stage of development. The sense of the mental self as defined by Strawson is viewed by Laing as a “sense of autonomy”. According to Laing (1965), the capacity to experience oneself as autonomous means that one has come to realize that he/she is unique from others.

...If the individual does not feel himself to be autonomous this means that he can experience neither his separateness from, nor his relatedness to, the other in a usual way. A lack of sense of autonomy implies that one feels one’s being to be bound up in the other, or the other as bound up in oneself. (p. 52)

According to developmental self-theory, the optimal sequence of personality development is based on stages of self-development (Jensen, Huber, Cundick, & Carlson, 1991). At birth and during the first year, there is no awareness of self (Kagan, 1998). Loevinger (1976) suggested that during the first year of life, infants have not yet learned to differentiate the self from the other. After the first year of his life, the infant experiences having a mind of his own, and it is this discovery that leads to the parallel

discovery that other people have minds as well (Lachmann, 2004). Thus, the model of self-development according to Lachmann is rooted in interactions between the self and other. Stern (1985) refers to this as a sense of an “intersubjective-self” and places its origins between 9 and 15 months, during which the child differentiates experiences of self with that of the other.

Stern (1985) understands the self as a structure in the development of “sense-of-self”. The sense-of-self, according to Stern (1985), is “the primary subjective experience that organizes social experience” (p. 11). Stern described four distinct senses-of-self, each one referring to a different domain of self-experience and social relatedness – the emergent-self, core-self, subjective-self, and the verbal-self. Each self sense is built upon the others, and thus they coexist throughout life. Furthermore, Stern labels the core sense-of-self as related or connected with other (Stern, 1985).

But what does it mean when one has a “sense” of self? James (1890) pointed out that the self has what appears to be a unique capacity that he termed “reflexivity”: the capacity of the self to turn around and take itself as the object of its own view. Thus, the self has both a “process” aspect (the self as the knower of things) and a “content” aspect (the self as that which is known) (Mead, 1934). Hence, there is a duality in the way humans experience the world. For instance, one might say, “I experience something external to me (objects) or internal to me (different feelings, my body), and simultaneously, I experience myself experiencing it. My different senses (vision, hearing, taste, smell, kinesthetic, vestibular, thermoceptive senses, etc.) are responsible for the experiences that are external or internal to me. My sense of the self is what gives me the knowledge that it is *I* who is experiencing whatever I am experiencing.”

Zahavi (2006) urges that “There is a minimal sense-of-self present whenever there is self-awareness” (p. 146). That is, one can “pre-reflectively” be aware of his present psychological states, and can simultaneously reflect on himself as the subject of this experience. According to Zahavi (2006) the “pre-reflective self-awareness and a minimal sense-of-self are integral parts of our experiential life” (p. 146).

### **Mental Representations**

In the last chapter of the *Outline of Psychoanalysis* (1938/1989), Freud distinguishes between the external and internal world of the child. According to Freud, until approximately age five, the toddler places the objects he interacts with outside of himself. However, after the age of five, the child has moved to a new and significant stage:

A portion of the external world has, at least partially, been given up as an object and instead, by means of identification, taken into the ego – that is, has become an integral part of the internal world. This new mental agency continues to carry on the functions which have hitherto been performed by the corresponding people in the external world. (p. 96)

Thus, for Freud, this stage marks the early organization of a person’s internal world. It is the stage where the child’s experiences and different interactions with the external world act as the building block or the foundation from which she builds his internal world. From this point on, the child’s internal world will continue to evolve through both interactions with the objects of the external world and interactions with constructs of his internal world. Later in life, the child will make meaning of his experience through the lens of his internal world and will understand his self (i.e. having

a sense of self) through the same lens. Hartmann (1939) uses the term “inner world” for the same concept, which is also related to the notions of the child's world portrayed by Piaget (1937) and Werner (1940) with regard to body schema or image.

In their paper, Sandler and Rosenblatt (1962) describe Freud’s notion of the internal world as the cognitive-affective structure of the “representational world” – that is, people’s representations of the self and others constructed from many impressions or images of one’s early life experiences. These mental representations of the self are more or less stable schemata that enable one to perceive, organize, and maintain one’s experience in a meaningful way. Furthermore, the existence of a subjective representational world is gradually structured in the process of development as a result of biological and psychological accommodations (Sandler & Resenblett, 1962). According to Sandler and Rosenblatt (1962), the child’s mental representation contains more than object representations taken from the external world. Furthermore, as part of the normal development of a child’s self-organization, he gradually establishes self-boundaries by differentiating self from other and self from object in his representational world (Sandler & Resenblett, 1962). In addition, during the course of development, all of one’s experiences are gradually organized around stable, recurrent configurations of self representations, object representations, and their corresponding affects. These representations serve as the fundamental components of personality or character style (J. D., Geller, personal communication, April, 4<sup>th</sup> 2009).

### **Object Relations Theory**

Freud’s differentiation between the child’s internal and external worlds lead to the foundation of the object relations theories and related approaches to personality (e.g.,

Greenberh & Mitchell, 1983; Guntrip, 1971; Mitchell 1988; Person, Cooper, & Gabbard, 2005; Scharf & Scharf, 1998). Object relations theories try to explain the cognitive and emotional processes that are responsible for our continuing templates of interpersonal functioning in intimate relationships (Westen, Gabbard, & Ortigo, 2008). They point to the significance of early childhood experiences in the creation of self representations and representations of others (i.e. object representations), which later in life play a crucial role in mediating interpersonal functioning. The process of representation (particularly object representation as used in object relations theory) involves an interaction of the objective features of a person or event and the subjective schemata (“the self”) of the individual that give it meaning (J. D., Geller, personal communication, April, 4<sup>th</sup> 2009).

According, to Westen, Gabbard, and Ortigo, (2008), two significant developments in object relations theory in the 1960s were Sandler and Rosenblatt’s (1962) paper on the representational world and Bowlby’s (1969) theory of attachment. Attachment theory, as developed by John Bowlby (1973, 1982), points to the collective human need to form close, warm bonds. It serves both as a normative theory of how the inborn attachment system functions in all humans and as an individual-difference theory of the attachment strategies that are adopted in response to different life experiences (Hazan & Shaver, 1994). The individual attachment strategies, according to Bowlby (1969, 1973, 1982), are shaped and influenced by what he referred to as “internal working models.” The internal working model is somewhat similar to Sandler and Rosenblatt’s (1962) concept of the representational world. Bowlby proposed that the quality of childhood relationships with caregivers’ results in internal representations or working models of the self and others that provide the prototypes for later social relations (Bowlby, 1973, 1982). He suggested

that the expectations of relationships and the patterns of affective experience and regulation shaped in the first relationships are central determinants of later interpersonal functioning (Westen, Gabbard, & Ortigo, 2008).

In sum, the self is a fluid notion that helps various fields of psychology (e.g., clinical psychology, social psychology, and personality psychology) better comprehend human conscious awareness and the different experiences of individuals' internal and external world. The self never stands alone; rather, it exists only in relation to the other, and when put in relation to the other it creates a conscious experience – the experience of the self.

### **Experienced Self and Other Scale (E-SOS)**

**Scale development.** For the purpose of this study, we developed The Experienced Self and Other Scale (E-SOS). The E-SOS is a self-report scale that asks how one experiences oneself in relation to different others that are specified in the scale. With almost no exception, all of the different measures of self are self-reported. The scale is attempting to measure one's experience of the self and since individual experience is subjective, the best way to grasp it is through self-report. In the present model, both the external other (i.e. people, inanimate objects) and the internal other (i.e. emotions) were incorporated into the scale. For each item ("other"), participants can choose the specific way in which s/he *experiences* him/her self in relation to it. In this study, the term "experience" is defined by the degree of felt overlap between oneself and the target other. Degree of overlap is symbolized using Venn diagrams.

The E-SOS is adapted from the Inclusion of Other in the Self (IOS) Scale developed by Aron, Aron, and Smollan (1992). This scale has seven Venn diagrams of two same size circles, one circle indicating the self and the other circle representing the

other. The IOS scale measures a general aspect of closeness. It had been used primarily to describe dyadic relationships such as romantic relationships and friend relationships (Aron & Aron, 1986; Aron, Aron, Tudor, & Nelson, 1991; Agnew, Van Lange, Rusbult, & Langston, 1998; Lin & Rusbult, 1995). In applying the IOS scale to various samples, researchers found it to be reliable (Aron & Aron, 1986; Aron et al., 1991; Agnew et al., 1998; Lin & Rusbult, 1995). Specifically, Aron, Aron, and Smollan (1992) reported significant test-retest reliability  $r(97) = .83, p < .001$ , and  $\alpha = .93$ .

Li (2001) has used a slightly modified version of the IOS to study the division between western cultures and non-western cultures in terms of individualism and collectivism. More recently, De Cremer and Stouten (2003), using the IOS, determined that self-other merging and trust were directly related to cooperative behavior.

A descriptive approach to the assessment of degrees of overlap was first proposed by Lewin (1948, p. 90). Lewin's diagram was employed to represent the relationships within the life space in terms of differing degrees of overlap between the region that represents the self and the region that represents the other. The IOS scale (Aron, Aron, & Smollan 1992) was adapted from Loevinger and Snoek's (1972) measure of assessing interpersonal attraction. According to Aron et al. (1992), Pipp, Shaver, Jennings, Lamborn, and Fischer (1985) were the first to use such diagrams as part of a measure of closeness. In their study, they had adolescents draw a picture of two circles, one representing the self and the other one a representation of the parent. The adolescents were instructed to draw the circles "in relation to each other as you believe best illustrates your relationship with your parent..." (p. 993). It should be noted that social psychologists also have used the idea of closeness as comprising overlapping entities in a



variety of ways. Intimacy, a concept often considered virtually synonymous with closeness, is suggested to be the process of mutual self-disclosure in which each person feels one's private self validated, understood, and cared for by the other (Reis & Shaver, 1988).

In the current study the E-SOS has four Venn diagrams, consisting of two circles of the same size. One circle represents the self and the second represents the other. In the first picture the circles are close to one another, but not touching. From the second picture to the fourth picture, the degree of overlap progresses in a linear fashion. In the last picture (the fourth) the circles (i.e. the self and other) are completely enmeshed, comprising a single circle. Thus, participants can rate their experience in relation to each item (other) on a scale of 1 to 4 (See Appendix 2). Specifically, participants are asked to choose the number that best represents the relationship between themselves and the target item (i.e. the "other"). Before answering the questions, participants were offered clear explanations regarding the symbolic meaning of the circles. For example, when two of the circles are completely separate (Diagram 1) this indicates that the self is completely independent of or separate from the other thing/person (e.g. mother, sadness etc.). When two of the circles completely overlap and create one circle (Diagram 4), it indicates that there is no separation between oneself and the other, as if both are one. In addition, participants were asked to reflect their felt sense of overlap at the present moment.

### **Plan of Exploration**

#### **Factor Structure**

Past attempts to use a version of the E-SOS (Shvil, Krauss, Midlarsky, & Ward 2008; Shvil, Midlarsky, & Krauss 2009) have been relatively successful. As opposed to

the current version of the E-SOS, in an earlier study, Shvil, Krauss, Midlarsky, and Ward (2008) intended to simultaneously measure two dimensions of relationships that one is experiencing in relation to the other—the *enmeshment/overlap* dimension and the *potency/weakness* dimension.

The previous version of the scale Shvil, Krauss, Midlarsky, & Ward 2008; Shvil, Midlarsky, & Krauss 2009) had 31 items (“others”) that were split into three groups: a) people located in different degrees of “blood” and associational relationship to the self (e.g. family members, friends, other acquaintances), b) inanimate objects (e.g. childhood pictures, alcohol, cell phones), and c) positive/negative emotions (e.g. anxiety, depression, optimism) (see Appendix 1). The scale’s items were subjected to exploratory factor analysis (EFA) using principal axis factoring with oblique rotation. The analysis for the enmeshment/overlap dimension yielded five factors with a scree plot of eigenvalues (3.41, 2.28, 1.52, 1.09, 0.74) accounting for 51.65% of the variance in the solution. Eight candidate items were removed after finding either low communality estimates or dual factor loadings, leaving a total of 23 items for the enmeshment/overlap dimension. By utilizing promax rotation with Kaiser normalization for interpretation, substantial evidence was found for the five independent factors with relatively low correlations among the factors. The first factor, “Negative Emotion” ( $\alpha=.79$ ), had six items (i.e., others): Sadness, Stress, What I despise about myself, Anxiety, Worst fear, and Hopelessness. The second factor, “View of Self,” ( $\alpha=.74$ ), included seven items: Optimism, Who I want to be, Positive emotion, Self control, Sexuality, Image/physical body, and Fantasies. The third factor, “Persons” ( $\alpha=.71$ ), was comprised of four items: Acquaintances/ neighbors, Class friend, and Those over whom I have power. The fourth

factor, “Objects/Substances” ( $\alpha=.69$ ), has a total of three items: Non-prescribed drugs, Prescribed drugs, and Alcohol. Finally, the fifth factor, “Family” ( $\alpha=.62$ ), had three items: Mother, Father, and Sibling.

The same analysis as the enmeshment/overlap dimension was conducted for the potency dimension. This analysis yielded three factors with a scree plot of eigenvalues (8.72, 1.85, and 1.05) accounted for 47.53% of the variance in the solution. Five candidate items were removed after running the analysis (EFA). A total of 26 items remained. The first factor, “Negative Emotion” ( $\alpha=.88$ ), consisted of eleven items (i.e., other): What I despise about myself, Hunger, Worst fear, Stress, Sadness, Image/physical body, Hopelessness, Anxiety, Food, Those with power over you, and Self control. The second factor, “Positive Interaction” ( $\alpha=.88$ ), consisted of: Other family members, Class friends, Acquaintances/ neighbors, Admirable figure, Sibling, Mother, Positive emotion, Father, Those over whom I have power, Optimism, Who I want to be, Sexuality, and Childhood dreams. The third and last factor for the potency dimension was described as “Substances” ( $\alpha=.80$ ) and it has a total of two items: Prescribed drugs and Non-prescribed drugs.

The first aim of this study is an attempt to improve the previous version of the E-SOS (Shvil, Krauss, Midlarsky, & Ward 2008), and to further strengthen the scale’s factor structure. First, in order to expand the item’s content, additional items were added. In the current version of the E-SOS there are 45 target items (others). Secondly, in addition to the groups from the previous version (i.e., people located in different degrees of familial and associational relationships to the self, inanimate objects, and positive/negative emotions), an additional group of items were added, named “external

forces” (God, fate etc.). It should be noted that these others represent only a small, non-random sample selected from an infinite number of objects that may be potentially relevant to the self.

Third, the discrepant structure of the potency dimension made it difficult to interpret and was therefore removed from the current E-SOS version. Specifically, it appears that not all possible values in the potency dimension were presented. Particularly, in the potency dimension, participants could evaluate their relationship with the other in three distinct ways: 1) both the self and the other are powerful (both of the circles are shaded) 2) the self is powerful, while the other is weak (the self circle is shaded, while the other circle is empty), and 3) the self is weak, while the other is powerful (the self circle is empty, while the other circle is shaded). However, a fourth potential relationship where both the self and the other are weak (both of the circles are empty) was not included. This situation was omitted because the researchers wanted the participants to evaluate the two hypothetical dimensions of relationships (i.e. enmeshment, potency) with the other simultaneously. It may have been that having two separate dimensions of the E-SOS presented in the same diagram simultaneously created confusion when filling out the measure. Thus, in the current version of the E-SOS the potency dimension was left out, leaving the overlap as the only dimension to assess one’s experience in relation to a target other. Finally, in order to strengthen the psychometric properties of the E-SOS, a confirmatory approach will be taken to construct validation, along with the EFA.

The current version included all 23 items from the previous version (i.e., overlap dimension), in addition to 22 new items, leaving a total of 45 items (see Appendix 2). Since the content of the scale remains relatively unchanged, it is assumed that the current

study will yield a similar factor structure. Specifically, it is assumed that the current E-SOS version will load on four to five clear factors, accounting for a similar variance in the solution as the previous version. Moreover, it is assumed that the factors' content will be similar to the previous version with an addition of the Higher Power factor. However, since additional items were added, each factor is expected to load on more items (i.e., others) than the previous subscales.

### **Anchor: "Experience of Self" in Current Psychological Literature**

In recent years, research has proposed various ways in which the concept of self influences how people act, think, and feel in particular situations, as well as the goals they pursue in life, and the ways they cope with and adapt to new environments (Robins, Tracy, & Trzesniewski, 2008). Many well known areas of personality research assume a central role for the self, including the study of self-conscious emotions, such as pride and shame (e.g., Tracy, Robins, & Tangney, 2007), traits, such as narcissism (e.g., Morf & Rhodewalt, 2001), autobiographical memories (e.g., Mclean, Pasupathi, & Pals, 2007; Sutin & Robins, 2005), self-regulation (Gailliot, Mead, & Baumeister, 2008), goal and motivation (Carver, Scheier, & Fulford, 2008), and internal working models of attachment (e.g., Collins & Allard, 2004).

Throughout the years, researchers have defined different aspects of self-experience that elucidate additional dimensions of personality. In addition to self-esteem (Rosenberg, 1979) and self-concept (Wylie, 1974- 1979), many other dimensions of self have emerged in the past thirty years. Among them are self-evaluation (Luhtanen & Crocker, 1992), self-perception (Bem, 1972), self-congruence (Ekinici & Riley, 2003), self-monitoring (Lennox & Wolfe, 1984), self-efficacy (Chen, Gully, & Eden, 2001),

self-confidence (Benabou & Tirole, 2002), self-control, positive self regard, self-identity, self-reliance, self-reflection, and self-disclosure (Cozby, 1973).

Somewhat different from these theory, Trower and Chadwick (1995), and Dagnan, Trower, and Gilbert (2002) proposed the self-constructed theory. The self-constructed theory deals with the process by which the self is constructed and the threats to this process. However, the theory is less concerned with self knowledge or self experience. It claims that in addition to self presentation, one must constantly obtain a self-verification from one or more significant others (Dexter-Smith, Trower, & Dagnan, 2003). Furthermore, in the process of constructing the self, individuals are confronted with two principal threats to the development of the self, an “insecurity” threat and an “engulfment” threat. The insecurity threat is linked with fear of exclusion, indifference, and rejection by significant others. The engulfment threat is associated with fear of intrusion, control, and possession by significant others, resulting in loss of the self as an autonomous agent (Dexter-Smith, Trower, & Dagnan, 2003). The Self and Other Scale (SOS; Dagnan, Trower, & Gilbert, 2002) was designed to measure both types of threat to self- construction, it assesses the utility of the other in the construction of the self, and it explicitly intends to measure the insecurity and engulfment threat.

To the author’s knowledge, there have been no attempts to assess the underlying structure of the experience of oneself or an underlying concept through which people understand the concept of self. This study seeks to assess if there exists a “subjective self” or an “I” aspect of the self as proposed by James (1890).

## **Construct Validity**

In terms of assessment, *construct validity* refers to the extent to which the measure assesses the domain, trait or characteristic of interest (Cronbach & Meehl, 1955). In other words, construct validity is based on the extent to which the construct underlying the measure serve as the basis for interpretation of the measure. Furthermore, there should be some initial assertion that the measure actually reflects the construct. Typically, the assertion comes from amassed evidence that findings are consistent with the construct (i.e., convergent validity) and findings that another construct is not plausibly related (i.e., discriminate validly) (Kazdin, 2003).

Accordingly, following the factor structure stage, this study will assess the relationship between each of the E-SOS subscales and Adult Attachment theory (Bartholomew (1990), Five Factor theory (FFT; McCrae & Costa, 1996), and Psychological Mindedness theory (Macallum, & Piper, 1997). Thus, the E-SOS was administered along with three additional scales. These scales include the NEO-Five-Factor Inventory (NEO-FFI; Costa & McCrae 1992), the Psychological Mindedness Scale (PM Scale; Conte, Plutchik, Jung, Picard, Karsu, & Lotterman, 1990), and The Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994).

**NEO-Five-Factor Inventory (NEO-FFI; Costa & McCrae 1992).** The initial NEO Personality Inventory (Costa & McCrae, 1985) included scales measuring three conceptual factors of Neuroticism, Extraversion, and Openness. Later, it included facet scales for the factors of Agreeableness and Conscientiousness. In 1992, Costa and McCrae published the 240 –item NEO personality Inventory Revised (NEO-PI-R; Costa & McCrae, 1992), which permits differentiated measurement of each Big Five dimension

in terms of six or more specific facets per factor (Costa & McCrae, 1995). For many research applications, the NEO-PI-R is rather lengthy.

To provide a shorter measure, Costa and McCrae (1989, 1992) developed the 60-item NEO-FFI, an abbreviated version based on an item level factor analysis of the 1985 version of NEO-PI (Costa & McCrae, 1985). The NEO-Five-Factor Inventory assesses the Big Five dimensions of personality: Neuroticism, Extraversion, Openness, Conscientiousness, and Agreeableness.

Based on the tentative understanding of the expected factor structure of the E-SOS, it was hypothesized that Neuroticism is be related to both the Negative Experience subscale, and to the Positive Experience subscale. Specifically, since Neuroticism is contrasted with emotional stability and even-temperedness with *negative emotionality* (John & Srivastava, 1999), it is assumed that while the Negative Experience subscale will be positively related to Neuroticism, the Positive Experience subscale will be negatively related to Neuroticism. Both the Agreeableness and Extroversion factors imply a positive approach toward the social and material world and include traits such as sociability, activity, assertiveness, and positive emotionality (John & Srivastava, 1999). Thus, while the Positive Experience subscale is expected to be positively related to both Agreeableness and Extraversion; the Negative Experience subscale is expected to be negatively related to these factors. Given the definition of these factors, one would also assume that the Family Experience subscale of the E-SOS will be positively related to both Agreeableness and Extraversion factors.



## **Adult Attachment**

Using Bowlby's definition of internal working models, Bartholomew (1990) suggested four classifications of adult attachment: Secure, Preoccupied, Dismissive-Avoidant, and Fearful-Avoidant. In addition, two dimensional spaces that underlie these categories are commonly labeled as "the self model" and the "other model" (Griffin & Bartholomew, 1994). Brennan, Clark, and Shaver (1998), labeled these underlying dimensions as "anxiety" (or "ambivalence") and "avoidance." These dimensions are associated with the degree of anxiety and dependency experienced in close relationships, as well as the extent to which others are generally expected to be available and supportive. Thus, they are associated with the tendency to seek out or avoid closeness in relationships (Rholes, & Simpson, 2004). Within the self and the other, each adult attachment style represents a distinct pattern of emotion regulation and interpersonal behavior.

Fearful-Avoidant individuals, defined by a negative self and other model (high anxiety and high avoidance), are highly dependent on others for the validation of their sense of worth; however, because of their negative expectations of others, they avoid intimacy as a means to avoid the pain of potential loss or rejection. The Dismissive-Avoidant individuals are defined by a positive self model and negative other model (low anxiety and high avoidance). They avoid closeness with others because of negative expectations; however, they maintain their high sense of self-worth by emphasizing the importance of independence, perceiving close relationships as an obstacle to achieve it. Preoccupied individuals are defined by a negative self and positive other model (high anxiety and low avoidance). They are highly dependent on closeness in personal

relationships as a source of protection for their low self esteem. Thus, their dependency on others leaves them vulnerable to extreme distress when their intimacy needs are not met. Finally, Secure individuals are defined by a positive self- and- other model (low anxiety and low avoidance). The individuals are characterized by both an internalized sense of self-worth and comfort with intimacy in close relationships (Griffin & Bartholomew, 1994).

**Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994).** The RSQ contains 30 short statements drawn from Hazan and Shaver's (1987) attachment measure, Bartholomew and Horowitz's (1991) Relationship Questionnaire, and Collins and Read's (1990) Adult Attachment Scale. On a 5-point likert scale, participants rate the extent to which each statement best describes their characteristic style in close relationships. Five statements contribute to the secure and dismissing attachment patterns and four statements contribute to the fearful and preoccupied attachment patterns. Internal consistencies of the two underlying dimensions have been shown to range from  $\alpha=.85$  to  $\alpha=.90$  for both avoidance and anxiety, respectively.

The expected E-SOS subscales are anticipated to relate to RSQ in the following way: the Secure Attachment factor will be positively related to the Family Experience subscale. In other words, the more one reports being enmeshed with his/her family, the more Securely Attached s/he will report. As mentioned above, scoring high in both the Fearful and Preoccupied pattern of attachment implies a negative self model or heightened anxiety (Griffin & Bartholomew, 1994). In other words, since the RSQ is a measure of attachment that is reflected in intimate adult relationships, having a negative self model means that the person is highly dependent on others for the validation of

his/her sense of worth and that person is also experiencing very low self esteem. Thus, one would assume that while the Negative Experience subscale would be positively correlated with both of these attachment patterns, the Positive Experience subscale would be negatively related to the Fearful and Preoccupied patterns of Attachment. Moreover, since Fearful Attachment also implies a negative-other model, it is assumed that it will be negatively related to the E-SOS Family subscale. Along these lines, Dismissing Attachment is also linked to the negative other model, thus it is expected to be negatively related to the Family subscale as well.

**Psychological Mindedness Scale (PM Scale; Conte et al., 1990).** The term psychological mindedness has been used interchangeably with other concepts such as insight, introspections, self awareness, self reflection, and the capacity for self-observation (McCallum & Piper, 1997). In the literature, psychological mindedness is also understood in different ways. For example Macallum and Piper (1990) define the term as “the ability to identify dynamic (intrapsychic) components and to relate them to a person’s difficulties” (p. 412). Farber (1985) saw psychological mindedness as a trait, rather than an ability, calling it “...the disposition to reflect upon the meaning and motivation of behavior, thoughts, and feelings of oneself and others” (p. 170). For the most part, the term is used in the clinical field as a predictor for success in psychodynamic oriented psychotherapy. Thus, the PM Scale (PM Scale; Conte et al., 1990) is a psychological mindedness measure designed to understand a patient’s suitability to dynamically oriented psychotherapy and to determine their personal therapeutic outcomes after such psychotherapy.

The scale is a 45-item self-report measure and the items appear on a 4-point scale ranging from *strongly agree* to *strongly disagree*, with higher scores indicating greater psychological mindedness. Although the E-SOS is asking about one's "self experience," it also asks the subject to self reflect, or to "identify dynamics" in order to authentically answer the scale's questions. Thus, if a meaningful and significant correlation will emerge between the two scales, it might provide a deeper understanding for both Psychological Mindedness theory and the experience of self concept. For the purpose of this study, the total score of the PM Scale will be compared to each of the E-SOS subscales.

### **A Further Understanding**

From the above investigation, one would hope to gain a better understanding of the E-SOS measure and the concept it intends to explore. Thus, apart from anchoring it with well-known and related concepts, this study wishes to further expand the line of research and to understand whether there is also a difference between ethnic and gender groups in construction of their self in the face of the other. The hope is that with a better understanding of the scale, new ideas for further use the measure will emerge that will be relevant to the self perspective approach to personality.

## **Method**

### **Participants**

A total of 397 men and women completed the E-SOS. Males made up 21.5% ( $N = 81$ ) of the sample, while females made up 78.5% ( $N = 310$ ) of the sample. The mean age was 31.1 ( $SD = 11.37$ ). The ethnic breakdown of the sample included: 69.8% Caucasian, 7.8% Asian, 7.8% Hispanic, 4.0% African- American, 0.3% Native American, and 10.3%

other. In terms of relationship status, 51.1% of the sample was single, 34.1% were married, 10.6% were in a domestic partnership, 3.8% were divorced, and 0.5% were widowed.

## **Measures**

**Psychological Mindedness Scale (PM Scale; Conte et al., 1990).** The Psychological Mindedness Scale (PM Scale) is a 45-item self-report measure. The PM Scale was originally developed to assess patient suitability for psychodynamic psychotherapy. It is an abbreviated version of Lotterman's (1993) 65-item scale. Items appear on a 4-point likert scale ranging from *strongly agree* to *strongly disagree*, with higher scores indicating a greater degree of psychological mindedness. Example items include: "I am always curious about the reasons people behave as they do," "I like to try new things, even if it involves taking risks," and "Often I don't know what I'm feeling." Internal consistency ( $\alpha = .87$ ) have been demonstrated in a sample of 256 psychiatric outpatients (Lotterman, 1993).

**NEO-Five-Factor Inventory (NEO-FFI; Costa & McCrae 1992).** The NEO-Five-Factor Inventory, a 60-item self-report instrument, assesses the Big Five dimensions of personality: Neuroticism, Extraversion, Openness, Conscientiousness, and Agreeableness. The NEO-FFI is a brief version of the 240-item NEO-PI. Items that represent each of the five factors are as follows: "I often feel tense and jittery" (Neuroticism), "I am a cheerful, high-spirited person" (Extraversion), "I often enjoy playing with theories or abstract ideas" (Openness), "I would rather cooperate with others than compete with them" (Agreeableness), and "I have a clear set of goals and work toward them in an orderly fashion" (Conscientiousness). The items are rated on a 5-point

likert scale. The NEO-FFI scales show internal consistency values range from  $\alpha = .74$  to  $\alpha = .89$  (Costa & McCrae, 1992).

**Relationship Scale Questionnaire (RSQ; Griffin & Bartholomew, 1994).** The RSQ contains 30 short statements drawn from Hazan and Shaver's (1987) Attachment Measure, Bartholomew and Horowitz's (1991) Relationship Questionnaire, and Collins and Read's (1990) Adult Attachment Scale. On a 5-point scale, participants rate the extent to which each statement best describes their characteristic style in close relationships. Internal consistencies of the two underlying dimensions have been shown to range from  $\alpha = .85$  to  $\alpha = .90$  for both avoidance and anxiety, respectively. (Griffin & Bartholomew, 1994).

### **Procedure**

Participants in this study voluntarily completed an Internet survey. They were recruited through advertisements on websites, flyers posted at diverse locations (colleges and universities, shopping malls, supermarkets, bus terminals and subways), and through TV and news media ads and announcements throughout the United States and Israel.

### **Data Analysis Plan**

The first step in the data analysis plan was to examine the factor structure of the revised E-SOS. The discarded items were factor analyzed using exploratory factor analysis (EFA) principal axis factoring, with oblique rotation to allow for correlations among the factors. Costello and Osborne (2005) explain that during the factor extraction, the shared variance of a variable is screened from its unique variance and error variance to reveal the underlying factor structure. According to de Vet, Ade`r, Terweel, and Pouter (2005), in the preliminary stages of developing a scale, there is no definitive

information regarding factor structure (number of factors and their inter-correlation), and thus, factor structure can best be assessed through exploratory factor analysis (Floyd & Widaman, 1995; Johnson, 1998; Streiner, 1994).

In order to determine how many factors are meaningful Allison, Gorman, and Primavera (1993) suggest using either orthogonal rotation or oblique rotation. Orthogonal (e.g. Varimax) rotation assumes the factors to be uncorrelated (de Vet, Ade`r, Terweel, & Pouwer, 2005), whether or not oblique rotation allows for correlations between the factors (Floyd & Widaman, 1995). As mentioned above, oblique rotations were used to allow for correlations among the factors.

In addition to exploratory work, a confirmatory approach was taken to determine construct validity. Confirmatory factor analysis (CFA) provides the researcher with important insight into the multivariate structure of a scale by explaining the covariance and correlation structure among the measured items (Floyd & Widaman, 1995; Johnson, 1998). CFA is used to test whether a hypothesized factor structure of a scale (based either on empirical data or on theory) is supported by actual data. Structural equation modeling techniques are used to test hypotheses about relationships between observed variables (items) and factors (de Vet, Ade`r, Terweel, & Pouwer, 2005). The aim may be either pure data reduction or assessment of the factor structure (dimensions) measured by the scale (Floyd & Widaman, 1995; Johnson, 1998; Streiner, 1994; Bollen, 1989). In using MPLUS to conduct this analysis, CFA was used, in addition to structural equation modeling to establish that the hypothesized underlying dimensions can be measured reliably and that they do validly represent the constructs of self and other models. CFA

provides fit indices, which indicate the degree to which the covariance among the items are accounted for by the hypothesized factor model (Baer & Allen, 2004).

After determining that all of the E-SOS' subscales demonstrated adequate internal reliability, bivariate correlations were conducted to examine the strength of the associations between the variables. Next, multi-linear regression analyses were conducted between each of the E-SOS subscales (dependent variable) and the other constructs (predictors) in order to assess goodness of fit for the overall model, and to find the variable(s) that significantly contribute to the outcome. This data analysis strategy allows one to evaluate the multivariate association between the E-SOS subscales and the other constructs without inflating the chance of committing a Type I error (false positive). Finally, to assess whether ethnicity and gender had an effect on the way participants answer the different subscales (factors) of the E-SOS, a one-way analysis of variance (ANOVA) and an independent one-sample t-test were conducted.

## **Results**

### **Factor Structure**

**Exploratory factor analyses.** A preliminary EFA was conducted for the initial sample of 397 subjects. This analysis yielded eight factors with eigenvalues greater than 1.0, cumulatively accounting for 59.95% of the variance. However, the scree plot showed a substantial drop in the eigenvalues after five factors, indicating a five factor solution. Floyd and Widaman (1995) argue that use of eigenvalues greater than 1.0 often result in overestimation of the number of factors to retain. They suggest that the scree plot is a more useful guide for interpreting the data. Therefore, a second factor analysis was



conducted, specifying that five factors should be identified; again, principal axis factoring with oblique rotation was used.

Fourteen candidate items were removed after finding either low communality estimates or dual factor loadings, leaving a total of 31 items. After dropping the 14 items, a scree plot of eigenvalues (5.21, 16.81%; 4.00, 12.91%; 2.24, 7.22%; 2.13, 6.87%; and 1.61, 5.20%) accounted for a total of 49.02% of the variance in the solution (see Table 1). By utilizing promax rotation with Kaiser Normalization for interpretation, substantial evidence for the independence of five factors (with relatively low correlations among the factors) was found. The five factors are described as: 1) Experience of Positive Sensation ( $\alpha=.81$ ); 2) Experience of Challenges ( $\alpha=.77$ ); 3) Experience of Temptations ( $\alpha=.73$ ); 4) Experience of Higher Power ( $\alpha=.78$ ); and 5) Experience of Family ( $\alpha=.65$ ) (see Tables 4, 5 and 6).

**Confirmatory factor analyses.** Utilizing CFA using MPLUS, the five-factor structure of the E-SOS was subjected to confirmation for an independent sample. The chi-square test of goodness-of-fit was significant,  $\chi^2(336) = 926.70, p < .001$ , indicating significant deviation of the data from the proposed model. This is a likely outcome due to the large sample size (Hu & Bentler, 1999). Other model-fit statistics that are less sensitive to sample size, yielded high values (CFI = .80 and TLI = .80). Furthermore, the root mean square error of approximation (RMSEA) was .05 and the standardized root mean square residual (SRMR) was .07. These findings indicate acceptable fit of the model in relation to its degrees of freedom. The fit indices of the model meet or exceed suggested levels (Bentler, 1995); therefore, it can be concluded that the hypothesized model provided good fit for the data (see Table 9).

**Second exploratory factor analyses.** In order to assess the stability of the factor structure found in the total sample, an additional and separate EFA was conducted for the females ( $n= 310$ ) and then for the males ( $n= 86$ ). Factor analysis of the initial 45 scale items resulted in both analyses requiring the removal of the same 14 items after finding either low communality estimates or dual factor loadings, leaving the same 31 items as in the preliminary EFA with the total sample. In the females' portion, there was hardly any change in comparison to the total sample. Specifically, a five factor structure was identified at the same order and content as the total sample. A scree plot of eigenvalues for the females' portion (5.09, 16.41%; 3.80, 12.26%; 2.10, 6.77%; 2.03, 6.56%; and 1.65, 5.32%) accounted for 47.31% of the variance in the solution, with coefficient alphas of .80; .78; .72; .80, and .66 respectively (see Tables 2 and 7).

The males' portion of the sample also yielded the same content factor; however, the order of the factors was slightly different than that of the total sample. Specifically, Experience of Positive Sensations ( $\alpha=.81$ ) was first, followed by Experience of Temptations ( $\alpha=.76$ ); Experience of Challenges ( $\alpha=.77$ ); Experience of Family ( $\alpha=.63$ ) and, Experience of Higher Power ( $\alpha=.69$ ). A scree plot of eigenvalues for the males' portion (5.41, 16.46%; 3.70, 11.95%; 2.60, 8.28%; 2.20, 6.96%; and 1.61, 5.20%) accounted for 49.85% of the variance in the solution (see Tables 3 and 8). It should be noted that the difference in the order of the factors could be due to the significant difference in the number of males in comparison to females and not necessarily due to gender differences.

The five-factor structure of the females' portion was subjected to CFA as well. The chi-square test of goodness-of-fit was significant,  $\chi^2 (263) = 864.70, p < .001$ ,

indicating significant deviation of the data from the proposed model. This is a likely outcome due to the large sample size (Hu & Bentler, 1999). Other model-fit statistics less sensitive to sample size yielded high values, CFI = .81 and TLI = .79. Furthermore, the root mean square error of approximation (RMSEA) was .06, and standardized root mean square residual (SRMR) was a .08. These findings indicate an acceptable fit for the model (see Table 10). The males' portion was not subjected to CFA, as the number of the males in the study is too low for conducting reliable fit indices using CFA (Hu, & Bentler, 1999).

### **Construct Validity**

A correlation matrix among all the variables of the study, not including the E-SOS factors, is presented in Table 11. Table 12 presents correlations between the subscales of the E-SOS and the subscales of the NEO-FFI (Costa & McCrae, 1992), Relationship Scales Questionnaire (Griffin & Bartholomew, 1994) and the total score of the Psychological Mindedness Scale (Conte et al., 1990). It is important to note that the E-SOS was the second questionnaire administered in the survey right after the demographical questionnaire, and some participants never completed the study. Thus, after cleaning the data, a total of 205 subjects were left to conduct the different correlations with relatively the same demographical breakdown. Specifically, within the new sample, 49 (23%) males and 156 females (76.5%) remained. The mean age was 30.9 ( $SD = 11.94$ ). The ethnic breakdown of the sample was 73.7% Caucasian, 8.8% Hispanic, 5.9% Asian, 5.4% African- American, and 6.3% other.

## Relationships Among E-SOS and the Other Constructs

**Factor 1- Experience of Positive Sensation.** Significant inverse relationships emerged between Neuroticism, Anxiety, Depression, Self Reproach, Fearful Attachment and Experience of Positive Sensation ( $r = -.43, p < .001$ ;  $r = -.21, p < .001$ ;  $r = -.41, p < .001$ ,  $r = -.50, p < .001$ ;  $r = -.27, p < .001$  respectively). Not surprising, a contradictory pattern emerged for Extraversion and Conscientiousness ( $r = .22, p < .001$ ,  $r = .32, p < .001$  respectively).

**Factor 2-Experience of Challenges.** As expected, a significant positive correlation was found between Experience of Challenges and Fearful and Preoccupied Attachment ( $r = .31, p < .001$ ,  $r = .36, p < .001$ ). Furthermore, a significant positive relationship emerged with Neuroticism, Anxiety, Depression and Self Reproach ( $r = .39, p < .001$ ;  $r = .34, p < .001$ ;  $r = .26, p < .001$ ,  $r = .36, p < .001$ , respectively). Not surprisingly, Extraversion, Openness, and Agreeableness were all negatively associated with the Experience of Challenges subscale ( $r = -.20, p < .001$ ;  $r = -.14, p < .001$ ;  $r = -.22, p < .001$ , respectively). Somewhat contradicting the former result, a significant positive correlation was found between the Experience of Challenges subscale and Secure Attachment ( $r = .18, p < .001$ ).

**Factor 3- Experience of Temptations.** A significant positive relationship emerged with Neuroticism, Depression, and Self Reproach, suggesting that negative affect is positively associated with the Experience of Temptations subscale ( $r = .20, p < .001$ ;  $r = .18, p < .001$ ;  $r = .16, p < .001$  respectively). Interestingly enough, no relationship was found with anxiety. Moreover, a significant positive correlation was also found with Fearful and Preoccupied Attachment ( $r = .19, p < .001$ ;  $r = .21, p < .001$ ).

respectively). Consistent with the latter finding, a converse pattern emerged for Openness, Agreeableness, and Conscientiousness, which were all negatively associated with the Experience of Temptations subscale ( $r = -.30, p < .001$ ;  $r = -.30, p < .001$ ;  $r = -.21, p < .001$ , respectively). Finally, a positive association between the Experience of Temptations subscale and the PM Scale (total score) was found ( $r = .21, p < .001$ ).

**Factor 4- Experience of Higher Power.** A significant positive correlation was found between the Experience of Higher Power subscale and Extraversion ( $r = .15, p < .05$ ).

**Factor 5- Experience of Family.** As expected, a significant positive correlation was found between Secure Attachment and the Experience of Family subscale ( $r = .31, p < .001$ ), as well as Extraversion ( $r = .16, p < .05$ ). Consistent with the latter finding, a significant inverse relationship emerged between Fearful Attachment and the Experience of Family subscale ( $r = -.18, p < .001$ ), as well as Dismissing Attachment ( $r = -.24, p < .001$ ).

### **Multiple Regression Analyses**

Since the PM scale did not correlated well with the E-SOS it was decided to leave it out in the multiple regression analyses stage. Thus, the next step investigated the extent to which the NEO and RSQ help explain the variability in E-SOS degree of enmeshment. Specifically, in order to examine the comparative contribution of The Big Five personality factor model and four different attachment styles, five separate multiple regression analyses were conducted using each of the E-SOS subscales as the criterion variables.

**Experience of Positive Sensation.** The Big Five personality factor model and four attachment styles significantly explained the variability in Experience of Positive Sensation ( $F(9, 148) = 5.77, p < .01$ ), and accounted for 26% of the variance in the experience of positive sensation (see Table 13). Within the model, both Neuroticism ( $\beta = -.37, p < .01, \eta^2 = .06$ ) and Agreeableness ( $\beta = -.21, p < .05, \eta^2 = .03$ ) coefficients showed significant inverse relationships with Experience of Positive Sensation. On the other hand, the Conscientiousness coefficient showed a significant positive relationship with Experience of Positive Sensation ( $\beta = .19, p < .05, \eta^2 = .03$ ).

**Experience of Challenges.** The model significantly explained the variability in Experience of Challenges ( $F(9, 154) = 4.20, p < .01$ ) and accounted for 19% of the variance in the Experience of Challenges (see Table 14). No significant coefficients were found within the model.

**Experience of Temptations.** The model significantly explained the variability in Experience of Temptations ( $F(9, 155) = 3.51, p < .05$ ) and accounted for 17% of the variance in the Experience of Temptations (see Table 15). Within the model, the coefficients of both Openness ( $\beta = -.17, p < .05, \eta^2 = .02$ ) and Agreeableness ( $\beta = -.33, p < .01, \eta^2 = .07$ ) were significant and negative.

**Experience of Higher Power.** Overall, the entire model did not sufficiently explain the variability in experience of Higher power,  $F(9, 157) = 1.74, ns$ , and its accounted for 9% of the variance in the Experience of Higher power (see Table 16). However, Extraversion's coefficient was found to be positively significant ( $\beta = .20, p < .05, \eta^2 = .03$ ).

**Experience of Family.** The model significantly explained the variability in Experience of Family ( $F(9, 152) = 3.65, p < .01$ ) and accounted for 18% of the variance in the Experience of Family (see Table 17). The Secure Attachment coefficient was positive and significant ( $\beta = .25, p < .05, \eta^2 = .03$ ). On the other hand, the Agreeableness coefficient was found to be significantly negative ( $\beta = -.21, p < .05, \eta^2 = .03$ ).

### **Ethnic and Gender Differences**

Overall, there were significant ethnic differences at the mean level of the Experience of Challenges, Temptations, and High-Power ( $F(3, 178) = 3.22, p < .05$ ;  $F(3, 182) = 4.58, p < .05$ , and  $F(3, 183) = 3.63, p < .05$ , respectively) (see Table 18). Post-hoc analyses (Least Significant Difference, LSD) revealed that both Asian Americans ( $p < .05, \eta^2 = .04$ ) and Caucasians ( $p < .05, \eta^2 = .03$ ) are significantly less enmeshed with their Experience of Challenges, in comparison to Hispanic/Latino individuals. In a similar vein, both Asian Americans ( $p < .05, \eta^2 = .05$ ) and Caucasians ( $p < .05, \eta^2 = .03$ ) were significantly less enmeshed with their Experience of Temptations in comparison to Hispanic/Latino individuals. Finally, both Hispanic/Latina/o ( $p < .05, \eta^2 = .03$ ) and African Americans ( $p < .05, \eta^2 = .03$ ) were significantly more enmeshed with their Experience of Higher Power in comparison to Caucasians individuals. It should be noted that there were significantly more white participants in the study, compared to any other ethnic groups. Furthermore, although the numbers of participants within the other ethnic groups were relatively similar, none of those groups had a sufficient number of participants to investigate group patterns. Thus, the results should be interpreted with caution.

In terms of gender, there were no significant differences in the mean levels of the variables (Positive Sensation  $t(177) = -1.00, p = .32, \eta^2 = .09$ ; Experience of Challenges  $t(179) = .184, p = .85, \eta^2 = .02$ ; Temptations  $t(183) = -.154, p = .88, \eta^2 = .01$ ; Higher Power  $t(184) = -.151, p = .88, \eta^2 = .01$ ; Family  $t(181) = -.383, p = .70, \eta^2 = .03$  (two tailed).

## **Discussion**

### **Factor Structure**

The first aim of this study was to improve and strengthen the factor structure of the previous version of the E-SOS (Shvil, Krauss, Midlarsky, & Ward 2008). Thus, additional items were added to the new version and the potency / weakness dimension was removed from the current E-SOS version. Moreover, in order to strengthen the scale's psychometric properties, in addition to using exploratory factor analysis as the previous study did, a confirmatory approach was taken. To further test the stability of the factor structure, additional exploratory as well confirmatory factor analyses were conducted both for the female and the male portions of the sample.

Fourteen candidate items were removed from the initial 45 items after finding either low communality estimates or dual factor loadings, leaving the current version of the E-SOS with a total of 31 items. As expected, and as similar to the previous version, examinations of the scree plots from the factor analysis suggest that the items of the E-SOS tap into five factors after the 14 items were removed. All factors show a relatively high internal consistency. Moreover, the five factors accounted for almost the same variance in the solution (49.02%) as the previous version (51.65%). Furthermore, confirmatory factor analysis demonstrates a sufficient model fit. This pattern was



repeated when additional factor analyses were conducted on the female and male portions of the sample, leading one to believe that the factor structure of the E-SOS is quite stable.

The mean scores of the five subscales did not differ substantially between genders. Although a few E-SOS subscales did differ substantially across ethnicities, the proportion of white participants is substantially greater than any other ethnic group. Thus, this result should be interpreted with caution.

In terms of the factors' content, the Person factor from the previous version of the E-SOS did not display in the current version, as all the underlying items had low communality estimates or dual factor loadings and thus were removed. The View of Self factor from the previous version has kept all but one item (Fantasies), which had low loading. But additional items were added to this factor (i.e., hope, your intelligence, excitement, and your significant other). These additional items, along with the items that were left from the previous scale version (i.e., happiness, optimism, what you want to be, self control, your sexuality, and your body), have changed the content domain of this factor; they seem to be connected to a positive view of one's self, specifically to a situation in which one feels good about one's self. Thus, the factor name was changed from View of Self to Experience of Positive Sensation. An addition five items were added to the Objects/ Substances factor (i.e., T.V. watching, internet, your cell phone, money, and food). These new items make the name of the factor more transparent than the previous factor. Thus the name of the Objects/ Substances factor from the previous version was changed to Experience of Temptations. Both the Family factor and the Negative Emotion factor from the previous version were kept the same. Finally, as expected, a new factor was yielded in the current version: Higher Power.

Similar to measuring IQ and personality traits, the endeavor of assessing one's experience of self has been measured by a scale of "items" that are subjected to a factor analytic method. However, it is difficult to conclude if the five E-SOS factors are analogous to either a stable trait (as in the Five Factor Model or IQ subscales). Trait Theory, for example, characterizes individuals in terms of relatively enduring patterns of thoughts, feelings, and actions that can be quantitatively assessed. These traits show some degree of cross-situational consistency (McCrae & John, 1992). Hence, the question remains whether the E-SOS factors will remain similar or stable if the scale is given to a different population (i.e., those with severe pathology). Moreover, an additional investigation is needed to further explore if new items added to the E-SOS will construct a new factors domain. In other words, it remains to be seen whether the current subscales are stable constructs that exist in the core of one's experience of self, regardless of one's state or specific scale items.

### **Construct Validity**

While the results show hardly any relationship between the Psychological Mindedness scale and the different E-SOS subscales, many relationship patterns emerged between both the Big Five theory and the different Attachment styles. Thus, the E-SOS is conceptualized in this study through the lens of these two theories.

**Experience of Positive Sensation subscale.** The regression results report that both Neuroticism and Agreeableness negatively predict higher scores on the Experience of Positive Sensation subscale. This might suggest that people who are generally more anxious, sad, and less emotionally stable—yet are orientated toward others and believe in

the authenticity and good intentions of others—will experience themselves as less enmeshed with their positive sensations, or be less aware of them.

On the other hand, the coefficient of Conscientiousness was found to be significant and positive. This suggests that goal-oriented individuals with high impulse control and high self-efficacy are predicted to score high on the Experience of Positive Sensation subscale. Therefore, those individuals experience themselves as more enmeshed with their positive sensations.

Both emotional stability and self-image are predictive of the pattern of Experience of Positive Sensations. Specifically, when individuals are emotionally stable, content, and satisfied with life (low in Neuroticism), they might attribute their success and state to their good planning skills and their efficiency (high Conscientiousness). Yet, since they attribute their positive sensations to themselves, they might be less orientated toward others and might seek less closeness with other people (low Agreeableness).

On the other hand, an unstable emotional individual that is anxious, depressed, and with poor impulse control and planning skills (high in Neuroticism; low Conscientiousness), but who is also orientated toward others and believes in their good intentions (high Agreeableness), is predicted to score low on the Experience of Positive Sensation. Thus, he or she will probably be less enmeshed with his or her positive sensations.

**Experience of Challenges.** Correlation results show that less emotional stability, low self-worth, anxiety, and sadness, all are positively related to the Experience of Challenges subscale. In other words, the more neurotic, anxious, and depressed one is, the more he or she will report to be intertwined with his/her challenges or be more aware

of them. Along this line, and as anticipated, both the Fearful and Preoccupied pattern of Attachment were positively related to Experience of Challenges subscale. Interestingly, the Secure Attachment pattern was also positively related to the Experience of Challenges subscale as well. This appears to be contradictory in so much as experience of challenges is not distinctly different in terms of one's attachment pattern. For instance, previous research sustains the argument that an individual's attachment pattern is highly related to his or her ways of coping with threats rather to his or her emotional state (Ein-Dor, Mikulincer, Doron, & Shaver, 2010) For example, highly secure individuals are frequently able to cope with threats by successfully seeking support from others (Mikulincer & Florian, 1995, 1998), and in general trusting other people (Batholomew & Horowitz, 1990; Collins & Read, 1990). Avoidant and Anxiously Attached individuals tend to cope with threats without seeking help or support from other people (Farley & Shaver, 1997).

Accordingly, while Fearful and Secure Attachment style were both positively related to Experience of Challenges; the Experience of Family subscale was positively related to Secure Attachment. This suggests that the more Securely Attached one reports themselves to be, the more enmeshed he or she will be with their Experience of Family subscale. Yet Fearful Attachment was negatively related to Experience of Family subscale, suggesting that the more Fearful Attached one reported to be, the less enmeshed he or she will report to be with their Experience of Family subscale. Thus, while both Fearful and Securely Attached individuals experience challenges in the same direction, Fearful Attached individuals will cope with challenges by themselves, without seeking

help or support from other people, while Securely Attached individuals will successfully seek support from others when experiencing challenges.

The regression results, on the other hand, show that while the model can significantly explain the variability in Experience of challenges, no single variable can explain or predict scores on the Experience of Challenges subscale. In other words, neither one's attachment style nor one's personality traits can predict above and beyond the other variables how one will score on this subscale.

One of the ways to understand this result is that, regardless of one's attachment style or personality pattern, all people experience challenges, regardless of how one responds to such challenges. It seems that the Experience of Challenges subscale stands above one's personality style or attachment pattern. This subscale might signify the core of human existential experience. In other words, life is essentially a challenge. One can choose to put life's challenges in the foreground of one's experience or to put them in the background. But regardless of how one reacts to negative challenges in life, these challenges are the foundation from which one's self is molded.

**Experience of Family subscale.** The regression results show that while a Secure Attachment style might positively predict higher scores on this subscale, Agreeableness negatively predicts high scores on the Experience of Family subscale. These results might seem contradictory, as an individual that is more comfortable with intimacy in close relationships (Griffin & Bartholomew, 1994) and who turns to others when facing difficulties (Mikulincer & Florian, 1995, 1998) is predicted to be more enmeshed with his or her Experience of Family subscale. On the other hand, an individual that is generally prosocial and trusts other people (John & Srivastava, 1999) is predicted to be less

enmeshed with his Experience of Family. Yet, Agreeableness is negatively correlated to Secure Attachment styles (see Table 8).

This suggests that the more Securely attached one is, the less Agreeable one is. Thus, one who is highly enmeshed with the Experience of Family subscale might trust his close family circle and turn to them in times of need, yet he will remain guarded of other people that are not his relatives.

On the surface this scale underscores the fundamental uniqueness of the way humans experience themselves in the face of their family circle—above and beyond any other relationship in their life. Interestingly, the Significant Other item, which considers part of one’s “family circle,” did not load well on this factor in the factor analysis, instead it loaded onto the Experience of Positive Sensations factor. Yet, the underlying items of the Experience of Family subscale include: Father, Mother, Other Family Member, and Sibling. These items, specifically the Father and the Mother, are connected to the pre-awareness time, that is, the period before the human infant develops the capacity to separate between the self and the other. Furthermore, these items are also related to the crucial period in one’s mental life when one realizes that his/her thoughts or mental representations are unobservable by others (Strawson, 1997; 1999). It is during this time that one discovers that other people have minds as well (Lachmann, 2004). Thus, it seems that the Experience of Family subscale is tapping into a turning point, or a fundamental junction, in one’s life experience—the emergence of the “subjective” or “I” aspect of the self, as proposed by James (1890).

**Experience of Temptations subscale.** The regression analyses results show that both Openness and Agreeableness negatively associated with scores on the Experience of

Temptations subscale. This might suggest that individuals who tend to be closed-minded and experience frequent interpersonal problems and delinquent behavior are likely to be more enmeshed with their temptations. In addition, although it was not significant in the regression analyses, results on the correlation analyses also show a significant and negative relationship between the Experience of Temptations subscale and Conscientiousness. This suggests that the *less* goal-oriented, and strategic one is, the *more* enmeshed he will be with his or her Experience of Temptations. Moreover, a significant positive relationship between this scale and Neuroticism, Depression, Self Reproach, as well as Fearful and Preoccupied Attachment style subscales were found. This might suggest that people with less emotional stability and low self-esteem tend to cope with threats by themselves, without seeking help or support from other people. Thus it seems the degree to which one's temptations impede one's functioning is how enmeshed one will be with or one's temptations. Specifically, it seems that the more enmeshed one is (scoring high on the subscale), the less control one has over one's temptations.

It would be interesting to assess in future studies the relationship between this subscale and ego control, as well as ego resiliency. These constructs are characterized as central personality constructs for understanding motivation, emotion, and behavior (Block, J., 2002; Block & Block, 1980). Thus, strong ego resiliency and ego control is predicted to be negatively related to this subscale.

**Experience of Higher Power subscale.** The regression results show that the model cannot significantly explain the variability in Experience of Higher Power. Thus, the Experience of Higher Power subscale cannot be predicted through the lens of

Attachment styles or the Big Five model. Yet, Extraversion alone was found to be significant and positively predicting higher scores on the Experience of Higher Power subscale. This suggests that individuals who enjoy the company of others and have a generally positive attitude toward life might experience themselves to be more enmeshed with a higher power.

### **Limitations**

Several limitations of this study must be noted. Conducting research through the Internet is an easy and inexpensive method for obtaining a large number of study participants and successfully avoids experimenter expectation effects. However, with no experimenter present, there is no way to provide answers or feedback to questions participants might have. There is also no quality control over response rate, including no effective way to ensure that the intended participants of the study are in fact the people who actually provide the responses. In addition, participants' motives may fluctuate through the course of the survey, leading to a corresponding drop in response quality (Holye, Harris, & Judd, 2002). Last, posting the inventory on the Internet may limit the participants to those who have computer access.

### **Conclusions**

The self is a concept that has occupied different fields of psychology (e.g., clinical psychology, social psychology, and personality psychology) for a considerable amount of time (Baumeister 1998). The self is considered to be a vital intrapsychic characteristic of a person that has central implications for healthy and mature emotional and social functioning (Tanti, Stukas, & Halloran, 2008). The self has also helped researchers to



better comprehend human conscious awareness and an individual's different experiences of the internal and external world.

Researchers agree that trying to understand, define, or explain the experience of self will further one's knowledge about the similarity and uniqueness of human experience (Robins, Tracy, & Trzesniewski, 2008). Throughout the years, researchers have defined different aspects of self-experience that elucidated additional dimensions of personality. They proposed various ways in which the concept of self influences how people act, think, and feel in particular situations, the goals they pursue in life, and the ways they cope with and adapt to new environments (Robins, Tracy, & Trzesniewski, 2008).

The view of the notion of self in this study is adhering to the schools of thought that understand the self only in relation to others (Klein, 1952; Sullivan, 1953; Stern, 1985; Lachmann, 2004). The self never stands alone; rather, it exists only in relation to others, and when put in relation to others, it creates a conscious experience – the experience of the self.

For the purpose of this study, the Experienced Self and Other Scale (E-SOS) was developed. The E-SOS is a self-report scale that asks experiences of oneself in relation to different others that are specified in the scale. In this study, the term experience is defined by the degree of overlap between oneself and the target other. Degree of overlap is symbolized using Venn diagrams. It was posited that by asking people to reflect how they think of the self in relation to others, the writers will gain an additional understanding of the experience of self.

The E-SOS yields a clear and reliable factor structure with strong psychometric properties. Specifically, the E-SOS items loaded on a five factors (i.e. subscales) that are

more transparent than the factors from the previous version of the scale (See Shvil, Midlarsky, Krauss, & 2009). The five factors are: Experience of Positive Sensation, Experience of Challenges, Experience of Temptations, Experience of Higher Power, and Experience of Family.

In an attempt to better understand what the E-SOS measures and what it does not measure, the E-SOS was jointly administered with three established measures in the field of personality, attachment, and psychological mindedness. Results indicate no correlation between the E-SOS and the Psychological Mindedness Scale (PM Scale; Conte et al., 1990). However, meaningful relationships were found with the NEO-Five-Factor Inventory (NEO-FFI; Costa & McCrae 1992) and Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994).

The E-SOS subscales were significantly correlated with the different NEO-FFI factors, as well as the RSQ factors. Yet the E-SOS subscales added information beyond what the measures are intended to provide. Results indicate that one's attachment style or personality traits hardly provide any information or implication of the pattern of one's experience of self. For example, while a Securely Attached individual is expected to reach out and to seek support from others in the face of adversity, a Fearful-Avoidant Attached individual is expected to cope with threats by ones' without seeking help or support from other people. Yet, both attachment styles will "experience their challenges" in the same direction. Thus, Attachment Theory might help predict how one will act given his family environment while growing up, but it does not imply how one experiences one sense of self.

Extensive research suggests that the self is viewed differently between cultures (Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994; Triandis, 1995). Specifically, various writers propose crucial differences in how those raised in individualistic and collectivistic cultures construct and experience the self (Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991; Triandis, 1989). Markus and Kitayama (1991) argue that individualistic cultures encourage an independent self-view, which promotes independence, autonomy, and view of the self as a separate and distinct entity from its social surrounding. Collectivistic cultures, on the other hand, encourage an interdependent self-view. This view promotes deep concern for others and commitment to group goals.

As mentioned before, the E-SOS was adapted from the Inclusion of Other in the Self (IOS, Aron, Aron, & Smollan, 1992). Li (2001) has used a slightly modified version of the IOS to study the division between Western cultures and non-Western cultures in terms of individualism and collectivism. Using an adapted version of the IOS, Li (2001) assessed the ways in which members of each cultural group constructed interpersonal relationships. The author claims that using the Venn diagrams as a representation of a relationship overcomes the limitations of verbal descriptions. In a similar vein, in future studies, the E-SOS might be useful in evaluating differences in one's experience of self among different cultures.

Moreover, the E-SOS should also be given to pathological populations to assess their experience of self. Last, while research asserts that both attachment style and personality traits remain relatively stable throughout one's life, it would be interesting to assess whether the experience of self is a stable construct or if it is subject to changes in

emotional states or life circumstances. Although many questions are left unanswered, the E-SOS appears to be a promising approach to measuring one's experience of self.

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Table 1

*E-SOS: Total Variance Explained*

Factor	Initial Eigenvalues			Rotation Sums of squared Loadings
	Total	% of Variance	Cumulative %	Total
1	5.21	16.81	16.81	4.17
2	4.00	12.91	29.73	2.78
3	2.24	7.22	36.95	2.97
4	2.13	6.87	43.83	2.76
5	1.61	5.20	49.02	2.59

*Note. N = 397*

Table 2

*E-SOS- Females Only Total Variance Explained*

Factor	Initial Eigenvalues			Rotation Sums of squared Loadings
	Total	% of Variance	Cumulative %	Total
1	5.09	16.41	16.41	3.91
2	3.80	12.26	28.66	2.75
3	2.10	6.77	35.43	2.87
4	2.03	6.56	41.99	2.93
5	1.65	5.32	47.31	2.12

*Note.*  $N = 310$

Table 3

*E-SOS- Males Only Total Variance Explained*

Factor	Initial Eigenvalues			Rotation Sums of squared Loadings
	Total	% of Variance	Cumulative %	Total
1	5.41	16.46	17.46	4.26
2	3.70	11.95	29.41	3.13
3	2.57	8.28	37.69	2.70
4	2.16	6.96	44.65	2.40
5	1.61	5.20	49.85	2.39

*Note.*  $N = 87$

Table 4

*Rotated Factor Loadings for the E-SOS Items*

Item Number and Content	Factor Loading				
	1	2	3	4	5
Experience of Positive Sensation					
39. Happiness	<b>.81</b>	-.24	.01	.24	.27
40. Hope	<b>.75</b>	-.18	.12	.35	.25
19. Optimism	<b>.64</b>	-.15	.18	.27	.21
43. Excitement	<b>.60</b>	.02	.28	.28	.30
18. What you want to be	<b>.58</b>	-.12	.06	.16	.21
20. Self control	<b>.54</b>	-.04	.07	.22	.16
13. Your Sexuality	<b>.51</b>	.08	-.03	.01	.05
38. Your intelligence	<b>.50</b>	.00	-.02	.15	.01
11. Your Body	<b>.50</b>	-.02	-.10	.11	.05
42. Your significant other	<b>.45</b>	-.11	.09	.03	.26
Experience of Challenges					
10. Your worst Fear	-.07	<b>.78</b>	.20	.05	.09
15. What you despise about your self	-.01	<b>.65</b>	.17	-.03	-.01
29. Sadness	-.19	<b>.64</b>	.18	.08	-.04
8. Terror	-.15	<b>.57</b>	.22	.06	-.01
9. Hunger	.11	<b>.53</b>	.35	.15	.10
12. Stresses	.02	<b>.53</b>	.33	.08	-.08
Experience of Temptations					
23. T.V. watching	-.09	.23	<b>.63</b>	.16	.19
5. Internet	-.09	.25	<b>.62</b>	-.01	.11
24. Your cell phone	.13	.13	<b>.62</b>	.18	.27
3. Money	.10	.16	<b>.58</b>	.11	.23
14. Alcohol	.05	.26	<b>.53</b>	-.03	.04
17. Food	.17	.19	<b>.46</b>	.13	.21
22. Non- prescribe drug	.07	.14	<b>.36</b>	.01	.03
Experience of Higher Power					
25. God	.19	.04	.12	<b>.89</b>	.22
30. Spirituality	.29	.09	.03	<b>.70</b>	.17
44. Religion	.16	.01	.14	<b>.67</b>	.37
41. Fate	.41	.04	.26	<b>.51</b>	.24
Experience of Family					
4. Other family Member	.27	-.08	.16	.21	<b>.74</b>
28. Sibling	.24	-.05	.34	.20	<b>.63</b>
31. Father	.20	.05	.15	.22	<b>.60</b>
1. Mother	.08	.08	.18	.22	<b>.57</b>
Coefficient alpha	.81	.77	.73	.78	.65

*Note.*  $N = 397$ . Factor loadings  $> .35$  are in boldface. Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 5

*Inter-correlation: E-SOS Subscales*

Subscale	1	2	3	4
1. Experience of Positive Sensation	1			
2. Experience of Challenges	-.02	1		
3. Experience of Temptations	.10	.37**	1	
4. Experience of Higher Power	.21**	.19**	.20**	1
5. Experience of Family	.22**	.21**	.30**	.33**

\*\* $p < .01$

Table 6

*Descriptive Statistic E-SOS: Means, Standard Deviations, Minimum, Maximum, Skewness, Kurtosis*

E-SOS Variables	<i>n</i>	<i>M</i>	<i>SD</i>	Min	Max	Skew	Kurtosis
Positive Sensation	397	2.87	0.53	1	4.00	-0.42	-0.33
Challenges	397	2.15	0.63	1	4.00	0.25	0.12
Temptations	397	2.00	0.53	1	4.00	0.35	0.04
Higher Power	397	2.22	0.78	1	4.00	0.23	-0.66
Family	397	2.26	0.62	1	4.00	-0.90	-0.19



Table 7

*Rotated Factor Loading for the E-SOS Items: Females Only*

Item Number and Content	Factor Loading				
	1	2	3	4	5
Experience of Positive Sensation					
39. Happiness	<b>.82</b>	-.14	-.01	.27	.22
40. Hope	<b>.76</b>	-.07	.09	.35	.22
19. Optimism	<b>.63</b>	-.06	.15	.29	.12
18. What you want to be	<b>.57</b>	.01	.06	.18	.10
43. Excitement	<b>.53</b>	.09	.11	.24	.26
20. Self control	<b>.53</b>	.05	.10	.23	.10
11. Your Body	<b>.47</b>	-.02	-.09	.11	.09
38. Your intelligence	<b>.47</b>	.06	-.03	.18	.10
13. Your Sexuality	<b>.41</b>	-.00	.01	.00	.01
42. Your significant Other	<b>.38</b>	-.02	.08	.03	.19
Experience of Challenges					
10. Your worst Fear	.02	<b>.80</b>	.21	.11	.15
15. What you despise about your self	.01	<b>.66</b>	.22	.05	.01
8. Terror	-.06	<b>.59</b>	.26	.14	.04
9. Hunger	.11	<b>.59</b>	.37	.18	.14
29. Sadness	-.11	<b>.55</b>	.21	.16	.07
12. Stresses	.14	<b>.43</b>	.35	.11	.09
Experience of Temptations					
24. Your cell phone	.16	.20	<b>.70</b>	.21	.22
23. T.V. watching	-.05	.27	<b>.58</b>	.19	.24
5. Internet	-.17	.16	<b>.54</b>	-.06	.07
14. Alcohol	.05	.26	<b>.53</b>	-.03	.04
3. Money	.02	.32	<b>.53</b>	.01	.01
17. Food	.09	.20	<b>.41</b>	.19	.13
22. Non-prescribe drug	.06	.23	<b>.37</b>	.04	-.04
Experience of Higher Power					
25. God	.23	.14	.18	<b>.87</b>	.20
44. Religion	.18	.09	.18	<b>.70</b>	.28
30. Spirituality	.29	.14	.00	<b>.69</b>	.14
41. Fate	.48	.13	.33	<b>.58</b>	.24
Experience of Family					
4. Other family Member	.19	-.02	.14	.16	<b>.78</b>
31. Father	.21	.12	.13	.24	<b>.60</b>
1. Mother	.08	.14	.18	.16	<b>.52</b>
28. Sibling	.15	.04	.36	.22	<b>.47</b>
Coefficient alpha	.80	.78	.72	.80	.66

*Note.*  $N = 310$ . Factor loadings  $> .35$  are in boldface. Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 8

*Rotated Factor Loading for the E-SOS Items: Males Only*

Item Number and Content	Factor Loading				
	1	2	3	4	5
Experience of Positive Sensation					
39. Happiness	<b>.80</b>	.01	-.19	.10	.16
40. Hope	<b>.75</b>	.16	-.25	.03	.28
19. Optimism	<b>.72</b>	.34	-.07	.26	.35
43. Excitement	<b>.65</b>	.30	-.03	.19	.05
18. What you want to be	<b>.54</b>	.10	.07	.40	.26
38. Your intelligence	<b>.54</b>	.05	.12	.05	.06
13. Your sexuality	<b>.51</b>	.08	-.18	.16	.10
20. Self control	<b>.50</b>	.16	.14	.01	.16
42. Your significant Other	<b>.43</b>	.08	-.05	.29	.05
11. Your body	<b>.37</b>	.01	.17	-.07	.20
Experience of Temptations					
3. Money	.09	<b>.65</b>	.25	.18	.11
17. Food	.49	<b>.61</b>	.18	.11	.01
5. Internet	.01	<b>.60</b>	.30	.19	-.02
23. T.V. watching	.01	<b>.58</b>	.19	.08	-.06
24. Your cell phone	.20	<b>.53</b>	.05	.22	.12
14. Alcohol	.12	<b>.46</b>	.14	.23	.05
22. Non- prescribe drug	.09	<b>.45</b>	.01	.01	.14
Experience of Challenges					
10. Your worst fear	.01	.21	<b>.80</b>	.09	-.03
29. Sadness	-.07	.14	<b>.70</b>	.01	.07
12. Stresses	-.07	.27	<b>.62</b>	.18	-.10
15. What you despise about yourself	.05	.08	<b>.60</b>	-.21	.00
8. Terror	-.17	.34	<b>.50</b>	.02	.09
9. Hunger	.17	.41	<b>.44</b>	-.01	.15
Experience of Family					
31. Father	.20	.20	.10	<b>.80</b>	.24
1. Mother	-.01	.14	-.01	<b>.57</b>	.33
4. Other family Member	.33	.24	-.14	<b>.51</b>	.33
28. Sibling	.20	.21	-.04	<b>.42</b>	.10
Experience of Higher Power					
25. God	.05	.04	.10	.32	<b>.81</b>
30. Spirituality	.30	.10	.04	.20	<b>.70</b>
44. Religion	.24	.20	-.04	.50	<b>.64</b>
41. Fate	.30	.21	-.05	.05	<b>.30</b>
Coefficient alpha	.83	.76	.77	.63	.69

*Note.*  $N = 87$ . Factor loadings  $> .35$  are in boldface. Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 9

*Confirmatory factor analysis (CFA): Five factor Model of the E-SOS*

Model	$\chi^2$	<i>df</i>	CFI	TLI	RMSEA	SRMR
Five factor model	926.70*	336	.80	.80	.05	.07

*Note.*  $N = 336$  \* $p < .01$ .

Table 10

*Confirmatory factor analysis (CFA): Five factor Model of the E-SOS- Females Only*

Model	$\chi^2$	<i>df</i>	CFI	TLI	RMSEA	SRMR
Five factor model	864.70*	336	.81	.79	.06	.08

*Note.*  $N = 263$  \* $p < .01$ .

Table 11

*Summary of Intercorrelations, Means, and Standard Deviations for Measure Variables Correlation Matrix*

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. RSQ_Secure	3.1	.74	--												
2. RSQ_Fearful	2.7	.10	-.22**	--											
3. RSQ_Preoccupied	2.6	.74	.37**	.41**	--										
4. RSQ_Dismissing	3.2	.72	-.36**	.45**	.18**	--									
5. NEO_Neuroticism	2.8	.80	.28**	.45**	.50**	.01	--								
6. NEO_Extraversion	3.3	.53	.14*	-.30**	-.13*	-.13*	-.42**	--							
7. NEO_Openness	3.7	.50	-.02	-.18**	-.07	.09	-.16*	.17**	--						
8. NEO_Agreeableness	3.6	.45	-.19**	-.40**	-.25**	-.28**	-.39**	.33**	.24**	--					
9. NEO_Conscientious	3.8	.60	-.05	-.18**	-.23**	.02	-.42**	.32**	.33*	.27**	--				
10. NEO_Anxiety	3.1	.94	.16*	.32**	.22**	.04	.79**	-.25**	-.08	-.22**	-.17**	--			
11. NEO_Depression	2.9	.90	.22**	.39**	.41**	-.00	.87**	-.43**	-.14*	-.31**	-.43**	.57**	--		
12. NEO_SelfReproach	2.7	.10	.30**	.42**	.44**	.01	.91**	-.34**	-.10*	.35**	-.40**	.58**	.70**	--	
13. PM_Total	119	8.9	.16*	.28**	.25**	.06	.23**	-.07	-.13*	-.23**	-.11	.10	.19**	.24**	--

*Note.*  $N = 205$ , \* $p < .05$ , \*\* $p < .01$  (1- tailed)

Table 12

*Correlation Matrix: E-SOS Subscales and Constructs*

E-SOS Subscale	Positive Sensation	Challenges	Temptations	Higher Power	Family
RSQ_Secure	-.05	.18**	.12	-.05	.31**
RSQ_Fearful	-.27**	.31**	.19**	-.03	-.18*
RSQ_Preoccupied	-.12	.36**	.21**	.08	.02
RSQ_Dismissing	-.01	.06	.04	-.03	-.24**
NEO_Neuroticism	-.43**	.39**	.20**	-.06	-.05
NEO_Extraversion	.22**	-.20**	-.02	.15*	.16*
NEO_Openness	.12	-.14*	-.30**	-.09	-.07
NEO_Agreeableness	.04	-.22*	-.30**	-.09	.04
NEO_Conscientious	.32**	-.11	-.21**	.01	.05
NEO_Anxiety	-.21**	.34**	.10	-.01	-.03
NEO_Depression	-.41**	.26**	.18**	-.06	.01
NEO_SelfReproach	-.50**	.36**	.16*	-.05	-.07
PM_Total	-.01	.12	.21**	.01	.12

*Note.*  $N = 205$ . RSQ = Rejection Sensitivity Questionnaire; NEO = NEO-Five Factor Personality Inventory; PM= Psychological Mindedness Scale. \*  $p < .05$ , \*\*  $p < .01$  (one-tailed).

Table 13

*Regression Analyses: Experience of Positive Sensation*

Variable	B	SE B	$\beta$	$\eta^2$
RSQ_Secure	-.05	.07	-.08	.003
RSQ_Fearful	-.11	.06	-.20	.002
RSQ_Preoccupied	.13	.07	.18	.002
RSQ_Dismissing	-.05	.06	-.07	.003
NEO_Neuroticism	-.24	.07	-.37**	.060
NEO_Extraversion	.04	.08	-.04	.001
NEO_Openness	.02	.08	.02	.000
NEO_Agreeableness	-.30	.11	-.21*	.031
NEO_Conscientiousness	.16	.07	.19*	.030

*Note.*  $N = 158$ . SE= Standard Error; RSQ = Relationship Scales Questionnaire; NEO = NEO-Five Factor Personality Inventory. \* $p < .05$ , \*\* $p < .01$ ;  $R^2 = .26^{**}$ .

Table 14

*Regression Analyses: Experience of Challenges*

Variable	B	SE B	$\beta$	$\eta^2$
RSQ_Secure	.07	.09	.09	.004
RSQ_Fearful	.06	.07	.10	.005
RSQ_Preoccupied	.07	.08	.09	.004
RSQ_Dismissing	-.02	.08	-.03	.000
NEO_Neuroticism	.15	.08	.20	.020
NEO_Extraversion	-.13	.10	-.13	.010
NEO_Openness	-.08	.10	-.07	.003
NEO_Agreeableness	-.13	.12	-.09	.003
NEO_Conscientiousness	.12	.09	.11	.009

*Note.*  $N = 164$ . SE= Standard Error; RSQ = Relationship Scales Questionnaire; NEO = NEO-Five Factor Personality Inventory. \* $p < .05$ , \*\* $p < .01$ ;  $R^2 = .19^{**}$ .



Table 15

*Regression Analyses: Experience of Temptations*

Variable	B	SE B	$\beta$	$\eta^2$
RSQ_Secure	.11	.08	.14	.010
RSQ_Fearful	.03	.06	.05	.001
RSQ_Preoccupied	.03	.08	.04	.001
RSQ_Dismissing	-.01	.07	-.02	.000
NEO_Neuroticism	-.03	.08	-.05	.001
NEO_Extraversion	.13	.09	.13	.012
NEO_Openness	-.18	.09	-.17*	.022
NEO_Agreeableness	-.43	.12	-.33**	.072
NEO_Conscientiousness	-.05	.08	-.06	.002

*Note.*  $N = 167$ . SE= Standard Error; RSQ = Relationship Scales Questionnaire; NEO = NEO-Five Factor Personality Inventory. \* $p < .05$ , \*\* $p < .01$ ;  $R^2 = .17^*$ .

Table 16

*Regression Analyses: Experience of Higher Power*

Variable	B	SE B	$\beta$	$\eta^2$
RSQ_Secure	-.19	.11	-.18	.016
RSQ_Fearful	-.04	.09	-.06	.002
RSQ_Preoccupied	.20	.11	.19	.020
RSQ_Dismissing	-.16	.01	-.15	.020
NEO_Neuroticism	-.01	.11	-.01	.000
NEO_Extraversion	.27	.12	.20*	.030
NEO_Openness	-.17	.13	-.12	.012
NEO_Agreeableness	-.23	.16	.13	.030
NEO_Conscientiousness	.14	.11	.11	.010

*Note.*  $N = 167$ . SE= Standard Error; RSQ = Relationship Scales Questionnaire; NEO = NEO-Five Factor Personality Inventory. \* $p < .05$ , \*\* $p < .01$ ;  $R^2 = .09$ .

Table 17

*Regression Analyses: Experience of Family*

Variable	B	SE B	$\beta$	$\eta^2$
RSQ_Secure	.22	.09	.25*	.031
RSQ_Fearful	-.06	.07	-.09	.004
RSQ_Preoccupied	.06	.09	.07	.002
RSQ_Dismissing	-.12	.08	-.13	.012
NEO_Neuroticism	-.07	.09	-.09	.003
NEO_Extraversion	.19	.10	.17	.020
NEO_Openness	-.08	.10	-.06	.003
NEO_Agreeableness	-.31	.13	-.21*	.030
NEO_Conscientiousness	.08	.09	.07	.004

*Note.*  $N = 162$ . SE= Standard Error; RSQ = Relationship Scales Questionnaire; NEO = NEO-Five Factor Personality Inventory. \* $p < .05$ , \*\* $p < .01$ ;  $R^2 = .18^{**}$ .

Table 18

*Descriptive Statistics of the E-SOS Five Factors: Breakdown by Ethnicity*

	White ( <i>N</i> = 151)	Hispanic ( <i>N</i> = 18)	African American ( <i>N</i> = 11)	Asian American ( <i>N</i> = 12)
Factor	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Positive Sensation	2.96 (.53)	3.04 (.52)	2.92 (.59)	2.76 (.54)
Challenges	2.15 (.60)	2.55 (.81)	2.34 (.75)	1.88 (.59)
Temptations	1.90 (.52)	2.33 (.73)	2.09 (.72)	1.64 (.46)
Higher Power	2.17 (.74)	2.61 (.56)	2.72 (.96)	2.39 (.70)
Family	2.25 (.62)	2.44 (.59)	2.31 (.45)	2.22 (.88)

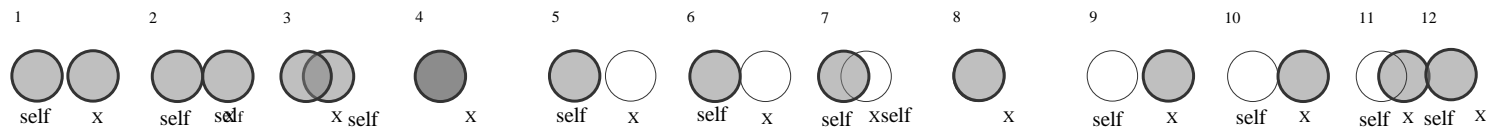
## Appendix 1

### E- SOS (old version)

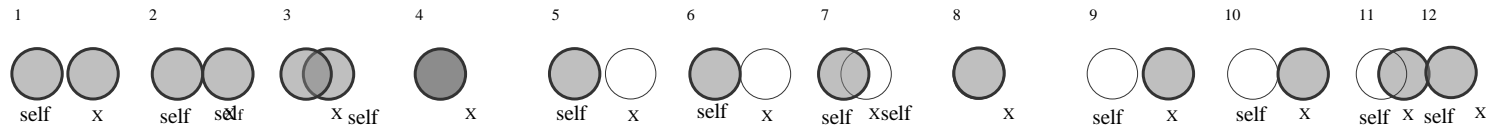
Look at the diagram for each of the items appearing in the table below. Please pick the number which best represents the relationship between yourself and X (mother, father, etc.).

When choosing your answers, please keep this in mind:

1. Which circles are shaded?
  - Shaded circles represent fullness and strength.
  - Unshaded circles represent emptiness and weakness.
2. How much do the circles overlap?
  - Separated circles means that you are independent/separate from X (mother, father, etc.).
  - Overlapping circles means that you are enmeshed/not separate from X (mother, father, etc.).
3. How do you see/perceive the relationship right now?
  - Please remember to give your own opinion of how you see/perceive the relationship to be at the current time.



SN	Element	Number which best represents the relationship
1.	Self and mother	
2.	Self and father	
3.	Self and Sibling (brothers/sisters )	
4.	Self and Other family	
5.	Self and Class friends	
6.	Self and Acquaintances / neighbors	
7.	Self and someone I look up to	



8.	Self and those over whom you have power ( i.e., employees, students, etc.)	
9.	Self and Positive emotions (happiness)	
10.	Self and Anxiety	
11.	Self and Sadness	
12.	Self and Hunger	
13.	Self and my Image/Physical body	
14.	Self and Worst fear	
15.	Self and Childhood dreams	
16.	Self and Stresses	
17.	Self and Sexuality	
18.	Self and Alcohol	
19.	Self and what I despise about my self	
20.	Self and Fantasies	
21.	Self and Food	
22.	Self and who I want to be	
23.	Self and Hopelessness	
24.	Self and Optimism	
25.	Self and those with power over you.	
26.	Self and Self control	
27.	Self and prescribed drugs	
28.	Self and Non-prescribed drugs	
29.	Self and my Childhood photographs	
30.	Self and T.V watching	
31.	Self and my Cell phone	

## Appendix 2

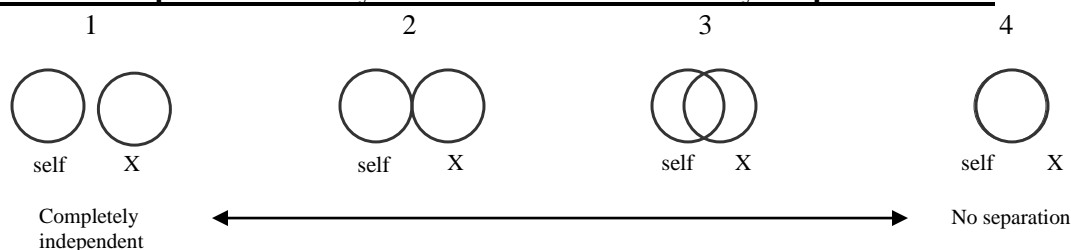
### E-SOS

Below there are four pairs of circles. Each pair represents a kind of relationship between yourself and other things in the world, which may be or not be part of yourself. You are asked to choose the number that best represents the relationship between yourself and the other things.

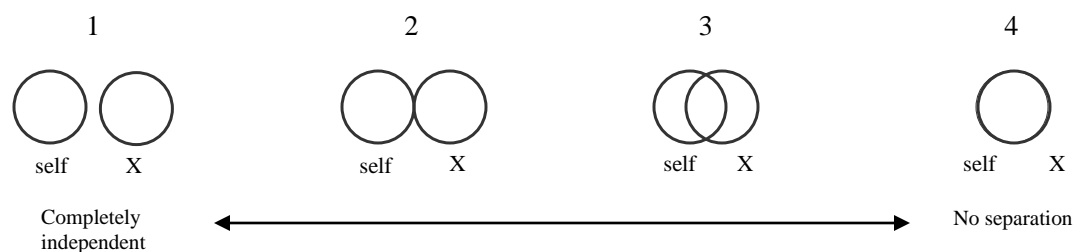
For Example:

1. When two of the circles are not touching each other at all (diagram 1) it means that you are completely independent or separated from the other thing (e.g. mother, father etc.).
2. When two of the circles completely overlap and create one circle (diagram 4), it means that there is no separation between yourself and the other thing, as if both of you are one.

**• Please keep in mind that your answers should reflect your present state.**



Relationship between your self and...					
1	Mother	1	2	3	4
2	Childhood dreams	1	2	3	4
3	Money	1	2	3	4
4	Other family members	1	2	3	4
5	Internet	1	2	3	4
6	Acquaintances	1	2	3	4
7	Admired figure	1	2	3	4
8	Terror	1	2	3	4
9	Hunger	1	2	3	4
10	Your worst fear	1	2	3	4
11	Your body	1	2	3	4
12	Stresses	1	2	3	4
13	Your sexuality	1	2	3	4
14	Alcohol	1	2	3	4
15	What you despise about your self	1	2	3	4
16	Your fantasies	1	2	3	4
17	Food	1	2	3	4
18	Who you want to be	1	2	3	4
19	Optimism	1	2	3	4



Relationship between your self and...					
		1	2	3	4
20	Self control	1	2	3	4
21	Prescribed drugs	1	2	3	4
22	Non-prescribed drugs	1	2	3	4
23	T.V. watching	1	2	3	4
24	Your cell phone	1	2	3	4
25	God	1	2	3	4
26	Yourself ten years <b>from now</b>	1	2	3	4
27	Your work	1	2	3	4
28	Your sibling(s)	1	2	3	4
29	Sadness	1	2	3	4
30	Spirituality	1	2	3	4
31	Father	1	2	3	4
32	Yourself five years <b>ago</b>	1	2	3	4
33	Your ethnic group	1	2	3	4
34	Those with power over you	1	2	3	4
35	Those over whom you have power	1	2	3	4
36	Aggressiveness	1	2	3	4
37	Creativity	1	2	3	4
38	Your intelligence	1	2	3	4
39	Happiness	1	2	3	4
40	Hope	1	2	3	4
41	Fate	1	2	3	4
42	Your significant other	1	2	3	4
43	Excitement	1	2	3	4
44	Religion	1	2	3	4
45	Social norms	1	2	3	4