IMPLICATIVE DILEMMAS AND GENERAL PSYCHOLOGICAL WELL-BEING: PREDICTIVE VALUES OF THREE PROPOSED SUBTYPES

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CHAPTER I

INTRODUCTION

Theorists in psychology have long recognized internal conflicts as central to the development and maintenance of personal identity, and as a potential source for distress. Freud (1923) conceptualized the human psyche as comprised of three components, the *id*, the *ego*, and the *superego*, which Bettleheim (1982) referred to as the "it," the "I," and the "Upper-I." Intrapsychic conflict in which the "I" functions as mediator between the base instincts of the "it," and the lofty moral demands of the "Upper-I," are said to lead not only to various and sundry symptoms, but also to the development, and in fact, betterment of both individuals and society (Freud, 1961). One's "ego defenses" then, commonly solely understood as the source of unpleasant symptoms, are one and the same as one's "ego strengths."

The entanglement of internal conflict and identity is seen throughout the writings of social cognitivists Festinger and Heider, both "go-to" theorists in the area of internal conflicts. Festinger's (1957) theory of cognitive dissonance is, at the heart, a recognition that personal identity develops and changes in and through the resolution of internal conflicts as a means for protecting the coherence of the Self. If, for instance, a man finds that he is engaging in behaviors that are contrary to the behaviors in which he

should engage based upon how he perceives himself, he will be compelled to change either his behavior, or his self-perception (Festinger & Carlsmith, 1959). A change in attitude, often easier to implement than a change in behavior, provides a means for escape from the distress of this conflict.

Likewise, Heider's balance theory (1958) observes that humans are more comfortable when there is no conflict between love and hate, between for and against. If a person holds a favorable attitude towards another person, for example, he or she will be more comfortable when the other person holds a similar attitude towards a third object/person (given the salience of the object.) A contradiction calls into question either the person's attitude of the other person, or the person's attitude of the object/person at hand, both parts of the former person's self-identity. In order to reach a level of maximum comfort, one or the other must be altered, thus altering personal identity to some degree. In Heider's published notes, he denounces the term balance as a concept in which tension is often implicit (Benesh-Weiner, 1989). While balance or striking some kind compromise between the two attitudes might preserve coherence of identity, it does not provide maximum comfort, but exacts some cost.

Despite widespread acknowledgment of internal conflicts as threats to identity coherence, and thus a source of psychological distress, work in this area has remained largely theoretical, and definitions of internal conflicts vague. Personal Construct Theory (PCT) developed by American theorist George Kelly (1955), provides a means for operationalizing/identifying internal conflicts, making the concept accessible for use in various modes and manners of research.

CHAPTER II

REVIEW OF LITERATURE

Personal Construct Theory

> Man's world is manifold, and his attitudes are manifold. What is manifold is often frightening because it is not neat and simple. Men prefer to forget how many possibilities are open to them. They like to be told that there are two worlds and two ways. This is comforting because it is so tidy. Almost always one way turns out to be common and the other one celebrated as superior.
>
> -Martin Buber's *I and Thou* (1970, p. 9.)

Though Kelly is not commonly known as an existentialist, the above excerpt from existentialist philosopher Buber's *I and Thou* might very well serve as a summary of the spirit of Personal Construct Theory. At the heart of Kelly's theory is the concept of constructive alternativism. According to this, for every meaning or interpretation that might be applied to some thing or event, there are endless alternative interpretations that may be reached. For Kelly, every person is a scientist and a philosopher. Thrust into a world of dizzying possibility, of endless interpretations, we crave order, for without order, relativity appears before us as chaos. As scientists, we seek to discern patterns within the apparent chaos of constructive alternativism. As philosophers, we seek meaning within the patterns. Seeing, or choosing to see one pattern or meaning implies

not seeing or choosing not to see all the other patterns or meanings that may have been discerned in its place. In this way, the person-scientist is both looking for laws and creating laws, not *ex nihilo*, but rather out of endless possibilities of lawfulness. In true scientific fashion, people form hypotheses from series of observations, tests them for validity, and adjusts and discards them as they are shown to be insufficient. For Kelly (1955) the building blocks of humankind's hypotheses are bipolar constructs, which serve as a dialectical classification system for all things we encounter. Isolated constructs are insufficient towards organization and thus anticipation of events in the world; after all, the goal of the person-scientist is not simply classification, but rather anticipation. Towards that end, the person-scientist organizes his or her constructs in relation to one another in such a way that they form a network, which Kelly refers to as a construct system, whereby single or multiple constructs imply or predict the presence of other construct(s).

In his Personal Construct Theory (1955), Kelly lays out 11 corollaries, all based upon his Fundamental Postulate explicitly describing the process of building and adjusting a construction system. Of the 11 corollaries, 6 will be described as they are directly relevant to the topic of internal conflict. The fundamental postulate states that "a person's processes are psychologically channelized by the ways in which he anticipates events," (1955, p. 46). One might read this to mean simply that people act in ways that make sense to them. Events in the world travel into each person's awareness by means of his or her construct system and each event is interpreted via his or her construct system, and he or she responds only to that interpretation. Though he or she is, therefore, creator of his or her own subjective world, events in his or her world nonetheless appear to

him/her as occurring independently from his or her construal. That is to say, though the person-scientist is a lawful being, that which guides and restricts his or her perception and behavior are his or her very own theories, which he or she has forged from a multitude of possible theories and reified as law in an attempt to create order where none was apparent. Kelly is clear that the person-scientist does not literally create the factual material of his experiences, but only interprets it. Constructs are not identical to objective things or events, but rather representations of them. Material events (e.g. people, places, things) are referred to as elements, (p. 137) and though they are not factually altered by humankind's constructs, we can see them only through our own lenses. In this way, the only reality available to each individual is reality *for him or her*. Largely unaware of his constructs as such, "man can enslave himself with his own ideas and [must] then win his freedom again by reconstruing his life" (Kelly, 1955, p. 21.) The suggestion of differing individual realities should not imply that Kelly's theory is one of relativism, for he does acknowledge the existence of elements independent of a construct system. Rather, what he is suggesting is, at root, a theory of relativity because people are simply experiencing the world relative to their own position. We are not constructing our worlds in the strictest sense of the term, but rather co-constructing the world. After all, in order for the person-scientist to construe an element, there must exist some element to construe.

The first corollary to the fundamental postulate Kelly proposes is the Construction Corollary: "A person anticipates events by construing their replication" (1955, p. 50). The most basic way in which the person-scientist builds a construct system is by observing events in the world and reasoning that they are more likely to occur again given the same circumstances than all the other events that did not occur. According to

Kelly's third corollary, the Organization Corollary, "each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs" (p. 56). This corollary begins Kelly's discussion of how various constructs become and stay connected. For ease of explanation, it is beneficial to combine the discussion of the Organization Corollary with that of Kelly's fourth corollary, the Dichotomy Corollary, which states that "a person's construction system is composed of a finite number of dichotomous constructs" (p. 59.) The combination of these two corollaries tells us several important things; first, it tells us that every expectation carries with it its implied opposite. Secondly, it tells us that some of these poles are either associated with a single pole of another construct, or may be divided according to a bipolar construct. Consider for example, Stanley who, like many people, acknowledges that certain things are *good*, which implies, according to the Dichotomy Corollary, the existence of certain things that are *not good* or *bad*. When confronted with a woman he deems *good*, Stanley might, according to the Organization Corollary, assume that she is also *honest*, implying that she is not *dishonest*. In this case, the construct of *good v. bad* functions as a superordinate construct of *honest v. dishonest*. Superordinate constructs are constructs which can be further broken down into constructs referred to as subordinate constructs (p. 136). This hierarchical system is analogous to the taxonomical classification system used to classify species and subspecies of living organisms. Take for instance, the bonobo (*pan paniscus*) and the common chimpanzee (*pan troglodytes*). They belong to the same classifications from kingdom through genus, but belong to different species. Genus (*pan*) serves as a superordinate construct for species (*paniscus and troglodytes*.) Furthermore, kingdom (*animalia*) serves as a

superordinate subtype for both genus and species (Fleagle, 1988). In the same way, for Stanley, *good* serves as a superordinate construct for *honest*, and honesty is construed as a subtype of goodness. Superordinate constructs in the context of this hierarchical arrangement have a wider range of convenience than do subordinate constructs, meaning that they can be used to construe many more different elements than can subordinate constructs that are more specialized. Kelly does discuss other ways in which constructs may be hierarchically organized. For example, rather than a whole bipolar construct being further defined into two narrower constructs, single poles of constructs may be regularly associated with other constructs or portions of other constructs which are not narrower categories of the superordinate construct. While Stanley's construct *good v. not good* encompasses the subordinate construct *honest v. dishonest, not good* may also be singly correlated with the undesired pole of his construct *working class v. upper class*. It is this type of hierarchical relationship, in which a single pole of one construct predicts, or implies the single pole of another construct that is of greatest interest to the current study.

Personal Construct Theory makes it very clear that human beings are active in creating and sustaining their own worlds. One implication of this is that the person-scientist can limit the scope of his or her worldview by constricting his or her construction system or widening it by allowing expansion of the system. The Modulation Corollary states that "the variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie" (Kelly, 1955, p. 77). In order for a new event to be construed or "made to seem regular" (p. 76), it must fall into the range of convenience of a pre-existing construct- there must be a

place for it. New elements come into the focus of our construction system through the elaboration of existing constructs. Some constructs with a small range of convenience, are said to be impermeable, as they are relatively specialized and thus less able to accommodate new elements. Constructs that are abstract tend to be more permeable than constructs that are concrete. A person who sees only in proverbial black and white will experience a world that is more constricted than a person whose construction system is able to accommodate for shades of grey. Finally, according to Kelly's Fragmentation Corollary, one may easily operate using a construction system partially comprised of two or more subsystems which are inferentially incompatible with one another (1955, see p. 83). It is only when the incompatibilities are brought into focus that fragmentation of one's construction system becomes problematic.

Kellian Conflict

Ideally, one's personal construct system is rigid enough to provide structure to an otherwise chaotic world, and yet flexible enough to incorporate new information. However, due to the sometimes delicate balance of ordinal relationships, it can be distressing to adjust those subsystems that are central or foundational to one's construct system, even when they are shown to be insufficient or contradictory. Anyone who has ever built or purchased a house knows that it is generally much easier and cheaper to replace small things (doorknobs, carpet), peripheral things (siding, windowpanes), or even uppermost parts of the house such as the roof, than it is to replace, repair, or rearrange the home's load bearing structures. So, for the person-scientist, when a superordinate construct is called into question, it can potentially threaten the structure of his or her entire construct system. When some life event reveals a relevant portion of

one's construct system to be insufficient, the weakness may be fixed, ignored or justified. Inconsistencies in one's construct system, though at times tolerable, can become confusing or even upsetting when the constructs involved are both highly valued as a means for anticipation. Consider again Stanley above, for whom the bipolar construct *good v. not good* has proven quite useful in the past. His experiences have led him to believe that people who are *good* are most often also *honest*. If he has always relied upon the goodness of his mother, it might be quite shocking to Stanley if he hears her tell a lie. If Mother is *good*, but also *dishonest*, depending upon the extent to which Stanley needs, for the sake of stability, for Mother to remain good, he is likely to find himself in a state of conflict. He has several choices. If Mother is to remain *good*, Stanley must reevaluate the construct *good v. not good* as anticipatory of *honest v. dishonest*. If it is not too distressing, he may also adjust his view of Mother and see her now as *not good*. He may also ignore the contradiction, or see the anticipatory weakness of the constructs as an anomaly, or he may free himself from the discomfort of seeing Mother as *not good* or *dishonest* by increasing the permeability of either construct. One can imagine many additional ways in which Stanley might resolve or justify this anticipatory insufficiency in his construct system, including, of course, refusing to acknowledge the inconsistency as insufficiency and seeing Mother as both *not good* and *dishonest*. Clinging to one's construct system is common when the person-scientist is faced with conflict. It is not uncommon, according to Kelly, for someone in the midst of such a conflict to tighten (make less permeable) existing subordinate constructs. This provides a short if unsustainable reprieve from the potentially destabilizing effects of conflict by allowing the person-scientist to continue anticipating events via the use of relatively few, but also

relatively unambiguous constructs while the person tweaks and rebuilds higher-level superordinate constructs. Much like the use of a back-up generator, a tightened construct system allows the person-scientist to function at a diminished capacity, but greatly limits his or her anticipatory power.

Though conflict may arise in response to any number of conceivable weaknesses of one's construct system, perhaps the most distressing arise when such dilemmas involve one's own identity. Just as other people are seen in terms of his construct system, so the person-scientist experiences and understands himself or herself in these terms. Kelly uses the term core constructs to refer to those constructs "which govern a person's maintenance processes- that is, those by which he maintains his identity and existence" (1955, p. 482). These core constructs serve as the means whereby the person-scientist can *know* and, in fact, *be* himself or herself as they provide the only self-representation available to him/her. If we are to take this term seriously, inconsistencies or insufficiencies involving core constructs are particularly distressing as they threaten to lead the person-scientist face to face with, perhaps, the ultimate chaos, the dismantling of his or her very existence.

Operationalizing and Measuring Identity Conflict with PCT

One might succinctly express Kelly's theory by saying that we each understand the world, including self, in terms of our own implicit theories. It is not his intent merely to make general statements about the beliefs and behaviors of the average person, but rather to provide a method of glimpsing into the idiographic theories that drive the beliefs and behaviors of each person-scientist. In order to ascertain the specifics of these individual models, Kelly developed the repertory grid method, originally conceived of as

a card-sorting task (see Kelly's triadic method of grid elicitation, 1955), in which various individuals considered to play roles central to the development of a person's own identity are positioned in terms of the person's own salient constructs. Figure 1 is an example of an elicited repertory grid. As can be seen, along the construct of *happy-go-lucky v. worried all the time* (a scale ranging from -2 to 2), this person rated her 'self' as very *happy-go-lucky* (-2), and her 'ideal self' as neither *happy-go-lucky* nor *worried all the time* (as indicated by the selection of 0, the scale midpoint).

This process provides a sort of map of each person's psychological space,- how the person views himself or herself in relation to others. When the 'self' and 'ideal self' are used as grid elements, it is possible to identify congruent and discrepant constructs, as well as various relationships between such constructs. Congruent constructs are said to occur when the 'self' and 'ideal self' are placed on the same pole of a bipolar construct (the desired pole); for example, if Stanley construes both his 'actual self' and his 'ideal self' as *smart* rather than *stupid*, he is said to be congruent along the construct *smart v. stupid*. Conversely, a discrepant construct is said to occur when the 'self' is placed on one pole (the undesired pole), and the 'ideal' self on another (the desired state). If Stanley construes his 'actual self' as *unproductive* and his 'ideal self' as *productive*, he is said to be discrepant along the construct *productive v. unproductive*.

Self-discrepancy. Several researchers have attempted, using a Personal Construct approach, to operationalize and measure internal conflicts and their relationship with various measures of psychological well-being. One type of internal conflict is simply a perceived discrepancy between one's 'self' and one's 'ideal self.' Generally, within dichotomous constructs, especially those concerning human behavior and character, one

pole emerges as desirable and the other as undesirable or less desirable (Kelly, 1955). A repertory grid task may reveal that a person perceives a discrepancy between 'self' and 'ideal self.' This self-ideal self dissonance conceivably contributes to negative emotions.

Fransella and Crisp (1979) suggested a measure of self-conflict in which conflict is operationalized as the angular distance between a desired-self state (self-construct) and self-element in a subject's grid, and found increased self-conflict to be correlated with psychological disorder. Winter (1983) found that self-conflict, as defined above, was related to guilt among neurotic subjects, and that its absence was related to increased perceptions of the subjects' own psychological disorder as similar to a medical illness. He found no decrease in self-conflict over the course of therapy, and did not look at conflict in a normal population. It is important to consider the possible role self-conflict plays in psychological well-being, especially in the light of Winter's findings that neither group nor behavior therapy resulted in its decrease. That is to say, if self-conflict is linked to negative psychological experiences, and therapy purports to address and alleviate negative psychological states, then it stands to reason that effective therapy would result in the reduction of self-conflict. What, then, does this say about the role of self-discrepancy? After all, if the person-scientist is the constructor of his or her own values, why does he or she not construe 'self' and 'ideal self' as one and the same? Perhaps there is some force, stronger that the desire for a positive self-view, that helps to maintain the discrepancy. Hinkle (1965) argues that people will choose to see themselves in terms of the poles of constructs which they anticipate will, for them, be most likely to extend the implications of their construct systems. That is to say, in spite of seeing the opposite pole as more desirable, a person will place himself or herself on the less

desirable pole of a single or multiple constructs if the undesired pole is associated with more positive constructs which the person sees as attainable. It is often said that the largest part of intelligence is recognizing those things at which one excels and pursuing them. So, although Stanley might, for example, prefer to be an athlete rather than a scholar, if he sees those terms as polar opposites, a realistic look at his abilities might deter him from pursuing sports over academia. After all, Hinkle is saying, more self-elaboration (and thus an expanded and more meaningful world) is available to him as a decent scholar than as a poor athlete. If this is true, it is not simply self-discrepancy, but the relationship of various discrepant constructs to congruent constructs that causes internal conflict. Referring to this conflicting hierarchical relationship between discrepant and congruent constructs, Hinkle coined the term 'implicative dilemma.'

Imbalanced Triads. Slade and Sheehan (1979) suggest a method for measuring dilemmatic relationships between constructs by identifying what they call imbalanced triads. This method, similar to Heider's (1946) cognitive balance theory, is based upon Lauterbach's (1975) technique for assessing conflict between three concepts. Slade and Sheehan developed a computer program (CONFLICT), in which imbalance between constructs is said to occur when the correlations between two of the three pairs of constructs are positive and the remaining correlation is negative, or when all three correlations are negative. The intensity of the conflictual relationship can also be measured using CONFLICT by converting the correlations to z-scores. Slade and Sheehan concluded that most dilemmas are not to be associated with pathology, as situatedness beneath balanced higher-level constructs often renders them mere inconsistencies with little, if any, negative consequences. In fact, they suggest that the

absence of conflicts might signal that a person is unable to cope with ambivalence and ambiguity, and thus pretend that no such case exists. This is consistent with the results of an early study by Sheehan (1977), in which the construct systems of depressed individuals revealed less conflict than those of non-depressed individuals, as well as with Margolius (1980) who found low levels of conflict to be correlated with high scores on a measure of neurotic symptology.

A 1983 study by Winter, using the same method of dilemma identification, yielded results that might have further supported these findings; however, he noted reliability problems with the CONFLICT software developed by Slade and Sheehan (1979), in that it is insensitive to imbalance within construct systems where construct correlations are generally high, as is typical in the neurotic patient.

Recent Studies of Implicative Dilemmas. Recently, Feixas, Saúl and Sanchez (2000) have developed a method of identifying implicative dilemmas that promises to be more reliable than past attempts by incorporating the correlation between the poles of different constructs. In this way, dilemmas are identified using what is, in effect, a measure of the reliability with which a person believes that a pole of one construct predicts a pole of another construct. Specifically, implicative dilemmas are determined in a three-step process. First, self-discrepant constructs are identified as those constructs on which the actual and ideal selves are rated at opposite ends of a bipolar scale. Second, the construct correlations are computed from all of the element ratings, and those constructs that correlate with the self-discrepant constructs according to a predetermined salience criteria (usually absolute r = .20 or absolute r = .35) are identified. Lastly, the saliently correlated constructs are examined for the location of the actual and ideal selves. For a

positively correlated construct, if the actual and ideal selves are both located at opposite ends of the rating scale compared to the ideal self on a given self-discrepant construct, then a dilemma is determined to be present. For a negatively correlated construct a dilemma is identified if the actual and ideal selves are located congruently with the ideal self on the given discrepant construct.

As an example, suppose a man evaluating his performance as a father rated his actual self '1' and his ideal self '5' on the following scale:

Weak disciplinarian 1 2 3 4 5 Firm disciplinarian

Further, suppose the man rated his actual self '5' and his ideal self '4' on the following scale:

"Draconian"/Heavy-handed 1 2 3 4 5 Offering guidance

Finally, the man's ratings of all the elements in the repertory grid yield a negative correlation (r = -.60) between the *weak disciplinarian v. firm disciplinarian* and *Draconian v. offering guidance constructs*; in other words, he tended to construe *firm disciplinarians* as *Draconian*. Following the three-step process above, the man is clearly self-discrepant on the *weak in delivering discipline v. firm in delivering discipline* construct. Secondly, the correlation of -.60 between the two constructs exceeds the salience criterion (absolute .35 for research studies). Lastly, the man's ratings for the actual and ideal selves on the *Draconian v. offering guidance* construct are incongruent with his ideal self on the *weak disciplinarian v. firm disciplinarian* construct. In conclusion, he construes himself as a weak disciplinarian and desires to be a firm disciplinarian. Blocked, however, from casting himself in the role of his ideal self in this respect due to a cost he considers too high (namely, becoming a dictator-like parent), he

is consequently stuck in an unsatisfied state of self-discrepancy in which he is unable to construe himself as the kind of parent he wants to be (Figure 2). Using a Pearson's product moment correlation (salience criterion) of .20 for clinical studies and .35 for research studies, Feixas and Saúl (2004) found that implicative dilemmas were present in a significantly larger proportion of those currently seeking therapy, as well as a significantly greater percentage of dilemmas per individual. Their multi-center study included a sub-group of subjects with both social phobia and irritable bowel syndrome (IBS). In contrast to the previously mentioned studies, they found dilemmas to be relevant to health related symptoms, and the resolution of dilemmas to be accompanied with a clinically significant decrease in both health-related as well as psychological symptoms.

Dorough, Grice and Parker (2007) found modest significant correlations between percentages of implicative dilemmas as computed from a completed repertory grid, and depression, self-esteem and anxiety using a .20 salience criterion, and a significant correlation between percent of implicative dilemmas and anxiety using a .35 salience criterion. The study also found evidence that implicative dilemmas account for a statistically significant, if modest, amount of variance in anxiety above and beyond the variance accounted for by actual/ideal self-discrepancies alone.

Though the Dorough, Grice and Parker (2007) study, in part, provides evidence in support of the theory that implicative dilemmas are associated with negative psychological well-being, the effect sizes were modest, at best. Additionally, the measures used to assess anxiety, depression and self-esteem failed to reflect these concepts in a distinctly Kellian way. One intent of the current studies is to attempt to

replicate these findings using, among various other measures, the Personal Construct Inventory (Watson, Winter & Rossotti, 1997) which provides measures of psychological well-being that are more consistent with Personal Construct Theory.

Proposed Subtypes of Implicative Dilemmas

Several individual cases in the Dorough et al. (2007) study also raised questions regarding possible functions of and subtypes of implicative dilemmas. That is to say, despite the overall positive correlation between high numbers of dilemmas and high anxiety, cases were noted in which high numbers of implicative dilemmas were not associated with anxiety, and yet the content of the dilemmas provided an intuitively logical explanation for the departure from the aggregate without bringing into question the theoretical basis of the overall positive correlation between dilemmas and anxiety. For instance, the grid of a 19-year old male revealed several implicative dilemmas, and yet he reported no anxiety. He reported several self-discrepancies in which he admitted that he construes his ideal self as kind and caring but construes his actual self as rude and uncompassionate. Notably, each of this young man's self-discrepancies was seemingly maintained by the threat of *feeling bad*. It is as if his dilemmas served a protective function, whereby he restrained himself from engaging pro-social behavior he valued because he wanted to remain disaffected by the plight of others. This case suggests that there may be specific and consistent instances in which implicative dilemmas are negatively correlated with anxiety and other negative feelings. Keeping this in mind, it is important to note that while studies have yielded significant correlations between anxiety and implicative dilemmas as defined by Feixas, Saul and Sanchez (2000), the correlations have been neither large nor consistent. This is, perhaps, due to an oversight of subtypes

or variations of implicative dilemmas that have been subject to a single expectation. If these subtypes are identified and isolated, the correlations between these various subtypes and dimensions of psychological well-being may be stronger and more consistent. Towards this end, we propose three subtypes of implicative dilemmas- the *classic implicative dilemma*, the *ought-self dilemma*, and the *unobtainable-self dilemma*, all of which are expected to predict different psychological experiences.

Theoretically, the presence of dilemma subtypes is able to accommodate both the findings of Feixas and Saúl (2002) and Dorough et al. (2007), which suggest that implicative dilemmas are associated with negative psychological well-being, and the view held by early studies (Sheehan, 1977; Slade and Sheehan, 1979; Margolius, 1980; Winter, 1983) that dilemmas may also be a normal, and non-distressing part of the maintenance and evolution of one's construct system, namely the subsystem of one's core constructs. In order to begin a meaningful discussion of the structure and possible implications of dilemma subtypes, a discussion of Kellian concepts of anxiety, guilt, depression and self-esteem is first necessary.

For Kelly (1955), anxiety is the emotional manifestation of the realization of the insufficiency of one's construct system to anticipate the outcome of an event. It may be that the situation at hand simply falls outside of the range of convenience of most of a person construct system or that the situation in which the person finds himself or herself defies current constructs. A woman who has been married to a man whose actions she can easily predict may, for example, experience Kellian anxiety when he begins to act in ways that she is unable to predict based upon her past observances of him. Note that anxiety so conceived does not conform to popular notions of anxiety wherein it is

characterized by physical symptoms and feelings of impending doom. For Kelly, anxiety is not knowing what is going to happen in some domain in which either previously developed laws, or hierarchical relationships between existing constructs, are no longer reliable or domains for which laws have not yet been developed. Discomfort directly resulting from anxiety, then, is rooted in a fear of the unknown or unknowable.

Guilt, for Kelly, is the awareness that one's 'self' is dislodged from one's core role structures (1955, p. 565.) This is not the same as self-discrepancy as defined above. Rather, it is the realization, similar to Roger's (1959) incongruence, that one is not acting like the 'self' he or she has previously construed. Though largely absent as a measure in the extant literature on implicative dilemmas, guilt is considered relevant to a discussion of implicative dilemmas, as dilemmas, and thus self-discrepancies may be sustained due to the threat of the guilt (and consequent loss of identity) that may accompany a move towards one's 'ideal self' along certain constructs. Guilt is not to be confused with diminished self-esteem, however, as guilt denotes for Kelly dislodgement only from core role constructs, and not as the perception of the self from desired constructs. Self-esteem and guilt may, in fact, be related in such a way that an attempt to eliminate one may exacerbate the other. In Personal Construct Theory, self-esteem has been operationalized in several ways, including the Euclidean distance between 'self' and 'ideal self' in a repertory grid, the number of discrepant constructs within a repertory grid (Dorough et al., 2007), and the proportion of positivity attributed to one's 'self' across all constructs in a repertory grid (see Sewell's Self-Esteem Index; Sewell, Cromwell, Adams-Webber and Mitterer, 1991). The current study uses a grid-based measure of self-esteem

recommended by MacKay (1992) previously utilized by Grice, Burkley, Burkley, Wright and Slaby (2004), which is functionally equivalent to Sewell's Self-Esteem Index.

At times, the world can appear unmanageable and/or frighteningly beyond the scope of one's ability to anticipate events. In order to combat the feeling of helplessness to anticipate events (i.e., anxiety), Kelly suggests that some people will, via constriction, restrict the parts of the world they construe, thus creating a more manageable world. This, for Kelly (1995), is depression. If it is true that the person-scientist only sees what can be defined in terms of his or her construct system, it makes sense that pruning back his or her construct system effectively eliminates the existence, for him/her, of those parts of the world which lie outside the range of convenience of his or her remaining constructs. In a sense, Kellian depression is the constructive equivalent of a child covering her ears when she does not want to hear what is being said.

The classic implicative dilemma. In an effort to take into account for the nuances of dilemmas, implicative dilemmas as outlined by Feixas, Saul and Sanchez (2000) are to be considered only a subtype of implicative dilemmas that will be referred to as the *classic implicative dilemma*. As previously outlined (see Figure 2), the classic implicative dilemma occurs when the desired pole of a discrepant construct regularly predicts the undesired pole of a congruent construct. Classic implicative dilemmas involve awareness of discrepancies between the self and ideal self, as well as an implicit cost associated with becoming more like the ideal self. A notable distinction of the classic implicative dilemma is that the self-discrepancy must be considered resolvable by the subject. In other words, inherent within the idea of the classic implicative dilemma is the perception of an obtainable ideal-self. If a person sees both a need and the potential

for a change, and is barred from making that change because it is incompatible with a valued congruent self-construct, he or she might be locked into a state of self-discrepancy indefinitely. As this discrepancy will not be resolved, the classic implicative dilemma may be correlated with chronic depression and/or trait anxiety.

The ought-self dilemma. The second subtype of dilemma we propose will be referred to as the *ought-self dilemma*. In this instance, rather than comparing his ideal self to his actual self, a person sees a discrepancy between his or her actual self, and someone who would be able to navigate his or her current situation more competently, which we will refer to as the "ought self." As the ought-self dilemma does not hinge upon an actual/ideal-self self-discrepancy, it is not expected to cause prolonged anxiety, but rather anxiety within the context during which the person feels socially unprepared, or incompetent.

Consider the following example: A person applies for a job, for which she is well-qualified, and receives an interview. Though she sees herself as *no-nonsense person*, during the course of the interview, she begins to feel as if the interviewer is interested, not in her skills relevant to the job, but in her ability to carry on witty small-talk, or to "schmooze." Though she is acutely aware that a person more well-versed and competent in schmoozing would fare considerable better than will a *no-nonsense*, person, she is unable to assume that role. Though, overall, she might be satisfied with her self as *no-nonsense*, during the social situation of the job interview, she may experience acute anxiety as she cannot be the 'ought self,' the person who would excel in the situation, due either to a lack of imagination or to a lack of practice (Figure 3).

According to Kelly (1955), during a period of anxiety a person is likely to exhibit signs of constriction. Therefore, though the self role to which she is accustomed is unsuited to social expectations and demands, she will likely cling to it, at least, until changing her 'self' role is no longer threatening. Though she might later experiment with alternate, unfamiliar selves, this is unlikely to occur during times of anxiety. Because the subject caught in an ought-self dilemma is not able or willing to envision herself in a role more suited to the task/situation at hand, the more competent/fitting role cannot be equated with an 'ideal self.'

This dilemma is, perhaps, more in line with Kelly's description of the experience of anxiety than is the chronic anxiety that might be expected to accompany a classic implicative dilemma. Kelly describes anxiety as a breakdown in the anticipatory powers of one's construct system. It is safe to say that we can never be completely without a construct system. The breakdown of the construct system, therefore, may be assumed to be localized. In other words, we experience anxiety due to the insufficiency of or a challenge to a specific portion of our construction system, likely an area that is currently salient and of some immediate importance. Pursuing this line of thought, if one experiences a breakdown in his or her construct system that explains some part of the world/life that is not central to his or her identity, or to use a colloquialism, one that 'doesn't hit close to home,' he or she is more likely to experience a situation as absurd or irrelevant rather anxiety-provoking. It may be important to note that implicit within the ought-self dilemma is the potential cost of guilt, which Kelly (1955) defines as the result of acting in a way that is not in line with one's core role constructs, or beliefs about oneself. Though a person caught in an ought-self dilemma is experiencing anxiety, the

dilemma may not be resolved, but may rather be sustained by the pressures of constriction and threat of guilt.

The unobtainable-ideal-self dilemma. An unobtainable-ideal-self dilemma, like a classic implicative dilemma, is said to exist when the desired pole of a discrepant construct serves as a significant predictor for the undesired pole of a congruent construct. These two subtypes differ, however, according to perceived attainability of the 'ideal self.' That is to say, in an unobtainable-ideal-self dilemma, the desired end of the discrepant construct is seen as unreachable by the subject; the self-discrepancy gap cannot be closed due to real or imagined limitations (e.g., limited intellectual or physical ability).

In contrast to classic implicative dilemmas or ought-self dilemmas, in an unobtainable-ideal-self dilemma the association between the desired pole of the discrepant construct and the undesired pole of the congruent construct are likely to serve as consolation for an otherwise upsetting or even unbearable self-discrepancy.

Consider, for example, a woman who construes her 'self' as *obese*, and her 'ideal self' as *skinny*. Within her construct system, *skinny* is highly predictive of *vain* as opposed to *accepting of one's self*. If she perceives herself as unable to change her 'self' from *obese* to *skinny*, the negative implications of *skinny* might serve to alleviate (or at least mask) the negative effects of her self-discrepancy (Figure 4).

In his *Outline of a Theory of Emotion*, Sartre (1948) touches upon this "sour grapes" phenomenon, describing emotion as an act whereby we can transform our situation. If a person is confronted with an object or a situation that is, for him/her, charged with negative affective energy, he or she will react to the situation by

unreflectively assuming an emotional stance towards the object or situation which completely alters his or her situation, at times, "discharging the strong affective charge from objects…reducing them all to affective zero" (p. 65.) Finding himself or herself lacking the power to deal with a situation, he or she simply employs, albeit often unreflectively, an emotion to alter the requirements the situation makes. So then, when a situation demands some superior behavior that one cannot maintain, one instead maintains an emotion, which is an inferior behavior, but requires less psychic energy to maintain.

Comparably, one who is caught in a painful self-discrepancy that cannot foreseeably be resolved, he or she may, via the construction and/or maintenance of a dilemma, effectively negate or, at least, diminish the pain by assuming a stance whereby the desired self-state becomes arguably distasteful. Because of the possible consolatory properties of the unobtainable-ideal-self dilemma, this dilemma subtype may not be correlated with negative psychological experiences.

Current Studies

Two studies are proposed towards elaborating our understanding of the relationship between implicative dilemmas and psychological well-being. In the first study, which is a replication of Dorough, Grice and Parker (2007) with one large modification, participants will complete a repertory grid using a sentence-completion method of elicitation designed to reveal self-discrepancies, if they exist, in several areas felt to be salient for young adults (i.e., body image, social competency). The sentence-completion method (see Grice, Burkley, Burkley, Wright & Slaby, 2004), in which participants provide salient constructs in answer to a series of incomplete sentences,

provides several advantages, the first being that it accommodates the human tendency towards a narrative understanding of self and world (see McAdam's imagoes, 1990;1993). The human self as narrative is a concept that has been taken up by many in the field of Personal Construct Theory (PCT). Where the triadic method is cumbersome, the sentence-completion method is less confusing, and easier to employ both for subject and researcher (Grice, Burkley, Burkley, et al., 2004). Another advantage of this method is that sentences can be tailored to address identity within specific domains. This is important as certain logical inconsistencies will be noticeable only during occasions in which the constructs relevant to the inconsistency are salient.

Participants will then complete measures designed to assess anxiety and guilt from a Kellian perspective, and their grids will be analyzed to obtain a measure of self-esteem. It is expected that anxiety, guilt, depression and self-esteem will correlate significantly with the proportion of classic implicative dilemmas. Percent of classic implicative dilemmas will also be correlated with measures of guilt, anxiety, self-esteem and depression obtained using the Dynamic Analog Scale (DAS) technique developed by Grice and Jackson (2007). Though Kelly discusses possible manifestations of depression (e.g. weeping, constriction, etc.), he does not clearly define depression as he does the other psychological experiences in question. As no suitable grid-based measure of depression was found within PCT literature, a traditional measure of depression, the Center for Epidemiological Studies Depression will be administered (CES-D; Radloff, 1977) in hopes that this study will provide evidence for the validity of the DAS as an instrument for assessing Kellian depression in further studies.

The grids will be analyzed for classic implicative dilemmas and unobtainable-ideal-self dilemmas. By removing unobtainable-ideal-self dilemmas from the analyses, it is expected that zero-order correlations between number of dilemmas (using both the r = .20 and the r = .35 criterion) and Kellian measures of psychological well-being (self-esteem, depression, anxiety and guilt) will be significant. Based upon previous results, it is also expected that anxiety will show the strongest relationship to dilemmas, and that the number of dilemmas will account for a significant amount of variance in anxiety beyond that accounted for by the number of discrepant constructs alone. Essentially, this study is an attempt to strengthen effects found in the original study by a) removing the "noise" in the data caused by unobtainable-ideal-self dilemmas and by b) replacing non-Kellian measures of psychological well-being with measures more suited to a Personal Construct Theory approach.

The second study focuses on the relationship of ought-self dilemmas and anxiety. In this study, participants will be asked to provide a narrative recounting an event in which they experienced Kellian anxiety as well as a narrative of an event in which they felt fully competent. They will then complete grids designed to elicit portions of their construct system that are relevant to each event. It is expected that grids elicited in response to events marked by anxiety will contain significantly more ought-self dilemmas than grids elicited in response to events marked by feelings of competency.

CHAPTER III

METHODOLOGY

Study 1

Participants

One-hundred and forty-seven people participated in this study. All of the participants were undergraduate students at Oklahoma State University, and earned course credit in exchange for their participation. Fifty-two of the participants were male, 91 were female, and 4 declined to indicate gender. The majority of the participants (81%) reported their ethnicity as Caucasian, 5.4% as Native American, 2 % as Hispanic, 4.1% as African American, 6.1% as Asian, and .7% as "Other." Age ranged from 18 to 30, with the majority of students between the ages of 18 and 20 (M = 19.19, SD = 1.72). The degrees of freedom reported below varied slightly due to missing data on the measures.

Materials

Idiogrid Software (Version 2.4). Idiogrid (Grice, 2007) can be used to administer and analyze various types of self-report data. Though designed specifically around George Kelly's repertory grid technique, it allows the user to administer a variety of repertory grids, including triadic, dyadic, or monadic construct elicitation using either rating or ranking scales. For this study, grids are created in three phases: The first set of instructions directed participants to provide the names of 16 people who fit eight positive

role titles and eight negative role titles. In the second phase, 14 incomplete sentences were used to elicit the bipolar constructs. One advantage of the use of the sentence-completion method is that repertory grid tasks can be tailored to reveal constructs relevant to specific domains. In this case, the sentence-completion task was designed to elicit constructs and elements (e.g., constructs relevant to body image, social competence, etc.) likely to reveal self-discrepancies along core constructs among the sample, which will be comprised mainly of college students. Previous research using this sentence-completion task yielded a mean of (2.38) actual-ideal-self discrepancies per 16 X 18 grid (constructs X elements; Dorough, Grice & Parker, 2007). In the third phase participants rated their actual and ideal selves and the 16 named people (18 total elements) on 7-point scales anchored by their personal constructs. For each rating they were given the opportunity to choose a 'does not apply' option which was recorded as missing data. The role titles and 14 incomplete sentences are included in Appendices A and B. Previous research using Idiogrid has yielded data shown to be internally consistent and reliable over time, and self-ratings using Idiogrid have been shown to correlate highly with other multidimensional measures of self-concept (Grice, et al., 2004).

Personal Construct Inventory. The Personal Construct Inventory (PCI) is a self-report instrument designed to tap into six Kellian constructs: Threat, hostility, preemption, guilt, anxiety, and looseness. The present study focused on a 7-item anxiety subscale (e.g., I feel like my foundations are shifting), and an 8-item guilt subscale (e.g., Lately, I have not been acting in the ways I know I should). The original 80 item questionnaire (Chambers & O'Day, 1984) has been adapted by Watkins, Winter and Rossotti (1997) to increase both reliability and construct validity. Though several

subscales proved problematic even after significant amendments, high alphas were obtained for the anxiety (.92) and guilt subscales (.80). The endorsement ratings of two expert raters yielded a significant agreement (.79) with items used to assess anxiety as a failure in the anticipatory power of one's construct system. The guilt subscale did not fare as well with the expert raters, and will thus be addressed more cautiously during data interpretation. Past studies suggest both concurrent and predictive validity of the scales as measures of psychological well-being.

Participants were asked to indicate, by rating each item on a 5-point Likert-type scale ranging from "not at all" (scored 0) to "extremely" (scored 4) the extent to which each statement described them during the last week (see Appendix C). Total scores ranging from 0 to 35 and 0 to 40 for anxiety and guilt, respectively, were computed.

Self-Esteem Index: Self-esteem was measured using a method suggested by MacKay (1992) in which all constructs were keyed in the same direction based upon some criterion. As previously defined by Grice, Burkley, Burkley, Wright and Slaby (2002), all constructs in the current study were keyed relative to participants' ratings of their 'ideal self.' That is to say, when the 'ideal self' was rated below the midpoint of the scale, ratings for all of the elements along that particular construct were reflected. If the 'ideal self' was placed above the midpoint of the scale, the original ratings were maintained. An average rating (ranging from -3 to +3) was then computed in which high values indicate positive self-evaluations and negative values indicate negative self-evaluations. Grice et al. (2002) found this method of assessing self-evaluations to have highly consistent test-retest reliability in the domains of mathematics and athletics (r = .84 and .81, respectively). They also found this grid-based measure of domain-specific

self-concept to have both high discriminant and convergent validity (r's < .15 and r's > .70, respectively) when compared to relevant subscales of Marsh's Self Description Questionnaire (SDQ-III, 1989).

Dynamic Analog Scale: The Dynamic Analog Scale (DAS) is a technique developed by Grice and Jackson (2007) for generating single-item measures for various personality traits. It is comprised of extensive trait definitions written by the test constructor and a quasi-continuous analog scale ranging from -200 to +200 on which the test taker simultaneously rates himself or herself as well as other people. The DAS, generated by Idiogrid (Grice, 2002) requires participants to 'drag' elements (including self-elements) onto a scale that is 'anchored' by the opposite poles of chosen constructs. In a study conducted by Grice and Jackson (2007), the DAS technique was used to reduce a multi-item Big Five Personality trait questionnaire to five single-item measures. The data showed support for the DAS as a viable means for obtaining reliable and valid trait data. Though used in the past to measure personality traits, the DAS was adapted for the current study to serve as an additional measure for Kellian guilt, anxiety, self-esteem and constriction v. dilation, which will serve as a measure for depression. One benefit of the DAS technique is that, like Kelly's repertory grid method, it allows participants to rate themselves along various constructs in the context of a known comparison group. Another benefit is that the trait definition, or construct definitions in this case, were constructed in such a way that all participants rated themselves along a more or less shared construct. That is to say, rather than asking participants to rate their current or recent level of 'anxiety,' a word that is encumbered by many connotations, most of them distinctly un-Kellian, each participant was provided with a detailed description of both

poles of the construct. For instance, the Kellian construct of 'guilt' was anchored by the following descriptions, each coded to avoid evoking popular sentiments of 'guilt':

C: Every person has a picture of who he or she is. There are certain attributes and/or behaviors that you value as part of your identity. Consider a state of mind or feeling when you are behaving in ways that do not conform to those values, or when you feel that you are not "acting like yourself." Let's refer to this feeling or state of mind simply as '**C**.' For example, someone for whom organized religion is an important part of his identity may feel '**C'** when he does not attend religious services. Another person who sees herself as 'loyal' may feel '**C'** after gossiping behind a friend's back.

D: You may, at one point, have been asked to list important things about yourself. Often, attributes that we value about ourselves are reflected in the ways in which we describe ourselves to others. Consider a feeling or state of mind that you are likely to experience when your behaviors are consistent with the way in which your view yourself. Let's refer to this feeling or state of mind simply as '**D**.' For example, a person who lists 'studious' as an important aspect of her personality is likely to feel '**D**' at a time when she is performing very well in school. Another person who sees himself as 'kind' may feel '**D**' while performing an act of charity.

The descriptions of each scale anchor can be found in Appendix D. In the current study, the DAS task was completed by rating the elements (i.e., people) generated by the sentence-completion tasks, and 'self' and 'ideal self.' A screen capture of the DAS anxiety scale is shown in Figure 5.

Center for Epidemiological Study Depression Scale. The Center for Epidemiological Study Depression scale (CES-D; Radloff, 1977) is a self-report instrument for measuring depressive symptomology in the general population. The CES-D consists of 20 items assessing both thoughts and affect experienced in the past week (see Appendix G). Participants rate each item on a 4-point Likert-type scale ranging from "rarely or none of the time (less than 1 day)" to "most or all of the time (5-7 days)". Scores were averaged with final scores ranging from 1 to 20. The CES-D has been found to yield data with both high internal consistency and adequate test-retest reliability. Substantial evidence of construct validity has also been reported (Radloff, 1977).

Speilberger's Trait Anxiety Inventory (STAI) Form Y-1: The STAI-S is a self-report measure designed to assess patient state anxiety during the last two weeks. It is comprised of six statements depicting how the individual may have felt, for example, 'I felt at ease' (Speilberger, 1983). The respondent chooses an answer from four response categories ranging from 'not at all' to 'very much'. Scores are summed (with some reverse scoring of individual items) to give a range from six (not at all anxious) to 24 (very anxious).

Procedure

Participants completed the repertory grid task described above. They then completed the PCI and the CES-D while the researcher entered the names they provided in response to the 11 role-titles into the DAS program. The researcher instructed each participant to use the DAS program to place themselves and others they know along the constructs provided in Appendix E (i.e., anxiety, guilt, self-esteem, constriction v. dilation) prior to completion of the DAS task. After all measures were completed, participants were asked to make the following rating in response to all discrepant constructs appearing in implicative dilemmas located in their completed repertory grid:

You described your 'self' as _____ and your 'ideal self' as _____. Using the following scale, please indicate how difficult you believe it would be for your 'self' to become _____.

1	2	3	4
Not at all difficult for me	Somewhat difficult for me	Very difficult for me	Impossible for me

This rating served to identify unobtainable-ideal-self dilemmas, as implicative dilemmas in which the discrepant construct contained an unobtainable-ideal-self (i.e., a rating of 4 on the above scale) were not used for analysis.

Due to a clerical error, some of the participants did not complete the STAI. For this reason, degrees of freedom for analyses including this measure differ from degrees of freedom for the remaining analyses.

Study 2

Participants

Sixty-three people participated in this study. Participants were recruited via in-class announcements in day and night classes at two universities and via the Oklahoma State University subject pool. Participants were recruited from undergraduate, graduate, and adult studies classes. Initially, recruitment was limited to graduate and adult studies students, however participation was later opened to undergraduate students due to low rate of participation. Non-traditional students were originally targeted for participation in order to avoid range restriction in age and psychological well-being variables. Later inclusion of traditional students was based upon the expectation that this population could adequately provide accounts of the phenomena in question. This change was approved by the Institutional Review Board of Oklahoma State University. Participants recruited before this revision were entered into a drawing for two fifty-dollar gift cards as compensation; those recruited after the revision were given the opportunity to receive course credit or to be placed into the drawing in exchange for their participation. The majority of the participants (80%) opted to receive course credit.

Of sixty-three total participants, 47 were included in the final analysis. Six participants did not complete the study, and ten participants were removed from analysis because the narratives they provided did not meet the requirement for inclusion (e.g., anxiety narratives were not judged by raters to fit the criteria listed below for Kellian

anxiety or a narrative was an inappropriate response to the prompt). Thirteen of the participants were male, 33 were female, and 1 declined to indicate gender. The majority of the participants (76.6%) reported their ethnicity as Caucasian, 8.5% as Native American, 8.5% as African American, and 4.3% as Asian. Age ranged from 18 to 54, with the majority of students between the ages of 18 and 20 (M = 22.87, SD = 8.27).

Materials

Anxiety narrative prompt: Participants were asked to provide a short narrative in response to the following prompt:

> Please, provide a narrative that describes an event in your life during which you felt like you were unable to handle what life was throwing at you. Recall that a narrative has a setting, a beginning, middle, and end. As you are writing, try to place yourself in this part of your life. If you are stuck, consider the following questions:
>
> How long ago did this happen?
>
> What things led up to this event?
>
> What were your thoughts and feelings at the time?
>
> Who are the key characters in this personal narrative, and what role did they play in the event?
>
> When did this situation resolve itself, if at all?
>
> Is there any advice you might give a person in a similar situation?

This prompt was designed to elicit narratives describing experiences of a distinctly Kellian concept of anxiety. Written narratives were requested as participants were deemed more likely to consider word choice more carefully when writing than when speaking.

Competency narrative prompt: Participants were also asked to provide a narrative of a time when they felt competent in response to the following prompt:

Please, provide a narrative that describes an event in your life during which you felt particularly competent. That is to say, tell about a time when you felt like you were "in your element." Recall that a narrative has a setting, a beginning, middle, and end. As you are writing, try to place yourself in this part of your life. If you are stuck, consider the following questions:

How long ago did this happen?

What things led up to this event?

What were your thoughts and feelings at the time?

Who are the key characters in this personal narrative, and what role did they play in the event?

Did this event in any way change your evaluation of yourself?

Idiogrid v. 2.4. Participants completed two repertory grids, using a sentence-completion task generated by Idiogrid v. 2.4, in which they were guided to create domain-specific grids relevant to both the anxiety and competency experience recounted in the narratives they provided. As in the first study, the grid task was a sentence-completion task consisting of three phases. In the first phase, participants were asked to provide the names of 11 people considered pertinent to the recounted experience (e.g., 'Someone who would have navigated this situation more successfully than I did,' 'The person to whom I turned for advice during this time.') A complete list of role titles is included in Appendix E. In the second phase, 10 incomplete sentences were used to elicit bipolar constructs. These sentences are designed to elicit constructs relevant to the anxiety experience and to the experience of competency (see Appendix F). For example, participants were asked to complete the following sentence, "[Someone who would have navigated this situation more successfully than I did] would have been better able to handle the situation because he or she is _____." They were then prompted for the opposing pole of the elicited construct. In the third phase participants rated their

actual and ideal selves and the 11 named people (13 total elements) on 5-point scales anchored by their personal constructs. For each rating they were also given the opportunity to choose a 'does not apply' option which was recorded as missing data. The role titles and 10 incomplete sentences are included in Appendix C. The role title 'Someone who would have navigated this situation more successfully than I did' served as an 'ought self' when analyzing the grid for ought-self dilemmas. This measure of the 'ought-self' was employed as the 'ought-self' does not necessarily imply the 'ideal self.' Where people are able to cast themselves, at least in their imagination, as their 'ideal self,' it may be difficult or even impossible for them to see themselves as others might desire them to be in certain situations. As subjects may be unable or unlikely to consider this, the term 'ought self' may cause them to consider a caricature of themselves rather than a picture of themselves behaving in a way that is distinctly *not themselves*. Thus, the above role title should capture the 'ought self' discrepancy intended by the researcher rather than conflating it with the 'ideal self' as well as with a conglomerate of various 'ought selves' that are distinctly unlike the subject.

The narratives provided by the participants were designed to serve two purposes. The first was to ensure that participants are completing the anxiety grid with true Kellian anxiety in mind. As the word anxiety is encumbered with many meanings far removed from Kelly's conception of the term, it was deemed unacceptable to ask them to simply consider a time when they were anxious. It was also hoped that the act of providing the narratives served to remind the participant of the recounted experience and allowed them to provide constructs and elements that were truly relevant to the events contained in the narratives.

Procedure

Participants were recruited as described above, and were then contacted via e-mail. The repertory grid tasks were completed over the course of two sessions lasting no more than one hour each, and took place on the campus from which each participant was recruited. Once an appointment time was set for the first session, participants were provided with the prompt for either the anxiety narrative or the competency narrative as the order in which the participants complete the narrative was counterbalanced. Participants were asked to write the first narrative prior to the first research session, and began the first session by re-reading the narrative prior to completing the repertory grid task. This was done in order to allow participants to provide sufficiently rich data for further analysis, and to avoid fatigue during the actual sessions and in hopes that it would allow participants to reflect upon their past experiences. During the first session, participants were asked to complete a repertory grid using the sentence-completion task above keeping in mind the event or situation they provided in response to the first prompt. Upon completion of the first session, participants scheduled a second appointment, and received the second narrative prompt.

On a separate occasion, 7 to 21 days after the first session, participants again brought a pre-written narrative to the second research session. They were again asked to re-read the narrative, and to complete a second repertory grid using the sentence-completion task outlined above, this time keeping in mind the event described in the narrative they provided in response to the second prompt.

The narratives were not coded or scored, but the anxiety narratives were examined by two independent raters for the themes of anxiety accounted for by the PCI.

Narratives judged by one or both raters to lack a reference to at least one of the seven anxiety items (i.e., ‘I am lately more and more confused,’ ‘Life is confusing and chaotic to me,’ ‘People are generally confusing to me,’ ‘I feel like my foundations are shifting,’ ‘I feel empty inside,’ ‘I am often very anxious and confused,’ ‘Quite often, I am not sure of who I am’) as a predominant theme were not included in analysis. Grids associated with any narrative that was irrelevant or inappropriate to the prompt in response to which it was provided were also excluded from analysis.

CHAPTER IV

FINDINGS

Study 1

Both classic implicative dilemmas and unobtainable ideal-self dilemmas were computed from the repertory grid ratings following the algorithm described in the Introduction above. Results indicated that dilemmas (combined number of classic implicative dilemmas and unobtainable ideal-self dilemmas) were present in 59.5% of the participants' grids using the .20 salience criterion (M = 2.91, SD = 3.89) and 40.5% of the grids using the .35 criterion (M = 1.6, SD = 2.67). These percentages are lower than the percentages of implicative dilemmas found by Dorough et al. (2007) using an identical elicitation task among a similar sample (73.5 for .20, 64.4 for .35), but an independent samples *t*-test did not reveal a significant difference in percentage of implicative dilemmas between the two samples. As all analyses conducted were interested in the predictive value of only classic implicative dilemmas, percent of classic implicative dilemmas were calculated and found to be present in 39.5% of the participants' grids using the .20 salience criterion, and in 29.2% of the grids using the .35 criterion. Analysis of the participants' grid data yielded an average of 1.37% classic implicative dilemmas at the .20 level (SD = 2.50) and .79% at the .35 level (SD = 1.86).

As the DAS subscales were novel measures of Kellian psychological well-being, it is of note to consider the shared variance between each of these subscales and the other, more established measures of psychological well-being (see Table 2). The DAS guilt score, as expected, was a significant positive predictor of PCI guilt scores, CES-D depression scores, and the PCI, STAI and DAS anxiety scores and a significant negative predictor of both grid-based and DAS self-esteem scores (p's < .01). The DAS anxiety score was a significant positive predictor of PCI and STAI anxiety scores, PCI and DAS guilt scores, CES-D depression scores and a significant negative predictor of both grid-based and DAS self-esteem scores (p's <.01). Dynamic Analog Scale (DAS) self-esteem score was a significant positive predictor of grid-based self-esteem scores, and a significant negative predictor of STAI, PCI and DAS anxiety scores, PCI and DAS guilt scores, and CES-D depression scores (p's < .01). The DAS constriction scale did not, however, perform as expected; DAS constriction scores failed to predict scores on any other measure of psychological well-being.

Zero-order correlations were calculated for the discrete measures of anxiety, guilt, depression and self-esteem and percentage of classic implicative dilemmas at both the .20 and.35 salience level (Feixas, Saúl and Sanchez, 2000). Correlations were also calculated for percentage of classic implicative dilemmas and anxiety, guilt, depression and self-esteem as measured by the DAS. Unobtainable-ideal-self dilemmas (in which participants rated discrepant construct obtainability as "4 = Impossible for me" to change) were excluded from analysis. In the results to follow, the term "implicative dilemmas" refers only to classic implicative dilemmas.

As shown in Table 1, consistent with expectations, the percentage of implicative dilemmas at the .20 level was significantly correlated with the grid-based measure of self-esteem, guilt (as measured by the DAS), and anxiety (as measured by both the DAS and the PCI), and depression (as measured by the CES-D). Also as expected, greater percentages of implicative dilemmas were associated with lower self-esteem and higher guilt and anxiety. At the .35 level, the percentage of implicative dilemmas was again significantly correlated with self-esteem, guilt and anxiety as measured by the DAS, but was not significantly correlated with the PCI anxiety subscale. Due to a positively skewed distribution in CES-D scores, all correlations including this measure were computed using Spearman's rho.

Hierarchical multiple regression analyses were also conducted to examine the unique contribution of implicative dilemmas in the grids to the prediction of depression, anxiety, guilt and self-esteem. A separate analysis was conducted for each of the psychological well-being measures, with the number of self-discrepant constructs in the grids entered as the predictor in the first step for each model. In the second step the percentage of dilemmas was entered. The hierarchical model for anxiety, for instance, was constructed as follows:

Step 1: Anxiety = $a + b_1$(Actual-Ideal Discrepancies) + ε

Step 2: Anxiety = $a + b_1$(Actual-Ideal Discrepancies) + b_2(Percent Dilemmas) + ε

These 2-step hierarchical regression analyses served to ascertain whether implicative dilemmas predicted psychological well-being above and beyond the number of discrepancies between the actual and ideal selves. As in the previous analyses, all known unobtainable discrepancies and unobtainable ideal-self dilemmas were excluded.

The results of the analyses in Tables 2 and 3 show that, while self-discrepancies were predictive of low self-esteem, high anxiety (as measured by the STAI, PCI and DAS), high guilt at both salience criteria (.20 and .35), percent dilemmas were uniquely predictive of only self-esteem (grid-based measure), guilt and anxiety (as measured by the DAS) at the .20 level, and of only anxiety and self-esteem (grid-based measure) at the .35 level. Though significant, it is important to note that the magnitude of the latter effects were small, with percent dilemmas accounting for only 3.5% of the variance in guilt at the .20 salience level, 3.4% of the variance in anxiety at the .20 and .35 salience level, and 6.3% and 5.7% of the variance in self-esteem at the .20 and .35 salience levels, respectively. Finally, it should be noted that examination of each regression model did not indicate the presence of outliers, multicollinearity, or violations of statistical assumptions.

Though the effect size for the variance in the grid-based measure of self-esteem accounted for by percent dilemmas found in this data exceeds the effect size for the variance in self-esteem as measured by Rosenberg's (1965) Self-Esteem index (.6% at the .20 level) found by Dorough et al. (2007), the effect size for the variance on the DAS anxiety subscale is slightly lower than the 4.4% variance in anxiety reported by Dorough et al. in which anxiety was measured by the Hopkin's Symptom Checklist (Derogatis, Lipman, Rickles, Uhlenhuth and Covi, 1974).

Exploratory Analyses for Study 1

As indicated above, for all discrepant constructs appearing in implicative dilemmas, participants were asked to indicate, on a scale of 1-4 how difficult it would be for him or her to resolve the self-discrepancy (1 = Not at all difficult for me, 2 =

Somewhat difficult for me, 3 = Very difficult for me, 4 = Impossible for me.) Zero-order correlations were calculated for all measures of psychological well-being and number of self-discrepancies rated at each level of obtainability. A pattern emerged among the Kellian measures of psychological well-being (excluding the DAS constriction/preemption scale) and ratings of obtainability. Correlations between guilt (as measured by the DAS) and anxiety (as measured by the PCI and the DAS) and the grid-based measure of self-esteem rose to significance in the expected directions as obtainability ratings approached 3 and dropped below significance when obtainability ratings reached 4 (see Table 4.) This pattern was also observed when zero-order correlations were obtained for Kellian measures of psychological well-being and the number of implicative dilemmas containing discrepant construct at each level of obtainability (viz., implicative dilemmas in which the discrepant construct was rated at exactly 1, 2, 3 or 4; see Table 5). The DAS self-esteem subscale followed this pattern, as well, but the correlations did not reach significance. The two non-Kellian measures of psychological well-being (the CES-D and the STAI) followed a different pattern in which correlations continued to increase as obtainability ratings approached 4.

Study 2

Using Idiogrid, the grids were analyzed for ought-self dilemmas as described above. A t-test was conducted to ascertain whether the participants' anxiety grids contain a significantly higher number of ought-self dilemmas than the competency grids. It was expected that the anxiety-grids would reveal a significantly higher number of 'ought-self dilemmas' than the competency grids.

Ought-self dilemmas were defined as constructs in which 'self' and 'ideal self' were placed on a single pole of a construct and the 'ought-self' was placed on the opposite pole. In this study, the person named as "someone who would have navigated this situation better than you" served as the 'ought self' element. Results indicated that ought self dilemmas were present in 14.9% of anxiety grids and 14.9% of competency grids. Analysis of the participants' grids yielded a mean of .17 dilemmas per grid (*SD* = .433).

Contrary to expectations, a paired samples *t*-test revealed that the mean number of ought-self dilemmas contained in the anxiety grids (*M* = .17, *SD* =.433) did not differ from the mean number of ought-self dilemmas contained in the competency grids (*M* = .17, *SD* = .433; *t* (46) = .000, *p* > .05). The 95% confidence interval indicates moderate precision in the estimated population mean difference (-.06 to .06).

When ought-self dilemmas were defined as personal constructs in which the 'self' was placed no more than two points away from the 'ideal self' and no less than three points away from the 'ought self' on a 5-point Likert type scale, dilemmas were found to be present in 46.8% of the anxiety grids (*M* = .64, *SD* = .55) and 34% of the competency grids (*M* = .55, *SD* = 1.21). Using this criteria, a paired samples *t*-test again revealed no significant different in number of dilemmas, *t* (46) = .586, *p* = .56. The 95% confidence interval indicates low precision in the estimated population mean difference (-.21 to .038).

CHAPTER V

CONCLUSION

Dorough, Grice and Parker (2007) conducted a study in which the percent of implicative dilemmas in participants' repertory grids was found to be a weak predictor of low self-esteem, high depression and high anxiety. Implicative dilemmas were also investigated as potential contributors to variation in self-esteem, depression and anxiety beyond that accounted for by self-discrepancies alone. A series of hierarchical regressions revealed only a small effect (4.4%) of percent dilemmas at the .20 criteria for anxiety. Implicative dilemmas were identified as previously defined by Feixas and Saúl (2004; see also Feixas, Saúl & Sanchez, 2000). Self-esteem was measured using the Rosenberg's Self-Esteem Inventory (RSEI; Rosenberg, 1965), depression was measured using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) and the depression subscale of the Hopkin's Symptom Checklist (HSCL), and anxiety was measured using the anxiety subscale of the HSCL (Derogatis et al., 1974).

Study 1 was an attempt to improve the study conducted by Dorough et al. (2007) by a) utilizing measurements of psychological well-being that are distinctly Kellian in nature and b) removing from the analyses unobtainable self-discrepancies and unobtainable ideal-self dilemmas. In the discussion that follows, the terms "implicative

dilemma" and "dilemma" will refer to classic implicative dilemmas. Unobtainable ideal-self dilemmas will be referred to as unobtainable dilemmas.

Though the measures of psychological well-being used by Dorough et al. (2007) are widely used in the psychological literature and have well-established psychometric properties, they depart all but nominally from Kelly's constructs of self-esteem, depression and anxiety. For instance, symptoms on the anxiety subscale of the Hopkin's Symptom Checklist such as 'trembling', 'feeling fearful', and 'heart pounding or racing', fail to reflect Kelly's definition of anxiety as "the awareness that the events with which one is confronted lie mostly outside the range of convenience of his construct system" (p. 565). Study 1 utilized, instead, the anxiety and guilt subscales of the Revised Personal Construct Inventory (PCI) as adapted by Watkins, Winter and Rossotti (1984; 1997), a grid-based measure of self-esteem, and four single-item measures of constriction, anxiety, self-esteem and guilt. Two conventional measures, Speilberger's Trait Anxiety Inventory (STAI; Speilberger, 1983) and the CES-D (Radloff, 1977) were also administered.

Unobtainable self-discrepancies and unobtainable ideal-self dilemmas were excluded from analysis as it was theorized that, in the case of an implicative dilemma built upon a discrepant dilemma in which the desired pole is unobtainable, the 'cost' of the resolution of the self-discrepancy may serve as a consolation, thus negating the expected negative psychological effects of the discrepancy.

With these adjustments, it was expected that implicative dilemmas would predict low self-esteem, high depression and high anxiety to a greater degree than found by Dorough et al. (2007). It was also expected that percent implicative dilemmas would

predict high guilt. The present study failed to support these hypotheses. Though significant correlations were found between percent implicative dilemmas and depression (as measured by the CES-D), anxiety (as measured by the PCI, the DAS, and the STAI), all of the effect sizes were smaller than those found by Dorough et al. (2007). The squared correlation between percent dilemmas and the grid-based measure of self-esteem (10.5% at the .20 level and 7.8% at the .35 level) alone exceeded the effect size found by Dorough et al. (2007) for self-esteem as measured by the RSEI (4.5% at the .20 level and 1.8 at the .35 level; Radloff, 1977). None of the remaining variables shared a significant amount of variance with percent dilemmas.

Hierarchical regression analyses were conducted to ascertain whether percent dilemmas accounted for variability in measured variables above and beyond that accounted for by self-discrepancies alone. Separate analyses were conducted for each measure of psychological well-being with the expectation that effect sizes would exceed those found by Dorough et al. (2007). At the .20 level, percent dilemmas accounted for 3.4% of the variation in anxiety as measured by the single-item measure Dynamic Analog Scale (DAS) task. Though significant, this failed to exceed the 4.4% of variance of anxiety as measured by the anxiety subscale of the HSCL (Derogatis et al., 1974) reported by Dorough et al. (2007). In the current study, however, percent dilemmas at the .35 level did significantly account for 3.4% of anxiety as measured by the DAS while Dorough et al. failed to report a significant effect for anxiety at the .35 level. Percent implicative dilemmas also accounted for a significant amount of variance in guilt (3.5% at the .20 level) as measured by the DAS and in the grid-based measure of self-esteem

(6.3% at the .20 level and 5.7% at the .35 level) beyond variance accounted for by self-discrepancies alone.

Though bivariate correlations suggest that the DAS subscales for guilt, anxiety and self-esteem are valid measures of psychological well-being, it should also be noted that the constriction/preemption DAS scale, intended as a Kellian measure of depression, seems to have missed the mark. Constriction was expected to be a significant positive predictor of depression, guilt and anxiety and a significant negative predictor of self-esteem. The failure of the data to confirm these expectations prompted a closer look at the content validity of the DAS constriction scale. Kelly (1955) defined constriction in terms of the process of reducing one's perceptual field, thereby limiting that which is subject to construal. Preemption, however, is said to involve a reduction in the number of type of constructs one utilizes such that elements one construes can be seen in only one way. That is to say, constriction refers to a reduction in what we construe, or elements, while preemption refers to the reduction in the availability of categories into which elements may be placed, or constructs (Kelly, 1955). The DAS preemption/constriction scale is, therefore, a misnomer. As it stands, the DAS "constriction" scale should be treated as a preemption scale and future attempts to measure constriction using this method should be based upon anchors revised to reflect constriction accurately. Where constriction has been associated with depression and anxiety, the association between psychological well-being and preemption is unclear.

Though some significant effects were found, most notably those associated with self-esteem, Study 1failed, overall, to improve upon the predictive value of percent implicative dilemmas as reported by Dorough et al. (2007). Nonetheless, this study is

encouraging as we were able to corroborate the finding of Dorough et al. that implicative dilemmas account for a statistically significant portion of anxiety as measured by the DAS task, a novel measure of Kellian anxiety. Additionally, the results of this study indicate that implicative dilemmas may also be related to heightened feelings of guilt, not measured by Dorough et al. and that implicative dilemmas are substantially more related to a grid-based index of self-esteem than to self-esteem as measured by Rosenberg's well-regarded Self-Esteem Index (1965).

Exploratory analyses also revealed an interesting pattern that lends support to the proposal that unobtainable discrepancies may serve an insulatory function against the negative psychological experience commonly associated with self-discrepancy. Zero-order correlations were found for number of self-discrepancies rated exactly 1, 2, 3 or 4 and psychological variables. For all Kellian measures of psychological well-being (excluding the DAS constriction scale and the PCI guilt scale) correlations became stronger as the obtainability level approached 3 and dropped when the obtainability level reached 4 suggesting that self-discrepancies become more distressing as they become less obtainable, that distress peaks when becoming the 'ideal self' is very difficult, but not impossible, and that distress drops when attaining the desired 'self' state is deemed impossible. This pattern was also observed when zero-order correlations were found between percent implicative dilemmas and Kellian measures. The two non-Kellian measures of psychological well-being (the CES-D and the STAI) followed a different pattern in which correlations remained the same or continued to increase as obtainability ratings approached 4. This different pattern among Kellian and non-Kellian measures of psychological well-being may be attributed to the fact that the items that constituted the

Kellian measures zeroed in on each participant's anticipation of the future of his or her world, departures from personal values and/or that participant's ability to move within his or her own personal construct system. The non-Kellian measures, on the other hand, focused on general physical and emotional symptoms. Thus, the Kellian measures may provide the better glimpse into the distress associated with the navigation and potential modification of one's own meaning-making/value system.

The results of the exploratory analyses of Study 1 are encouraging as they offer some support to the concept of the unobtainable ideal-self dilemma, or at the very least, that self-discrepancies may become more distressing as they increase in difficulty, but become less distressing when they are deemed irresolvable. Intuitively, this makes sense. If a person does not like the way he or she is in a certain domain, but feels that it will be easy to change to a desired state, he or she may remain in a state of self-discrepancy for an indefinite amount of time with little distress. "After all," he or she may say, "I can always change tomorrow."

As a desired self state becomes more difficult to achieve, however, a person's level of distress may rise. Consider for example an amateur athlete who aspires to be in peak physical condition in hopes that she may one day enter the WNBA. She may desire to change her behavior to achieve that goal, and while she has the knowledge that it is possible, that knowledge may be accompanied by the anticipation of the hard road that must be traveled if she is to make the desired change. To attain her goal she must eat correctly, practice often to improve her skill, and work out daily to gain strength and stamina. The knowledge or belief alone that she has the ability to implement this positive change may be the very thing that causes her distress. The knowledge of the attainability

of her goal propels her towards change, while the difficulty of resolving the discrepancy (e.g., her 'self' is *not in peak physical condition,* whereas her 'ideal self' is *in peak physical condition*) may repel her away from change. If this is true, then the knowledge or belief that a desired self state is unattainable may be seen as a relief. In the case of the athlete, if she comes to the conclusion that her goal is no longer attainable, she may feel a relief as the hard work of achieving her goal is no longer necessary. This may play a role in the procrastination of self-improvement goals. Not only are we waiting because we fear hardship or failure, we may also be waiting for the sweet release we feel when a once attainable goal becomes a pipe dream.

Study 2 was designed to detect the proposed 'ought-self dilemma.' It was expected that, if 'ought-self dilemmas' are likely to appear in times of acute anxiety, that a repertory grid guided by a narrative of a personal experience of anxiety would contain a significantly higher number of 'ought-self dilemmas' than a repertory grid guided by a narrative of a personal experience of competency provided by the same person. A paired samples t-test comparing anxiety grids and competency grids revealed no difference in the number of 'ought-self dilemmas' contained in the grids.

Two major weaknesses stand out in the design of the study that may have contributed to the null results. First, while the narrative prompts and the first two phases of the sentence-elicitation task were worded to guide participants to provide only constructs and elements relevant to a specific event, the final phase, the rating task in which participants provided the numeric data that allows for the identification of dilemmas, was not worded in such at way that participants were prompted to rate elements as they would behave in the context of the situation described in the narrative.

For example, during the first phase participants were asked to provide that name of "someone who would have navigated this situation better than you." Suppose a participant provided that name 'Mary.' In the next phase, participants were asked to provide a relevant bipolar construct in response to the following sentence: Mary would have handled this situation better than me because she is _____, as opposed to _____." Suppose the participant responded with *confident* as opposed to *unsure of herself*. In the final phase, the participants were asked to conduct ratings of all provided elements along all provided constructs. The rating task for the example element along the example construct would have said simply:

"Please, rate Mary along the following scale:"

Confident 1 2 3 4 5 Unsure of herself

All ratings, including 'self' and 'ideal self', were conducted using the same format. This presents a problem as Mary (and all of the other elements) may be *confident* in situation like the one described, but *unsure of herself* in general. Additionally, Mary may be reasonably expected to act in one way during a situation of acute anxiety, but a different way during most situations. As other constructs used in the rating task were not anchored by Mary, ratings of Mary along all other constructs are likely to reflect how Mary behaves in the majority of circumstances rather than the specific event in question. It cannot be determined, after the fact, whether participants rated the behavior/attributes of elements in general or within a specific situation. As 'ought-self dilemmas' are thought to be short-lived and context-dependent, this error renders any 'ought-self dilemmas' that are identified, as well as the entire grid of each participant, uninterpretable.

The second design error involves the anxiety narrative prompt. Though the prompt clearly indicated that participants should describe a single event, many participants provided a description of multiple events. Despite instructions, the phrase "unable to handle what life was throwing at you" seemed to have elicited feelings of stress and being overwhelmed. Though the majority of the anxiety narratives were judged to be accounts of Kellian anxiety, the wording of the anxiety prompt may have confused some participants and affected the outcome of the study. A better anxiety prompt may have been: "Please describe a single event in your life when you felt like someone wanted you to be something that you are not." Though this may seem heavy-handed, it may zero in on relevant 'ought-self dilemmas' that may otherwise be missed.

As is always a concern when eliciting repertory grids, it is possible that the role titles we used to elicit grid elements did not trigger participants to provide people relevant to the event in question. A clinician who is able to become familiar with a client over time, in and through multiple interactions, is likely better able to guide the client to provide relevant elements than is a researcher preparing a generic sentence-completion task to be administered to many participants. As researchers conducting laboratory studies based on the aggregate model, we are at a disadvantage when it comes to tailoring tasks to zero in on true and relevant cognitive dilemmas.

Taken together, the studies presented here do not provide strong evidence for implicative dilemmas as predictors of anxiety, depression, guilt or evidence for the presence of 'ought-self dilemmas' in situations of acute anxiety. They do offer some encouragement that we are on the right track as we were able to replicate previous findings that implicative dilemmas do play some role in anxiety. We also gained support

for expectations that implicative dilemmas are associated with guilt and found a significant increase in the effect size for the variability in self-esteem accounted for by implicative dilemmas beyond that accounted for self-discrepancies by using a grid-based measure of self-esteem (rooted in Kellian theory) rather than the RSEI (1965).

These modest results, along with human experience and some encouraging data provided by exploratory analyses, suggest that these dynamic cognitive dilemmas do play a role in our ever-changing psychological states. The efforts of personal construct theorists operating outside of clinical practice may be hampered by the shortcomings of the aggregate model. Future studies will benefit from increased focus on the individual. This may be achieved by studying a smaller number of individuals longitudinally, by observing individuals during a period of transition or distress, or simply by giving more attention and respect to the individuals that make up the aggregate. Though it may be accompanied at times by distress, intrapersonal conflict is both necessitator and tool of change, and thus it warrants our continued attention as researchers who are looking, not only for significant effect sizes, but also for significant insights into the ebb and flow of human transformation.

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APPENDICES

Appendix A
Eight negative and eight positive role descriptions

A former boyfriend/girlfriend whom you now dislike
A person whom you consider to be unethical or immoral
A person in high school or middle school whom you did not like
The teacher or coach whom you did not like or who was a poor role model
The most dishonest person you know personally
A person whom you once thought was a friend but in whom you were badly disappointed.
A person with whom you have worked and did not get along with
A person in your family whom you consider to be a poor role model

A current or past romantic partner whom you still love
A person who upholds high ethical and moral standards (other than yourself)
A person in high school or middle school whom you liked
The teacher or coach whom you liked or thought was a good role model
The most honest person you know personally (other than yourself)
A current close friend (other than your romantic partner)
A person with whom you have worked and got along with well
A person in your family whom you consider to be a good role model

Appendix B
Incomplete Sentences

1. It is common to want to change things about your physical appearance. For me, it would be nice if I were _____.
2. I am embarrassed when I act like I am _____.
3. Often people behave in ways they don't particularly like. Sometimes I am disappointed to find myself acting like _____.
4. When I get emotional, I wish I wouldn't _____.
5. It is normal to sometimes envy other people. The people I sometimes envy are typically _____.
6. It is true that no one is perfect, and sometimes I really wish I wouldn't _____.
7. Generally speaking, other people think that I ought to be more _____.
8. If I had to describe myself in one word, I would say that I am _____.
9. One of the things I admire about $E9$ is that he or she is _____.
10. In order to make mature decisions in life, a person really needs to _____.
11. To qualify as a person I dislike, you must be the type of person who is _____.
12. The typical student at OSU is the type of person who enjoys _____.
13. Most people in America tend to _____.
14. When I go to parties, I generally feel _____.

Appendix C
Revised Personal Construct Inventory

Directions: Indicate the extent to which each you agree with each statement. Please, indicate the extent of your agreement or disagreement by using the following scale:
1 = Strongly agree, 2 = Agree, 3 = Neither agree or disagree, 4 = Disagree, 5 = Strongly disagree

__1. I expect that I will be a very different person in a few years.
__2. I have not been my true self much lately.
__3. Lately I have not been acting in the ways I know I should.
__4. My thought is often hazy and not clearly formed.
__5. I am lately more and more confused.
__6. Most of the talking that people do really concerns nothing but a few issues.
__7. I suffer from deep feelings of guilt.
__8. Almost all of a person's behavior can be predicted from knowledge of a few basic characteristics of the person.
__9. I will basically be the same person in a few years.
__10. I admit that I enjoy winning even if I have to cheat.
__11. All thing are because of laws. Nothing is due to chance or free will.
__12. I have lately done a lot of things that were not "like me."
__13. Life is confusing and chaotic to me.
__14. People are generally confusing to me.
__15. I am not a very systematic person.
__16. I feel like my foundations are shifting.
__17. Much of what people say is nothing but rubbish.
__18. People are rarely both good and bad. They tend to be either good *or* bad.
__19. I am a highly organized person.
__20. Winning is everything.
__21. My mind wanders easily.
__22. My way of doing things will possibly very different in the future.
__23. Power is really more important than truth.
__24. I feel out of tune with those I admire.
__25. I often seem to think in a disorganized fashion.
__26. I feel empty inside.
__27. I think most things that are interesting cannot be described exactly.
__28. I have not been acting like the person I really am deep inside.
__29. There is usually only one good way to do something.
__30. I enjoy manipulating people.
__31. I anticipate having mostly different friends in the coming year.
__32. I am just not what I could and should be.
__33. I often do not tell all I know if it can help me win an argument.
__34. I do not mind distorting the truth to get my own way. Business is business.
__35. Only a fool plays by the rules.
__36. My health will probably be changing in the near future.
__37. I regret having let a number of people down.
__38. I am often very anxious and confused.
__39. I feel there will be some definite changes in my love life.
__40. Quite often, I am not sure of who I am.

Appendix D
Kellian Descriptions for Use with the Dynamic Analog Scale

Read <u>both</u> descriptions below. Each pair of descriptions represents opposite psychological experiences (feelings, emotions, states of mind). Please, read each section carefully. You will be asked to place the names of people you personally know on a scale that ranges from one description to its opposite.

1st pair of opposites: **A v. B**

A: Consider a feeling or state of mind in which you feel like you are not able to handle the things that life is throwing at you. You also feel like things that you used to take for granted are no longer certain and that life suddenly feels confusing and chaotic. Let's refer to this feeling or state of mind simply as '**A**.' As an example of someone who is experiencing high levels of '**A**', consider a high school senior struggling to envision the future after graduation or a married person whose spouse begins to behave unpredictably in almost everything he or she does.

B: Consider a feeling or state of mind in which you feel like life makes sense, and that important aspects of your life are pretty much predictable. In this state of mind, you also feel like events in the world unfold in a way you can understand. Let's refer to this feeling or state of mind simply as '**B**.' As an example of someone else who is experiencing high levels of '**B**', consider a person who has a clear career path and has been successful in pursuing that path or a person who has a comfortable sense of how his or her future will work out.

2nd pair of opposites: **C v. D**

C: Every person has a picture of who he or she is. There are certain attributes and/or behaviors that you value as part of your identity. Consider a state of mind or feeling when you are behaving in ways that do not conform to those values, or when you feel that you are not "acting like yourself." Let's refer to this feeling or state of mind simply as '**C**.' For example, someone for whom organized religion is an important part of his identity may feel '**C'** when he does not attend religious services. Another person who sees herself as 'loyal' may feel '**C'** after gossiping behind a friend's back.

D: You may, at one point, have been asked to list important things about yourself. Often, attributes that we value about ourselves are reflected in the ways in which we describe ourselves to others. Consider a feeling or state of mind that you are likely to experience when your behaviors are consistent with the way in which your view yourself. Let's refer to this feeling or state of mind simply as '**D**.' For example, a person who lists 'studious' as an important aspect of her personality is likely to feel '**D**' at a time when she is performing very well in school. Another person who sees himself as 'kind' may feel '**D**' while performing an act of charity.

3rd pair of opposites: **E v. F**

E: Consider a feeling or state of mind in which you see things as 'black and white.' That is to say, when you are in this state, you may be convinced that there is only one way to interpret events that occur. Let's refer to this feeling or state of mind simply as '**E.'** For example, a person in a state of '**E'** may assume that people are either all good or all bad, and may have difficulty imagining a 'good' person doing something bad, or a 'bad' person doing something good. Another person in this state may believe that Republicans are always right and Democrats are always wrong, or vice versa.

F: Consider a feeling or state of mind in which you recognize that certain events may be interpreted in a number of ways. Let's refer to this feeling or state of mind simply as '**F**.' When you are in a state of '**F'**, you are likely to understand that things are not always 'black and white,' but that there are also many 'shades of grey,' so to speak. For example, a person in this state of mind is likely to withhold judgment on another person's seemingly offensive actions because they recognize that there may be a justified reason for such behavior.

4th pair of opposites: **G v. H**

G: Consider a feeling or state of mind in which you feel that you are less worthy than other people. Let's refer to this feeling or state of mind as '**G**.' A person who feels '**G'** may be dissatisfied with her physical appearance, her academic performance, or her social confidence. Someone who is in a state of '**G'** may be greatly distressed by aspects of himself that he feels fall short of his ideal self.

H: Consider a feeling or state of mind in which you feel that you are a worthwhile person. Let's refer to this feeling or state of mind as '**H**.' When you are in a state of '**H**,' you feel satisfied that you are not falling too short of your ideal self. For example, someone who feels that she looks and acts in ways that she thinks people should look and act may feel '**H**.'

Appendix E
Role Titles

Your mother or someone who is like a mother to you.
Your father or someone who is like a father to you.
Someone who would have navigated this situation better than you. (A measure of 'ought self')
Some whom you feel would have acted similarly to you if placed in this situation.
Someone who would have navigated this situation more poorly than you.
A person whom you avoided during this time, or have specifically avoided speaking to about the situation since that time.
A person to whom you turned for advice regarding this situation, either during or since that time.
Someone you consider to be successful in the areas in which you desire success.
Someone whom you consider to be unsuccessful, or whom you feel would not be able to achieve success in the area(s) in which you desire success.
A person whom you admire and aspire to emulate.
A person you would like to avoid emulating.

Appendix F
Part II: Incomplete Sentences

1. (Someone who would have navigated this situation better than you) would have handled this situation better than I did because he or she is _____.
2. (Someone who would have navigated this situation more poorly than you) would have handled this situation poorly because he or she is_____.
3. Knowing what I know now, if I had to go back and change my behavior during this time, I would try to be _____.
4. In order for one to succeed in my area(s) of interest, one must be _____.
5. If placed in the same position, (a person whom you admire and aspire to emulate) would be _____.
6. If placed in a similar position, I think that (a person you would like to avoid emulating) would be _____.
7. I confided in (a person to whom you turned for advice regarding this situation, either during or since that time) regarding this situation because he or she is _____.
8. If I were to become more like (a person you admire and aspire to emulate), I would need to be _____.
9. If placed in this situation, I think that (a person you would like to avoid emulating) would be _____.
10. If I were to provide one reason why I avoid (a person whom you avoided during this time, or have specifically avoided speaking to about the situation since that time) when it comes to discussing this situation, it is that he or she is _____.

Appendix G
Center for Epidemiological Studies Depression Scale (CES-D)

Below is a list of the ways you might have felt or behaved during the past week. Check your response to each statement using the scale provided below.

	0 Rarely or None of the Time (less than 1 day)	**1** Some or a Little of the Time (1-2 days)	**2** Occasionally or a Moderate amount of Time (3-4 days)	**3** Most or All of the time (5-7 days)
1. During the past week I was bothered by things that usually don't bother me.	____	____	____	____
2. During the past week I did not feel like eating; my appetite was poor.	____	____	____	____
3. During the past week I felt that I could not shake off the blues even with the help from my family or friends.	____	____	____	____
4. During the past week I felt that I was just as good as other people.	____	____	____	____
5. During the past week I had trouble keeping my mind on what I was doing.	____	____	____	____
6. During the past week I felt depressed.	____	____	____	____
7. During the past week I felt that everything I did was an effort.	____	____	____	____
8. During the past week I felt hopeful about the future.	____	____	____	____

	0 Rarely or None of the Time (less than 1 day)	**1** Some or a Little of the Time (1-2 days)	**2** Occasionally or a Moderate amount of Time (3-4 days)	**3** Most or All of the time (5-7 days)
9. During the past week I thought my life had been a failure.	____	____	____	____
10. During the past week I felt fearful.	____	____	____	____
11. During the past week my sleep was restless.	____	____	____	____
12. During the past week I was happy.	____	____	____	____
13. During the past week I talked less than I usually do.	____	____	____	____
14. During the past week I felt lonely.	____	____	____	____
15. During the past week people were unfriendly.	____	____	____	____
16. During the past week I enjoyed life.	____	____	____	____
17. During the past week I had crying spells.	____	____	____	____
18. During the past week I felt sad.	____	____	____	____
19. During the past week I felt that people disliked me.	____	____	____	____
20. During the past week I could not “get going.”	____	____	____	____

Table 1

Bivariate Correlations Among Measured Variables

	$Dil_{.20}$	$Dil_{.35}$	PCI_{ANX}	PCI_{GUILT}	DAS_{ANX}	DAS_{GUILT}	DAS_{CON}	DAS_{SE}	Self-Esteem	CES-D[a]	STAI	*M*	*SD*
Dil.20	-	.888**	.172*	-.077	.224*	.221*	-.031	-.004	-.324**	.227**	.141	1.374	2.500
Dil.35		-	.109	-.100	.212*	.189*	-.021	-.053	-.279**	.167	.098	.799	1.858
PCI_{ANX}			-	.685**	.489**	.512**	.108	-.399**	-.375**	.678**	.690**	24.157	5.942
PCI_{GUILT}				-	.480**	.430**	.123	-.450**	-.460	.514**	.525**	26.939	6.447
DAS_{ANX}					-	.500**	-.165	-.496**	-.442**	.501**	.405**	-25.877	119.354
DAS_{GUILT}						-	.097	-.518**	-.362**	.548**	.422**	30.573	113.169
DAS_{CON}							-	.209	-.116	.043	.037	-79.915	111.724
DAS_{SE}								-	.372**	-.425**	-.296**	-31.386	98.555
Self-Esteem									-	-.262**	-.417**	.647	.513
CES-D[a]										-	.669**	16.081	9.445
STAI											-	10.141	2.936

Note. PCI_{ANX} = Personal Construct Inventory Anxiety subscale (scale ranges from 0-35); PCI_{GUILT} = Personal Construct Inventory Guilt subscale (ranges from 0-40); DAS_{ANX} = Dynamic Analog Scale Anxiety subscale (ranges from -200 to +200); DAS_{GUILT} = Dynamic Analog Scale Guilt subscale (ranges from -200 to +200); DAS_{CON} = Dynamic Analog Scale Constriction/Pre-emption subscale (ranges from -200 to +200); DAS_{SE} = Dynamic Analog Scale Self-Esteem subscale (ranges from -200 to +200); Self-esteem = Grid-based Self-Esteem index (ranges from -3 to +3); CES-D = Center for Epidemiological Study Depression scale (ranges from 0 to 60); STAI = Speilberger's Trait Anxiety Inventory (ranges from 6-24). Analyses did not include unobtainable ideal-self dilemmas and self-discrepancies known to be unobtainable. N's range from 117 to 147.
* $p < .05$, ** $p < .01$, [a] Computed using Spearman's rho due to significant skew

Table 2

Hierarchical regression models predicting measures of well-being from self-discrepancies and percent dilemmas at the .20 salience level

	Step 1 Actual-Ideal Discrepancies			Step 2 Percent Implicative Dilemmas			
Dependent Variable	R^2	F	$p\leq$	R^2	$R^2\Delta$	F	$p\leq$
PCI_{ANX}	.054	7.798	.006	.076	.022	3.231	.074
PCI_{GUILT}	.086	12.873	.001	.088	.002	.224	.637
DAS_{ANX}	.054	6.873	.010	.088	.034	4.475	.036
DAS_{GUILT}	.067	8.720	.004	.102	.035	4.699	.032
DAS_{CON}	.000	.043	.835	.001	.000	.035	.852
DAS_{SE}	.070	8.864	.004	.073	.002	.282	.596
Self-Esteem	.465	116.543	.001	.528	.063	17.660	.001
CES-D	.085	11.759	.001	.094	.009	1.214	.273
STAI	.097	11.526	.001	.108	.011	1.250	.266

Note. PCI_{ANX} = Personal Construct Inventory Anxiety subscale; PCI_{GUILT} = Personal Construct Inventory Guilt subscale; DAS_{ANX} = Dynamic Analog Scale Anxiety subscale; DAS_{GUILT} = Dynamic Analog Scale Guilt subscale; DAS_{CON} = Dynamic Analog Scale Constriction/Pre-emption subscale; DAS_{SE} = Dynamic Analog Scale Self-Esteem subscale; Self-esteem = Grid-based Self-Esteem index; CES-D = Center for Epidemiological Study Depression scale; STAI = Speilberger's Trait Anxiety Inventory. Analyses did not include unobtainable ideal-self dilemmas and self-discrepancies known to be unobtainable.

Table 3

Hierarchical regression models predicting measures of well-being from self-discrepancies and percent dilemmas at the .35 salience level

	Step 1 Actual-Ideal Discrepancies			Step 2 Percent Implicative Dilemmas			
Dependent Variable	R^2	F	$p \leq$	R^2	$R^2\Delta$	F	$p \leq$
PCI_{ANX}	.054	7.798	.006	.064	.009	1.353	.247
PCI_{GUILT}	.086	12.873	.001	.092	.006	.888	.348
DAS_{ANX}	.054	6.873	.010	.088	.034	4.387	.038
DAS_{GUILT}	.067	8.720	.004	.096	.029	3.785	.054
DAS_{CON}	.000	.043	.835	.001	.000	.103	.749
DAS_{SE}	.070	8.864	.004	.076	.006	.756	.386
Self-Esteem	.465	116.543	.001	.522	.057	15.821	.001
CES-D	.085	11.759	.001	.091	.006	.804	.372
STAI	.097	11.526	.001	.103	.006	.685	.410

Note. PCI_{ANX} = Personal Construct Inventory Anxiety subscale; PCI_{GUILT} = Personal Construct Inventory Guilt subscale; DAS_{ANX} = Dynamic Analog Scale Anxiety subscale; DAS_{GUILT} = Dynamic Analog Scale Guilt subscale; DAS_{CON} = Dynamic Analog Scale Constriction/Pre-emption subscale; DAS_{SE} = Dynamic Analog Scale Self-Esteem subscale; Self-esteem = Grid-based Self-Esteem index; CES-D = Center for Epidemiological Study Depression scale; STAI = Speilberger's Trait Anxiety Inventory. Analyses did not include unobtainable dilemmas and self-discrepancies known to be unobtainable.

Table 4

Zero-order Correlations Among Kellian/ non-Kellian measures and self-discrepancies contained in implicative dilemmas at all levels of obtainability

	PCI_{ANX}	PCI_{GUILT}	DAS_{ANX}	DAS_{GUILT}	DAS_{CON}	DAS_{SE}	Self-Esteem	CES-D[a]	STAI
Discrepancies rated 1	-.050	-.031	.038	-.111	-.092	.105	-.005	-.066	.059
Discrepancies rated 2	-.015	.046	.116	.035	-.125	-.042	-.322**	-.033	.105
Discrepancies rated 3	.207*	.138	.331**	.246**	.011	-.133	-.414**	.248*	.119
Discrepancies rated 4	.135	.047	.002	.106	.046	-.022	-.107	.213*	.273**

Note. PCI_{ANX} = Personal Construct Inventory Anxiety subscale; PCI_{GUILT} = Personal Construct Inventory Guilt subscale; DAS_{ANX} = Dynamic Analog Scale Anxiety subscale; DAS_{GUILT} = Dynamic Analog Scale Guilt subscale; DAS_{CON} = Dynamic Analog Scale Constriction/Pre-emption subscale; DAS_{SE} = Dynamic Analog Scale Self-Esteem subscale; Self-esteem = Grid-based Self-Esteem index; CES-D = Center for Epidemiological Study Depression scale; STAI = Speilberger's Trait Anxiety Inventory.
* $p < .05$, ** $p < .01$, [a] Computed using Spearman's rho due to significant skew.

Table 5

Zero-order Correlations Among Kellian/ non-Kellian measures and implicative dilemmas at all levels of obtainability

	PCI_{ANX}	PCI_{GUILT}	DAS_{ANX}	DAS_{GUILT}	DAS_{CON}	DAS_{SE}	Self-Esteem	CES-D[a]	STAI
.20 Criterion									
Dilemmas at 1	-.040	-.030	-.078	-.077	-.118	-.041	-.119	-.046	-.017
Dilemmas at 2	-.055	.007	.057	.070	-.069	-.079	-.233**	.022	.044
Dilemmas at 3	.172*	.077	.224*	.221*	-.031	-.004	-.324**	.227*	.141
Dilemmas at 4	.119	.005	-.061	.059	.048	.011	-.107	.213*	.245*
.35 Criterion									
Dilemmas at 1	.002	.025	-.037	-.081	-.121	.043	-.070	-.009	-.023
Dilemmas at 2	-.050	.001	.062	.044	.037	-.043	-.189*	.063	.080
Dilemmas at 3	.109*	.100	.212*	.189*	-.021	-.053	-.279*	.167	.098
Dilemmas at 4	.039	-.044	-.117	.002	.020	-.036	-.035	.116	.142

Note. PCI_{ANX} = Personal Construct Inventory Anxiety subscale; PCI_{GUILT} = Personal Construct Inventory Guilt subscale; DAS_{ANX} = Dynamic Analog Scale Anxiety subscale; DAS_{GUILT} = Dynamic Analog Scale Guilt subscale; DAS_{CON} = Dynamic Analog Scale Constriction/Pre-emption subscale; DAS_{SE} = Dynamic Analog Scale Self-Esteem subscale; Self-esteem = Grid-based Self-Esteem index; CES-D = Center for Epidemiological Study Depression scale; STAI = Speilberger's Trait Anxiety Inventory.
* $p < .05$, ** $p < .01$, [a] Computed using Spearman's rho due to significant skew.

	Myself							
	.	My Ideal Self						
	.	.	1.	Mom				
	.	.	.	2.	Marty			
	.	.	.	.	3.	Sarah		
	.	.	.	.	.	4.	Scottie	
	.	.	.	.	.	.	5.	Caroline
	.	.	.	.	.	.	.	
Happy-go-lucky	-2	0	1	2	-2	0	2	Worried all the time
Intelligent	1	2	2	2	0	0	-1	Unintelligent
Inquisitive	1	2	0	-2	-2	1	-1	Not at all curious
Optimistic	-1	1	1	2	2	0	-1	Pessimistic
Altruistic	-1	1	0	0	-2	1	0	Selfish

Figure 1: Complete repertory grid

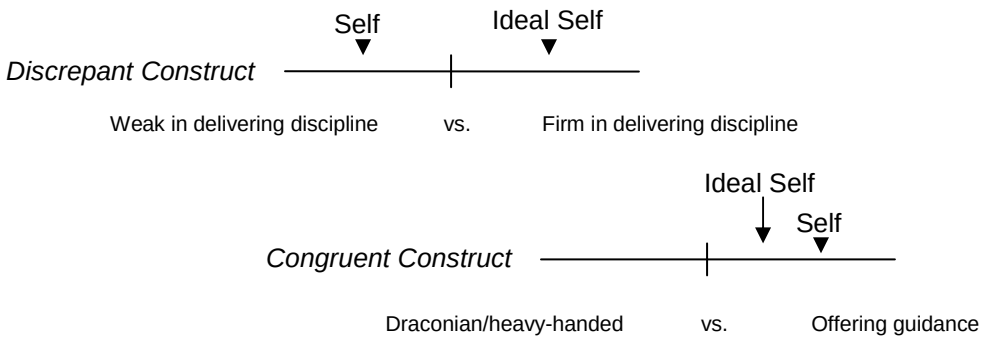


Figure 2: Implicative Dilemma

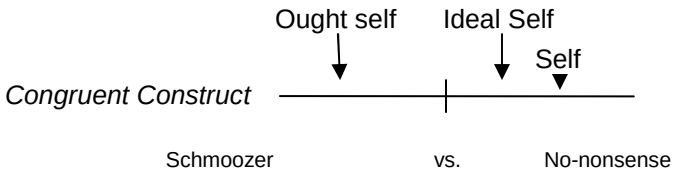
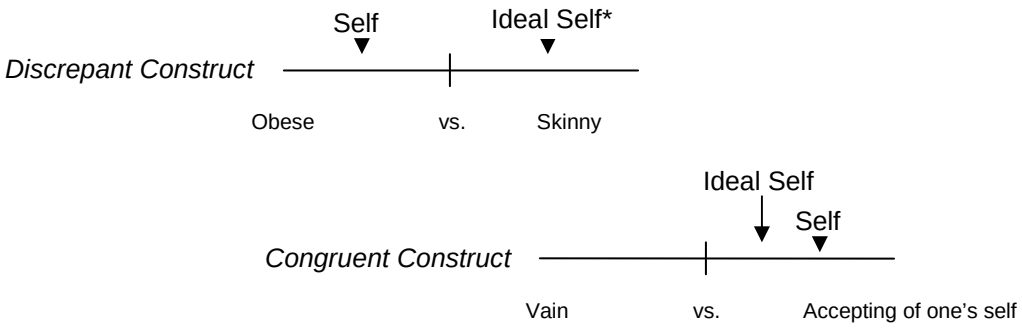


Figure 3: Ought-self dilemma



**When Ideal Self is reported as unobtainable by the subject*

Figure 4: Unobtainable ideal-self dilemma

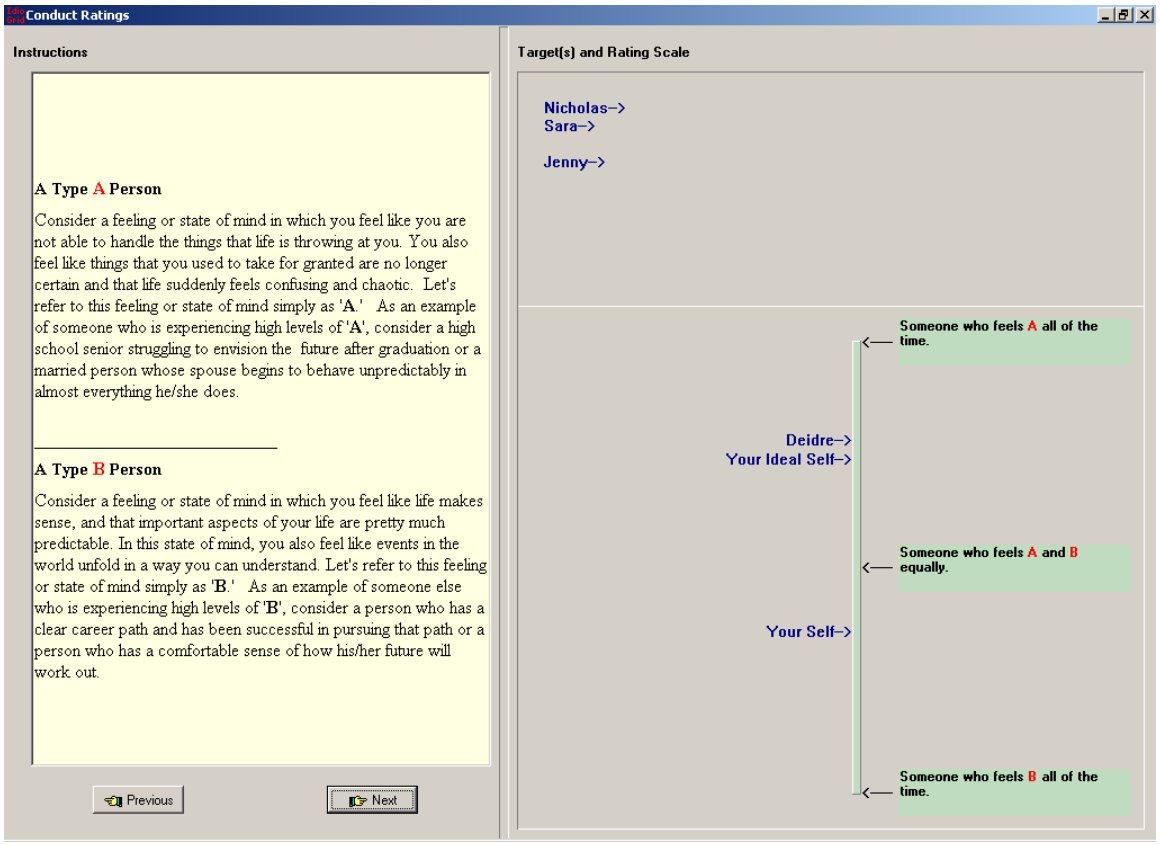


Figure 5: Dynamic Analog Scale (DAS) screen capture

VITA

Stefanie I. Badzinski

Candidate for the Degree of

Master of Science

Thesis: IMPLICATIVE DILEMMAS AND PSYCHOLOGICAL WELL-BEING: PREDICTIVE VALUES OF THREE PROPOSED SUBTYPES

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Name: Stefanie I. Badzinski Date of Degree: May 2009

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Title of Study: IMPLICATIVE DILEMMAS AND PSYCHOLOGICAL WELL-BEING: PREDICTIVE VALUES OF THREE PROPOSED SUBTYPES.

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Scope and Method of Study: Two studies are presented which examined the predictive values of three subtypes of implicative dilemmas, cognitive dilemmas developed within the framework of George Kelly's (1955) Personal Construct Theory. Previous research provides evidence that implicative dilemmas, dilemmas in which self-discrepancies are maintained due to a cost of resolution, are predictive of psychological distress. Study 1 focuses on two subtypes of implicative dilemmas, the classic implicative dilemma and the unobtainable ideal-self dilemma. Participants in study 1 completed a repertory grid task utilizing the sentence-completion method of grid elicitation and measures of guilt, depression, anxiety and self-esteem as conceptualized by Kelly (1955). In study 2, participants provided anxiety narratives and competency narratives in response to prompts. They then completed two repertory grids, again using the sentence-completion method of grid elicitation, in which elements and constructs relevant to each narrated event were used. The grids were analyzed to identify ought-self dilemmas, dilemmas in which one's 'self' and 'ideal' are congruent relative to one another, but incongruent relative to the 'ought self' particular to each event. An analysis was conducted to ascertain whether anxiety grids contained significantly higher numbers of ought-self dilemmas than competency grids.

Findings and Conclusions: Percent classic implicative dilemmas found in repertory grids was found to be significant positive predictor depression, anxiety and guilt and a significant predictor of self-esteem. Percent classic implicative dilemmas also accounted for a significant amount of variance in depression, guilt, anxiety and self-esteem scores above that accounted for by self-discrepancies alone. The data also suggests that unobtainable ideal-self dilemmas may serve an insulatory role against psychological distress. This study provides further evidence that implicative dilemmas play a role in psychological well-being and suggests that it is useful to differentiate between classic implicative dilemmas and unobtainable ideal-self dilemmas. The results of study 2 indicated no significant difference between the numbers of ought-self dilemmas in anxiety versus competency grids. This may be due to design limitations that can be resolved in future studies regarding ought-self dilemmas.

ADVISER'S APPROVAL: Dr. James W. Grice