TOWARDS A REFINEMENT OF COGNITIVE THERAPY IN LIGHT OF INTERPERSONAL THEORY: I. THEORY

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ABSTRACT. This article is the first of a two part series on the refinement of cognitive behavioral theory and practice in light of interpersonal theory. The objective of this article is to outline a systematic theoretical framework that can be useful in integrating cognitive interpersonal perspectives. It is argued that an integration of this type can be useful in guiding the use of the therapeutic relationship in cognitive therapy and in clarifying the relationship between cognitive and interpersonal processes in problem maintenance and change. Of central importance to the current perspective are the concepts of interpersonal schema and cognitive-interpersonal cycle. An interpersonal schema is defined as a generic knowledge structure based on previous interpersonal experience, that contains information relevant to the maintenance of interpersonal relatedness. A cognitive interpersonal cycle is defined as an unbroken causal loop through which maladaptive expectations and dysfunctional behaviors maintain one another. The article concludes with a number of suggestions for research evaluating the central theoretical concepts.

This article is the first of a two-part series designed to begin the process of articulating an integrative theoretical framework to guide the use of the therapeutic relationship in cognitive therapy, and to clarify the relationship between cognitive and interpersonal factors in the change process. The impetus for this series is two-fold.

First, there is a growing recognition among cognitive therapists of the importance of the therapeutic relationship (e.g., Arnkoff, 1983; Goldfried, 1982; Jacobson, 1989; Safran, 1984a, 1984b; Wilson, 1984). This recognition stands in marked contrast to earlier cognitive behavioral writings which de-emphasized the importance of this variable in the change process. While many cognitive thera-
pists now recognize the importance of the therapeutic relationship, however, cog-
nitive behavioral theory still lacks a systematic theoretical framework to clarify the
relationship between what have traditionally been thought of as relationship fac-
tors and technical factors in therapy, and to guide the use of the therapeutic
relationship (Lambert, 1983; Sweet, 1984; Wachtel, 1982).

The second impetus is the growing body of empirical evidence indicating that
cognitive formulations of emotional disorders pay insufficient attention to the role
of interpersonal and environmental variables. Coyne and Gotlib (1983) for exam-
ple, following a thorough review of research relevant to the role of cognition in
depression, concluded that cognitive models of depression over-estimate the role
that cognitive processes play in precipitating and maintaining depression, and fail
to recognize that the negative cognitions of depressed individuals may accurately
reflect negative environmental realities, or undesirable life circumstances. Krantz
(1985) reviews a large body of evidence suggesting that depressed individuals
possess social skills deficits and are more likely than non-depressed individuals to
experience relationships characterized by avoidance and rejection. Beidel and
Turner (1986) review an overlapping body of evidence and conclude that cognitive
behaviorists over-estimate the role that cognitive processes play in both psycho-
pathology and therapeutic change.

A number of authors have spoken recently about the importance of incorporat-
ing an interpersonal perspective into cognitive therapy. Meddin (1982), for exam-
ple, suggests that traditional cognitive behavioral interventions be combined with
strategies more typically employed by marital and family therapists. Similarly,
Bedrosian (1981) suggests that cognitive therapists focus on family relationships
as well as on the cognitive processes of the depressed individual. Krantz (1985)
argue that in addition to challenging negative or biased information processing
styles it may be useful to encourage clients to join support groups or create new
social networks that will help to provide positive information that will contradict
the negative information provided by old social circles.

These are all examples of a technically integrative approach. This approach
recognizes that both cognitive and interpersonal factors play an important role in
clinical problems and thus suggest the use of interventions taken from both tradi-
tions. The selection of interventions is, however, not guided by an integrative
conceptual perspective.

The approach to be outlined in the present series is, in contrast, conceptually
integrative in nature. This approach recognizes that both cognitive and interper-
sonal spheres are important, and attempts to develop an integrative theoretical
framework for purposes of understanding the relationship between cognitive and
interpersonal realms in normal psychological development, as well as in the devel-
opment and maintenance of emotional problems.

The perspective to be outlined is not proposed as a new model of psychopathol-
ogy nor as a new theory of change. Instead it is intended as a conceptual and
technical refinement of cognitive behavioral theory and practice through the
systematic integration of a number of concepts, propositions, and hypotheses
derived from interpersonal theory. I am referring here to the theoretical tradition
which traces its roots back to the seminal contributions of Harry Stack Sullivan
(1953, 1954, 1956) and has been elaborated on by a variety of contemporary
theorists such as Anchin (1982), Beier (1966), Carson (1969, 1982), Cashdan
(1973), Leary (1957), and Wachtel (1977). Most directly influential on the current
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perspective, however, have been the contributions of Kiesler (1982, 1983, 1986, 1988).

The reader will also find that much of the thinking in the perspective to be outlined here is compatible with certain contemporary developments in psycho-dynamic theory, particularly those which are more interpersonal in nature (e.g., Gill, 1982; Luborsky, 1984; Sandler & Sandler, 1978; Strupp & Binder, 1984; Weiss, Sampson, & Mount Zion Psychotherapy Research Group, 1987). This is not surprising since these theorists have also been an important influence on the current perspective. What distinguishes the present approach, however, is an attempt to articulate the central theoretical concepts in a framework which is compatible with cognitive theory and which is amenable to empirical investigation.

This article, being the first in the series, deals with more general theoretical issues. In it the concept of the interpersonal schwa is introduced as an integrative theoretical construct. An interpersonal schema is defined as a generic cognitive representation of interpersonal events. It will be argued that an important factor impeding the incorporation of an interpersonal perspective into cognitive theory has been the failure of cognitive theorists and researchers to pay sufficient attention to considerations of ecological validity. The interpersonal schema construct will be presented as an ecologically valid refinement of schema theory which can facilitate the integration of cognitive and interpersonal perspectives.

The second article in the series (Safran, 1990), will deal more directly with psychotherapy, and will articulate a number of therapeutic principles that follow from the theoretical perspective which is outlined here.

FORMULATING THE SCHEMA CONCEPT FROM A COGNITIVE-INTERPERSONAL PERSPECTIVE

In recent years the schema concept has become a central theoretical construct in cognitive models of psychopathology and psychotherapy. A schema can be defined as a generic cognitive representation which the mind extracts in the course of exposure to particular instances of a phenomenon (Bartlett, 1932). This generic knowledge structure guides both the processing of information and the implementation of action.

Theorists' conceptualizations of what schemas are and what exactly is contained within a schema vary widely. The fact that there is no one definition of the schema is not a problem in and of itself. This multiplicity of definitions is referred to by theorists as the modularity hypothesis (Brewer & Nakamura, 1984). This hypothesis asserts that different hypothetical constructs are necessary for clarifying the way in which information is processed in different domains.

What does constitute a problem, however, is that clinically oriented theorists often are not clear about what exactly they mean when they use the term schema. Because the schema concept is acceptable coinage in the cognitive sciences it is tempting for psychotherapy theorists to employ it in order to confer scientific respectability on ill-defined concepts. Thus clinical theorists as diverse as Beck (1976) in the cognitive tradition, Kernberg (1982) and Horowitz (1979) in the psychodynamic tradition, and Rice (1984) in the client-centered tradition, employ the schema concept without clearly defining the term or specifying precisely what type of knowledge is represented schematically.
The concepts of cognitive psychology provide the researcher with tools to test certain hypotheses about the way in which knowledge is represented. It is important to recognize, however, that using the schema concept does not eliminate the necessity of clarifying what type of knowledge representation is worth focusing on in the context of psychotherapy.

The schematic structure that has received most attention from cognitive therapists is the self-schema. A scrutiny of the clinical literature on self-schemas reveals that this construct is not employed in a uniform fashion by theorists. One common usage of the self-schema concept in clinical theory derives from research and theory in the social cognition domain. In this tradition, self-schemas are defined as "cognitive generalizations about the self, derived from past experience, that organize and guide the processing of self-related information contained in an individual social experience" (Markus, 1977). Research guided by this conceptualization has focused upon the self-referent processing of adjectives (Kuiper & Olinger, 1986).

A second common usage of the self-schema concept has evolved out of a more clinically oriented tradition. In this view, the self-schema is conceptualized as a self-worth contingency. Beck and his associates have been the major proponents of this perspective in the cognitive therapy tradition (Beck, 1976; Beck, Rush, Shaw, & Emery, 1979). They view the schema as a tacit rule that guides the process of self-evaluation. The belief "I have to be perfectly competent at everything I do in order to be worthwhile as a person" would thus be seen by Beck et al. (1979), as an example of a depressogenic self-schema. Research guided by this conceptualization has employed paper and pencil measures such as the Dysfunctional Attitudes Scale (Weissman & Beck, 1978) to assess for the presence of rigid and dysfunctional self-worth contingencies.

The notion that self-worth contingencies are clinically important has both theoretical appeal and empirical support (Kuiper & Olinger, 1986). It is not, however, immediately apparent how this conceptualization is related to the schema concept as typically employed in cognitive psychology. While the social-cognition conceptualization of the self-schema as "cognitive generalizations about the self" is more closely tied to both theory and research in cognitive psychology, the restriction of researchers' attention to the fashion in which people currently represent the self imposes a somewhat narrow focus on our investigation of self-knowledge. The restrictiveness of this focus has been recognized recently by Markus (1983) and Markus and Nurius (1986) who suggest that the concept of self-schema be broadened to incorporate the idea of "possible selves." Possible selves are defined as an individual's ideas of what they might become, what they would like to become, and what they are afraid of becoming (Markus, 1983). Markus and Nurius (1986) maintain that the expansion of the self-schema concept in this fashion establishes a rationale for the investigation of a variety of different components of self-knowledge such as rules, standards and strategies that the individual uses to evaluate, guide and control their own behavior.

This revised conceptualization of the self-schema appears to be more compatible with the notion of self-schema as a self-worth contingency, since a self-worth contingency is essentially a rule or standard that is employed to evaluate and guide one's own behavior. There thus appears to be some potential for reconciling the discrepant self-schema conceptualizations emerging from clinical and social-cognition literatures. By expanding the notion of self-schema in this fashion,
however, the link with schema theory in cognitive psychology becomes more obscure. How can information such as possible selves, goals, plans, strategies, and rules for self-evaluation be regarded as part of a generalized information structure based upon past experience? If the schema concept is to be employed in a rigorous and consistent fashion in clinical theory it will be necessary to address this question.

Schemas and the Acquisition of Real World Knowledge

The investigative paradigm that has been most commonly used in self-schema research—that of evaluating the processing of adjectives—represents both positive and problematic features of the cognitive sciences approach. On the positive side it involves making and testing rigorous predictions about the way in which knowledge is represented. On the negative side it involves the use of laboratory tasks that have limited ecological validity (Neisser, 1976, 1981; Safran, 1986; Safran & Segal, 1987; Safran, Segal, Hill & Whiffen, in press). The testing for biases in the processing of adjectives appears to lose sight of the very reason that Bartlett developed the schema concept in the first place—that is, to account for the fashion in which learning influences the way in which people deal with new instances in the real world. As Neisser (1976) has argued, this type of lack of ecological validity may stem from some of the basic assumptions of the information processing approach.

Information processing theory has been strongly influenced by the mind-as-computer analogy. This analogy has advanced cognitive psychology by facilitating the process of formulating and testing precise theoretical predictions about unobservable psychological processes. It fails to take into account, however, that there is a fundamental difference between the way in which computers process information and the way in which people acquire knowledge. In the real world people do not simply process static information. Instead, they actively mine the world for information by moving around, manipulating and interacting with their environment (Gibson, 1966, 1979; McArthur & Baron, 1983; Neisser, 1976, 1981; Safran & Greenberg, 1986, 1987, 1988; Shaw & Bransford, 1977). Information processing theory typically does not reflect this intrinsic connection between knowledge acquisition and action.

The Ecological Approach

An alternative in cognitive psychology to the information processing approach can be found in the ecological approach to perception, initially developed by Gibson (1966, 1979). Although the application of the ecological approach was originally limited to perception, a growing number of proponents are beginning to explore the implications of this approach for both cognitive psychology in general (e.g., Shaw & Bransford, 1977) and for social psychology (e.g., McArthur & Baron, 1983). As I have argued elsewhere, the incorporation of some of the basic tenets of the ecological approach into mainstream cognitive theorizing can provide a useful corrective influence to information-processing theory (Greenberg & Safran, 1987; Safran & Greenberg, 1986, 1987, 1988). For this reason, I will briefly summarize some of these principles below.

The first is that one cannot study an organism out of context of its ecological
niche (Gibson, 1966, 1979). It is thus important to attempt to understand human functioning in real world settings rather than in artificial environments.

The second is that there is an intrinsic connection between knowledge and action, and that knowledge is acquired through action and for action (Gibson, 1966, 1979; Mace, 1977; Weimer, 1977). It is thus a mistake to attempt to understand schematic processing in terms of the way in which static information is registered and processed. Instead, it is important to investigate the way in which information processing and action in the real world interact.

A final tenet is that all psychological processes should be viewed from a functional perspective. This tenet suggests that it is conceptually useful to inquire into what type of adaptive role a given aspect of human functioning has played in the history of the species. Rather than viewing human beings as disembodied computing machines, it is important to regard them as biological creatures who have evolved specific features that play a functional role in the environment of ecological adaptedness (Gibson, 1979; McArthur & Baron, 1983; Shaw & Bransford, 1977).

These propositions, which are central to the ecological approach, are meta-theoretical assumptions that are not directly falsifiable. Instead, their scientific merit must be evaluated on the basis of their ability to generate productive research programs leading to the formulation of falsifiable hypotheses (Lakatos, 1974; Weimer, 1979). In the next section we will explore the way in which these principles can influence our attempt to clarify the type of schematic structures worth investigating in clinical psychology, and facilitate the integration of cognitive and interpersonal perspectives.

Representations of Self-Other Interactions

If we examine the schema concept from an ecological perspective, and ask what kind of generic knowledge structures play a central role in the real world, it would seem that the encoding of static environmental features would be less important than the generalized representation of significant and survival-relevant interactions that have been experienced. A central postulate of the interpersonal perspective is that some of the more important survival-relevant events for human beings involve interactions with other human beings. Such a perspective starts with the assumption that there is a wired-in propensity for maintaining relatedness to others and that this wired-in propensity plays an important role in the survival of the species (Bowlby, 1969, 1973, 1980; Safran & Greenberg, 1987, 1988, in press; Schachtel, 1959; Sullivan, 1953, 1956).1

Given the importance for survival purposes of maintaining relatedness to others, particularly in infants, it would seem to be particularly adaptive to be able to encode past experience in a way which maximizes this possibility. Consistent with this line of reasoning, Bowlby (1969, 1973, 1980) hypothesizes that human beings

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1This proposition is central to Bowlby's (1969, 1973, 1980) attachment theory, which is influenced by an ethological perspective. It is also compatible with the emphasis on evolutionary adaption characteristic of the ecological approach (McArthur & Baron, 1983), although it is not typically held as an explicit proposition by ecological theorists.
develop internal working models representing interpersonal interactions relevant to attachment behavior.

In the language of cognitive psychology, this type of working model can be conceptualized as an interpersonal schema (Safran, 1986; Safran & Segal, 1990; Safran et al., in press), that is abstracted on the basis of interactions with attachment figures and that permits the individual to predict interactions in a way that increases the probability of maintaining relatedness with these figures. This type of schema is a generalized representation of self-other relationships, rather than a representation of self or a representation of others. It is thus intrinsically interactional in nature. As Bretherton (1985) argues, a person's beliefs about the self automatically imply certain beliefs about others, and visa-versa.

A related concept has been proposed recently by Stern (1985). Drawing on Tulving's (1972) distinction between episodic and semantic memory, he theorizes that infants develop prototypical representations of interactions with attachment figures through a process of encoding specific interactional sequences in episodic memory. He suggests that over time, interactions that are similar in nature become averaged in memory and the details that are specific to individual events become abstracted into a generalized representation in semantic memory.

According to Stern, these prototypical memories, or what he refers to as Representations of Interactions that have been Generalized (RIGs) are closely related to Bowlby's (1969) concept of the working model, but are more specific in nature. A working model thus consists of a number of RIGs that are assembled into a larger overall generalized representation of interactions with the attachment figure.

It may be useful, as Neisser (1976) suggests, to think of schemas of different orders of abstractness and generality as being embedded within one another, and as functioning in a hierarchical fashion. Bowlby's (1969) working model can thus be thought of as a higher order, fairly general interpersonal schema that has a number of more specific interpersonal schemas, or RIGs embedded within it. The growing evidence that individuals have multiple working models (Bretherton, 1985), can also be understood in this fashion. An individual may have different interpersonal schemas for people who play different roles in their lives (e.g., authority figures, prototypical lovers), and these lower level schemas may all be embedded within a higher level more abstract and generalized interpersonal schema.

What type of information would be coded in those interpersonal schemas? As Main, Kaplan, and Cassidy (1985) point out, an individual's memory can be seen as guided by general event schemas that organize experience in terms of reactions, goal paths, attempts, and outcomes. It is hypothesized that the specific information coded in memory includes goals, action plans, and if-then contingencies relevant to maintaining relatedness. It may thus be useful to think of an interpersonal schema as being somewhat like a program for maintaining relatedness (Safran, 1986; Safran & Segal, 1990). The perspective being advanced is that the basic goal of maintaining interpersonal relatedness is biologically wired-in. The specific information, strategies, and principles that are employed in order to obtain this goal are learned.

Viewing the interpersonal schema as analogous to a program for maintaining interpersonal relatedness provides a framework for more fully understanding the relationship between cognitive and interpersonal realms. It also clarifies the fashion in which self-worth contingencies, goals, plans, and strategies can be coded as
part of the same schematic structure. The various types of goals, plans, and strategies that Markus (1983) argues should be viewed as part of the self-schema can be viewed as coded information acquired on the basis of previous interactions, relevant to the maintenance of interpersonal relatedness.

In an interpersonal schema, self-worth contingencies function as implicit rules for maintaining relatedness. They are like action rules in a script (Abelson, 1981). As Abelson (1981) suggests, these action rules are not necessarily consciously articulated by the individual. Thus, for example, the dysfunctional attitude, “I must be perfectly competent at everything I do,” can be viewed as a tacit rule for maintaining relatedness, that has been developed on the basis of maladaptive learning experiences with attachment figures.

Higgins (1987) refers to this as self-other contingency knowledge. Although the present conceptualization is consistent in certain ways with his self-concept discrepancy model of motivation, it goes beyond his model to attempt to clarify the relationship between this type of knowledge representation and schema theory.

A general issue regarding the coding of information in interpersonal schemas involves the question how or in what form information is represented. It is hypothesized that information relevant to attachment behavior has an important affective component to it (Bowlby, 1969; Greenberg & Safran, 1987) and that it is thus coded at least in part in expressive-motor form (Bucci, 1985; Greenberg & Safran, 1987, 1989; Safran & Greenberg, 1987; Zanjonc & Markus, 1984). The hypothesis is that interpersonal schemas are partially coded in the form of procedural knowledge which individuals experience as a currently felt sense when certain activating conditions occur.

If, however, as Leventhal (1984) theorizes, the emotional synthesis process involves processing at both expressive-motor and conceptual levels, the relevant information would be coded at least partially in conceptual/propositional form as well. It is thus hypothesized that interpersonal schemas are best conceptualized as cognitive-affective schemas that are coded at both conceptual and expressive-motor levels. While some aspects of an individual's interpersonal schema may be readily accessible in conceptual/linguistic form, other aspects may be more difficult to access symbolically. In theory, however, it would be both possible and important to access the expressive-motor level in therapy by working with clients in an emotionally alive fashion. Once this has taken place the possibility of forming a conceptual representation of information coded at the expressive-motor level exists (Greenberg & Safran, 1987; Safran & Greenberg, 1987).

**Maintaining Interpersonal Relatedness**

We have hypothesized that interpersonal schemas allow the infant to maintain interpersonal relatedness by facilitating the prediction of interactions with attachment figures. The goal of maintaining interpersonal relatedness continues throughout the lifespan (Bowlby, 1969). The particular interpersonal strategies that are employed, however, are shaped by interpersonal schemas that may not be appropriate to the present context even though they were historically adaptive for the infant. Thus, it is not unusual for an individual to act in a fashion that pursues a subjective sense of interpersonal relatedness which may in reality impede interpersonal relatedness.

It is hypothesized that people establish a subjective sense of potential interper-
sonal relatedness in a variety of ways. One way consists of engaging in life plan strategies designed to increase the probability of maintaining relatedness to others. For example, the individual whose parents valued intelligence may become an academic. The individual who was valued for supporting or nurturing members of his or her family may ultimately become a therapist. The individual who was valued for his or her ability to entertain may become a professional entertainer.

A second way consists of interactional maneuvers designed to maintain relatedness. For example, the previously described academic may speak intelligently when he or she wishes to establish a subjective sense of potential relatedness. A woman who was related to as a child in a sexual manner may behave seductively when she wishes to maintain a sense of potential interpersonal relatedness.

A third way consists of distorting the processing of information that threatens the individual's subjective sense of potential interpersonal relatedness. One can fail to attend to external feedback that threaten one's sense of interpersonal relatedness. For example, the individual who has learned that relatedness is contingent upon being warm and kind can fail to fully process or forget interactions with others providing feedback that he or she has been aloof or uncaring. One can also distort internally generated information that threatens one's subjective sense of interpersonal security and evokes anxiety. For example, the individual who learns that anger or sadness threatens interpersonal relatedness may fail to fully process expressive-motor behaviors consistent with these emotions (Greenberg & Safran, 1984; Safran & Greenberg, 1986, 1987).

It is essential to recognize that the individual's goal is not necessarily one of maintaining relatedness to a specific person in a specific interaction, but rather, one of acting in a fashion which enhances his or her sense of potential relatedness in an abstract, generalized sense. In other words, the audience that an individual plays to is an internal one (Sullivan, 1953). One may, for example, behave in an overtly aggressive and alienating fashion, yet still be satisfying one's own inner model of how a potentially loveable person must be, given his or her perception of the interpersonal world. The individual who imagines the world to be inhabited by hostile and malicious creatures may feel they have no choice other than to be vigilant and hostile in return. Given their perception of the world, a combative stance may appear subjectively necessary and also commendable. If the circumstances appear sufficiently dire, one may to varying degrees relinquish the goal of maintaining interpersonal relatedness in reality, yet act in a fashion that one imagines would be accepted and approved of by some ideally understanding person. Solutions to the problem of interpersonal relatedness are thus often complex.

Sullivan (1953) employed the term security operations to designate various psychological and/or interpersonal operations that function to maintain one's self-esteem. From an interpersonal perspective, one's fundamental sense of security in the world is a function of one's sense of potential relatedness to others (Safran, 1984a, 1984b). One of Sullivan's (1956) central theoretical propositions was that self-esteem is ultimately an interpersonal phenomenon; one feels good about oneself if one is satisfying his or her generalized cognitive representation of others. Sullivan viewed anxiety as the inverse of self-esteem. According to him, anxiety is evoked by the anticipated disintegration of interpersonal relationships.

Sullivan did not offer a thoroughly articulated explanation of the connection
between anxiety and the disruption of interpersonal relationships. He did not, however, have at his disposal, the knowledge available from current theory and research on attachment behavior, mother infant interaction, and emotional development. In light of such current developments, it is hypothesized that anxiety functions as a biologically wired-in form of feedback about potential danger to the organism (Bowlby, 1973; Greenberg & Safran, 1987; Safran & Greenberg, in press; Safran & Segal, 1990).

As Bowlby (1973) maintains, animals of every species are genetically biased to respond with anxiety to stimulus situations that serve as naturally occurring clues to situations that are potentially dangerous to that species. Since maintaining proximity to other human beings plays such an important role in the survival of the human species (particularly in the helpless infant that depends upon the caretaker for survival on a moment by moment basis), it is not surprising that the perception of a potential disruption in an interpersonal relationship would elicit an anxiety response in human beings.

It is thus reasonable to hypothesize that human beings are by nature perceptually attuned to detect any clues regarding the disintegration of interpersonal relationships and are programmed to respond with anxiety. Anxiety can thus serve as a cue that alerts people to avoid associated experiences and stimulus situations. Behaviors and experiences that become associated with the disintegration of relationships with significant others will subsequently evoke anxiety. Conversely, experiences and behaviors that are valued by significant others become associated for the individual with a sense of interpersonal security. It is hypothesized that through this learning process people develop various kinds of security operations, ranging from diverting attention from anxiety-provoking information, to controlling the conversation in order to avoid anxiety-provoking topics, to presenting oneself in a fashion which momentarily raises one's self-esteem (e.g., as intelligent or strong) (Safran, 1984a; Sullivan, 1953).

While the notion that people will engage in behavioral avoidance of anxiety-provoking stimuli has always been accepted by behavioral and cognitive behavioral theory, Sullivan's notion of selective inattention to anxiety-provoking stimuli (both external and internal) has not. The research on selective attention, however, certainly demonstrates that people have the capacity to screen out stimuli, and the research on perceptual defense, although not without its attendant controversies (Dixon, 1971/1981), suggests that the selective inattention to anxiety-provoking stimuli is a phenomenon warranting further empirical investigation and careful consideration in a clinical context (see Dixon, 1981; Erdelyi, 1985; and Shevrin & Dickman, 1980, for reviews of the relevant literature).

The Cognitive-Interpersonal Cycle

To this point we have explored the connection between the interpersonal schema and the psychological and interpersonal strategies that the individual employs to maintain a subjective sense of potential interpersonal relatedness. It has been argued that this subjective sense derives from a historically adaptive interpersonal schema which may be maladaptive in the present context.

A key question now remains to be addressed. How is it that a cognitive structure of this type can remain unchanged in the face of new interpersonal experiences? From an information-processing perspective the answer to this question is
that information which is schema inconsistent is not attended to or is discounted (Beck, 1976; Nisbett & Ross, 1980).

The ecological perspective on cognition, however, suggests that this answer is only partial, since it fails to take into account the intrinsic connection between knowledge acquisition and action in the real world. The central postulate of an integrative cognitive-interpersonal perspective is that a person's maladaptive interactional patterns persist because they are based upon working models of interpersonal relationships that are consistently confirmed by the interpersonal consequences of his or her own behavior (Carson, 1969, 1982; Kiesler, 1982, 1986; Leary, 1957; Safran, 1984b; Strupp & Binder, 1984; Wachtel, 1977). One's interpersonal schemas shape the perception of the interpersonal world and lead to various plans, strategies and behaviors, which in turn shape the environment in a manner which confirms the working model. There is, thus, a self-perpetuating cognitive-interpersonal cycle (Safran, 1984a; Safran & Segal, 1990). As Strupp and Binder (1984) argue, the individual shapes his or her interpersonal world by both construing and constructing it. This type of conceptualization of neurotic problems has been well articulated by Wachtel (1977, 1987), who refers to it as a cyclical psychodynamic perspective.

As Mischel (1973) suggest, all individuals display certain consistencies in construal style and associated behavioral consistencies. It is, however, hypothesized that the psychologically maladjusted individual has relatively negative and rigid expectations about the characteristics of others and rigid and constricting beliefs about the way in which he or she must be in order to maintain interpersonal relatedness (Carson, 1969, 1982; Kiesler, 1982, 1983). Thus, they possess rigid and constricting interpersonal schemas which restrict the range of their interpersonal behaviors. As Kiesler (1986) states:

In interpersonal theory, abnormal behavior is defined as inappropriate or inadequate interpersonal communication. It consists of a rigid, constricted, and extreme pattern of interpersonal behaviors by which the abnormal person, without any clear awareness, engages others who are important in his or her life. The abnormal person, rather than possessing the flexibility of the normal individual to use the broad range of interpersonal behaviors warranted by different social situations, is locked into a rigid and extreme use of limited classes of interpersonal actions. (p. 572)

As a result, maladjusted individuals are more likely than psychologically healthy individuals to be characterized by a high degree of redundancy of patterns across a wide range of different interpersonal situations (Carson, 1969, 1982; Kiesler, 1982, 1986; Leary, 1957). The more maladjusted the individual is, the more likely it is that he or she will pull a similar response from a range of different people. As a result, the maladjusted individual has a more limited range of interpersonal experiences than the well adjusted individual.

The ongoing debate in the cognitive literature regarding whether or not clinical problems are cognitive or interpersonal in nature (Coyne & Gotlib, 1983, 1986; Krantz, 1985; Segal & Shaw, 1986) is fueled by a tendency to think of such deficits in rather gross, molar terms. This perspective fails to capture the subtlety of the cognitive and interpersonal deficits that often bring people into therapy, or the nature of the interaction between them.

Consider the following example. A young female inpatient was referred to
therapy for treatment of severe depression. She presented in a very sensible, rational manner and was quick to generate balanced and reasonable accounts of any untoward events that occurred to her. For example, after a negative interaction with a nurse on the ward, she explained to the therapist that there was no need for her (the client) to take it personally or to blame the nurse, since the nurse was under a lot of stress and trying her best. When speaking about painful memories, she would smile wistfully, and maintain that it was important to get on with the future and not dwell on the past. She had a history of supporting and helping others who were in need, but acknowledged that others were not there to provide emotional support when she needed it. The prevailing feature of her interpersonal impact was a sense of strength, resourcefulness and self-containment, that made it easy to respect her from a distance, but difficult to feel really close to. This interpersonal impact seemed to flow from all aspects of her self-presentation: her unwillingness to dwell on painful memories, her wistful smile, her constant reasonableness and evenhandedness, her concern about the interviewer's welfare, and so on.

Further assessment revealed that this resourceful and self-contained interpersonal style was linked to a belief that nobody would be there for her if she were needy and vulnerable and that the way to obtain the respect of others was to be strong and self-contained. This belief was in turn maintained by the fact that her interpersonal style discouraged other people from relating to her in a caring, supportive fashion.

An understanding of the fashion in which security operations function helps to further clarify the fashion in which dysfunctional cognitive-interpersonal cycles can operate. Consider the following example. As a result of important developmental experiences, a young man comes to view the maintenance of interpersonal relatedness as contingent upon his being intelligent. When he feels anxious in interpersonal situations, he attempts to reduce this anxiety by speaking in an intelligent fashion. This communication style, however, is viewed by others as unnecessarily pedantic, and distances them. In this situation the very operations that are employed to reduce the man's anxiety by increasing his sense of potential interpersonal relatedness have the impact of distancing other people from him. The more anxious he becomes, the more likely he is to engage in the very operations that are interpersonally problematic for him.

As these examples illustrate, the deficits that characterize clients are not necessarily gross, easily observable, cognitive distortions that show up in analogue experimental tasks, or gross interpersonal deficits that show up on standardized behavioral measures. Instead they often involve an ongoing subtle interplay between cognitive and interpersonal realms. This has important implications for both assessment and intervention, which will be elaborated on in the second article in this series (Safran, 1990).

Research

The value of the framework which has been summarized here must ultimately be evaluated in terms of its clinical utility, the falsifiability of the central concepts, and its ability to generate a productive research program. The clinical implications of this perspective will be explored in the second article in the series (Safran,
1. Interpersonal Schemas. While schema research in clinical psychology has tended to focus on the schematic processing of static characteristics, the current perspective suggests that it is important to focus on the schematic processing of dynamic interpersonal events in which the individual participates. The type of schematic structure worth investigating would thus be more like a script (Abelson, 1981) than a schema for static information. This type of focus introduces methodological complications, but such obstacles are not insurmountable. Although we will not focus in detail on methodological issues here, we will briefly touch on this area for purposes of illustration. The reader who is interested in a more detailed exploration of these issues is referred to Safran et al., (in press).

One methodological lead is provided by Neisser (1981). In an attempt to find an ecologically valid method for investigating schematic effects on memory, Neisser employed a variant of a case study methodology to compare John Dean's memory for events taking place in meetings with Nixon around the Watergate affair against the criterion of actual transcripts of those meetings.

This type of approach has a greater chance of yielding information about the type of schematic processing relevant to real world interactions than more commonly employed laboratory research. The distinguishing feature here is the examination of memory biases about naturally occurring events in which the subject is actually involved.

The psychotherapy situation provides a naturally occurring laboratory for examining schematic effects on memory in an ecologically valid fashion. By using an established methodology to help generate hypotheses about the client's working model of interpersonal relationships (e.g., Luborsky, 1984; Strupp & Binder, 1984; Weiss et al., 1987), the researcher could generate hypotheses about the type of schematic effects on memory that are likely to occur. It would then be possible to compare the client's memory of a specific therapy session against the criterion of recorded sessions.

A second methodological lead is provided by script theory (Abelson, 1981). According to Schank and Abelson (1977), events in scripts differ in their centrality to the action flow. There is now experimental evidence that subjects can verify central events as belonging to a script faster than peripheral events (Abelson, 1981). If interpersonal schemas follow the same processing rules as scripts, researchers may be able to obtain information about the structure of clients' interpersonal schemas by asking them to judge whether various events have taken place in their own therapy sessions, and by then measuring the speed with which such judgments are made.

A third lead is provided by Main et al. (1985), who attempted to assess the working models of 6-year-old children by showing them pictures of children undergoing separations from their parents and asking them how they imagined the children in the pictures would feel and act. They hypothesized that children with working models of the attachment figure as accessible, would be able to imagine more active ways of dealing with the separations than those who had working models of attachment figures as inaccessible. When subjects' responses were classified in terms of the degree of security of attachment they reflected, a relationship emerged between security of attachment as measured this way and security of
attachment as measured at an earlier age, using mother-child observational measures.

In a similar fashion it would be possible to assess the interpersonal schemas of adult subjects by either: (a) using a projective test focusing on separation themes; on (b) asking them to imagine themselves in various relationship threatening interactions with significant others and probing for feelings, reactions, and probable interpersonal strategies.

A fourth lead is suggested by a recent pilot study conducted by Safran, Hill, and Ford (1988). In this study a questionnaire was developed to evaluate subjects' expectations of the way in which three different significant others (mother, father and friend) would respond to a range of interpersonal behavior on their part. Sixteen different interpersonal behaviors were derived from Kiesler's (1983) interpersonal circle, one behavior representing each of the 16 segments of the circumplex. This provided some assurance that a full range of possible interpersonal behaviors was sampled in a theoretically guided fashion. Subjects were then asked to indicate the type of response (e.g., disappointed, resentful, respectful, warm) expected from each of the three significant others to each of the behaviors and to rate the desirability of each response. Slightly different versions of the questionnaire were then administered to two independent samples ($n = 54$ and $n = 45$) of undergraduate subjects (small modifications in the questionnaire were made after the first administration).

When subjects were divided into high symptomatic versus low symptomatic groups on the basis of the SCL-90 (Derogatis, 1977), it was found in both samples that high symptomatic subjects expected significantly more undesirable responses from all three individuals and that this pattern was more pronounced for some interpersonal behaviors (e.g., acting mistrustful, hostile, detached, trusting) than for others (e.g., acting dominant, competitive, submissive, warm).

In a follow-up study (Hill & Safran, 1990), the revised questionnaire was administered to 216 college undergraduates, divided into high and low symptomatic groups, on the basis of the SCL-90. Collapsing across interpersonal situations it was found, once again, that high symptomatic subjects expected responses that were significantly more undesirable than low symptomatic subjects. Furthermore, low symptomatic subjects expected responses that were significantly more friendly, sociable and trusting than those expected by high symptomatic subjects. Finally, low symptomatic subjects expected more complementary responses (i.e., friendly responses) to friendly interpersonal acts than did high symptomatic subjects. In contrast, high symptomatic subjects expected more complementary responses (i.e., hostile responses) to hostile interpersonal acts than did low symptomatic subjects.

While this type of aggregate analysis of the data obscures important individual differences, future research using this type of questionnaire would allow the investigation of the idiosyncratic working models of either individuals or particular interpersonal types by examining the nature of the specific interpersonal behaviors to which they expect negative responses (e.g., one type of individual might expect negative responses to dominant or quarrelsome behaviors, while another might expect negative responses to submissive or affiliative behaviors).

2. Interpersonal Flexibility and Psychological Health. A second important research focus will involve the evaluation of hypotheses regarding the actual interpersonal patterns associated with psychological maladjustment. A first hypothesis warrant-
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ing evaluation states that psychologically maladjusted individuals actually display less flexibility in their interpersonal repertoire than well adjusted individuals.

Paulhus and Martin (1988) have recently developed a questionnaire that asks subjects how capable they are of performing each of 16 different interpersonal behaviors chosen to sample the segments of Wiggins' (1979) circumplex model of interpersonal behavior. Interpersonal flexibility is evaluated on this measure by summing the subjects’ ratings of how capable they are of performing each of the 16 interpersonal behaviors. Using this index, a significant correlation was found between interpersonal flexibility and both self-report ratings of self-esteem and peer ratings of psychological adjustment.

A second research possibility would involve comparing the range in behavioral patterns actually displayed by psychologically healthy versus unhealthy subjects across a variety of interpersonal situations. Using a behavioral rating instrument such as Kiesler's (1984) Checklist of Interpersonal Transactions, it would be possible to compare the behavioral consistency displayed by adjusted versus maladjusted individuals across a range of different interpersonal situations.

A final research direction would involve evaluating the hypothesis that psychologically maladjusted subjects are more consistent than psychologically healthy subjects in evoking negative responses from other across a range of interpersonal situations. Preliminary evidence relevant to this hypothesis can be found in the literature demonstrating that depressed individuals evoke more negative feelings and aversive responses from others in both role playing and real life situations (Arkowitz, Holliday, & Hutter, 1982; Coyne, 1976; Kahn, Coyne, & Margolin, 1985; Strack & Coyne, 1983).

Further investigation of this issue could be explored by administering a rating instrument such as Kiesler's (1987) Impact Message Inventory (IMI) to a range of different people who interact with subjects classified as psychologically maladjusted in order to evaluate the degree of consistency in precise feeling patterns and response dispositions evoked in others. The quality (i.e., negative vs. positive) and degree of consistency in these responses could then be compared with the quality and degree of consistency in response ratings on IMI ratings obtained from a range of individuals interacting with subjects classified as psychologically healthy.

3. Summary. The above research suggestions are not intended as an exhaustive catalogue of research possibilities, or as detailed and definitive research blueprints. Implementing them will obviously involve working out various methodological “bugs.” They are, however, intended as an illustration of the type of systematic research program that is necessary in order to empirically ground the theoretical perspective being advanced and to demonstrate the potential verifiability of the relevant hypotheses.

CONCLUSION

In this article I have outlined a number of concepts that can be useful for purposes of integrating cognitive and interpersonal approaches to psychotherapy. I have argued that the bridge between cognitive and interpersonal traditions can be facilitated by incorporating a number of metatheoretical assumptions compatible with the ecological approach (Gibson, 1979; McArthur & Baron, 1983; Shaw & Bransford, 1977) into an information processing perspective. These include the propositions that: (a) there is an intrinsic connection between cognition and
action, (b) human beings are biological creatures who have adapted to their ecological niche through evolution, and (c) there is a wired-in propensity for maintaining interpersonal relatedness.

A proposal has been advanced for formulating the schema concept in terms that are more ecologically valid and more interpersonal in nature, and that can help to clarify the relationship between cognitive processes and interpersonal behavior. In this proposal, a particular type of schematic structure is held to be of central clinical importance. This schematic structure, which I have designated as an interpersonal schema, is conceptualized as a generic knowledge structure based on previous self-other interactions, which contains information relevant to the maintenance of interpersonal relatedness. Interpersonal schemas can be thought of as being analogous to programs for maintaining interpersonal relatedness.

Dysfunctional interpersonal schemas constitute the cognitive component of cognitive-interpersonal cycles in which dysfunctional interpersonal patterns are shaped by and maintain dysfunctional cognitive structures. Because of the subtlety and complexity of these cognitive-interpersonal cycles, it is important for clinicians to have a conceptual grasp of the nature of the relationship between cognitive and interpersonal realms.

In the second article in this (Safran, 1990) we will explore some of the implications of the perspective outlined here, for refining the practice of cognitive therapy.

REFERENCES


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