This chapter attempts to encapsulate contemporary interpersonal theory, assessment, and research as relevant to diagnosis of adaptive and maladaptive human functioning. Although an in-depth coverage is impossible, it is hoped that a wide-band synopsis might prove heuristic to both social and clinical psychologists.

In what follows I address, in turn, four central topics: (a) interpersonal behavior and personality, (b) interpersonal behavior and maladjustment, (c) interpersonal assessment, and (d) interpersonal diagnosis. Major emphasis will be placed on the last two topics.

**INTERPERSONAL BEHAVIOR AND PERSONALITY**

At a minimum, interpersonal behavior refers to our actions in the presence of other humans—our social behavior. Interpersonal theorists, however, do not focus study on what an individual does with others in one or various situations and do not concentrate on the behavior of an individual in situations, be they social (dyads, families, groups, etc.) or impersonal.

Interpersonal study focuses on human transactions, not on the behavior of individuals. What needs to be studied is not conceptually isolated “human behavior,” but rather the behavior of persons relating to and interacting in a system with other persons. That human activity to be understood and explained is interpersonal or social, which necessitates focus on at least a dyad or two-person group. (Kiesler, 1982a, p. 5)

Measurement of interpersonal behavior requires, at a minimum, measurement of at least two people's conjoint behaviors during their interactions with each other. Assessment focuses on what person A and person B do reciprocally to and with each other during their transactions. Interpersonal meaning cannot be extracted by aggregating measures of what A does with B, thereby summarizing A's behavior in that particular social context. Rather, by measuring both A's and B's interactional behaviors, interpersonal meaning is extracted from the lawful interrelationships of
each person's unfolding behaviors to those of the other. As many others have suggested, what needs to be studied is interaction (action-reaction) rather than action.

The basic unit of interpersonal behavior is the interaction unit (Peterson, in press), variously referred to as the "interpersonal proceeding" (Murray, 1951), "interaction sequence" (Raush, 1965; Peterson, 1979a), "interaction episode" (Kelley et al., 1983), and "relational scenario" (Gergen, 1987). The interaction unit consists of an action by A and the accompanying reaction by B, and in communications terminology consists of a speech turn by A and the subsequent speech turn of B. In studying interaction units over various temporal lengths of a dyad's transactions, researchers can draw conclusions regarding the probabilities of recurrent sequences of their actions-reactions. Importantly, as Murray (1951) cogently observed (Peterson, in press; Thorne, 1986), in understanding interaction units, person B must be given the same conceptual status as person A; our explanation must include as much formulation of person B's thought and action as of person A's thought and action.

Murray's comments highlight another central emphasis. Interpersonal behavior encompasses not merely overt, observable transactions between two individuals, but also refers to the private, unobservable, symbolic (fantasized) interactions and dialogues with the self and other conducted by either. Study of these symbolic interactions attempts to understand not only the nature of the cognitive schemas (Sullivan's [1953] "personifications") for both the other member of the dyad and for persons more generally, but the reciprocal relationships of each person's cognitive events (both person and self schemas) to the action-reaction sequences occurring in the arena of their joint overt behavior.

In sum, interpersonal behavior refers to recurrent patterns of reciprocal relationship present among two people's covert and overt actions and reactions studied over some period (sequence) of their transactions with each other. The length of period studied can range from a single interaction unit (cycles) to phases, episodes, sequences, and so on (Peterson, in press), all the way to the entire history of transactions between two individuals. Accordingly, the concept of interpersonal behavior overlaps, to a great extent, that of interpersonal communication (Kiesler, 1979, 1988; Kiesler, Bernstein, & Anchlin, 1976), which refers to recurrent patterns of reciprocal relationship present among two people's verbal-nonverbal message exchanges over some period of their communications with each other.

**Interpersonal Assumptions for Human Personality**

The assumptions that interpersonal theorists adopt in their study of personality, psychopathology, and psychotherapy are interspersed in Sullivan (1953) and in more contemporary pivotal volumes (Anchin & Kiesler, 1982; Carson, 1969; Leary, 1957).

Kiesler (1982a) summarized these embedded themes in the form of six "interpersonal assumptions for human personality":

1. As just elaborated, interpersonal study focuses on human transactions, not on the behavior of individuals. That activity to be understood and explained is interpersonal, which necessitates focus on at least a dyad or two-person group.

2. A central theoretical position is accorded to the construct of self, a self that is interpersonal and transactional in its development and functioning throughout life. A central and pervasive feature of our transactions is self-presentation—the automatic, predominantly unaware, and recurrent manner in which we centrally view ourselves, which in turn leads to acted out claims or bids to others (evoking messages) regarding the kind of reactions and relationships we seek from them. In pursuit of our transactions, we seek to impose distinctive interpersonal climates—to produce constricted overt responses in others (impact messages) that lead to constricted overt (complementary) reactions confirmatory of our self-presentation. Sullivan (1953) labeled the essential constructs governing these processes self and other personifications; the contemporary equivalent would be self and other schemas (Carson, 1969; Safran, 1984b).

3. A person's recurrent pattern of interpersonal situations (person A's overt and overt behaviors, along with interactant B's covert and overt reactions) represents distinct combinations or blends of two basic dimensions of interpersonal behavior: control (dominance-submission) and affiliation (friendliness-hostility). The empirical domain of individual differences in interpersonal behavior can be validly summarized by an interpersonal circle (e.g., Kiesler, 1983), a circumplex organized around the vertical and horizontal axes of control.
and affiliation, respectively. This circle can validly characterize both A’s actions and B’s reactions over various temporal sequences of their transactions.

4. Interpersonal transactions consist of two-person mutual influence. Causality is simultaneously bidirectional; that is, circular (Danziger, 1976) rather than linear. Interpersonal behavior is embedded in a feedback network in which the effect influences or alters the cause—in which person A both shapes and is shaped by the environment (especially by person B).

5. At a minimum, interpersonal theorists adopt an interactionist position in which person A’s behaviors are an interactive product of both A’s predispositions toward transactions and situational/environmental events. Further, the most important class of situations is that of other people, especially significant others; the environment as perceived by A (the psychological environment) is prepotent. A recent transactional alternative to interactionism, Duke’s (1987) situational stream hypothesis, is even more congruent to the interpersonal perspective.

6. The vehicle for human transactions is communication; that is, the verbal and nonverbal messages exchanged between person A and interactant B over the course of the transactions. Because nonverbal messages predominate in emotional and relational communication, understanding of interpersonal behavior requires simultaneous study of both the report (linguistic) and, especially, the command (nonverbal) levels of human communication (Duke & Nowicki, 1982; Kiesler, 1979; Kiesler, Bernstein, & Anchin, 1976).

**Interpersonal Complementarity**

A key interpersonal construct, embedded in the self-confirmation process just described, is that of reciprocity or complementarity in human transactions. When anchored empirically in the interpersonal circle, the principle serves as a guide to specific transactional predictions in a wide range of applied areas, including diagnosis and treatment. Derived originally from Sullivan’s (1953) theorem of reciprocal emotion, its broadest meaning is that “our interpersonal actions are designed to invite, pull, elicit, draw, entice, or evoke ‘restricted classes’ of reactions from persons with whom we interact, especially from significant others” (Kiesler, 1983, p. 198). Leary (1957) called this the “principle of reciprocal interpersonal relations;” Carson (1984) more recently has referred to this interpersonal situation as “interbehavioral contingency.”

Carson (1969) was the first to define explicitly how this principle relates to the interpersonal circumplex, as follows: “Complementarity occurs on the basis of reciprocity in respect to the dominance-submission axis (dominance tends to induce submission, and vice versa), and on the basis of correspondence in respect to the hate-love axis (hate induces hate, and love induces love)” (p. 112). Kiesler (1983) summarized and clarified the propositions of complementarity articulated by Carson (1969), offered expanded and new propositions for personality tied operationally to the 1982 interpersonal circle, and articulated other propositions that related to psychopathology and to the goals and procedures of psychotherapy. The result was 11 propositions of complementarity as they apply in personality, psychopathology, and psychotherapy.

Orford (1985, 1986) critically examined the evidence for interpersonal complementarity and concluded that the only prediction finding support was on the friendly side of the circle; that is, friendly-dominant and friendly-submissive behaviors are mutually evoking. Disconfirming findings reported by Orford were (a) that hostile-dominant acts are frequently responded to with further hostile-dominant behavior (rather than with predicted hostile-submissive behavior), and (b) that hostile-submissive behavior is frequently met with friendly-dominance (rather than with predicted hostile-dominance). Orford also discussed in detail the conceptual and methodological problems with research into complementarity and provided an expanded discussion and emphasis regarding setting, status, and temporal factors that were addressed earlier in Kiesler’s (1983) propositions.

Kiesler (1987c) suggested caution regarding Orford’s conclusions and offered clarifications to place Orford’s review in a more balanced perspective. First, because multiple interpersonal circles exist, valid tests of complementarity for any particular circle require the use of measures that fit the structure of that circle. Orford draws strong conclusions about the Kiesler and Wiggins circles from studies that exclusively used the Interpersonal Check List (ICL), a measure tied specifically to Leary’s circle and one that provides a poor fit to the Kiesler and Wiggins circles. Second, all available studies of complementarity have analyzed only the action/overt-reaction chain of the
circular transaction cycle, whereas propositions of complementarity seem most veridically applicable to the action/covert-reaction link of the chain (i.e., person A’s overt action, person B’s covert-impact response). Third, as Orford notes, few available studies have analyzed interaction units (action-reaction sequences), in contrast to aggregated data; the most valid tests of complementarity can be discovered only by looking at the moment-by-moment sequential negotiations occurring between dyadic interactants. Fourth, interpersonal theory does not postulate that any relationship between two interactants will show complementary patterns of behavior as defined by the interpersonal circle. What the theory does postulate is that one interactant’s interpersonal behavior tends to pull complementary behaviors from the other interactant; whether a complementary outcome occurs for one interactant in a particular dyad depends crucially on what the other person concurrently wants, seeks, and is most comfortable with. When the self-presentation behaviors of two interactants mesh and are mutually confirming, the outcome is complementarity; when they clash, the outcome is anticomplementarity; when they only partially mesh, the outcome is acomplementarity (Kiesler, 1983). Theoretically, then, one does not expect to find complementary pairings in all (or even most) interpersonal encounters, as Orford’s thesis assumes. Depending on interactant mixes and the other important contextual and intervening factors amplified by Orford, one can expect to find any one of the three outcomes.

Nowicki and Manheim (in press) noted that investigators have yet to determine how much time is required for complementarity to make its impression on a relationship. “It is possible that the lack of consistent empirical support for the complementary hypothesis reported by Orford (1986) may be due, in part, to an inability to pinpoint precisely when interactants are engaged in transactions which are affected by interpersonal complementarity. Consistent with the results of the present study, investigators who have found support for the complementary hypothesis are usually those who went beyond a single brief interaction or studied interpersonal behavior over differing lengths of time (e.g., Dietzel & Abeles, 1975; Rausch, 1965; Shannon & Guerny, 1973)” (Nowicki & Manheim, in press, p. 18). A summary of research on reciprocity using the Social Relations Model (Kenny & LaVoie, 1984) similarly concludes that only in long-term relationships is there compelling evidence for reciprocity; in short-term relationships (e.g., interactions with strangers) no evidence emerges.

Interpersonal research has a long way to go before a heuristic body of data becomes available that can offer replicable answers to interpersonal complementarity theory. Some crucial issues, besides the ones just articulated, include (a) the necessity of using circle measures demonstrating close fit to circumplex structure (at present, only Wiggins’ Interpersonal Adjective Scales [IAS] and Interpersonal Adjective Scales-Revised [IAS-R] [see “Interpersonal Assessment” section] satisfy this requirement); (b) whether axis, quadrant, octant, or segment scores are used in calculations (segment scores represent the most conservative and powerful test); (c) whether the scores used are raw (normative) or ipsativized (Block, 1957; Paddock, Potts, Kiesler, & Nowicki, 1986); (d) whether the complementarity index is constructed from a correlation coefficient between interactants’ profiles, a summed difference score squared, a summed absolute value difference score, or from cross-product scores in regression analysis; (e) whether the complementarity index is summarized from the entire circle, various hemispheres (especially hostile vs. friendly), or quadrants; (f) whether data are from self-reports, participant ratings, or nonparticipant observations; (g) whether nonverbal as well as verbal interactant behaviors are being rated in observational studies; (h) where on the temporal dimension of a dyadic relationship one obtains one’s measures (e.g., the choice, beginning, deepening, or termination phase of a particular dyad’s relationship) (Duke & Nowicki, 1982; Nowicki & Manheim, in press); (i) whether the interactional context is structured (with clear roles or rules for each participant) or unstructured (novel, or unfamiliar); (j) whether the reactants are strangers, acquaintances, friends (in general, significant others or not); (k) whether noticeable age or status differences exist among the interactants; (l) whether the interactants are of the same or opposite gender; (m) whether the study assesses the effects of the interactants individual reciprocity or the unique dyadic reciprocity (Kenny & LaVoie’s [1984] Social Relations Model); (n) whether the investigator measures all seven of the possibilities of covert and overt reactions to noncomplementary situations detailed by Secord and Backman (1961, 1965); and (o) how the interpersonal proposition
of “transactional escalation” (Van Denburg, 1988; an individual's preferred pattern of interpersonal behavior escalates under stressful conditions) interacts with propositions of complementarity in stressful contexts (see also Swann & Read, 1981).

Cognition in Interpersonal Theory

Although a major focus of interpersonal research has been the study of overt interpersonal behavior through applications of interpersonal circle measures, considerable emphasis also has been placed on the covert, cognitive events that are central to human transactions. It seems evident that an individual's characteristic cognitive or construal style, whether disordered or not, contributes significantly to both encoding and decoding processes inherent in interpersonal transactions.

Sullivant's (1953) original interpersonal statement put a heavy emphasis on the schema-equivalent constructs of personification of self and of others. Leary (1956, 1957) provided a five-level model for measurement of interpersonal behavior that included assessment of overt and covert behaviors along a continuum of awareness to unconsciousness: (a) public communication, (b) conscious description, (c) private communication or perception, (d) unexpressed (significant omisions), (e) values (ego ideal). He also emphasized the importance of empirical indices that documented the degree of variability or inconsistency in characterizations from these multiple perspectives (see also Madison & Paddock, 1983).

Carson (1969, 1971, 1979, 1982, 1984, 1989) has provided an in-depth analysis of interpersonal behavior with particular emphasis on cognitive components. His 1969 volume provides an incisive review of Sullivantian constructs, which he translates into the cognitive language of “plans” and “strategies” in the tradition of Miller, Galanter, and Pribram (1960). Reviewing evidence for the circumplex arrangement of interpersonal behavior, Carson analyzed interpersonal complementarity using constructs from Secord and Backman's (1961, 1965) balance theory. In the final section of his book, Carson merged the four quadrants of the interpersonal circle with “rewards” and “costs” derived from Thibaut and Kelley's (1959) exchange theory, then constructed a 4 × 4 matrix for classifying interaction sequences for the study of interpersonal transactions in personality, psychopathology, and psychotherapy.

Carson (1982) offered the fundamental cognitive hypothesis that a person’s behavior is designed to produce consequences in and reactions from others that confirm the principal hypotheses (perceptions, expectations, or construals of other people) organizing his or her world. In Carson's view, an “unbroken causal loop” (p. 66) exists among (a) a person's social perceptions or cognitions, (b) his or her behavioral enactments, and (c) reactions of interactants that confirm the person's cognitions or expectancies. Carson (1979) further speculated that people who are dispositionally passive count on others to assume the dominant position with them; consequently, their world is largely populated by assertive and dominant individuals. Affiliative people, on the other hand, do not usually bring an expectation into a relationship, but instead wait to see what the other person is going to be like; if anything, these people tend to have a generalized positive attributional set toward others, thereby judging differences along the affiliation-hostility dimension to be more salient than differences in dominance-submission.

Safran (1984a), like Carson, argued that “cognitive activities, interpersonal behaviors, and repetitive interactional or me-you patterns are linked together and maintain one another in an unbroken causal loop,” which he named the “cognitive interpersonal cycle” (p. 342). Safran concluded that “a full assessment in the context of a cognitive-interpersonal therapy requires that the therapist conduct a comprehensive exploration of both the specific interpersonal behaviors and me-you patterns that impair the client's interpersonal relations, and the particular cognitive activities that are linked to them” (pp. 345–346). Kiesler (1986a) developed both Carson's and Safran's notions of causal loops into a more comprehensive model for general psychopathology, the Maladaptive Transaction Cycle.

Other explorations of the cognitive components of interpersonal behavior can be found in Andrews and Moore (in press), Conway (1980, 1983), Crowley (1985), Gascoyne (1984), Golding (1977, 1978), Golding, Valone, and Foster (1980), Horowitz (1979), Horowitz, Weckler, and Doren (1983), and Safran and Segal (1990). Golding (1977), for example, reported that individuals who describe themselves as aggressive, hostile, and suspicious (i.e., hostile-dominant) have generally negative attributional sets. They tend to attend to the dominance-submission dimension in a relationship far more than the love-hate dimension,
Applications to Behavior Theory and Social Learning

Several theorists have drawn important implications of interpersonal principles for behavioral and social learning analyses. DeVogue and Beck (1978) argued that "behavioral technology has become limited by the failure of behaviorists to incorporate into their viewpoint a broad theory of human relationship" (p. 204). Applying Leary's (1957) interpersonal model to their review of the social reinforcement literature, they concluded that "only in friendly dominant/friendly submissive dyads . . . would social 'reinforcement' in the form of praise and approval have its maximum effect. In any nonreciprocal [i.e., noncomplementary] dyad . . . we could predict less frequent use of the target response by the subject in this reciprocal dyad . . . Especially when the subject attempts to use hostile dominance vis-a-vis the reinforcer, the subject may show a decrease in the target response in order to avoid the aversive stimulation of praise and approval" (p. 221). Hence, in psychotherapy and other helping relationships, "the utility of a warm, empathic approach quite possibly is limited to those clients who present themselves initially to the therapist as friendly and submissive, since they would constitute the only clients who would find the approach nonaversive" (p. 235).

In a similar vein, Brokaw and McLemore (1983) argued that a significant portion of current social-reinforcement research utilizes friendly reinforcers assumptively, without demonstrating their reinforcement efficacy for the particular behaviors targeted. Their study contrasted the normative notion with the interpersonal prediction that different reinforcers are required for different behaviors. Their findings supported the interpersonal principle that "reinforcers will vary according to the complements of targeted behaviors" (p. 1018); for subjects' targeted hostile-dominant behaviors, confederates' hostile-submissive reactions produced significantly more frequent continued hostile-dominant target behaviors than did confederates' friendly-submissive reactions. Brokaw and McLemore concluded that "the interpersonal conceptualization of complementarity represents an important component of the reinforcement construct" (p. 1019).

Kiesler, Bernstein, and Anchin (1976) argued that behavior therapies have ignored, deemphasized, or have not developed constructs and operational assessments for key therapeutic factors that loom central in interpersonal communication theory. Various chapters of their manuscript developed the assertion that the multiple phenomena of the client-therapist relationship need to be systematically incorporated into behavior therapy theory and practice. They analyzed traditional constructs of resistance and transference from their interpersonal communication perspective, highlighting that the self-defeating interpersonal relationship messages a patient sends the therapist may be representative of the patient's central self-defeating interactions with other significant people. Kiesler (1979) detailed a list of operational indices of relationship in psychotherapy and elsewhere.

Safran (1984a, 1984b) has argued convincingly for a rapprochement between cognitive-behavioral and interpersonal therapies. Safran (1984b) documented how Sullivan's concepts of personification, parataxic distortion, selective inattention, security operations, and dynamism predated and are both compatible with contemporary theory and research in cognitive psychology, and contributory to important amplifications of contemporary approaches to cognitive therapy. Safran (1984a; Safran, Vallis, Segal, & Shaw, 1986) detailed specific ways in which incorporation of interpersonal principles can broaden and enrich cognitive therapy's theoretical and practical scope; namely, (a) understanding and dealing with problems in both therapeutic compliance and maintenance, (b) broadening its conceptualization of the role of emotions in psychotherapy, and (c) incorporating the technique of pinpointing dysfunctional automatic thoughts of a client as part of the interpersonal intervention of metacommunication (Kiesler, 1988).

INTERPERSONAL BEHAVIOR AND MALADJUSTMENT

Maladjusted behavior resides in a person's recurrent transactions with others, especially significant others. Defined as disordered, inappropriate, inadequate, and self-defeating interpersonal actions, maladaptive behavior results originally and cumulatively from an individual's failure to attend to and correct the self-de-
feating, interpersonally unsuccessful aspects of his or her interpersonal acts. The disturbed person consistently broadcasts a rigid and extreme self-presentation and simultaneously pulls for a rigid and constricted relationship from others. The individual imposes a rigid program on transactions, a program he or she is unwilling or unable to modify, despite the initially varying interpersonal stances of others. For the disturbed person, then, the ability to modify his or her definition of self and others in line with varying situational factors seems strikingly absent. Maladjusted people attend to some aspects of their claims as to how to define self in important relationships; they do not attend to other aspects of their interpersonal acts nor do they attend to the aversive interpersonal consequences they unaccountably and automatically produce.

In contrast, as Carson (1969) describes, the more normal individual has a sufficiently broad style of interacting, reflecting a more flexible definition of self and others. The normal person enacts varied sets of interpersonal actions appropriately tuned to the interactant. In each instance, he or she negotiates a mutually agreed upon definition of self and other, responding to the unique aspects of the particular interpersonal situation.

Maladjusted behavior, then, has three important characteristics: (a) extremeness (the more extreme an interpersonal behavior, the more maladaptive it is, the more aversive its effects on interactants); (b) rigidity (with varying interactants, a maladjusted individual's interpersonal acts are constricted to expressions of only a few classes of the total range of possible interpersonal behaviors); (c) cross-channel incongruity (the complex of verbal and nonverbal messages that constitute the interpersonal acts of maladjusted individuals yield discrepant, mixed, and inconsistent information to interactants, in turn evoking from them discrepant, mixed, and inconsistent interpersonal reactions).

Duke and Nowicki (1982) further clarified this interpersonal analysis by documenting that “not only may incongruence sometimes be 'normal' and appropriate, but that incongruence may actually be the prevalent mode of adult human interaction” (pp. 82–83). The effect of cross-channel incongruity depends crucially on situational parameters. In their view, the result is at least four categories of dyadic congruence/incongruence situational patterns: adaptive congruence, adaptive incongruence, maladaptive congruence, and maladaptive incongruence. They concluded that incongruence “must be viewed as associated with maladjustment only in certain situationally defined instances . . . failure to learn when, where, and with whom to be congruent or incongruent may have more to do with the development of maladjustment than with simple incongruence per se” (p. 83).

Kiesler's (1986a, pp. 7–10) Maladaptive Transaction Cycle is a model that defines the essential components of the maladjusted person's action-reaction sequence with others—a conceptual guide that predicts the specific components of the recurrent pattern of actions and reactions that define the person's self-defeating maladaptive transactions with others. The model, together with complementarity predictions from the interpersonal circle, provides the framework for specifying the covert and overt aspects of the maladjusted person's behavior that are chained circularly to the covert and overt aspects of the interactant's reactions. It specifies, further, how the maladjusted individual's transactions with others typically move to “impasse”; that is, to recurrent enactment of the cycle of maladaptive self-fulfilling prophecy and behavior. The Maladaptive Transaction Cycle is depicted in Figure 22.1.


In interpersonal therapy the therapist's essential task is to disrupt the patient's vicious cycle of self-defeating actions depicted in the Maladaptive Transaction Cycle. In attempting to accomplish this task, the therapist has available important components of intervention that are derivable from the interpersonal circle (Kiesler, 1983). Having identified prototypic segments on the circle that define a particular disorder, theoretically derivable interventions can be systematically designated, including (a) the goal of therapy, (b) the precise overt and covert reactions (objective countertransference) that will be "pulled" from the
Figure 22.1. The Maladaptive Transaction Cycle (Kiesler, 1985).
therapist in early transactions, (c) the therapist’s shift to therapeutic “asocial” responses (Beier, 1966) to effect cognitive ambiguity and uncertainty as the first step toward disrupting the patient’s maladaptive style, and (d) the specific anticomplementary responses the therapist can initiate to exert the greatest pressure for positive change in the patient. Kiesler (in press) has provided a pictorial summary of this “Interpersonal Treatment Plan” as a clinical guide for psychotherapy applications.

Although interpersonal therapists have yet to articulate comprehensive treatment packages applying these principles to specific disorders, some important first steps have been taken (Andrews, 1966, 1984, in press-a, in press-b, in press-d; Beier & Young, 1984; Benjamin, 1982, in press-a, in press-b; Cashdan, 1971, 1982, 1988; Coyne, 1976a, 1976b; Coyne & Segal, 1982; Kiesler, 1977, 1979, 1982b, 1988, in press; Klerman, Weissman, Rounsaville, & Chevron, 1984; McLemore & Hart, 1982; Safran & Segal, 1990; Wachtel, 1982; Weissman, Klerman, Rounsaville, Chevron, & Neu, 1982; Young & Beier, 1982). Summaries of many of these various approaches to interpersonal therapy can be found in Anchin and Kiesler (1982) and Kiesler (1986a).

INTERPERSONAL ASSESSMENT

As the Maladaptive Transaction Cycle shows, the basic blocks of transactional behavior are four: person A’s covert experience about B, A’s overt behavior (action) toward B, person B’s covert engagements (impacts) in response to A’s action, and B’s overt reaction to A. Any comprehensive study of interpersonal behavior, then, requires measurement of each of these four transactional blocks, measurement of both A’s and B’s covert and overt actions and reactions, and methodologies that draw conclusions about the patterns present between and among these four links of the circular interactional chain. Measurement of the basic blocks requires delineation of some duration of the A-B-A-B interaction sequence. As we have seen, the duration period focused on can range from the interaction unit (A’s speech turn, B’s speech turn) through phases, episodes, sequences, all the way to the entire history of transaction between A and B.

Also, if our analysis focuses on the interpersonal behavior of A, we can extend our measurement to A’s behavior, not only with B, but with various other people with whom A interacts (or has interacted) in his or her life. Study of A’s interactions with these other people also will ultimately involve characterizations of the environmental contexts in which these interactions occur, the defined roles of both A and the others in each of these contexts, the interface of the various A-B dyadic units with larger interpersonal systems (e.g., family, group, subculture) in which the dyad is embedded, and so on.

At the most microanalytic level of interpersonal behavior, the interaction unit, characterization of A’s interpersonal behavior, is in terms of “acts” (A’s actions, B’s reactions; B’s actions, A’s reactions). At the most macroanalytic level, where A’s (or B’s) interpersonal behavior is measured from the viewpoint of a wide band of time and people-situations, characterization of A’s interpersonal behavior is in terms of style or disposition. At levels between micro and macro, A’s interpersonal behavior can be characterized only with newly invented terms, because the available language of psychology offers no appropriate words.

Most, if not all, interpersonal measures evolved first as inventories designed to measure interpersonal style. This evolution was tied intimately to the many normative attempts to characterize and assess the comprehensive domain of interpersonal behavior— attempts that resulted in the various interpersonal circles constituting the conceptual-empirical models that guide both interpersonal theory and research. However, many of these same measures also have been adapted for ratings of acts (within interaction units) as part of sequential analysis studies.

Another difference among measures that is conceptually related to the act-style continuum just articulated concerns the adjective versus verb-phrase format of the various inventories. Verb-phrase items seem designed, and necessary, for coding or rating of interpersonal acts; adjectival items seem designed for ratings of individuals’ styles or dispositions. The pioneers in the empirical study of interpersonal behavior, the Kaiser Permanente research group, were acutely aware of this difference. “In rating the observed and recorded interactions [of group therapy participants], it was noticed that transitive verbs were the handiest words for describing what the subjects did to each other, e.g., insult, challenge, answer, help. In rating the content of the spoken or written descriptions of self-or-other, it was noted that adjectives were more often suitable...” [e.g.] ‘I
am friendly, helpful, strong; they are hostile, selfish, wise, helpful.' A clear relationship seemed to exist between these two types of interpersonal description, such that the adjectives seemed to express an interpersonal attribute or potentiality for action, while the verbs described the action directly" (Leary, 1957, p. 63). More recently, Buss and Craik (1983a) defined an act as a specific behavior in context (e.g., "When I am on a committee, I take charge of things"). A trait or disposition, in contrast, refers to a label that summarizes frequently occurring acts of a particular class. Importantly, in their view there is no one-to-one correspondence between a single act and its signified disposition; rather, to validly reflect a disposition, multiple constituent acts need to be sampled across situations and time. The upshot is that interpersonal measures vary along an adjective (style, disposition) to verb-phrase (act) continuum of item format that affects, in some presently unknown manner, the results from studies of interpersonal behavior.

Interpersonal measures can be used differently depending on the design focus of a particular investigation (Kiesler, 1987a, p. 17). The focus essentially can be on the actor, the inventory respondent (rater, interactant), or the actor-respondent transaction. In "actor-focused" studies, the central aim of the investigator is to characterize the overt behavior of actor A, or the individual differences present in the overt interpersonal behaviors of selected groups of actors. The design strategy is to eliminate any variance present in the actor(s)’s interpersonal scores that derives from real differences in the interpersonal decoding styles of the respondent(s). The investigator accomplishes this by using a sample of respondents to rate the actor’s interpersonal behavior. In "respondent-focused" studies, the aim of the investigator is to characterize the covert decoding or construal style of respondent B, or of a group of respondents. The design strategy is to randomize any variance present in the respondent(s)’ item responses that derives from real differences in the overt interpersonal behavior of the actor(s). By standardization or randomization of actor subjects or conditions, the investigator attempts to ensure that the respondent(s)’ item responses averaged across actors will be good estimates of the true variance attributable to the respondent(s)’ characteristic interpersonal decoding style. Finally, "transaction-focused" studies incorporate the most complicated design strategy but the one most relevant to testing interpersonal hypotheses. In these studies, the investigator’s central purpose is to characterize patterns in the conjoint, systemic, transactional behavior evident in some sample of actor-respondent dyads. A clearly distinguishing feature of these studies is that actor and respondent labels are interchangeable, in that each interactant’s actions are coded in sequential analysis, or each interactant fills out an inventory on the other and dyadic scores are derived from the set. These studies, thus, always produce two sets of interpersonal measures: either one for A and one for B in act studies, or, in style studies, with each of two samples of subjects alternatively taking the respondent role. The focus of analysis is on description of the system properties of various combinations of actor-respondent matches. As a result, neither the interpersonal behavior of the actor nor that of the respondent is of interest in and of itself. Instead, it is the degree and/or kind of fit, match, or complementarity of interpersonal actions or styles that is the crucial concern.

It seems that a comprehensive and sophisticated understanding of interpersonal behavior requires studies with all three concentrations: actor, respondent, and transaction. This is especially the case for studies attempting to test the various propositions of interpersonal complementarity as articulated within the context of the interpersonal circle (Kiesler, 1983). Wright and Ingraham (1986), further underlining the importance of these distinctions, have argued and demonstrated that Kenny and LaVoie’s (1984) Social Relations Model provides a method to separate individual difference (actor or respondent) effects from relationship-specific (transaction) effects in analysis of interpersonal behavior. The Social Relations Model addresses both relationship effects and outgoing and incoming individual differences in social behavior by providing a method to partial out three separate sources of variance in a dyadic system: A’s average behavior toward a sample of other people (actor effect), B’s average behavior toward a sample of other people (partner effect), and the dyad-specific adjustment A and B make to each other (relationship effect). Relationship effect, then, is the regular variability in an individual’s behavior associated with interaction in a specific relationship, above and beyond individual differences of either member. Using round robin analyses of variance (Warner, Kenny, & Stoto, 1979) of graduate students’ ratings of each other
in experiential groups, Wright and Ingraham (1986) tested for interpersonal complementarity and found clear support for correspondence of affiliative behavior but inconclusive results for reciprocity of control behavior.

**Interpersonal Circle Inventories**

An authoritative historical and psychometric summary of interpersonal inventories can be found in LaForge, Freedman, and Wiggins (1985) and Wiggins (1982). More recent summaries of interpersonal assessment can be found in Anchin and Kiesler (1982), Benjamin (1984, 1987b), Carson (1984), Kiesler (1986a, 1986b), and Brokaw and McLemore (in press). This section will provide a tabular summary of circle inventory measures that are being used currently in programs of research as well as brief summaries of other more recent measures and approaches to the assessment of interpersonal behavior.

"It is a well-established empirical generalization that interpersonal variables have a circular structure. This fact can contribute to systematic assessment and prediction in the absence of any theoretical speculations about the nature of interpersonal behavior" (Wiggins, 1982, p. 214). However, when circumplex (Guttman, 1954) and other specific interpersonal geometric properties also are incorporated (e.g., Kiesler, 1983), the circular representation becomes a powerful structure for generation of theoretical propositions regarding interpersonal behavior. In this latter case, the interpersonal circle becomes "a formal geometrical model of the interrelations among indicants of constructs derived from an interpersonal theory of personality. Under this interpretation, the specific angular location of person variables (indicants) and their distance from the center of the circle should provide an empirical basis for testing hypotheses derived from interpersonal theory" (Wiggins, Phillips, & Trapnell, 1989, p. 296).

The research evidence upon which circle representations of interpersonal behavior have been based has been summarized in Berzins (1977), Bierman, (1969), Carson, (1969), Foa (1961), Plutchik and Conte (1986), and Wiggins (1982, in press). Evidence for the convergence of interpersonal behavior across methods of measurement (e.g., self-report inventories, self-ratings, peer ratings) has been reported by Golding and Knudson (1975) and Mungas, Trontel, and Winegardner (1981).

Historically, four two-dimensional interpersonal circles have been published as contemporary attempts to define and summarize the interrelationships among categories of adult interpersonal behavior. The earliest circle was that provided by Leary (1957), followed by Lorr and McNair (1965), Wiggins (1979a, 1979b, 1982), and the 1982 Interpersonal Circle (Kiesler, 1983, 1985). A party game version is also available (Oden, 1976).

Kiesler (1983) constructed the 1982 circle as a comprehensive taxonomy of the domain of two-dimensional interpersonal behavior by integrating and expanding the content of four major adult interpersonal measures: the Interpersonal Check List (ICL; LaForge & Suzek, 1955; Leary, 1957), the Interpersonal Behavior Inventory (IBI; Lorr & McNair, 1965, 1967), the Interpersonal Adjective Scales (IAS; Wiggins, 1979a, 1979b, 1981), and the Impact Message Inventory (IMI; Kiesler, Anchin, Perkins, Chirico, Kyle, & Federman, 1985). The result was a circle taxonomy consisting of 16 segments, 128 subclasses, 2 levels, and 350 bipolar items. Kiesler subsequently derived the Check List of Interpersonal (or Psychotherapy) Transactions (CLOT-CLOPT; Kiesler, 1984, 1987b) as an inventory measure of the 1982 circle structure. Supporting empirical evidence for the validity of the 1982 circle structure has been found in studies by Conte and Plutchik (1981), Kiesler and Chapman (1988), Paddock and Nowicki (1986, 1987), and Wiggins, Trapnell, and Phillips (1988b). Benjafield and Carson (1985) present empirical evidence that the octant categories of the 1982 circle can be ordered historically developmentally. That is, words belonging to octants closest to the circle axes of control or affiliation (LM, DE, PA, HI) have the earliest "dates of entry" into the language, as determined by Oxford English Dictionary counts, whereas words belonging to octants falling in the middle of the circle quadrants (NO, BC, FG, JK) had significantly later dates of entry. Figure 22.2 presents Kiesler's 1982 Interpersonal Circle.

The original and all subsequent two-dimensional circles are constructed on the assumption that human interpersonal behavior represents blends of two basic motivations: the need for control (power, dominance) and the need for affiliation (love, friendliness). That is, people interacting with each other continually are negotiating two major relationship issues: how friendly or hostile they will be with each other, and how much in charge or in control each will be in their en-
counters. Interpersonal circles directly incorporate this assumption by placing control (dominance-submission) and affiliation (friendliness-hostility) along their vertical and horizontal axes, respectively.

Any interpersonal action represents a composite or blend of relative components of these two factors—so many units of control, so many units of affiliation. The 16 segments found on the circle circumference define the range of possible blends of the two underlying dimensions. For example, on the 1982 circle, exhibitionistic actions fall at segment O and represent approximately 2 units of dominance and 2 units of friendliness. In contrast, inhibited actions (segment G) represent the polar opposite to O and represent approximately 2 units of submission and 2 units of hostility.

The sixteen circle radii represent continua of normal (near the midpoint) to abnormal (near the circumference) versions of each segment’s interpersonal acts. In other words, component actions subsumed by each segment vary in terms of their
intensity or extremeness; the more extreme the act, the more maladjusted it is, and the more aversive its effects on interactants. For example, along the range of segment O, exhibitionistic acts, level 2 histrionic actions (loquacious/educing, histrionic, impulsive, hypersuggestible) are more maladaptive than milder segment O versions at level 1 (talkative/disclosing, demonstrative, causal/spontaneous, suggestive). Note that Figure 22.2 provides level 1 (mild-moderate) and level 2 (extreme) labels for each of the 16 segments of interpersonal behavior.

Interpersonal circle inventories are designed to assess the comprehensive domain of interpersonal behavior as classified and conceptualized on the various interpersonal circles; they yield scores for categories (most usually 16) arranged in circumplex order around the circumference of one of these interpersonal circles. The circular and circumplexical structure of the circle arrangement provides for a distinct pattern of intercorrelations among the 16 categories such that circle axis categories are orthogonal, adjacent categories are positively correlated, and categories opposite on the circle are negatively correlated. For more detail regarding the logical, mathematical, and circumplexical characteristics of interpersonal circles and their measures, see Guttman (1954), Kiesler (1983), LaForge (1977), McCormick and Kavanagh (1981), Phillips (1983), Wiggins (1982), and Wiggins, Steiger, and Gaelick (1981). Inventories are differentiated into those with adjective format and those with verb-phrase item format. All inventories, to greater or lesser degrees, can be used to measure individuals' self-report characterizations of their own behavior, interactants' characterizations of each other's behaviors, or observers' ratings of interactant behavior.

Tables 22.1, 22.2 and 22.3 present a summary of eight interpersonal circle inventories used by contemporary interpersonal researchers, including respective act-by-act coding version derivatives that have been applied in sequential analysis studies. Table 22.1 highlights key inventory properties of each and provides key references for obtaining copies and more detailed information. A masterful historical and psychometric analysis of almost all of these inventories can be found in Wiggins (1982).

Two of these inventories deserve a few comments because of their uniqueness as circle measures.

1. In contrast to the seven other two-dimensional circle inventories, Benjamin's (1974) structural analysis of social behavior constitutes what can be called a three-dimensional, or two-plane, model that adds new categories of interpersonal behavior and provides, on a third plane, assessment of a covert dimension of intrapersonal behavior. Benjamin’s model uniquely defines autonomy as the opposite of control and submission as its complement. The first two diamond-shaped planes or surfaces of her model contain not only the four Leary-tradition quadrants (in Benjamin's terms, “friendly-influence,” “hostile-power,” “friendly-accept,” “hostile-comply”), but also four additional quadrants (“encourage friendly autonomy,” “invoke hostile autonomy,” “enjoy friendly autonomy,” “take hostile autonomy”). Her third surface, intrapersonal or introject, assesses people's behaviors toward themselves (“manage, cultivate self,” “oppress self,” “accept, enjoy self,” “reject self”).

2. The six other inventories besides Kiesler and colleagues' IMI and Wiggins' Affective Reactions Questionnaire (ARQ) are designed to designate the overt interpersonal behavior of target people by measuring perceptions of the targets themselves (self-report), of interactants, or of external observers. In contrast, the IMI and ARQ are designed to designate the overt behavior of target people by measuring the covert reactions targets induce or evoke in interactants or observers. Uniquely, both are self-report transactional inventories used to identify the interpersonal behavior of individuals by measuring the covert consequences occurring within interactants that result from the individuals' interpersonal behavior patterns.

**Inventory of Interpersonal Problems (IIP)**

Horowitz and his colleagues (Horowitz, 1979, 1988; Horowitz & French, 1979; Horowitz, French, & Anderson, 1982; Horowitz, French, Lapid, & Wecker, 1982; Horowitz, Post, French, Wallis, & Siegelman, 1981; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988; Horowitz, Rosenberg, Ureno, Mertz, & O'Halloran, 1988; Horowitz, Sampson, Siegelman, Weiss, & Goodfriend, 1988; Horowitz & Vitkus, 1986; Horowitz, Wecker, & Doren, 1983; Horowitz, Wright, Lowenstein, & Parad, 1981; see also Youngren & Lewinsohn, 1980) set out to investigate the relationships among three classes of complaints that bring patients into psychotherapy: symptoms, specific behavioral difficulties, and self-defeating thoughts. In the process they examined complaints in the form of interpersonal problems (e.g., “I can't seem to make friends”; “I find it
Table 22.1. Summary Characteristics of Contemporary Interpersonal Circle Inventories

<table>
<thead>
<tr>
<th>INVENTORY</th>
<th>REFERENCE</th>
<th>S</th>
<th>TI</th>
<th>NIS</th>
<th>IF</th>
<th>IS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICL</td>
<td>LaForge &amp; Suzeck (1955)</td>
<td>16</td>
<td>128</td>
<td>8</td>
<td>ADJ-VRB</td>
<td>Checklist</td>
</tr>
<tr>
<td>IBI</td>
<td>Lorr &amp; McNair (1967)</td>
<td>15</td>
<td>140</td>
<td>7-11</td>
<td>VRB</td>
<td>Checklist</td>
</tr>
<tr>
<td>ISI</td>
<td>Lorr &amp; Youniss (1983)</td>
<td>15</td>
<td>300</td>
<td>20</td>
<td>sentence</td>
<td>T-F</td>
</tr>
<tr>
<td>IAS</td>
<td>Lorr &amp; DeJong (1986) (SF)</td>
<td>15</td>
<td>150</td>
<td>10</td>
<td>sentence</td>
<td>T-F</td>
</tr>
<tr>
<td>IAS</td>
<td>Wiggins (1979b, 1981)</td>
<td>16</td>
<td>128</td>
<td>8</td>
<td>ADJ</td>
<td>8-pt Likert</td>
</tr>
<tr>
<td>IAS</td>
<td>Wiggins (1988) (IASR)</td>
<td>8a</td>
<td>64</td>
<td>8</td>
<td>ADJ</td>
<td>8-pt Likert</td>
</tr>
<tr>
<td>CLOIT</td>
<td>Kiesler (1984, 1987b)</td>
<td>16</td>
<td>96</td>
<td>6</td>
<td>VRB</td>
<td>Checklist</td>
</tr>
<tr>
<td>IMI</td>
<td>Kiesler et al. (1985)</td>
<td>15</td>
<td>90</td>
<td>6</td>
<td>ADJ-VRB</td>
<td>4-pt Likert</td>
</tr>
<tr>
<td>ARQ</td>
<td>Wiggins (1984)</td>
<td>8a</td>
<td>32</td>
<td>4</td>
<td>ADJ</td>
<td>8-pt Likert</td>
</tr>
<tr>
<td>SASB</td>
<td>Benjamin (1983)</td>
<td>8a</td>
<td>144</td>
<td>4-5</td>
<td>ADJ-VRB</td>
<td>11-pt Likert</td>
</tr>
<tr>
<td>SASB</td>
<td>Benjamin (1987a) (SF)</td>
<td>8a</td>
<td>32</td>
<td>1</td>
<td>ADJ-VRB</td>
<td>11-pt Likert</td>
</tr>
</tbody>
</table>

Note. S = number of scales; TI = total number of items; NIS = number of items per scale; IF = item format (ADJ = adjectives; VRB = verb phrases); IS = item scale; ICL = Interpersonal Check List; IBI = Interpersonal Behavior Inventory; ISI = Interpersonal Style Inventory; IAS = Interpersonal Adjective Scales; IASR = IAS Revised; CLOIT = Check List of Interpersonal (Psychotherapy) Transactions; IMI = Impact Message Inventory; ARQ = Affective Reactions Questionnaire; SASB = Structural Analysis of Social Behavior; SF = short form.

*aOctant scales (rather than sixteenths). Benjamin provides eight octant scores on each of her three surfaces.

hard to say no to my friends”) gathered from samples of patients about to begin therapy. Observers viewed videotaped intake interviews and recorded each problem that began with the phrase “I find it hard to . . .” or with a synonym such as “I can’t . . .”, as well as statements that began “I find it hard not to . . .” or with a synonym such as “I can’t stop. . .” Nearly 200 problems were identified and over three-quarters were judged to be interpersonal in nature.

By various sorting and scaling procedures, three major problem dimensions were identified among the 200 problem statements: control, degree of psychological involvement, and nature of the involvement (friendly to hostile). A clustering procedure grouped the problems further into five thematic clusters concerning intimacy, aggression, compliance, independence, and socializing. A final analysis yielded a list of 127 problem statements scored under one of these five clusters. These 127 items represent the present version of the IIP (Horowitz, 1979; Horowitz, Rosenberg, Baer, et al., 1988; Horowitz et al., 1983).

The IIP is a 127-item inventory with each item rated by a subject or patient on a 5-point scale ranging from “not at all” to “extremely.” It demonstrates acceptable test-retest reliability and convergent validity both with other interpersonal measures and with clinicians' ratings of patients’ behaviors (Horowitz, Rosenberg, Baer, et al., 1988). It has been shown to be responsive to changes that occur during psychotherapy (Horowitz, Rosenberg, Ueno, et al., 1988).

Alden, Wiggins, and Phillips (1987) reported clear circulant relationships between the IAS-R (Wiggins, Trapnell, & Phillips, 1988b) and the IIP. Circumplex analyses revealed that the first two dimensions to emerge from the IIP were prob-

Table 22.2. Summary Characteristics of Contemporary Interpersonal Circle Inventories (Part 2)

<table>
<thead>
<tr>
<th>INVENTORY</th>
<th>INVENTORY MANUAL REFERENCE</th>
<th>CODING MANUAL REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICL</td>
<td>None</td>
<td>Duke (1978)</td>
</tr>
<tr>
<td>ICL</td>
<td>None</td>
<td>Strong, Hills, &amp; Nelson (1988)</td>
</tr>
<tr>
<td>IBI</td>
<td>Lorr (1986)</td>
<td>None</td>
</tr>
<tr>
<td>ISI</td>
<td>Lorr (1986)</td>
<td>None</td>
</tr>
<tr>
<td>IAS</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>CLOIT</td>
<td>Kiesler, Goldston, &amp; Schmidt (in preparation)</td>
<td>Kiesler (1985)</td>
</tr>
<tr>
<td>IMI</td>
<td>Kiesler (1987a)</td>
<td>None</td>
</tr>
<tr>
<td>ARQ</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ICL</td>
<td>Bibliographies</td>
<td>Clark &amp; Taulbee (1981); Taulbee &amp; Clark (1982)</td>
</tr>
<tr>
<td></td>
<td>Critiques</td>
<td>Chartier &amp; Conway (1984); Kiesler (1983); Lorr &amp; McNair (1965); Paddock &amp; Nowicki (1986, 1987); Stern (1970); Wiggins (1979a, 1982)</td>
</tr>
<tr>
<td>IBI</td>
<td>Studies</td>
<td>Lorr &amp; McNair (1966)</td>
</tr>
<tr>
<td></td>
<td>Critiques</td>
<td>Lorr, Bishop, &amp; McNair (1965); Lorr &amp; McNair (1963, 1965); Lorr, Suzelidis, &amp; Kinnane (1973); McNair &amp; Lorr (1965)</td>
</tr>
<tr>
<td>IAS</td>
<td>Studies</td>
<td>Lorr (1986)</td>
</tr>
<tr>
<td></td>
<td>Manual</td>
<td>Kiesler (1983)</td>
</tr>
<tr>
<td></td>
<td>Studies</td>
<td>Kiesler, Goldston, &amp; Schmidt (in preparation)</td>
</tr>
<tr>
<td></td>
<td>Critique</td>
<td>Carson &amp; Shapiro (1983); Kiesler &amp; Chapman (1988); Kiesler &amp; Goldston (1988); Kiesler, Goldston, Paddock, &amp; Van Denburg (1986); Kiesler, Schmidt, &amp; Larus (1988, 1989); Kiesler, Van Denburg, Sikes, Larus, &amp; Goldston (1988); Kiesler &amp; Watkins (in press); Mahalik, Hill, Thompson, &amp; O’Grady (1989); Thompson, Hill, &amp; Mahalik (1989); Van Denburg (1988); Weinstock-Savoy (1986); Wilkie (1987)</td>
</tr>
<tr>
<td>IMI</td>
<td>Manual</td>
<td>Kiesler (1987a)</td>
</tr>
<tr>
<td></td>
<td>Critiques</td>
<td>Borgen (1985); Kiesler (1983); McCarthy (1985); Strong (1985); Wiggins (1982)</td>
</tr>
<tr>
<td>ARQ</td>
<td>Questionnaires</td>
<td>Wiggins, Trapnell, &amp; Phillips (1988a)</td>
</tr>
<tr>
<td>SASB</td>
<td>Manual</td>
<td>Benjamin (1987c, in press-a, in press-b; see also Benjamin, 1979b, 1984); Alpher (1988); Wiggins (1982)</td>
</tr>
<tr>
<td></td>
<td>Critique</td>
<td>Benjamin, Giat, &amp; Estoff (1981); see also Benjamin (1979a; 1986b); Benjamin, Foster, Giat-ero, &amp; Estoff (1986)</td>
</tr>
<tr>
<td></td>
<td>Coding System</td>
<td>Grotevant &amp; Carlson (1987); Weick (1984)</td>
</tr>
<tr>
<td></td>
<td>Critique</td>
<td>L. S. Benjamin (personal communication, 1988); Humphrey &amp; Benjamin (1986)</td>
</tr>
<tr>
<td></td>
<td>Bibliography for both</td>
<td></td>
</tr>
</tbody>
</table>

There are versions of the same two dimensions of the interpersonal circle, and also identified eight-item subset scales from the 127 IIP items that both were equally spaced within the two-dimensional space and met statistical criteria for a circumplex ordering. The 64-item, eight-scale version of the IIP that correlates strongly with Wiggins's IAS-R measure is described and listed in Horowitz (1988).

Comprehensive interpersonal assessment requires some form of inventory of interpersonal problems. As Alden et al. (1987) noted, self-report interpersonal inventories “ask an individual to describe his or her characteristic traits and do not specifically include statements of interpersonal problems. Trait endorsements do not necessarily imply interpersonal problems” (p. 5). Study of interpersonal problems can provide not only an interpersonal translation of presenting complaints, but also can illuminate the correspondence of patient presenting problems to clusters of overt interpersonal behaviors defined by the 16 segments of the interpersonal circle (e.g., Alden et al., 1987) and to various physical and mental disorders. The IIP shows considerable promise for serving these important functions as a standard component of an emerging battery of interpersonal measures.

**Assessment of Significant Others**

Within interpersonal theory, the preeminent situational determinants of a patient's maladaptive actions are other people, especially those whom a person considers “significant.” "Significant persons are those whose opinions about the [person]
'as a person’ matter, with whom the [person] spends considerable time in either imaginary or real transactions, and who serve as potential sources of intimacy and regard in the [person's] life” (Kiesler, 1986a, p. 11). Until recently, however, no systematic procedures have been available to the clinician or researcher to help chart the scope and nature of these past and present relationships. Until very recently, empirical research on significant others has been virtually nonexistent (Shrauger & Schoeneman, 1979).

Interpersonal Inventory

Klerman et al. (1984, pp. 86–87), as part of their interpersonal treatment of depression, emphasize an assessment procedure called the “interpersonal inventory,” which is completed through the process of the therapist’s questions in early therapy sessions. The questioning has as its goal a review of key people and issues in the patient’s life, past and present. The therapist has the option of pursuing this exploration further by asking the patient to write an autobiographical statement containing interpersonal information.

Either exploration seeks to gather the following information about each person who is important in the patient's life: (a) interactions with the patient, including frequency of contact, activities shared, and so forth; (b) the expectations of each party in the relationship, including some assessment of whether the expectations were or are fulfilled; (c) a review of satisfactory and unsatisfactory aspects of the relationship with specific, detailed examples of both kinds of interactions; and (d) the ways the patient would like to change the relationships, whether through changing his or her own behavior or bringing about changes in the other person.

Significant Other Survey

Chewing (1983a, 1983b) constructed the Significant Other Survey for standardized use in interpersonal research and therapy. Her survey asks the respondent to “list the names of all the persons who you consider to be highly significant in your life” (p. 1). For each person listed, the respondent then supplies the following information: (a) a rating of the importance of the person’s opinion of the respondent as a person; (b) a rating of how much imaginary and real time is devoted by the respondent to each person; (c) a list of three positive and three negative “traits, characteristics, or behavior patterns” characteristic of the respondent; (d) a list of three positive and three negative traits that characterize each significant person listed; (e) a rating of the extent to which the respondent has actually discussed each of his or her traits in actual conversation with each significant other; and (f) a rating of the extent to which each significant other has actually discussed his or her traits in actual conversation with the respondent.

More recently, Larus, Chewing, and Kiesler (1988) have developed a revised inventory, the Significant Other Inventory (SOI), that is more simple in both size and structure. Respondents are asked (a) to list three to six of the most significant people in their lives, (b) to characterize the most prominent role each significant other (SO) occupies vis a vis their particular relationship, and (c) to rate each SO on a series of 21 characteristics chosen to represent different definitions of SOs and other theoretical features present in the literature. In a preliminary validation study, Larus (1989) examined psychometric, structural, and logical features of the SOI preparatory to applications within the psychotherapy context.

In order to understand the complex workings of interpersonal behavior, it is clear that important situational factors need to be identified and their interactive effects demonstrated (Kiesler, 1982a). It is also clear that a central source of situational influence resides in the dispositional patterns of interpersonal behavior characteristic of interactants (Kiesler, 1982a). The interpersonal propositions of complementarity are postulated to operate most straightforwardly in situations without structure and clearly defined expectations (Kiesler, 1983). Further, as Orford (1986) documents, there is considerable evidence that interpersonal contingencies are affected by factors of role and status. It is within this multivariate complex of interactive situational influence, also including various types of personal relationships (e.g., with strangers, acquaintances, close friends), that the measurement and study of significant others becomes so critical. Moreover, in interpersonal therapy it is crucial that the therapist be able to identify the significant relationships in a patient's life in order to explore, define, and alter the patient's Maladaptive Transaction Cycle. Perhaps the assessment procedures of both Larus et al. (1988) and Klerman et al. (1984) may become part of an eventual standardized interpersonal assessment battery.
Sequential Analysis of Interpersonal Transactions

The potentially most powerful procedures for identifying specific components of the Maladaptive Transaction Cycle are various possibilities of sequential or stochastic analysis of the evolving patterns of action-reaction between individuals and various significant others.


The Interaction Record and Functional Analysis of Interpersonal Behavior

Peterson has developed and applied several sequential analysis methods that are relevant to clinicians and researchers alike (Boals, Peterson, Farmer, Mann, & Robinson, 1982; Peterson, 1977, 1979a, 1979b, 1979c, 1982, in press; Peterson & Rapinchuk, in press). A central method that Peterson and colleagues employ is the Interaction Record (IR; Peterson, 1979a, 1979b) and its accompanying manual (Peterson, 1979c), which they have applied primarily to studies of marital therapy. Peterson argued that the flow of actions and reactions that occurs as spouses meet, deal with one another, and then part must first be described at a very specific and concrete level; this is accomplished through administration of the IR. Only subsequently should the therapist attempt to understand this flow in terms of deeper relationship meanings.

On separate IR forms each spouse describes the most important interaction they had on a given day. In their own words, and from their respective viewpoints, each independently describes in specific detail the conditions under which the exchange took place, how the interaction started, and what happened then. The third point is especially crucial in that the spouse is asked to write a fairly detailed account of the exchange from start to finish, including, Who did and said what to whom? What were you thinking and feeling as the action went on? What ideas and emotions did your partner seem to have? How did it all come out?

In interpreting interaction records, Peterson first identifies the major acts or moves that each person has made in the course of the exchange; then an interpersonal meaning or message is inferred for each act. Each message contains three kinds of meaning: a report of the emotion the person is feeling at the time, a report of the way the person construes the situation, and an expectation about the response of the other. Peterson reports that, despite the rather high level of inference required for these interpretations, clinicians agree fairly closely about them. He finds interesting differences between normal and disturbed couples regarding the kinds of affect, construal, and expectation they report with this procedure.

Peterson also advocates use of videotaped samples of "analog interactions" between spouses for which they are directed to discuss conflicts, plan vacations, and so on. Descriptions of recurrent interaction patterns can be derived from these videotapes by clinicians or other observers. Once obtained, the causal governing regularities in interpersonal behavior between marriage partners or other dyads can be inferred provisionally. Peterson uses the phrase "functional analysis of interpersonal behavior" to designate this "cyclical process of describing interaction patterns, formulating ideas about the conditions that maintain the patterns, testing the propositions by planned interventions, and describing the interaction patterns that follow" to determine whether changes have or have not occurred. Changes "in predicted directions confirm hypotheses about the causes of the disorder. Persistence of the problem tends to disconfirm the hypothesis and requires conceptual reformulation" (Peterson, 1982, p. 164).

Peterson's modifications of behavior procedures for study of interpersonal disorders have much to offer interpersonal assessment, especially with regard to discovery of specific components of Maladaptive Transaction Cycles prototypical of distinct individual, marital, and family psychiatric disorders.
INTERPERSONAL DIAGNOSIS

Various authors have argued that contemporary interpersonal theories of personality and psychopathology can provide taxonomies to guide assessment of the mental disorders as defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R; American Psychiatric Association, 1987; Adams, 1964; Frances, 1982; Kiesler, 1986a, 1986b; Leary, 1957; Leary & Coffey, 1955; McLemore & Benjamin, 1979; McLemore & Brokaw, 1987; Plutchik & Conte, 1986; Widiger & Frances, 1985, 1988; Widiger, Frances, Spitzer, & Williams, 1988; Widiger & Kelso, 1983; Wiggins, 1982). These authors have proposed adoption of one or another version of the interpersonal circle to serve as a taxonomy of individual differences for the domain of normal to maladjusted adult interpersonal behavior. Other authors have provided more in-depth analyses of principles and procedures of interpersonal diagnosis (Andrews, in press-c; Benjamin, 1984, 1986a, in press-a, in press-b; Boghossian, 1982; Buss & Craik, 1986b, 1987; Horowitz & Vitkus, 1986; Horowitz et al., 1983; Kiesler, 1986a, 1986b; Leary, 1957; Safran, 1984a; Widiger & Trull, 1987; Wiggins, 1982).

Several authors also have made a priori attempts to translate DSM characterizations of personality disorders into prototypic patterns of maladaptive interpersonal behavior at distinctive segments or octants of the interpersonal circle (Kiesler, 1986b; Leary, 1957; McLemore & Brokaw, 1987; Widiger & Kelso, 1983; Wiggins, 1982). At present, however, few empirical studies have addressed these interpersonal predictions. Several investigators (Lorr, Bishop, & McNair, 1965; Plutchik & Platman, 1977) have examined patterns of interpersonal behavior associated with DSM-III-R symptomatic (axis I) disorders. Three studies (Blashfield, Sprock, Pinkston, & Hodgson, 1985; Plutchik & Platman, 1977; Widiger, Trull, Hurt, Clarkin, & Frances, 1987) have examined the circumplex properties of interpersonal behavior on samples of personality disorder patients. Only Morey (1985) and Kiesler, Van Denburg, Sikes, Larus, and Goldston (1988), however, have directly examined distinctive profiles of interpersonal behavior for the axis II disorders, with mixed results. Obviously, much empirical work remains to be done by interpersonal researchers.

Since Leary (1957) first observed the pattern, it still seems the case that DSM-III-R disorders are classified predominantly in the hostile (left) half of the interpersonal circle; further, they are underrepresented in the bottom-right (friendly-submissive) and extreme top left (dominant-competitive) circle categories. These patterns of interpersonal behavior undoubtedly reflect interactive effects of societal preferences and values. These societal contributions, however, need to be both explicitly conceptualized and empirically demonstrated before interpersonal diagnosis can provide a comprehensive paradigm for mental disorder.

At present, interpersonal diagnosis is most clearly relevant to the DSM-III-R personality disorders. Future theory and research will determine the extent to which interpersonal conceptualizations and measurement might be useful for diagnosis of DSM-III-R axis I disorders (Widiger & Hyler, 1987). Also, as Kiesler, Van Denburg, et al. (1988) noted, self-report data are suspect as the sole basis for determining either diagnosis of personality disorder or profiles of interpersonal behavior, because it is the pattern of a patient's overt behavior as assessed from interactants' or observers' ratings that produces the maladaptive aversive effects in others emphasized both by DSM-III-R and by interpersonal theory.

Principles of Interpersonal Diagnosis

Kiesler (1986b) has detailed six principles that guide interpersonal diagnosis using the circle as a conceptual framework: (a) Circle diagnosis focuses exclusively on assessment of overt social-interpersonal behaviors of abnormal people; these observable actions include both verbal and nonverbal behaviors. It thereby avoids inferences about patients' motives, feeling states, cognitions, or other covert events. (b) Circle diagnosis of mental disorders needs to designate both the exact circle segment as well as the exact level on each segment (mild, moderate, extreme) that characterize the maladaptive behavior for each disorder. (c) The task of interpersonal diagnosis is to establish the empirical profile of circle segments that represents the distinctive prototype (Horowitz, 1979; Horowitz, French, & Anderson, 1982; Horowitz, French, et al., 1982; Horowitz, Post et al., 1981; Horowitz et al., 1983; Horowitz, Wright et al., 1981; Rosch, 1975, 1978; Wiggins, 1982) of exemplary behaviors for each of the mental disorders. Because diagnostic categories represent fuzzy sets, there is no reason to expect an exact one-to-one correspondence between specific mental disorders and circle segments. (d) There is no compelling
reason to assume that the circle structure of the prototypes defining each of the various disorders will be identical or isomorphic. Prototypic descriptions of various disorders may incorporate different levels and segment bands, may subsume more than one circle octant, and in some cases may include octants from different quadrants. (e) For comprehensive interpersonal diagnosis of mental disorders, classes of situations associated with and most relevant to each defining prototype need to be clearly specified so that assessment can target these environmental contexts. The distinctive situational band width (classes of situations and interpersonal contexts) in which the prototypical behavior pattern is most likely to be expressed must be specified as an essential component of the assessment procedure. (f) The therapeutic situation must be distinctively included in this situational specification. Both the expected counterpull of the therapy situation and the distinctive complementary covert engagements the therapist can expect to experience as operative for each prototypical disorder need to be designated as, by employing circle principles, they define for the therapist the first stage of sequential interventions (Kiesler, 1983, 1988) designed to progressively alter the patient’s style toward less extreme and rigid self-presentations.

Issues in Interpersonal Diagnosis

It is important to realize, however, that basic understanding both of interpersonal diagnosis and intervention requires use of two conceptual models: the interpersonal circle and the Maladaptive Transaction Cycle (Kiesler, 1986a). The interpersonal circle specifies the range of individual differences in normal and abnormal interpersonal behavior. Through use of one or more of the inventories described in the previous section, one can assess a patient’s interpersonal behavior and precisely locate that behavior on the surface of the interpersonal circle. This placement, in turn, permits both exact specification of the patient’s maladaptive pattern of living as well as precise prediction of various components of the optimal treatment program for the patient (Kiesler, 1983, 1988). The Maladaptive Transaction Cycle provides a framework for depicting the specific transactional pattern present in any patient’s self-defeating interpersonal relationships. It also pinpoints covert (cognitive, emotional, etc.) and overt behavioral components that need to be targeted for intervention in order to disrupt the patient’s pattern of maladaptive transactions.

Covert Interpersonal Assessment

What the Maladaptive Transaction Cycle makes abundantly evident is that comprehensive assessment of mental disorders will require, in addition to present interpersonal circle inventories that target overt behavior, additional inventories or measures that target patients’ covert behaviors and experiences (Kiesler, 1983, 1986a, 1986b; Widiger, Frances, & Trull, 1987). Ideally, models of covert events will be developed that permit predictions of one-to-one correspondence with the categories of overt behavior depicted on the interpersonal circle.

To date, this bridging work has occurred primarily in the area of emotion. Plutchik (1980) showed that circumplex models of personality traits can be mapped onto structural models of the emotion domain. Schaefer and Plutchik’s (1966) factor analytic findings supported their hypothesis that circular configurations would be found for trait and emotion signs and for diagnostic constructs. They concluded that most of the variance of traits and emotions associated with psychiatric diagnostic categories falls within a two-dimensional space so that trait and emotion terms can be plotted within the same semantic configuration. Russell (1980) provided evidence of a clear circumplex structure in the domain of personal affect. Kiesler, Horner, Larus, and Chapman (1988) showed that (a) interpersonal acts located at the poles of the two 1982 circle axes evoke distinctive patterns of emotion as measured by Russell’s (1980) personal affect scales, and (b) Russell’s list of affect adjectives exhibits a circumplex structure equivalent to that found for personal affect when used to measure the “evoked emotion” characteristic of interpersonal encounters.

Empirical studies of the traditional cognitive realm are necessary to determine whether similar structural models can be found for construal, perceptual, expectational, and other cognitive events that provide covariate matches to the categories of overt behavior anchored on the circumference of the interpersonal circle. Seminal work has begun by Carson (1969, 1979, 1982), Andrews and Moore (in press), Conway (1980, 1983), Crowley (1985), Golding (1977, 1978), Golding, Valone, and Foster (1980), Horowitz (1979), Horowitz et
al. (1983), Safran (1984a, 1988), and Safran and Segal (1990).

**Situational and Temporal Assessment**

If interpersonal diagnosis is to contribute to full understanding of mental disorders, its assessment must systematically incorporate the important situational and temporal factors relevant to expression of each disorder's prototypical maladaptive interpersonal pattern, including both central and peripheral components (Anchin, 1982a; Duke & Nowicki, 1982; Kiesler, 1982a, 1983, 1986a, 1986b; Orford, 1986; Strong, in press). An important move in this direction is the "act-frequency approach" of Buss (1985a, 1985b) and Buss and Craik (1980, 1981, 1983a, 1983b, 1983c, 1984, 1986a, 1986b, 1987; Buss, Gomes, Higgins, & Lauterbach, 1987), which conceptualizes interpersonal dispositions as cognitive categories of acts that summarize general trends in behavior. Their prototypical (act-in-context) interpersonal descriptors anchor interpersonal assessment simultaneously in both overt behaviors and situations.

Interpersonal behavior and diagnosis need to be viewed from the perspective of relationship development as well. Duke and Nowicki (1982) proposed that relationships progress through four phases: choice, beginning, deepening, and termination. From their perspective, negotiation of relationship definition is not as essential during the earliest stages of a relationship, but becomes more important as the interaction continues over time.

**Assessment of Nonverbal Behavior**

Kiesler (1983) emphasized that "basic aspects of nonverbal communication need to be integrated both with the interpersonal circle and with interpersonal theory more generally" (p. 211). Kiesler (1977, 1979, 1982a, 1988; Kiesler et al., 1976) provided a theoretical integration of nonverbal behavior with interpersonal theory. Nowicki and colleagues have pursued a program of research examining the nonverbal and verbal correlates of interpersonal behavior (Cooley & Nowicki, in press; McGovern, 1985; McLeod & Nowicki, 1985; Nowicki & Manheim, in press; Oxenford & Nowicki, in press), as have Perlmutter, Paddock, and Duke (1985) and Schmidt (1988).

It is clear that nonverbal messages predominate in emotional and relationship communication, and in the arena of interpersonal behavior. The factor structure underlying both domains is identical. Increasingly, complexes of specific nonverbal behaviors have been identified for control and affiliation relationship messages; these complexes need to be interfaced with the traditional acts used to define the interpersonal circle categories, and need to become an essential part of assessment of interpersonal behavior.

**Assessment of Significant Others**

Duke and Nowicki's (1982) analysis, that relationship definition becomes more important as an interaction continues over time, also leads to the conclusion, emphasized by Kiesler (Kiesler et al., 1976), that significant others are crucial to the task of interpersonal diagnosis—that assessment of patients' maladaptive behavior must include transactant ratings by people currently significant in each patient's life. Use of the Significant Other Inventory (Larus et al., 1988) may provide the initial methodology for identification of these people.

**CONCLUSION**

Contemporary interpersonal theory, together with its two central conceptual/empirical models (the interpersonal circle and the Maladaptive Transaction Cycle), has much to offer to assessment, diagnosis, and differential treatment of mental disorders.

Psychometrically sophisticated inventories and coding systems are increasingly available to assess the transactional domain of interpersonal behavior. Continuing attempts to chart the covert behavioral domains of interactants may gradually provide conceptual bridges to the categories of overt behavior organized on the interpersonal circle, bridges that also lawfully link together the covert and overt blocks of interactants' behaviors conceptualized in the Maladaptive Transaction Cycle. Kiesler and colleagues' (1985) Impact Message Inventory provides a preliminary and unique probe into this covert transactional arena.

Availability of other interpersonal assessment procedures can address more directly the complexity of the diagnostic task. Horowitz and colleagues' (Horowitz, Rosenberg, Baer et al., 1988) Interpersonal Problem Inventory is directly relevant to diagnosis and treatment, and already has shown important relationships to interpersonal
circle categories. Preliminary methods for assessment of significant others (Larus et al.'s, [1988] Significant Other Inventory, Klerman and colleagues' [1984] Interpersonal Inventory method) offer opportunities both for assessing significant others' perceptions of the interpersonal behavior of patients and charting patient improvement over the course of treatment. Peterson's (1982) applications of Interaction Records and sequential analysis of interpersonal behavior have already demonstrated clinical utility in diagnosis and treatment of marital couples. Benjamin's (in press-a, in press-b) structural analysis of social behavior models, including questionnaires and codings, has shown considerable utility in both diagnostic and treatment settings.

Much remains to be done, but much has been accomplished. Contemporary interpersonal theory of maladjustment, diagnosis, and treatment is complex and needs to become even more complex to capture the multiple facets of human transactions. The "carrot" that interpersonal theory extends is the specificity of explanation and prediction that the interpersonal circle (and, eventually, the Maladaptive Transaction Cycle) provides—together with the capacity for falsification that this level of concreteness offers.

Finally, interpersonal diagnosis and interpersonal treatment are inherently inseparable. The ultimate predictive power of the interpersonal circle (and the Maladaptive Transaction Cycle) resides in its propositions for psychotherapeutic intervention (Kiesler, 1983, 1986b). The real promise of the interpersonal circle is that, having identified prototypic segments that define a particular disorder, theoretically derivable interventions can be systematically designated. Kiesler's (in press) Interpersonal Treatment Plan offers a practical guide for individual clinical cases. What is available, however, is only a skeleton of an ultimately comprehensive treatment package for mental patients. Many additional components are necessary, including guidelines for analysis of situational manifestations of maladaptive interpersonal behavior; specification of interventions that target cognitive, affective, and other covert events lawfully associated with a patient's overt behavior patterns; specific rules that guide the therapist's metacommunicative use of covert complementary responses or impact messages with different patients; and rules that govern optimal sequencing over sessions of asocial, acomplementary, and anticomplementary therapist responses.

Hopefully, an ever increasing number of psychological researchers will pursue the fascinating challenges that remain.

REFERENCES


Wiggins interpersonal scales. Paper presented at the meeting of the American Psychological Association, Toronto, Canada.


*Journal of Consulting and Clinical Psychology*, 56, 885.


Kiesler, D. J. (1977). *Communications assessment of interview behavior of the “obsessive” personality*. Unpublished manuscript, Virginia Commonwealth University, Richmond, VA.


Miller, G. A., Galanter, E., & Pribram, K. H.


Strong, S. R. (1985). Review of the impact mes-
sage inventory. In J. V. Mitchell (Ed.), *The ninth mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.


psychology of groups. New York: John Wiley & Sons.


Journal of Consulting and Clinical Psychology, 46, 40–52.


Wilkie, C. F. (1987). Interpersonal complementar-