The Interpersonal Paradigm

Scientific psychiatry has to be defined as the study of interpersonal relations, and this end calls for the use of the kind of conceptual framework that we now call field theory.

—SULLIVAN (1953b, p. 368)

METAPSYCHOLOGICAL CONSIDERATIONS:
1. THE NATURE OF INTERPERSONAL FIELDS

The Field Concept in Physics

Faraday’s Fields

In 1821, Michael Faraday began a series of experiments suggesting that the results of previous experiments on electricity and on magnetism could be incorporated within a single unified theory. He demonstrated that (1) a changing magnetic field can create an electric current, and (2) a changing electric current can create another electric current. These findings, together with an earlier finding that (3) a steady electric current can produce a magnetic field, suggested a possible unified theory of electricity, magnetism, and possibly light—a theory that was not easily reconciled within the old physics.

Faraday pondered on the idea of action at a distance, and there grew in his mind the idea that, surrounding a magnet or charged body, there was an invisible, immaterial “sea,” an entity that exists in space, rather like the waves that spread out from a stone thrown into a pond. (Silver, 1998, p. 91)

Maxwell’s Equations

In 1864, James Clerk Maxwell summarized existing knowledge of “electromagnetism” in a series of differential equations that provided a quantitative expression of electric and magnetic fields. Einstein and Infeld (1938) later
characterized Maxwell's equations as "the most important event in physics since Newton's time, not only because of their wealth of content, but also because they form a pattern for a new type of law ... representing the structure of the field" (p. 143; emphasis added). From these equations, Maxwell predicted that electromagnetic waves should travel through space at the speed of light, and this prediction was confirmed by Hertz in 1888. The excitement generated by the concept of an invisible and immaterial "force field" determining the interactions among material objects extended well beyond the discipline of physics.

The Field Concept in Psychology

Psychological Proponents of Field Theory

Within experimental psychology, the field-theoretical approach to understanding human behavior was championed by the influential Gestalt school of thought (Koffka, 1935; Kohler, 1929; Wertheimer, 1912), and this approach was extended to social psychology by Kurt Lewin (1939). J. R. Kantor (1924-1926) had earlier founded his school of interbehavioral psychology, which was heavily influenced by the field-theoretical ideas of the physics of his day (Kantor, 1953). The field-theoretical perspective in physics was also highly influential in the theoretical formulations of Harry Stack Sullivan (1940), whose interpersonal theory of psychiatry eventually provided the conceptual foundation for the interpersonal paradigm (Wiggins & Trobst, 1999).

Interactionism and Interpersonalism

In considering the influence of physical field theory on psychological theorizing, it is useful to make a distinction between "interactionism" and "interpersonalism." The interactionist perspective, as presented by Lewin (1946), focuses on the manner in which behavior is determined by the interaction between a person and the environment in which the person is situated: \( B = f(P, E) \). In its modern form, this perspective assesses the relative contributions of person and situation by calculating the relative variance contributions to behavior of person, situation, and the statistical interaction of person and situation (Endler, 1975). Contemporary interactionism is based on an analysis-of-variance model for conducting empirical research, and as such does not claim to be a theoretical perspective (Endler, 1983).

The interpersonalist perspective, as presented by Sullivan (1953a), focuses on the interrelation between two persons within a common environment: \( B = f[E(P_1 \leftrightarrow P_2)] \). Sullivan's form of radical interpersonalism may be difficult to comprehend at first exposure, because of our ingrained "individualist language" (1953a, p. 50) for describing personality as reflecting attributes of a discrete individual who is separate from others and from a shared social environment. Theorists within the interpersonal paradigm have attempted to operationalize Sullivan's view of personality in ways that avoid this individualistic bias by defining personality as: "nothing more (or less) than the patterned regularities that may be observed in an individual's relations with other persons, who may be real in the sense of actually being present, real but absent and hence 'personified,' or 'illusive'" (Carson, 1969a, p. 26).

Within Sullivan's radical interpersonalism, dyadic relationships with others constitute the environment, and a person's recurrent patterns of such relationships over time constitute his or her "personality." He stated: "In extreme abstract, the theory holds that we come into being as persons as consequence of unnumbered interpersonal fields of force and that we manifest intelligible human processes only in such interpersonal fields" (Sullivan, 1948a, p. 3; emphasis added). Thus personality was for Sullivan (1948a) "the hypothetical entity which we posit to account for interpersonal fields" (p. 6).

METAPSYCHOLOGICAL CONSIDERATIONS: II. THE INDIVIDUAL AND SOCIETY

In addition to emphasizing dyadic interpersonal force fields, Sullivan placed a heavy emphasis upon the cultural and societal contexts in which these interactions occur, in light of the new perspectives on the relation between the individual and society that were emerging in the fields of psychiatry, sociology, and cultural anthropology during the 1920s and 1930s. Although acknowledging the discoveries of Freud (e.g., Breuer & Freud, 1893-1895) as providing the initial impetus for his own investigations, Sullivan (1953b, pp. 16-26) also acknowledged the influence of three additional "tributaries" outside the psychoanalytic tradition: (1) the emphasis upon the integrated psychobiological individual as the central unit of study (Meyer, 1907; White, 1922); (2) the emphasis upon the reflected appraisals of significant others as determinants of the individual's self-view (Cooley, 1930; Mead, 1934); and (3) the emphasis upon the potency of culture in shaping individual lives (Benedict, 1934; Lapsley, 1999; Sullivan, 1948b) and upon the importance of language within both interpersonal and cultural contexts (Sapir, 1935).

The Metaconcepts of Agency and Communion

Because of its origins in the conceptualizations of Sullivan, the interpersonal paradigm of personality assessment is best understood as a broadly based interdisciplinary effort to understand the individual in relation to society. For that reason, it is helpful to summarize the conceptual foundations of this par-
adigm with reference to the manner in which David Bakan's (1966) meta-concepts of “agency” and “communion” may be applied to related conceptualizations within a variety of disciplines, as outlined in Table 2.1.

“Agency” refers to the condition of being a differentiated individual, and it is manifested in strivings for mastery and power, which enhance and protect that differentiation. “Communion” refers to the condition of being part of a larger social or spiritual entity, and it is manifested in strivings for intimacy, union, and solidarity within that larger entity. These two “meta-concepts” (concepts about concepts) underlie—at different levels, in different ways, and in different disciplines—the distinctions made in the rows of Table 2.1.

Conceptions of Agency and Communion within Disciplines

Hogan (1996) considered it axiomatic that “people always live in groups, [that] every group has a status hierarchy [and that] people need social acceptance—which facilitates group living and enhances individual survival” (p. 165). Redfield (1960) considered “getting a living” and “getting along” to be the common challenges provided by all societies. The classic distinction between “instrumental” and “expressive” roles in society was made by Parsons and Bales (1955) with reference to the division of labor required to meet these two challenges. From an evolutionary perspective, successful competition for a reproductive advantage over members of one’s own sex requires the negotiation of status hierarchies (for men) and the formation of reciprocal alliances (for women) (Buss, 1991). From cross-cultural psychology, we know that “individualistic” cultures are those in which personal goals are pursued that benefit individuals, and that “collectivist” cultures are those in which collective goals (ones that benefit the group) are pursued (Triandis, 1990).

Psychodiagnostic work within the interpersonal paradigm focuses upon the recurrent interpersonal situations that characterize the life of an individual. It is assumed that the agentic and communal challenges of group living are reflected in the character and quality of an individual's pattern of dyadic interactions as well. Thus Sullivan (1948a) maintained that interpersonal transactions are motivated primarily by the desire to avoid anxiety due to loss of self-esteem (agency), and by the desire for interpersonal security (communion). Baumeister’s (1990) more recent version of this dynamic distinguishes different forms of “social exclusion” that may give rise to agentic and communal anxiety (see Wiggins & Trapnell, 1996).

The social exchange theory of Foa and Foa (1974) defines “status” (esteem, regard) and “love” (acceptance, liking) as the principal interpersonal resources that are exchanged (given or denied) in interpersonal transactions. For example, a dominant individual tends to grant love but not status to others. This explicit theory of social exchange allows one to predict the empirical interrelations among interpersonal dispositions (e.g., dominance, hostility) in terms of the similarity of resource patterns among different dispositional variables (Foa, 1965). When the intercorrelations among dispositional variables are subjected to a principal-components analysis, a two-dimensional circular structure emerges, the coordinates of which were first labeled “dominance” and “affiliation” (Leary, 1957). Although the interpersonal circumplex was originally seen as a convenient scheme for classifying interpersonal dispositions (LaForge, 1977), it is now regarded by many as providing both the conceptual and empirical foundations of the interpersonal paradigm of personality assessment.

### The Interpersonal Circumplex

**Louis Guttman and the Structure of Mental Abilities**

Guttman’s (1954) “radex” model was developed in the context of data on human abilities, in which various tests of ability were conceived of as dif-
ferring along the two dimensions of complexity and kind. The vertical dimension, called a “simplex,” orders tests in terms of increasing complexity, as would be found in tests of addition, subtraction, multiplication, and division. Thus, for example, abilities at a higher order of complexity (e.g., division) presuppose or include abilities at lower orders of complexity (addition, subtraction, multiplication). One must be able to add in order to learn subtraction; one must understand multiplication in order to grasp division. The simplex model is perhaps most familiar in the context of attitude measurement, in which “Guttman scales” are frequently employed. These scales have the property that endorsement of an item at a given level of intensity entails endorsement of all items at lower levels of intensity.

Guttman’s (1954) horizontal dimension is called a “circumplex,” and it describes the circular ordering that exists within tests of different content at the same level of complexity. Thus one may select a test of verbal ability, a test of numerical ability, and a test of spatial ability, all of which are at the same level of difficulty or complexity:

The new hypothesis is that the different kinds of abilities should have an order among themselves, but not of such a nature that there is a ranking from highest to lowest. Is it possible to have an ordering without a head and foot to it? Yes, quite simply, by having it circular. Then the order has neither beginning nor end. . . . A system of variables which has a circular law of order is a circumplex. (p. 325; emphasis in original)

Guttman did not himself apply the circumplex model to interpersonal behavior. But the model was “waiting in the wings” for another discovery that was made in a quite different context.

The Kaiser Foundation Group and the Structure of Interpersonal Behavior

We can safely conclude that the use of objective systems of this sort for categorizing interpersonal behavior will make public, reliable, and communicable the complexities of human relationship which have previously remained intuitive, subjective, and speculative.

—Leary (1950, p. 77)

In 1947, a University of California faculty member (Hubert Coffey) and three graduate students (Mervin Freedman, Timothy Leary, and Abel Ossorio) initiated a psychodiagnostic investigation of patients who were undergoing group psychotherapy at a Unitarian church in Berkeley (Coffey, Freedman, Leary, & Ossorio, 1950). The same team later studied psychiatric patients in group psychotherapy at the Kaiser Foundation Hospital in Oakland, California (Leary, 1957). Direct observations of interpersonal behavior in group psychotherapy, individual interviews, and a broad array of psychodiagnostic testing procedures were all employed in “an attempt at systematization and operational definition of the concepts of Harry Stack Sullivan” (Freedman, 1985, p. 623). In seeking to understand the interrelations among the many different kinds of ratings obtained in this study, the investigators noticed some interesting psycholinguistic features of the ratings:

... what you actually do in the social situation as described by a verb (e.g., help) can be related to your description of yourself as described by the attribute helpful and to your description of your dream-self or fantasy-self (also attributive, helpful or perhaps unhelpful). (Leary, 1957, p. 63; emphasis in original)

This principle of psychological synonymy was useful in reducing a list of several hundred terms to a list of 16 “generic interpersonal themes” (Leary, 1957, pp. 62–66).

From its inception, the Kaiser Foundation study included a large number of personality variables, of which 16 were eventually emphasized. These variables were measured from a variety of perspectives—a procedure that would later be called “multitrait-multimethod” (Campbell & Fiske, 1959). The challenge was to find a common structural model that would permit meaningful comparisons both within and between methods of measurement. In the construction and conceptualization of rating scales, Leary originally had a quasi-circular model in mind (Laforge, 1985, p. 615), but the circular model that was eventually decided upon was done so on the basis of empirical data: “A close-fought battle with empirical fact, not lofty considerations of symmetry, produced the sixteen categories. In the closing stages, the circle emerged” (Laforge, 1977, p. 8). However, once the model appeared, Leary (1957) was able to state clearly the basic conceptual assumptions that have guided all subsequent work within the interpersonal paradigm:

In surveying the list of more or less generic interpersonal trends, it became clear that all had reference to a power or affiliation factor. When dominance–submission was taken as the vertical axis and hostility–affection as the horizontal, all of the other generic interpersonal factors could be expressed as combinations of these four nodal points. The various types of nurturant behavior appeared to be blends of strong and affectionate orientations toward others. Distrustful behaviors seemed to blend hostility and weakness. (p. 26; emphasis added)

Classification of Interpersonal Behavior

Leary’s (1957) description of the circular model (presented in Figure 2.1) provides a prescient summary of some of the major conceptual and empiri-
The five paradigms and their convergences

**THE FIVE PARADIGMS AND THEIR CONVERGENCES**

1. In the inner ring of this circle, the 16 generic interpersonal themes are assigned alphabetic designations in a counterclockwise direction: P, A, B, C ... O.
2. Moving outward to the next ring, we find the characteristic "mechanisms" or "reflexes" (traits) associated with each 16th (e.g., P = guide, advise, teach; A = manage, direct, lead).
3. The next outer layer specifies the reaction that is provoked in others by these mechanisms (e.g., P provokes respect; A provokes obedience).
4. The next layer illustrates extreme or rigid expression of mechanisms (e.g., extreme P = seeks respect compulsively, pedantic, dogmatic actions; extreme A = dominate, boss, order).
5. In the outermost layer, the categories have been combined into eight sectors: PA, BC, ... NO. The label of each "octant" reflects, successively, the adaptive and maladaptive forms of each mechanism: PA, Managerial-Autocratic; BC, Competitive-Narcissistic; ... NO, Responsible-Hypernormal.

I now elaborate on each of these points:

1. The issue with respect to the 16 generic interpersonal themes designated by the category labels in the inner ring of the circle is whether or not they constitute a "basic level" of categorization. A basic level is one in which the categories carry the most information, possess the highest cue validity, and are most clearly differentiated from one another (Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976; Wiggins, 1980a). Leary (1957) clearly opted for an 8-category system (PA, BC, ... NO), whereas LaForge (1977) just as clearly preferred a 16-category system (P, A, ... O). The number of categories employed in interpersonal circumplex interpretation has varied from 4 (Carson, 1969a) to 36 (Benjamin, 1974), and the optimal number of categories depends very much on the substantive domain being scaled and on the discriminative capabilities of the raters and respondents.
2. In the recent history of personality psychology, concepts of "traits" and "motives" have increasingly converged (Winter & Barenbaum, 1999).
3. Sullivan's notion of "complementarity" in interpersonal relationships is based on the notion that certain patterns of response tend to "elicit" predictable responses in others, based on their respective locations within the interpersonal circle. These responses may or may not be desirable for the relationship.
4. The assumption that abnormal or "disordered" behavior is an exaggeration of normal adaptive behavior is axiomatic in the interpersonal paradigm.
5. These labels provide dimensional descriptions of the preceding point. Thus "Managerial" is used to describe the adaptive and effective expression of strength and leadership in interpersonal situations, whereas "Autocratic" describes the domineering, overambitious, and maladaptive expression of the same trait.
6. Virtually all types of interpersonal relatedness are included somewhere within the interpersonal circle. All forms of relating to one another can be represented in terms of the two fundamental dimensions of agency and communion that define the interpersonal circle.

**HISTORICAL DEVELOPMENT OF THE INTERPERSONAL PARADIGM**

The conceptual and empirical results of the Kaiser Foundation research project first appeared in a series of doctoral dissertations from the University of Illinois, sponsored by E. Paul Torrance, and were later published as articles in the *Journal of Personality and Social Psychology* (LaForge, 1977; Leary, 1957, 1970; Leary & Lieberman, 1967; Leary & Sack, 1969) and in the book *The Interpersonal Paradigm* (LaForge, 1977). This book was followed by *The Interpersonal Circle: A Comprehensive System for the Assessment of Interpersonal Behavior* (LaForge, 1980), which contains a comprehensive collection of research and theory on the interpersonal paradigm. Since then, the interpersonal paradigm has been applied to a wide range of research questions, including the study of personality, social cognition, and social behavior. The paradigm has also been used in the development of assessments of interpersonal behavior, such as the Interpersonal Circumplex Measurement of Personality (ICM) and the Interpersonal Circumplex Assessment Form (ICAF).
ity of California (Freedman, 1950; LaForge, 1952; Leary, 1950; Ossorio, 1950). These results were soon published in a series of classic papers on the interpersonal dimension of personality (Freedman, Leary, Ossorio, & Coffey, 1951; LaForge, Leary, Naboisek, Coffey, & Freedman, 1954; LaForge & Suczek, 1955), followed shortly thereafter by Leary's (1957) canonical formulation of the interpersonal paradigm in personality assessment. It is difficult to overestimate the achievements of the originators of the interpersonal paradigm. Within a decade, the basic concepts of Sullivan had been successfully operationalized with reference to a two-dimensional circumplex model. Within this model of interpersonal behaviors and dispositions, patterns of dyadic interactions could be understood at several different levels of measurement. Given these achievements, and the posthumous publication of Sullivan's major works during the same decade (Sullivan, 1953a, 1953b, 1954, 1956), one might have reasonably anticipated a groundswell of interest in this promising new paradigm for personality assessment in the decades that followed.

For a variety of personal reasons, the originators of the interpersonal paradigm chose not to continue their project: "... the conspicuous lack of implementation of the original scheme for systematization suggest[s] that the system is in danger of 'dropping out' along with its celebrated principal investigator" (Wiggins, 1968, p. 322). As is well known, in 1960 Leary ingested a "magic mushroom" that changed his life and the lives of a substantial number of others during the 1960s and 1970s (Leary, 1983). The coincident rediscovery of behaviorism within clinical psychology, attacks on the psychometric-trait viewpoint (e.g., Mischel, 1968), and a focus upon mechanistic models of person-situation interaction all contributed further to an atmosphere that was inhospitable to the further development of the interpersonal paradigm. Nevertheless, the interpersonal paradigm remained viable during the ensuing four decades—not as the result of the intensive efforts of a single research team, but as a more broadly based enterprise involving collaboration among a much larger group of investigators, many of whom were not personally acquainted with one another (Wiggins, 1985).

Ten years after the first interpersonal circumplex was described (Freedman et al., 1951), Foa (1961) noted a convergence of thinking among several investigators with respect to the circumplex as a common structural representation of interpersonal behavior. Two decades later, I was able (Wiggins, 1982) to identify 20 circumplex models that had been independently constructed, all of which employed agentic and communal axes. By 1996, Kiesler was able to identify 21 different domains or content areas in which comparable two-dimensional circular representations had been reported (e.g., parent-child interactions, vocational behavior).

Notable contributions during the 1960s included the conceptualization of both maternal and child behavior within an interpersonal circumplex framework (Schaefer, 1961); a psychometrically sophisticated replication of the circumplex within a clinical population (Lorr & McNair, 1963); and a highly influential integration of the circumplex with the clinical, social, and experimental psychology of that time (Carson, 1969a). Alternative conceptual formulations of the interpersonal model were presented in the 1970s (e.g., Benjamin, 1974; Kiesler, 1979; Wiggins, 1979), and during the 1980s, the model was applied to psychotherapy (e.g., Anchin & Kiesler, 1982), complementarity (e.g., Kiesler, 1983), and interpersonal problems (e.g., Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). Among the contributions of the 1990s were an updated and psychometrically sound version of the original interpersonal checklist (Wiggins, 1995), a comprehensive exposition of contemporary interpersonal theory and research (Kiesler, 1996), and a presentation of the impressive variety of contexts in which the interpersonal circumplex model has been applied (Plutchik & Conte, 1997).

In 1994, a symposium in honor of Timothy Leary was held at the annual meeting of the American Psychological Association, at which many of the aforementioned authors paid tribute to the originator of the interpersonal paradigm (see Strack, 1996). On this occasion—his first attendance at a meeting of the Association in 30 years—Leary remarked: "I must say that I do not take it personally. All of us involved in this project are celebrating ourselves and our charming underground community of dedicated interpersonal researchers" (Leary, 1996, p. 301).

**REPRESENTATIVE ASSESSMENT INSTRUMENTS**

**Interpersonal Adjective Scales**

The Interpersonal Adjective Scales (IAS; Wiggins, 1995) evolved from a psychological taxonomy of trait-descriptive terms that was developed within the framework of a larger program of collaborative research on language and personality (Goldberg, 1977). Within a representative pool of trait-descriptive adjectives selected from an unabridged dictionary, an "interpersonal domain" was distinguished from other domains, such as characterological, temperamental, and cognitive domains (Wiggins, 1979). Approximately 800 interpersonal adjectives were assigned to Leary's (1957) original categories of the interpersonal circumplex on both conceptual and empirical grounds. By means of computer-based multivariate procedures, it was found that scales based on the original categories failed to meet certain circumplex criteria that could be better met with scales based on the revised categories that now constitute the IAS (Wiggins, 1995). The IAS consists of 64 adjectives that respondents rate for self-descriptive accuracy on an 8-point Likert scale ranging from "extremely inaccurate" to "extremely accurate." Eight scales, of eight items each, assess the interpersonal dispositions...
listed in the second column of Table 2.2. For example, the PA octant includes items such as “dominant,” “forceful,” and “assertive.”

**Inventory of Interpersonal Problems**

Horowitz (1979) transcribed statements of problems expressed by psychiatric outpatients in the course of videotaped intake interviews. In classifying these statements, a distinction was made between interpersonal problems (e.g., “It is hard for me to let other people know when I am angry”) and noninterpersonal problems (e.g., “I have difficulty falling asleep at night”). The interpersonal problems were further subdivided into those involving inhibition (“It is hard for me to . . . ”) and those involving excess (“I . . . too much”). The resultant statements were employed as items in the construction of the Inventory of Interpersonal Problems (IIP). This inventory requires respondents to indicate the extent to which each of 127 statements of problems expressed by psychiatric outpatients in the course of videotaped intake interviews. In classifying these statements, a distinction was made between interpersonal problems (e.g., “It is hard for me to let other people know when I am angry”) and noninterpersonal problems (e.g., “I have difficulty falling asleep at night”). The interpersonal problems were further subdivided into those involving inhibition (“It is hard for me to . . . ”) and those involving excess (“I . . . too much”). The resultant statements were employed as items in the construction of the Inventory of Interpersonal Problems (IIP). This inventory requires respondents to indicate the extent to which each of 127 statements is problematic on a 5-point Likert scale ranging from “not at all” to “extremely” (Horowitz et al., 1988).

We (Alden, Wiggins, & Pincus, 1990) developed a Circumplex version of Horowitz’s inventory (IIP-C) consisting of eight scales, with eight items each, that assess the interpersonal problems listed in the third column of Table 2.2. The PA scale includes such items as “I try to control other people too much.” The IIP has more recently become available as a commercial test (Horowitz, Alden, Wiggins, & Pincus, 2000) that has been standardized on a representative U.S. sample of 800 adults. In its 64-item version (IIP-64), this instrument is identical to the IIP-C (Alden et al., 1990), which had been previously demonstrated to be a promising clinical instrument (e.g., Gurtman, 1995; Wiggins & Trobst, 1997a). The new manual (Horowitz et al., 2000) reports additional evidence of the clinical utility of the IIP-64.

**Impact Message Inventory**

The Impact Message Inventory (IMI; Kiesler, 1987; Kiesler & Schmidt, 1993) is a highly original and promising method of assessment that is based on Kiesler’s (1988) theory of interpersonal communication in psychotherapy. The theory postulates that disordered individuals are unaware of the unintended, inappropriate, and ambiguous messages they repetitively “send” to others, and that they are thereby confused and distressed by the pattern of negative responses they consistently evoke or “pull” from others. The IMI attempts to identify the location within the interpersonal circumplex of these patterns of negative response evoked in others, as a means of gaining insight into a client’s maladaptive transactional behavior. This instrument has been the focus of a considerable amount of empirical research (Kiesler, 2001).

Items were generated from a content analysis of free responses to 15 interpersonal vignettes that described characters enacting 15 different interpersonal styles, similar to those found in the second column of Table 2.2. Respondents were asked to imagine themselves in the company of each of these characters and to record their covert reactions using the stem “He makes me feel . . . .” Content analysis of responses suggested three categories of covert reaction: (1) direct feelings, (2) action tendencies, and (3) perceived evoking messages. The Octant Version of the IMI (Kiesler & Schmidt, 1993) consists of six items for each of the target stimuli listed in the fourth column of Table 2.2. For each octant, there are two items for each of the three categories of covert reaction to the target stimulus. Thus the PA scale includes two items each for direct feelings (e.g., “bossed around”), action tendencies (e.g., “I want to tell him to give someone else a chance to make a decision”), and perceived evoking messages (e.g., “He thinks he’s always in control of things”). Respondents (e.g., a psychotherapist) are asked to imagine themselves in the company of a particular person (e.g., a psychotherapy patient) and to indicate the extent to which they experience the covert reactions on a 4-point scale. Covert reactions to a target person (e.g., feeling “bossed around”) are thus revealing of the personality of that target person (e.g., rigidly dominant [PA]).

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**TABLE 2.2. Octant Scales from Four Interpersonal Assessment Instruments**

<table>
<thead>
<tr>
<th>Interpersonal Adjective Scales (IAS)</th>
<th>Inventory of Interpersonal Problems (IIP)</th>
<th>Impact Message Inventory (IMI)</th>
<th>Support Actions Scale—Circumplex (SAS-C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA Assured—Dominant</td>
<td>Dominating</td>
<td>Dominant</td>
<td>Directive</td>
</tr>
<tr>
<td>BC Arrogant—Calculating</td>
<td>Vindictive</td>
<td>Hostile—Dominant</td>
<td>Arrogant</td>
</tr>
<tr>
<td>DE Cold-hearted</td>
<td>Cold</td>
<td>Hostile</td>
<td>Critical</td>
</tr>
<tr>
<td>FG Aloof—Introverted</td>
<td>Socially Avoidant</td>
<td>Hostile—Submissive</td>
<td>Distancing</td>
</tr>
<tr>
<td>HI Unassured—Submissive</td>
<td>Nonassertive</td>
<td>Submissive</td>
<td>Avoidant</td>
</tr>
<tr>
<td>JK Unassuming—Ingenuous</td>
<td>Exploitable</td>
<td>Friendly—Submissive</td>
<td>Delerential</td>
</tr>
<tr>
<td>LM Warm—Agreeable</td>
<td>Overly Nurturant</td>
<td>Friendly</td>
<td>Nurturant</td>
</tr>
<tr>
<td>NO Gregarious—Extraverted</td>
<td>Intrusive</td>
<td>Friendly—Dominant</td>
<td>Engaging</td>
</tr>
</tbody>
</table>
Support Actions Scale—Circumplex

The Support Actions Scale—Circumplex (SAS-C; Trobst, 1999, 2000) is an individual-differences measure of dispositions to provide (or not to provide) esteem (status) and emotional (love) support to those in need of help or assistance. On the basis of the general logic of the interpersonal circumplex and the facet-analytic theory of Foa and Foa (1974), three expert judges devised items to measure the postulated eight categories of support listed in the final column of Table 2.2 (Trobst, 2000). Representative items include the following: PA, “Give advice”; BC, “Persuade them to change their behavior”; DE, “Remind them that whining doesn’t help”; FG, “Remain detached while listening to their problem”; HI, “Avoid being directive”; JK, “Not argue with them”; LM, “Give them a hug”; and NO, “Check up on them frequently.” Successive pools of these items were administered to samples of undergraduates with instructions to rate, on a 7-point Likert scale, the degree to which they characteristically or typically performed these actions when a friend or family member was in need of support. The resultant circumplex structure of the SAS-C is comparable to the best structures reported in the literature. The SAS-C has been used in the study of physically ill recipients of social support and their support providers, and has been found to be related to personality characteristics (Trobst, 2000) and marital satisfaction (e.g., Trobst & Hemphill, 2000).

INTERPRETIVE PRINCIPLES

Among the most valuable features of the circumplex model is the opportunity it provides for interpreting interpersonal variables with reference to the geometric properties of a circle (LaForge et al., 1954). The variables of traditional multiscale inventories are typically displayed as “factor lists” (Hogan, 1983), in which the ordering and interrelations among variables lack both conceptual and interpretive significance. In contrast, the trigonometric procedures that can be applied to the variables of an interpersonal circumplex permit descriptions and diagnostic inferences that cannot be generated from traditional scale analyses (Wiggins, Phillips, & Trapnell, 1989).

Some general principles of circumplex interpretation may be illustrated with reference to the IAS profile of a 33-year-old male bank manager displayed in Figure 2.2. At the bottom of the figure are T-scores on the octant variables, expressed with reference to an appropriate normative group (Wiggins, 1995, pp. 70–71). These scores have been plotted on shaded sectors of the circle, and they are interpreted as representing eight vectors in two-dimensional space. The mean or “average directionality” of these vectors is of critical diagnostic significance, because it determines the typological category to which this man will be assigned. By trigonometric procedures, this average directionality was determined to be 87°, which falls near the midpoint of the Assured-Dominant (PA) category. This angular location is considered to be representative of individuals classified as pure PA “types.” Had the location been at 110°, a more hostile manifestation of dominance (BC) would have been suggested; had it been at 65°, a more affiliative expression of dominance (NO) would have been suggested.

The general shape of the profile in Figure 2.2 closely resembles the “characteristic configuration” of IAS profiles, which is found in the average profiles of subjects in all IAS typological groups (Wiggins et al., 1989). The
A circumplex structure can be defined and evaluated by a number of different but complementary methods. Guttman (1954) originally defined the circumplex as a particular pattern of correlations when he demonstrated that the intercorrelations of tests of mental abilities have this distinctive pattern. In the same year, LaForge and colleagues (1954) independently identified “a two-dimensional array in ordinary Euclidian space [in which] conventional trigonometric and analytic formulas relate ... the variables” (p. 140). More recent accounts have emphasized the two principal components that underlie the intercorrelations among interpersonal variables (e.g., Wiggins, Steiger, & Gaelick, 1981). That these two principal components clearly reflect the metaconcepts of agency (power, control, dominance) and communion (intimacy, nurturance, love) has allowed for an unusually close relationship between theory and measurement in the interpersonal paradigm (Wiggins, 1991). This close relationship makes it possible to introduce the variables of the paradigm and their underlying measurement model at the same time.

**Defining and Evaluating Circumplex Structure**

The pattern of correlations just described should hold for all of the...
octant variables. That is, there should be strong negative correlations with polar opposite variables; zero correlations with variables at right angles ("orthogonal") to the variable itself; and moderate positive and negative correlations with adjacent and more distant pairs of variables, respectively. Table 2.3 presents the general pattern of intercorrelations among variables within what Guttman (1954) called a "circulant correlation matrix." In that table, the correlation of a variable with itself is assumed to be 1.00, and that value appears in every cell of the principal diagonal. Note also that, in theory, successive diagonals all have the same values, which decrease as indicated by the inequality symbols.

In the IAS data obtained from 2,988 university men and women that formed the basis for Figure 2.3, the obtained correlations in each of the diagonals specified in Table 2.3 were used to obtain ordinary least-squares estimates of population correlation coefficients for elements in each diagonal

<table>
<thead>
<tr>
<th>Variable</th>
<th>PA</th>
<th>BC</th>
<th>DE</th>
<th>FG</th>
<th>HI</th>
<th>JK</th>
<th>LM</th>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
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<td>$\rho_1$</td>
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</tr>
<tr>
<td>4</td>
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<td>$\rho_2$</td>
<td>$\rho_1$</td>
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<td>$\rho_2$</td>
<td>$\rho_1$</td>
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</tr>
<tr>
<td>6</td>
<td>$\rho_5$</td>
<td>$\rho_4$</td>
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<tr>
<td>7</td>
<td>$\rho_6$</td>
<td>$\rho_5$</td>
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<td>$\rho_4$</td>
<td>$\rho_3$</td>
<td>$\rho_2$</td>
<td>$\rho_1$</td>
<td>1.00</td>
</tr>
</tbody>
</table>


(Steiger, 1980). These population correlation coefficient estimates are presented in Table 2.4.

One method for evaluating the circumplexity of a measuring instrument is that of comparing the estimated population correlation matrix with the empirical correlation matrix obtained within a given sample of respondents (Wiggins et al., 1981). The empirical correlation matrix obtained from the Wiggins (1995) study of university students is shown in Table 2.5. Subtraction of the elements in Table 2.5 from those in Table 2.4 yields a residual correlation matrix that indicates the differences between the obtained correlation matrix and the estimated population correlation matrix. As can be seen from inspection, these differences are small; their absolute mean value is .04 (Wiggins, 1995).
Multiple Perspectives

Principal-components analyses and correlational analyses do not exhaust the available methods for defining and evaluating circumplexity. In recent years, a number of new methods for evaluating circumplexity have been introduced (e.g., Browne, 1992; Browne & Cudeck, 1992; Davison, 1994; Fabrigar, Visser, & Browne, 1997; Gurtman, 1994; Tracey & Rounds, 1997); these differ in the ways in which a circumplex is defined and evaluated. In light of these differences in conceptualization and analysis, Gurtman and Pincus (2000) have suggested that multiple perspectives be applied in a given circumplex analysis, in order to more fully understand the specific strengths and weaknesses of the measures under investigation. Their own analyses are particularly germane to the present discussion, because their applied three quite different methods of circumplex evaluation to the IAS data set based on 2,988 students that we have been considering. The methods described by Gurtman and Pincus and applied to the IAS data set were the spatial representation model (Shepard, 1978), the circulant correlation model (Wiggins et al., 1981), and the “circular-order” model of analysis developed by Tracey and Rounds (1997). This last model involves highly fine-tuned criteria of circumplexity:

As applied to the IAS, perfect fit to the circular model requires that (a) correlations of scales adjacent on the circle (e.g., Assured-Dominant [PA] and Arrogant-Calculating [BC]) be of greater magnitude than are correlations for scales more than one step away, (b) correlations of scales two steps apart on the circle (e.g., PA and Cold-hearted [DE]) be greater than for scales more than two steps apart (e.g., PA and Aloof-Introverted [FG]) and (c) correlations of scales three steps apart (e.g., PA and FG) away exceed those for scales opposite on the circle (e.g., PA and Unassured-Submissive [HI]). For an 8 × 8 matrix of correlations, the test of the circular order model would involve 288 order predictions, each involving a comparison between two correlations. (Gurtman & Pincus, 2000, pp. 378–379)

Although this is a rather stringent set of structural criteria, all 288 of these predictions were confirmed in the IAS data set.

CLASSIFICATION OF PERSONALITY SCALES WITH THE INTERPERSONAL CIRCUMPLEX

I originally developed the IAS as a theory-driven taxonomy for the classification of trait descriptive adjectives within the interpersonal domain (Wiggins, 1979). The longer-range goal of this research was to provide a taxonomic framework within which we could classify some of the literally hundreds of personality scales that have been developed within the fields of personality, social, and clinical psychology. During the subsequent decade, various scales and inventories believed to be “interpersonal” in nature were administered, along with the IAS, to approximately 2,000 university students (Wiggins & Broughton, 1991).

The manner in which we determined what Gurtman (1991) has called the “interpersonalness” of a given personality scale can be understood with reference to Figure 2.4. Assume that a particular personality scale has been administered to a group of respondents, along with the IAS. The scale of interest is scored, as are the eight octants of the IAS, which are expressed as a factor score on DaM (Factor II). In the case of a well-structured circumplex, such as the IAS, the computation of factor scores is a relatively simple procedure:

\[ \text{LOV} = 0.3[(LM - DE) + 0.707(NO - BC - FG + JK)] \]
\[ \text{DOM} = 0.3[(PA - HI) + 0.707(NO - BC - FG - JK)] \]

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The manner in which we determined what Gurtman (1991) has called the “interpersonalness” of a given personality scale can be understood with reference to Figure 2.4. Assume that a particular personality scale has been administered to a group of respondents, along with the IAS. The scale of interest is scored, as are the eight octants of the IAS, which are expressed as standard scores. The next step is to compute factor scores for each respondent on the two coordinates of Love (LOV; Factor I) and Dominance (DOM; Factor II). In the case of a well-structured circumplex, such as the IAS, the computation of factor scores is a relatively simple procedure:

\[ \text{LOV} = 0.3[(LM - DE) + 0.707(NO - BC - FG + JK)] \]
\[ \text{DOM} = 0.3[(PA - HI) + 0.707(NO - BC - FG - JK)] \]

In Figure 2.4, it can be seen that factor scores for both LOV and DOM range from −1 to +1. Each subject has a factor score on LOV (x) a factor score on DOM (y), and a raw score on the outside variable of interest (ν). The correlation between x and ν gives the distance from the origin of the variable along the horizontal axis (x = Rxν); the correlation between y and ν locates the variable on the vertical axis (y = Ryν). The angular displacement of the variable from the x axis is given by (θ = tan⁻¹(y/x)), an operation that can be performed on most scientific calculators; this value is referred to as the “angular location” of the outside variable. The length of the vec-
tor associated with the outside variable is given by \( r = \sqrt{x^2 + y^2} \); this value is referred to as the "vector length" of the variable.

Our geometric taxonomy of personality scales involved the classification of 172 such scales in terms of their angular location and vector length when projected upon the IAS (Wiggins & Broughton, 1991). The classification was divided into eight sections that reported the angular location and vector length of each projected scale for each of the eight octants of the IAS. A fragment of this taxonomy is illustrated in Table 2.6. The Unassuming-Ingenuous (JK) octant of the IAS occupies a sector ranging from 292° to 337°. In Table 2.6, the angular location of each scale that fell in this sector is displayed, along with the author(s) of the scale, the inventory from which it came, the name given to the scale by its author(s), and the vector length of the scale’s projection.

The Unassuming-Ingenuous (JK) scale from the IAS is highlighted to serve as a marker variable for this octant, and it is located at the midpoint of the JK octant (315°) with a substantial vector length (.82). There is considerable convergence among scales from Gough and Heilbrun’s Adjective Check List (.41), Campbell’s Murray Need Scales (.38), Stern’s Activities Index (.29), and Edwards’s Personal Preference Schedule (.28) on the common construct of “deference,” which is a word that frequently comes to mind with reference to the unassuming-ingenuous individual (Wiggins, 1995, pp. 25–26). The related construct of “abasement” appears in scales from the inventories of Campbell (.41) and Jackson (.27). Less central, but still related to the unassuming-ingenuous personality, are the constructs of “self-control” from the Adjective Check List (.55) and “harm avoidance” from the Personality Research Form (.27).

As we noted in an earlier paper,

Investigations of the relationships between the IAS and other existing measures from the same (interpersonal) or different domains (e.g., temperament) serve two related purposes: (1) the conceptual meaning of a given measure or set of measures . . . may be clarified by establishing its location within the IAS circumplex space or (2) the nomological network within which the IAS variables are embedded may be enriched by establishing the external correlates of the IAS. (Wiggins & Broughton, 1985, p. 3)

**AXIOMS OF CONTEMPORARY INTERPERSONAL THEORY**

Contemporary theory and research within the interpersonal paradigm are concerned with a wide range of topics that are approached from a number of somewhat differing viewpoints using different measurement procedures (see Kiesler, 1996). Nevertheless, two widely accepted principles seem to be subscribed to by most, if not all, workers in the field. These principles stem...
directly from Sullivan’s notion of “interpersonal force fields,” and from his emphasis on “security” and “self-esteem” as the principal sources of satisfaction in interpersonal relations.

**Interpersonal Force Fields**

In the following quotations, Kiesler (1996) provides an exceptionally succinct statement of several interrelated principles concerning the dynamics of interpersonal behavior that are central to the interpersonal paradigm:

> Interpersonal theory asserts that each of us continually exudes a force field that pushes others to respond to us with constricted classes of control and affiliation actions; thereby we pull from others complementary responses designed to affirm and validate our chosen style of living and being. (p. 85; emphasis in original) ... The abnormal individual imposes an extreme and intense force field on his or her interpersonal transactions. (p. 128)

Although stated somewhat differently by different interpersonal theorists, the central idea of complementarity here is that during interactions, Person A (perhaps unknowingly) attempts to “elicit” behavior from Person B that is compatible with Person A’s preferred definition of an interpersonal situation with respect to the dimensions of control (agency) and affiliation (communion). It has also been suggested that persons tend to elicit behaviors opposite to them on the interpersonal circle when their behavior is within the realm of the dimension of agency (e.g., dominance begets submission, and submission begets dominance), whereas behaviors within the realm of communion tend to elicit similar behaviors (e.g., love begets love, and hate begets hate). For example, Person A may wish to define the situation as one in which Person A him- or herself is important and likeable, and Person B is a likeable but unimportant person. To the extent that Person B responds with behavior that conforms to Person A’s definition of the situation, the relationship between Person A and Person B is said to be complementary (Carson, 1979). The strength and determination with which Person A tends to impose his or her force field on all partners at all times is an index of the maladaptive nature of Person A’s recurrent patterns of interpersonal situations.

**Social Exchange**

Whereas the notion of “interpersonal force fields” emphasizes the strength and flexibility of interpersonal transactions, the idea of “social exchange” specifies the content of these transactions. Interpersonal transactions may be thought of as occasions for exchange in which participants give social resources to or take them away from each other. Foa and Foa (1974) have provided a theory of social exchange that emphasizes the development of cognitive categories of social perception with respect to directionality (accepting or rejecting), object (self or other), and resource exchanged (love or status). Foa (1965) had earlier applied this facet-analytic approach in a social exchange analysis of Leary’s circumplex model of interpersonal behavior. I (Wiggins, 1982) later applied a slightly modified version of Foa’s circumplex analysis in the development of the IAS, and this is shown in Table 2.7a.

Although the resources exchanged in interpersonal transactions may include money, goods, services, and information, the resources of status (agency) and love (communion) are considered to be the coins of the realm of interpersonal exchange (Foa & Foa, 1974). In Table 2.7a, the facet elements of giving (+1) and denying (−1) of love and status to self and to other are specified for each of the eight variables of the IAS. Thus the Assured-Dominant (PA) variable is defined as the granting of status and love to self, and the granting of love but not status to the other. The Arrogant-Calculating (BC) variable is defined as the granting of status and love to self, and the denial of both status and love to the other. Examination of the rows of Table 2.7a reveals that each row differs from the preceding row in one element (BC differs from PA in not granting love to the other, DE differs from BC in not granting love to self, etc.). Note also that the first variable (PA) and last variable (NO) differ from each other on one element (PA does not grant status to other). To the extent that these facet assignments are in fact true, the relationship among the eight variables will necessarily be circular (Foa, 1965).

When the entries in Table 2.7a are treated as standard scores (M = 0, SD = 1), the relation between any two variables may be obtained by summing the cross-products of their respective row elements. Thus the relation between PA and BC is (+1 x +1) + (+1 x +1) + (+1 x -1) + (-1 x -1) = 2. The sums of the cross-products for all combinations of the eight variables are presented in Table 2.7b. Dividing the elements in Table 2.7b by the number of “observations” (i.e., 4) yields the correlation matrix shown in Table 2.7c. Extracting and rotating two principal components from this matrix (see Chapter 4) yields the factor matrix in Table 2.7d. Figure 2.5 presents a plot of this solution in which the black squares indicate the location of the eight variables. It can be seen from this figure that the eight variables fall at the center of each of the eight categories and are close to the perimeter of the interpersonal circle. This perfect, evenly spaced circumplex is the standard against which interpersonal assessment instruments are evaluated.

**THE NATURE OF INTERPERSONAL SPACE**

Although the basic geometry of interpersonal space is well established and may be analyzed by a variety of methods (Gurtman & Pincus, 2000), the
### TABLE 2.7. Derivation of the Interpersonal Circumplex

**a. Facet composition of interpersonal variables**

<table>
<thead>
<tr>
<th></th>
<th>Self</th>
<th></th>
<th>Other</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Status</td>
<td>Love</td>
<td></td>
<td>Status</td>
</tr>
<tr>
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</tr>
<tr>
<td>BC</td>
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<td>-1</td>
<td>+1</td>
<td>-1</td>
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<td>+1</td>
</tr>
<tr>
<td>FG</td>
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<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>HI</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>+1</td>
</tr>
<tr>
<td>JK</td>
<td>-1</td>
<td>-1</td>
<td>+1</td>
<td>+1</td>
</tr>
<tr>
<td>LM</td>
<td>-1</td>
<td>+1</td>
<td>+1</td>
<td>+1</td>
</tr>
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<td>+1</td>
<td>+1</td>
<td>+1</td>
</tr>
</tbody>
</table>

**b. Sums of cross-products (ΣXY)**

<table>
<thead>
<tr>
<th></th>
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<th>BC</th>
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<th>FG</th>
<th>HI</th>
<th>JK</th>
<th>LM</th>
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</thead>
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<td>-2</td>
<td>-4</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

**c. Correlation matrix (ΣXY/N)**

<table>
<thead>
<tr>
<th></th>
<th>PA</th>
<th>BC</th>
<th>DE</th>
<th>FG</th>
<th>HI</th>
<th>JK</th>
<th>LM</th>
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<td></td>
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**d. Rotated factor matrix**

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<td>.85</td>
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<td>.85</td>
</tr>
<tr>
<td>NO</td>
<td>.65</td>
<td>.65</td>
<td>.85</td>
</tr>
</tbody>
</table>

% variance: 42.5% 42.5% 85%

---

turance (IAS) and nurturant social support style (SAS-C) are closely related, dispositional dominance and dominant social support style are largely unrelated. Additional analyses demonstrated that in comparison with individuals of other personality “types,” dispositionally nurturant individuals reported performing more of all potentially helpful behaviors, including relatively dominant actions (e.g., giving advice), and less of all “unhelpful” behaviors (e.g., reminding them that whining doesn’t help). Metaphorically speaking, the “force field” of a social support context appears to perturb the usual structure of a dispositional “field.”

**Clinical Applications of the Interpersonal Circumplex**

**Psychiatric Diagnosis**

The recent revival of interest in the application of circumplex models to the formal diagnostic categories of the American Psychiatric Association is not without historical precedent. For many years, the interpersonal paradigm has been recommended either as a supplement to the Diagnostic and Statistical Manual of Disorders (DSM) criteria (e.g., Benjamin, 1993, 1996; Kiesler, 1986; Leary, 1957; Plutchik & Conte, 1986; Plutchik & Platman, 1977; Wiggins, 1982), or as a replacement for that diagnostic system (e.g., Adams, 1964; Carson, 1996; McLemore & Benjamin, 1979). Over 40 years ago, Leary (1957) proposed an equivalence between the typological categories of the circumplex and the diagnostic categories of DSM-I: PA, compulsive personality; BC, narcissistic personality; DE, psychopathic personality; FG, schizoid personality; HI, obsessive personality; JK, dependent personality; LM, hysteric personality; and NO, “hypernormal” (psychosomatic) personality. The categories, labels, and criteria of DSM have changed since that time, as have the descriptive labels attached to interpersonal categories, but Leary’s prescience in these matters should be evident.

The definition of the personality disorders in terms of personality traits by the American Psychiatric Association (1980), and the availability of new instruments and techniques for assessing personality disorders, has resulted in an increased understanding of this diagnostic axis. For example, the DSM-III and DSM-III-R personality disorder categories have been shown to be well captured by the two-dimensional structures of the IAS (e.g., Wiggins & Pincus, 1989, 1994) and the IIP-C (e.g., Pincus & Wiggins, 1990; Soldz, Budman, Demby, & Merry, 1993). Similarly, clinicians’ ratings of DSM-II personality disorder categories have been found to be well captured by an interpersonal circumplex model (e.g., Blashfield, Sprock, Pinkston, & Hodgins, 1985; Plutchik & Conte, 1986). And Benjamin (1993, 1996) has provided detailed and perceptive descriptions of procedures for the diagnosis of DSM-III-R and DSM-IV personality disorders within the framework of her variant of the interpersonal circumplex model.

**Psychotherapy**

The interpersonal paradigm originated in the context of psychotherapy and, perhaps more than any other paradigm, has contributed to an understanding of the therapeutic process itself (e.g., Anchin & Kiesler, 1982; Benjamin, 1993, 1996; Kiesler, 1988; Safran & Segal, 1990; Sullivan, 1953b). The most notable contribution of the paradigm to psychotherapy has been the circumplex structural model, which provides a framework for representing dyadic interactions in the therapeutic relationship. A number of different assessment devices based on the interpersonal circumplex, and variants of that model (Benjamin, 1974), have proven useful in studies of psychotherapy process and outcome (Kiesler, 1992). The IIP has been employed in the prediction of response to treatment (Alden & Capreol, 1993; Horowitz, Rosenberg, & Bartholomew, 1993; Mohr et al., 1990), the development of therapeutic alliance (Muran, Segal, Samstag, & Crawford, 1994), and prediction of continuation in psychotherapy (Horowitz et al., 1988).

Henry (1996) has made a case for the Structural Analysis of Social Behavior (Benjamin, 1974) as a common metric for programmatic psychotherapy research. Kiesler, Schmidt, and Wagner (1997) have stressed the conceptual advantages of the IPI in analyzing the psychotherapeutic relationship. And Kiesler (1996) has also emphasized the potential of the revised Check List of Psychotherapy Transactions (Kiesler, Goldston, & Schmidt, 1991) for measuring the interpersonal behavior of interactants in the therapy relationship. In sum, such studies constitute an impressive empirical literature that attests to the heuristic potential of the interpersonal circumplex model in psychotherapy research.

**Overview**

The field-theoretical perspective in physics influenced the theoretical formulations of Harry Stack Sullivan, whose interpersonal theory of psychiatry eventually provided the conceptual foundation for the interpersonal paradigm. In the 1950s, Timothy Leary and other members of the Kaiser Foundation research group in Oakland, California, attempted to operationalize Sullivan’s ideas with reference to the coding of interpersonal interactions among patients in psychotherapy groups. The system that emerged identified an array of interpersonal behaviors that were ordered in circular fashion around the two coordinates of power and affiliation. Leary's
(1957) seminal formulation of this interpersonal system of personality diagnosis launched the interpersonal paradigm in personality assessment.

As Gurtman (1992) has emphasized, the interpersonal circumplex itself functions as a nomological net within which the construct validity of other interpersonal measures may be evaluated. We (Wiggins & Broughton, 1985, 1991) had similarly emphasized the integrative function of the circumplex model in providing a single framework for interpreting personality scales from a variety of research traditions in personality, clinical, and social psychology. Circumplex representations of the interpersonal field have proven to be of considerable heuristic value in both the conceptualization and measurement of a variety of interpersonal phenomena, as is evident from the approximately 1,000 references that appear in Kiesler's (1996) magisterial survey of that literature. Research topics to which the model has proven particularly applicable include complementarity (e.g., Kiesler, 1983), nonverbal behavior (e.g., Gifford, 1991), manipulation tactics (e.g., Buss, Gomes, Higgins, & Lauterbach, 1987), agentic and communal situations (e.g., Moskowitz, 1994), and attachment styles (e.g., Bartholomew & Horowitz, 1991).

Although Guttman's (1954) circumplex model was originally developed to capture the structure of mental abilities, it has proven especially valuable as a model of interpersonal behaviors. The circumplex has provided both a conceptual and a computational model of interpersonal assessment. In conceptualization, the model may be used to describe the manner in which interpersonal behavior is influenced by the underlying coordinates of agency and communion. In computation, the model permits the rigorous analysis of patterns of both test and person variables in psychodiagnostic work. Although once considered an "underground movement" running counter to the mainstream, the interpersonal paradigm of personality assessment must now be counted among the major paradigms on the contemporary scene.