

# PERSONALITY: STRUCTURE AND ASSESSMENT

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## CONTENTS

INTRODUCTION .....	473
BACK TO BASICS .....	474
<i>The Concept of Trait</i> .....	474
<i>Personality Language and Trait Taxonomies</i> .....	475
<i>Personality Structure</i> .....	476
<i>The Study of Lives</i> .....	487
<i>The Perception of Traits</i> .....	493
PERSONALITY STRUCTURE, THEN AND NOW .....	496

## INTRODUCTION

Although conceived in different ways by different investigators, the concept of *trait* is the central concern of the fields of personality structure and personality assessment. Investigators of personality structure are concerned with providing multivariate representations of the organization of traits, from both nomothetic and idiographic perspectives, and with the consistency and change of these structures over the lifespan. Investigators of personality assessment are concerned with the development and evaluation of procedures for the measurement of traits, within both nomothetic and idiographic testing

paradigms, and with the forecasting of significant life events from the information provided by these measurement procedures. For some of us, these are heady enterprises that enrich our lives and work. For others, they are less so. Much may depend upon one's early experiences in graduate school.

As McAdams (1990) notes, the budding personologist is likely to find both villains and heroes in forging his or her own professional identity (Erikson 1980). For McAdams, and likely for many of his generation, the early heroes were Henry Murray and Gordon Allport, and the first villain was Walter Mischel (p. 284). However, with the passage of time since Mischel's (1968) first formulation of the person-situation issue, at least some personologists have come to view the debate "as an intellectually stimulating chapter in the history of the discipline, replete with useful lessons for professionals who include assessment in their repertoire" (Kenrick & Funder 1988:23). It is clear from the literature reviewed here that there has also been a strong "back to basics" trend that reaffirms the centrality of trait psychology in the study of lives.

## BACK TO BASICS

### *The Concept of Trait*

One might easily conclude from Kenrick & Funder's (1988) evenhanded historical analysis of the highly polarized trait controversy that in future personality psychologists will seek truth "somewhere in the less striking gray area" (p. 31) between the hyperskeptical position (traits are in the eye of the beholder) and the pure-trait position ["people show powerful, unmodulated consistencies in their behavior across time and diverse situations" (p. 24)]. Not so. Tellegen (1991), for one, would like to consider "the nature and viability of a *strong*, rather than straw-man, trait position" (p. xx, italics added). He does so in a carefully reasoned and documented defense of the realist view of the trait concept as "an inferred organismic structure underlying an extended family of consequential behavioral dispositions" (p. xx). The implications of this strong position are explored in detail for such topics as the nature of traits, traits as dispositions, trait-situation matching, situational constraints, aggregation, person-situation interactions, and "traitedness." Tellegen's chapter is a sharply focused and modern exposition of the "basics" found in the writings of Allport, Cattell, Murray, and Thurstone.

On another front, McCrae & Costa (1990) are seeking to reestablish a strong trait psychology within the pantheon of classical theories of personality (psychoanalysis, behaviorism, humanism): "from the beginning trait psychology has been regarded as a relatively minor part of personality theory: not as a fourth school, but only a set of personality measures, a few isolated studies, an appendix to one of the "true schools" (p. 21). Although their case for trait

psychology as a major theory of personality originally rested largely on studies of the longitudinal stability of personality dimensions, their more recent studies of the prediction of major life outcomes, such as occupational change (McCrae & Costa 1985), life satisfaction (Costa & McCrae 1984), and coping with a nuclear accident (Costa & McCrae 1989a) attest to what Tellegen calls the "response penetration" of traits.

On still a different front, Arnold Buss (1989) makes it clear that "If there is to be a specialty called personality, its unique and therefore defining characteristic is traits" (p. 1378). In an invited article meant to describe personality psychology to psychologists in other specialties, Buss captures many of the central issues in a strong trait psychology with gratifying clarity. In contrasting the work of trait psychologists with that of others who study the impact of experimental manipulations on specific responses, he discusses laboratory procedures that tend to increase or decrease the importance of traits (see Table 1). This discussion is meant to discourage those who would attempt to establish the relative importance of traits or manipulations in a single experiment.

And for those who are still not convinced that personality psychology has taken a decided swing back to fundamentals, consider Funder's (1991) observation that "As it turns out, Allport's basic ideas look remarkably sound even with 53 years of hindsight, and yield a large number of implications for conceptualization and research in modern personality psychology" (p. 32). Although Funder's brief outline of a "Neo-Allportian" theory of global traits is informed by the results of contemporary empirical research, it is unmistakably Allportian in its fundamental assertion that "Traits are real" (p. 32). That this return to roots may continue for some time is suggested by John & Robins' (1992) forthcoming chapter, "Gordon Allport: Father and critic of the five-factor model."

### *Personality Language and Trait Taxonomies*

Within the field of personality structure, it is convenient to distinguish between: 1. the development of multivariate models for representing latent variables underlying individual differences in personality structure and 2. the

**Table 1** Manipulations and traits

	Manipulations become important	Traits become important
context	novel, formal, public	familiar, informal, private
instructions	detailed, complete	general or none
choice	little or none	considerable
duration	brief	extensive
response	narrow	broad

development of taxonomies of trait-descriptive terms that provide a representation of how personality attributes are encoded in ordinary language. The latter, long-standing, lexical approach to the study of personality (John et al 1988) constitutes an important area of inquiry in its own right (Goldberg 1981b). It is also of central importance to the development of multivariate models of personality structure for those who subscribe to Cattell's (1946) dictum that an analysis of the "language personality sphere" must precede scale construction. Recent overviews of both of these traditions have emphasized their convergence within a common framework provided by the five-factor model of human characteristics (John 1990a,b; Wiggins & Trapnell 1992).

Personality language was recently the topic of a special issue of the *European Journal of Personality* that provides an interesting cross-section of current taxonomic research in several countries (Hofstee & Van Heck 1990). Reading these articles, one can still detect some of the enthusiasm that accompanied earlier proposals for transcultural taxonomies: "In our most grandiose moments, my colleagues and I see our scientific task as one of discovering the basic elements that underlie the personality compounds found in the various natural languages" (Goldberg 1981a:44). Overall, the tone of these recent articles is soberer, and the focus is upon the difficult obstacles that must be overcome before trait taxonomies can be considered to have a firm scientific basis (e.g. Hofstee 1990). Although the superordinate dimensions of the five-factor model are discernible across cultures and between taxonomies developed within the same language groups, "convergence on a set of specific 'middle level' categories or facets (Briggs 1989) is nowhere in sight" (Angleitner et al 1990:115). And it may be that complex dimensions, such as openness to experience, cannot be represented at even a superordinate level by single trait-descriptive adjectives (McCrae 1990).

Those not directly familiar with this work may not appreciate the magnitude or the labor-intensive nature of these taxonomic enterprises. Consider, to take a single example, the procedures whereby judges classified 5,092 German adjectives in the research of Angleitner et al (1990): "To ensure that they would work as carefully as possible, the judges were given no time limit. As a consequence, the categorization of the entire pool of adjectives by each of the 10 judges required almost four years" (p. 107).

### *Personality Structure*

Digman's (1990) *Annual Review* chapter provided a thoughtful overview of the five-factor model of personality structure that serves as an excellent introduction to what is still the most noteworthy topic in the literature. Although sharing the enthusiasm of some of the more "bullish" investors in this enterprise, Digman notes that the model is not without its critics. In

particular, Waller & Ben-Porath (1987), in response to an article by McCrae & Costa (1986) suggesting that clinical assessment could benefit from the five-factor model, argued that "the field of clinical psychology, as well as personality, should refrain from prematurely jumping onto a 'big-five' bandwagon" (p. 888). Their major reservations may be summarized as follows:

1. Many of the studies cited in support of the five-factor model were based on variants of Cattell's (1943) original rating scales, and hence "are better thought of as replications, rather than conceptual validations of the five-factor model" (p. 887).
2. Claims for the comprehensiveness of the model are premature because "we are aware of several well-articulated models of personality structure (e.g. Jackson's 1967 work on Murray's needs; Gough's 1969 catalog of folk concepts; Tellegen's 1992 three-factor temperament model) that have yet to be incorporated into the five-factor model" (p. 887).
3. It is premature to stress the inadequacies of the MMPI as a measure of critical dimensions and to advocate "inclusion of standardized measures of the five factors in clinical assessment so that practitioners will be able to take advantage of state-of-the-art personality assessment strategies" (p. 887).

These reservations, if well founded, should be taken seriously, and they may be thought of as raising issues related to 1. structure, 2. assessment, and 3. applications, respectively. In the three sections that follow, we emphasize recent work relevant to each of these issues.

#### THE FIVE-FACTOR MODEL

*Structural issues* In response to the first reservation stated above, Goldberg (1990) sought evidence for a five-factor structure in a comprehensive set of common English trait adjectives that were assembled independently of the Cattell tradition. Previously, Norman (1967) selected 2,800 trait terms from an unabridged dictionary and reduced the list to 1,431 relatively familiar terms. He later classified these terms into 75 fine-grained categories within the framework of the five-factor model. In factoring these 75 scales formed by summing within categories, Goldberg (1990) found a clear five-factor structure that was virtually invariant under different methods of factor extraction, different methods of rotation, and different numbers of factors rotated.

To demonstrate the generalizability of this structure beyond Norman's initial classifications, Goldberg developed a new set of 133 synonym clusters from 479 commonly used terms that were independently judged by lexicographers as similar in meaning. When scale versions of these clusters were factored, a clear five-factor structure emerged in both peer- and self-

ratings. *Conclusion:* The five-factor model has substantial generalizability across different sets of representative English adjectives.

Angleitner et al (1990) went to even greater lengths to avoid any possible "prestructuring" of terms that might be biased toward a five-factor solution. From a pool of more than 5,000 German trait-descriptive terms they selected 430 adjectives that judges agreed were clearly dispositional in nature. Instead of grouping terms into synonym clusters, Ostendorf (1990) then factored self- and peer-ratings of the items in the entire pool and obtained a clear five-factor structure that was invariant across different methods of rotation and different numbers of factors rotated. *Conclusion:* The five-factor model has substantial generalizability to sets of representative German adjectives.

The Ostendorf (1990) study is also noteworthy for its inclusion of marker variables from previous studies so as to facilitate factor interpretation. External markers of the five factors were provided by translations of bipolar adjective marker scales employed by previous investigators, by prototypicality ratings for all adjectives, and by a translation of the NEO Personality Inventory (NEO-PI; Costa & McCrae 1985). The importance of including appropriate external markers in exploratory studies of the five-factor model cannot be overemphasized (Goldberg 1990), and studies that fail to do so (e.g. Livneh & Livneh 1989) are inherently ambiguous.

Marker variables may also serve to highlight cultural *differences* in content within five-factor structures. Yang & Bond (1990) employed a Chinese translation of the 20 bipolar rating scales of Tupes & Christal (1958) along with a set of 150 frequently used Chinese trait adjectives selected from a pool of 557 terms (Yang & Lee 1971). When subjects rated themselves and significant others on both sets of rating scales, five-factor solutions were obtained for both the imported (Tupes-Christal) and indigenous (Chinese) instruments. However, as the authors noted, "there is no one-to-one correspondence between the local and imported factors. All five indigenous factors show significant beta weights with at least two and sometimes four of the imported factors" (Yang & Bond 1990:1093), suggesting a possible difference in structure between the two sets of factors. The lesson here is that "If only these indigenous materials had been used, many cross-culturalists would probably have detected some apparent universals" (p. 1094).

Most structural investigations of the five-factor model have employed single adjectives as stimuli (e.g. Brand & Egan 1989) or scales from personality inventories (e.g. Conn & Ramanaiah 1990). Recently, however, Borkenau & Ostendorf (1989) and Ostendorf & Angleitner (1990) investigated the structure of questionnaire items taken from four widely used instruments: the Personality Research Form (PRF; Jackson 1967), the Freiberg Personality Inventory (FPI; Fahrenberg & Selg 1970), the Eysenck Personality Inventory (EPI; Eysenck & Eysenck 1968), and the NEO-PI (Costa & McCrae 1985).

Factor analysis of the 576 items from these inventories revealed the expected five-factor structure, which was interpreted with reference to appropriate marker variables.

*Assessment* Waller & Ben-Porath's (1987) second reservation concerned the comprehensiveness of the five-factor model. Since that critique, the specific assessment traditions they mentioned have indeed been incorporated within the model: Jackson's scales for Murray's needs (Costa & McCrae 1988a), Gough's catalog of folk concepts (McCrae et al 1992), and Tellegen's temperament model (McCrae & Costa 1991; Watson & Clark 1992). The Myers-Briggs Type Indicator has also been evaluated from a five-factor perspective (McCrae & Costa 1989b). More generally, the NEO-PI has been systematically related to measures derived from virtually all of the major research traditions in personality assessment (Wiggins & Trapnell 1992). In this context, McCrae & Costa (1989a) note that "We should make it clear that we do not think of the five-factor model as a replacement for other personality systems, but as a *framework* for interpreting them" (p. 451, italics added).

The framework employed by McCrae & Costa is not the only theoretical perspective on the five-factor model, however. Wiggins & Trapnell (1992) distinguish four major contemporary perspectives: the enduring-dispositional (Costa & McCrae), the dyadic-interactional (Wiggins), the social-competency (Hogan), and the lexical (Goldberg). These perspectives differ in their foci of convenience, theoretical orientations, universes of content, assessment instruments, and representative applications (Wiggins & Pincus 1992). Collectively, these perspectives, and the empirical work conducted within them, demonstrate the *comprehensiveness* of the five-factor model.

Different assessment instruments are associated with the theoretical perspectives just enumerated: the NEO-PI (Costa & McCrae 1985), the extended Interpersonal Adjective Scales (IASR-B5; Trapnell & Wiggins 1990), the Hogan Personality Inventory (HPI; Hogan 1986), and the standard marker scales of the Big Five structure (SMS; Goldberg 1992). A convenient 60-item short-form version of the NEO-PI is now available (NEO-FFI; Costa & McCrae 1989b), and a revision that includes facet scales for all five domains is in the works (Costa et al 1992). The Act Report measure of Buss & Craik (1984) has recently been extended from the original dimensions of dominance and nurturance to include the three additional dimensions of the five-factor model (AR-B5; Botwin & Buss 1989). When choosing an assessment instrument, an investigator who contemplates research within the five-factor framework is faced with an embarrassment of riches. Fortunately, Briggs's (1992) comprehensive review of available measures offers sound advice on selecting an instrument that is suited to the particular interests of the investigator.

*Applications* The third reservation of Waller & Ben-Porath involved the use of five-factor measures in clinical assessment. It is noteworthy that the most recent applications of the five-factor model appear to have taken just that direction. The interest of personality psychologists in clinical assessment was stimulated by the appearance of the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association (APA 1980), which defined personality disorders (Axis II) in terms of *personality traits* (p. 305). A number of self-report instruments were developed to discriminate among these categories of personality disorder (e.g. Hyler et al 1989; Millon 1983, 1987; Morey et al 1985; Strack 1987, 1990); and these scales were subsequently found to be substantially and meaningfully related to the five-factor model of personality (e.g. Costa & McCrae 1990; Lyons et al 1990; Wiggins 1987; Wiggins & Pincus 1989, 1992).

The use of the five-factor model in clinical assessment has been the topic of several recent symposia (e.g. Shea 1989; McCrae 1989), the focus of a special section of the *Journal of Personality Assessment* (Costa 1992), and the topic of a forthcoming edited book (Costa & Widiger 1992). Many of these reports are concerned with the application of the five-factor model to the personality disorders described in Axis II of DSM-III, a concern stimulated in part by current deliberations about the role of dimensional assessment in the personality disorders section of the forthcoming DSM-IV (Widiger 1989). As a consequence, the conceptual context in which the five-factor model is embedded has been broadened to include psychiatric and biological perspectives (Costa & Widiger 1992). Within this broadened context, there is evidence that practitioners are in fact availing themselves of state-of-the-art five-factor assessment strategies.

Timothy R. Miller (1992), a clinical psychologist in full-time private practice, has presented a fascinating and highly personal account of the manner in which the five-factor model (as implemented by the NEO-PI) may facilitate the practice of psychotherapy. The recommendations made by Miller do not strike us as premature; they suggest the possibility of more rational assignment of patients to treatments on the basis of well-established dimensions of personality.

THE STRUCTURE OF INTERPERSONAL BEHAVIOR "If I were to bet on what sort of 'basic dimensions' we will eventually settle on in personality research," wrote Carson in his recent *Annual Review* chapter on personality psychology (1989), "I would *still* (Carson 1969) expect variables with an interpersonal referent to provide a large share of the successful candidates" (p. 232). Examination of the recent literature on personality structure suggests that Carson might well win his wager on a number of grounds: 1. There is increasing agreement on the appropriate structural model (namely, the cir-

complex—see below) for representing the dimensions of interpersonal behavior; 2. the theoretical, geometric, and psychometric bases of this model have been clarified; 3. the model has been operationalized in a number of different assessment instruments; and 4. the model has been applied to diverse substantive topics.

*Structural issues* Until the recent resurgence of interest in the five-factor model there was general agreement that the appropriate structural model for representing interpersonal dispositions was a two-dimensional circumplex in which variables are ordered in a circular arrangement around the orthogonal dimensions of dominance (vs submission) and nurturance (vs hostility) (e.g. Benjamin 1974; Kiesler 1983; Leary 1957; Lorr & McNair 1963; Wiggins 1979). The five-factor model provides a comprehensive superordinate taxonomy of individual differences that includes a simple-structure representation of the interpersonal dimensions of surgency/extraversion and agreeableness. The recent recognition that the circumplex and five-factor representations are *complementary* rather than competing (McCrae & Costa 1989a; Trapnell & Wiggins 1990) has led to an increased interest in the structural relations between the two models.

McCrae & Costa (1989c) have addressed a number of methodological issues pertinent to such an integration by jointly factoring self-reports on the revised Interpersonal Adjective Scales (IAS-R; Wiggins et al 1988) and self-, peer-, and spouse-ratings on the extraversion and agreeableness scales of the NEO-PI. Their results provide cross-observer validation of the circumplex structure of interpersonal traits. These findings, together with the ongoing research of Gifford (1992; Gifford & O'Connor 1987), suggest that the circumplex structure reflects behavioral consistencies rather than artifacts (cf Jackson & Helmes 1979). McCrae & Costa also addressed the major structural issue between the two models, that of factor rotation. The NEO-PI model provides a simple-structure representation of the factors of extraversion and agreeableness that differs by approximately 30 degrees from the orientation of the IAS-R dimensions of dominance and nurturance. The authors suggest that the dimensions of extraversion and agreeableness may be more stable and cross-situationally consistent, and that the circumplex dimensions of dominance and nurturance may be more fruitful for the study of interpersonal interactions. In the end, they conclude that "The five-factor model provides a larger framework in which to orient and interpret the circumplex, and the interpersonal circle provides a useful elaboration about aspects of two of the five factors—Extraversion and Agreeableness—and their combinations" (p. 593).

Lorr & Strack (1990) suggest that circumplex and factor-analytic views of the first two factors of the five-factor model may be reconciled by focusing on

the first-order factors *within* the interpersonal domain. They demonstrated that the first four oblique factors extracted from the IAS-R item pool correspond directly to the four bipolar radii of the Interpersonal Circle (e.g. gregarious-extraverted vs aloof-introverted) that are subsumed by the "higher-order" factors of dominance and nurturance. Because this result follows necessarily from the manner in which IAS-R was constructed (Wiggins et al 1988), it may be viewed as additional evidence of the structural validity of IAS-R. The authors emphasize that scales constructed at this level, such as those in the Interpersonal Style Inventory (ISI; Lorr & Youniss 1986), may be of considerable importance and may lead to increased predictiveness (see also Strack & Lorr 1990).

Wiggins and his colleagues (Trapnell & Wiggins 1990; Wiggins & Pincus 1992; Wiggins & Trapnell 1992) have proposed a dyadic-interactional perspective on the five-factor model that supplements circumplex classifications of interpersonal behaviors with reference to the additional dimensions of conscientiousness, neuroticism, and openness to experience. Wiggins & Pincus (1992) investigated the empirical relations between the traditional interpersonal circumplex dimensions of dominance and nurturance and the interpersonal dimensions of both the NEO-PI (extraversion and agreeableness) and the Hogan Personality Inventory (ambition/sociability and likeability). Their results demonstrate that the issue is one of rotation rather than discrepancies regarding the domain of interpersonal traits. In this context, Wiggins (1991) argues that evidence spanning the social sciences and humanities (e.g. world views and philosophies, theories of personality, the study of language, and the study of sex roles) supports the argument that Agency (dominance) and Communion (nurturance) should serve as the conceptual coordinates for the measurement of interpersonal behavior.

*Assessment* Over the years a number of self-report and observer-rating instruments have been developed to assess interpersonal behavior (Kiesler 1991). Often, these instruments are theoretically associated with the interpersonal circumplex, although some do not meet the strong geometric and psychometric assumptions required to represent circumplex structure (Wiggins et al 1989). For example, the FIRO-B scales (Schutz 1958) appear to be almost completely unrelated to the two generally accepted interpersonal dimensions (Hurley 1990). Lorr & Youniss's ISI appears to be overinclusive with regard to dimensions of interpersonal behavior (Lorr & Suziedelis 1990; Strack & Lorr 1990), and the circumplex properties of the ISI items have not been investigated. A recent circumplex modification of the Inventory of Interpersonal Problems (IIP; L. Horowitz 1979; L. Horowitz et al 1988) appears to meet the strong assumptions of circumplex structure. Alden et al (1990) have developed precise circumplex scales (IIP-C) based on a subset of

the original IIP items. The IIP items were originally derived from transcripts of presenting complaints made by psychotherapy patients. As such, the instrument is clinically useful, both for assessing the interpersonal style of a client and for identifying specific behavioral difficulties at the item level.

Gurtman (1992) reports the results of a principal components analysis of a subset of items from Kiesler's (1983) 1982 Interpersonal Circle. His results provide initial support for a circumplex structure underlying Kiesler's theoretically derived items. Gurtman's work also presents additional guidelines for evaluating the "interpersonalness" of scales and inventories, and he offers three reasons why an interpersonal taxonomy of personality constructs is important: 1. it is important to know what a scale measures, specifically what it shares with other broad factors of individual differences; 2. objective data concerning interpersonal content are important in establishing construct validity; and 3. many constructs are assumed to be interpersonal on an a priori basis, without regard to their relations with the established interpersonal dimensions of personality. Gurtman illustrates these points by using the interpersonal circumplex as an objective criterion to evaluate the "interpersonalness" of a number of *purportedly* interpersonal scales.

When the geometric and psychometric assumptions of circumplexity are met, two long-standing issues in interpersonal assessment may be resolved by empirical investigation: the circumplex representation of interpersonal deviance referred to as *vector length* (Gurtman 1992; Wiggins et al 1989), and the concept of interpersonal *complementarity* (Carson 1969; Kiesler 1983; Leary 1957; Orford 1986). In the interpersonal system of personality diagnosis, an individual may be classified as falling within one of the 8 (or 16) sectors of the Interpersonal Circle with reference to his or her average profile of scores on the constituent variables of the system. An individual's location within a sector of the circle may be further characterized in terms of the distance of his or her location from the center of the circle (i.e. vector length). Vector length has been considered a measure of "deviance" in a psychiatric as well as statistical sense (e.g. Leary 1957). However, vector length is not, in itself, considered to be a general measure of psychopathology. Rather, vector length *within* a particular sector of the circle is taken to be an index of the intensity or extremity with which that particular *pattern* of interpersonal dispositions is expressed.

In testing this assumption of interpersonal theory (e.g. Carson 1969; Kiesler 1983; Leary 1957), Wiggins et al (1989) examined the correlations between vector length and measures of psychological dysfunction in a sample of undergraduates and in eight subgroups of the same sample, formed by classification of IAS-R profiles. They found that, within the total sample, vector length was unrelated to general measures of psychopathology [Lanyon's (1973) Psychological Screening Inventory] and to more specific mea-

asures of interpersonal problems [circumplex scales from Horowitz et al's (1988) IIP]. However, meaningful patterns of correlations were found between vector length and scales from the aforementioned inventories within groups of subjects classified as falling in particular sectors of the Interpersonal Circle.

An interpersonal relationship is considered to be complementary if the behaviors of the two participants endorse and confirm each other's self-presentations with respect to both dominance and nurturance. On the Interpersonal Circle, complementarity occurs on the basis of "reciprocity" in regard to dominance (dominance pulls submission, submission pulls dominance) and of "correspondence" in regard to nurturance (hostility pulls hostility, friendliness pulls friendliness). Empirical demonstrations of this interpersonal proposition have been equivocal at best. Orford (1986) concluded that research has generally supported the correspondence hypothesis, but findings regarding the reciprocity of dominance have been inconsistent.

Bluhm et al (1990) investigated whether individual differences in dominance and nurturance mediate the influence of interpersonal impact on the elicitation of complementary responses. Using both self- and observer-ratings of an experimental interaction, they found evidence supporting both correspondence on the nurturant axis of the circumplex and reciprocity on the dominance axis. However, the latter effect disappeared when subjects' initial differences on dominance were taken into account. Although these results are again consistent with Orford's review, no adequate explanation is provided for the fact that dominant/submissive behaviors are more influenced by individual differences than are nurturant/hostile behaviors. Two additional studies also suggest that the hypothesized complementarity on the nurturance axis of the Interpersonal Circle is more clearly supported than is reciprocity on the dominance axis. Kiesler & Watkins (1989) demonstrated that complementarity on the nurturance axis is important in establishing a positive therapeutic working alliance, but "total complementarity" (referring to both axes) showed no relations with the therapeutic alliance. Benjamin's (1989) study of the interpersonal relationships between chronic schizophrenics and their auditory hallucinations indicated that complementarity between patients and their hallucinated voices occurred on the nurturance axis, but again the trends toward reciprocity on the dominance axis were less marked.

In perhaps the most important study of interpersonal complementarity in recent years, L. Horowitz et al (1991) provide the only recent experimental evidence for "reciprocity" on dominance and propose a number of methodological and theoretical hypotheses of importance to interpersonal theory and complementarity research. Based on their studies of semantics and on the interpersonal impact of self- and other-derogations, they concluded that: 1. judgments of nurturance are not independent of judgments of dominance—

people seen as friendly or hostile are more apt to seem self-assured or assertive, whereas people who seem submissive, helpless, or passive are more apt to be seen as neutral in nurturance; 2. previous research has often forced individuals to rate the two interpersonal dimensions independently, thus obscuring the rating dependency they discovered; 3. interpersonal theory does not claim that every reaction to a given behavior is complementary—rather, it claims that when the interactants' behaviors are not complementary, the discrepancy needs to be resolved through further negotiation; and finally, 4. noncomplementary responses (particularly on the dominance axis) seem to occur as opening moves under certain conditions, implying a need to negotiate power or status.

*Applications* The original focus of convenience of interpersonal theory and the Interpersonal Circle involved dyadic interactions in psychotherapeutic settings (Freedman et al 1951). Hence, it is not surprising that most applications of interpersonal constructs and of the Interpersonal Circle continue to involve psychotherapy and psychopathology.

L. Horowitz's conception of interpersonal problems has been applied to both of these domains. The IIP has been found useful in predicting problems that would become the focus of psychotherapy, even when judges' IIP ratings were based on independently formulated case summaries (L. Horowitz et al 1989). This report also provided important evidence indicating that patients with primarily interpersonal (as opposed to symptomatic) problems are better candidates for brief dynamic psychotherapy. Similarly, Mohr et al (1990) reported that the IIP was useful in discriminating nonresponders from positive and negative responders in psychotherapy. They concluded that interpersonal problems and distress activate the individual to seek change in psychotherapy. Pincus & Wiggins (1990a,b) demonstrated that a subset of the DSM-III personality disorders are systematically related to the interpersonal-problems circumplex and proposed that interpersonal problems are a useful way of operationalizing maladaptive and inflexible trait expression. Finally, Alden & Phillips (1990) used the interpersonal-problems circumplex to differentiate socially anxious depressives from pure depressives, suggesting that subtypes of depression may involve the presence or absence of interpersonal problems.

A number of recent studies have investigated the utility of the Interpersonal Circle in discriminating and describing DSM-III, Axis II personality disorders. These studies are noteworthy for the range of methodologies and variety of assessment instruments that have been brought to bear on this topic. Strack et al (1990) conducted principal components analyses of Millon's MCMI-II and Strack's PACL personality disorder scales and concluded that the interpersonal dimensions of personality can be identified in instruments operationalizing Millon's personality theory. Wiggins & Pincus (1989) used

principal components analyses to demonstrate the relations between the IAS-R and a number of self-report personality disorder scales. Romney & Bynner (1989) used structural equations to reanalyze a number of previously published sets of correlational data involving personality disorder diagnoses. Kiesler et al (1990) provided interpersonal behavior profiles for eight personality-disordered patients based on ratings of multiple judges who viewed videotaped psychotherapy sessions. Sim & Romney (1990) used multi-dimensional scaling techniques to investigate the relations between the Interpersonal Circle and personality disorders. Their results and the results of DeJong et al (1989) are less clear, and may be limited by the structural shortcomings of the Interpersonal Check List (see Paddock & Nowicki 1986). Given the general consistency of the other results, however, we would conclude that interpersonal dysfunction seems central to histrionic, narcissistic, dependent, avoidant, schizoid, and antisocial personality disorders.

Applications of the Interpersonal Circle to the practice of psychotherapy have led to direct intervention models (e.g. Anchin & Kiesler 1982). Kiesler's (1988) contribution to interpersonal psychotherapy is seminal. The therapeutic relationship is viewed by Kiesler as a microcosm of the "maladaptive transaction cycle" in which the patient pulls a restricted range of responses from significant others, which in turn tends to reinforce the patient's rigidly held self-view. Kiesler's intervention model relies heavily on metacommunicative feedback to the patient concerning the interpersonal impact he/she is having on the therapist. Kiesler uses the Interpersonal Circle and the principles of complementarity to structure and systematize his intervention strategies. Benjamin (1992) also uses the Interpersonal Circle, as operationalized by the Structural Analysis of Social Behavior (SASB; Benjamin 1974, 1984), to systematize "brief SASB-directed reconstructive learning therapy." The key proposition is that each of the mental disorders in the DSM-III-R is hypothetically associated with specific SASB-codable interpersonal and intrapsychic patterns. The SASB model also provides hypotheses about specific associated interpersonal learning experiences presumed to contribute to a disorder; the analysis has specific implications for learning experiences needed to change the patterns characteristic of the respective disorders (p. xx). In a different vein, Andrews (1989) uses the Interpersonal Circle in an especially imaginative way to systematize the existential philosophies underlying various schools of psychotherapy, in the hope of facilitating integration among the schools. He assigns an existential "vision of reality," or "*Weltanschauung* that underlies the values and theoretical models inherent in psychotherapeutic schools" (p. 803), corresponding to each of the eight octants of the Interpersonal Circle.

A section on applications of the Interpersonal Circle would not be complete without additional consideration of the diverse and often fascinating research

using Benjamin's SASB. Benjamin has operationalized the interpersonal dimensions of personality to include three circumplex surfaces, corresponding to transitive interpersonal behaviors directed toward others, intransitive interpersonal behaviors focused on the self, and introjected intrapsychic aspects of interpersonal relationships. Over the years, operationalization of this model has been modified. Currently the long and short versions of the INTREX questionnaire seem to reflect the state-of-the-art (Benjamin 1988). In addition to the SASB-based brief psychotherapy mentioned above, Tunis et al (1990) used the SASB to validate other clinical methods for identifying a phobic patient's dysfunctional schemas. They concluded that "The three methods together paint a convergent picture that provides extensive insight into how various self-schemas are organized and how they may relate to conflictual situations such as the phobic situation" (p. 1285). Johnson et al (1989) use the SASB as a component of their "Cyclical Maladaptive Pattern" assessment in psychotherapy. Their results support the use of this SASB-based procedure as a clinically relevant means of quantifying psychotherapeutic transference and rigidity of interpersonal style. Talley et al (1990) used the INTREX to test hypotheses regarding therapist-client matching in psychotherapy. Their findings suggest that treatment outcome differs as a function of patients' and therapists' self-concepts as assessed by the Interpersonal Circle. Based on the principles of complementarity, they also found that greater degrees of noncomplementarity between the therapist's self-concept and the therapist's perception of patient behaviors is associated with less clinical improvement. Conversely, greater degrees of noncomplementarity between the patient's self-concept and the patient's perception of therapist's behaviors is associated with the patient's perceptions of therapeutic gain. The authors conclude that "The more noncomplementary a behavior is to one's self-concept, the more likely it is to disrupt the self-system. With therapists it seems undesirable to have such disruptions occurring, but with patients, it is generally regarded as a necessary part of change" (p. 187). Finally, the SASB has been applied to helpful and unhelpful instances of emotional catharsis in psychotherapy (Benjamin 1990), to analyses of chronic schizophrenics' relationships with their hallucinated voices (Benjamin 1989), and to differentiation of interaction patterns among families of anorexic, bulimic, and patients with mixed eating disorders (Humphrey 1989).

### *The Study of Lives*

**PSYCHOBIOGRAPHY** Some personality psychologists appear to be returning to even deeper disciplinary roots—the study of persons. In an integrative and informative introduction to a special issue of the *Journal of Personality* on "Psychobiography and Life Narratives," Dan McAdams (1988) observed that "Once again, it is okay to study the 'whole person'. Better, contemporary

personologists insist, as did pioneers like Gordon Allport and Henry Murray, that such an endeavor is the personologist's *raison d'être*" (p. 1). McAdams also emphasizes that, in its most recent reincarnation, psychobiography is considerably more methodologically rigorous and more conceptually pluralistic than it was in the days of the pioneers. The *Journal's* special issue reflects this diversity in several autobiographical accounts, and biographical reconstructions, of persons who are "famous, enigmatic, or paradigmatic" (p. 2). Thus, Elms (1988) presents a psychobiographical account of the psychological factors in Freud's own life that contributed to the major psychobiographical errors committed in Freud's classic study of Leonardo da Vinci (1957 [1910]). Stewart et al (1988) demonstrate the utility of Erikson's (1980) theory of personality development in providing an increased understanding of the life of Vera Britten (a British feminist and pacifist). Winter & L. A. Carlson (1988) analyze the motives of Richard Nixon by coding his first inaugural address for themes of achievement, intimacy, and power. R. Carlson (1988) analyzes biographies of Nathaniel Hawthorne and Eleanor Marx (social activist and daughter of Karl) from the perspective of Tomkins's (1979) script theory. Anderson (1988) draws upon his own extensive interviews with Henry Murray to add to our growing knowledge of Murray's life and work (see also Elms 1987). And elsewhere Rosenberg (1989) sheds light on the personality of Thomas Wolfe through a multidimensional scaling analysis of trait terms appearing in *Look Homeward, Angel*.

The most recent volume from the Henry A. Murray Lecture Series at Michigan State University is *Studying Persons and Lives* (Rabin et al 1990), and is dedicated to the memory of Murray, who died in 1988 at the age of 95. In that volume, Runyan (1990) attempts to place the study of individual lives within the broader "structure of personality psychology." He relates the former to the major theoretical traditions, core conceptual issues, different methodological traditions, and empirical research on substantive processes that constitute the field of personality psychology. It is clear from his review that many traditions have advanced our understanding of individual lives, including the individual differences tradition (pp. 30–31). In fact, the boundaries between psychobiography and traditional personality assessment become indistinct in the procedures described by Craik (1988) for assessing the personalities of historical figures. In this paradigm, experts (e.g. present-day editors of targets' correspondence) or created experts (teams that review source materials) provide judgments of historical figures (e.g. Woodrow Wilson) on traditional assessment instruments, such as rating scales, adjective check lists, and Q-sorts (assignment of a target's personality characteristics within a forced normal or near-normal distribution from least accurate to most accurate). Although this is clearly "assessment at a distance" (pp. 201–2), the findings are comparable in reliability to those of more traditional assessment programs.

Alexander (1990) has provided a thoughtful and perceptive account of method and content in personality assessment and psychobiography, one that is deeply rooted in the personological traditions of Henry Murray and Silvan Tomkins. His arguments are richly illustrated with material from both the lives and theories of Freud, Jung, and Sullivan. Alexander's reconstruction of the "missing years" of Sullivan's life (1909–1911) is nothing short of spellbinding. If, as seems likely, Alexander's work will serve to introduce many graduate students to the personological tradition, McAdam's (1990) unusual introductory textbook on personality psychology may serve the same purpose for some undergraduate students. This textbook is unusual in at least two respects: 1. It adopts the person as the unit of study in personality psychology in an uncompromising exposition of the traditions of Murray and Allport, and 2. it does so within the context of the more traditional textbook topics of classical theories and contemporary empirical research. This is one to watch—it could produce some changes in undergraduate personality psychology course syllabi in the coming years.

**STUDYING PERSONALITY STABILITY AND PERSONALITY CHANGE** The methodological sophistication and conceptual pluralism McAdams notes regarding psychobiography are also evident in new approaches to the study of personality development, and in the descriptions and explanations of long-term stability and change. In another special issue of the *Journal of Personality*, West & Graziano (1989) bring together personality, social, and developmental psychologists, along with sociologists and psychometricians, to consider topics in the study of personality stability and change. The empirical papers in this collection focus on stability in children, personality change as a consequence of important life events, and the processes that influence both change and stability.

Of the four studies of personality stability in children, Digman's (1989) is the only one cast within the framework of the five-factor model. Although the stability of these factors over a seven-year period was lower than that usually found for adult samples (e.g. Costa & McCrae 1988b), the correlations between more closely adjacent periods were generally high. It seems likely that "personality structure may be less set during the childhood years than it is in later life" (p. 206). An alternative approach to the issue of stability in childhood is illustrated by Mathaney's (1989) multimeasure-multioccasion assessment of the trait of behavioral inhibition in monozygotic (MZ) and dizygotic (DZ) twins at 12, 18, 24, and 30 months. MZ twins were found to be more concordant than DZ twins for each of the measures of behavioral inhibition employed at each of the ages studied. The results of this study support the hypotheses that trait manifestations "include both the flow and stasis of behavior" (p. 217) and that "It is the coordination of the MZ twin pairs' changes in behavioral patterns that informs us that there is a semblance

of a trait that regulates behavior" (p. 233). Rubin et al (1989) found moderate consistency for the related construct of social withdrawal across grades 2, 3, 4, and 5. Moreover, children identified as withdrawn in kindergarten and grade 2 were more likely to suffer from internalizing problems (anxiety, insecurity, negative self-regard, depression) in grades 4 and 5.

Renken et al (1989) investigated the early childhood antecedents of aggression and passive-withdrawal within the framework of attachment theory (Ainsworth et al 1978; Bowlby 1973). According to the authors, this conceptual framework maintains that "continuity in individual adaptation is not due so much to the presence of static traits in the child as to a transactional process guided by experience" (p. 260). The alternative to "static trait" predictions in this context were the differential predictions that: 1. children who developed avoidant attachments would become aggressive; 2. children who developed resistant attachments would become passive; and 3. children who developed secure attachments would become neither. The results of zero-order correlations between attachment styles (assessed at 12 and 18 months) and teacher ratings (in first through third grades) did not sustain this distinction. Avoidant attachment was correlated with both aggressive ( $r = .23$ ) and passive ( $r = .29$ ) outcomes, in boys only. Resistant attachment was unrelated to outcome.

Two of the studies in the *Journal's* special issue are concerned with important life events that may be associated with personality change. Eccles et al (1989) focus on the salient life-transition from grade school to junior high school, as it affects the adolescent's self-concept. They found that although overall self-esteem was lowest immediately after this transition, it recovered during seventh grade. In addition, "Children's self-concepts of ability for math and English became less stable across the junior high transition, whereas beliefs about other activities and general self-esteem were more stable in seventh grade" (p. 284). Elder & Clipp (1989) investigated personality change induced by exposure to the extreme life event of heavy combat in World War II and the Korean war. A sample of veterans from the Institute of Human Development longitudinal study were assessed by Q-sort ratings at adolescence, age 30, and age 40, and by interviews in 1985. Those veterans who were experiencing at least one symptom of posttraumatic stress disorder in 1985 were found to have ranked below average on *ego resilience* (Block & Block 1980) when they were adolescents. However, there were also positive changes in personality characteristics from adolescence to midlife following exposure to combat. Q-sorts at age 40 revealed that combat veterans were more goal oriented, assertive, and less helpless than they were during adolescence. The authors concluded that, when other factors were statistically controlled, exposure to heavy combat increased the likelihood of ego resilient behavior at midlife.

Caspi et al (1989) distinguish between two kinds of person-environment interaction that serve to sustain behavioral patterns across the life course. *Cumulative continuity* occurs when a person's interactional style directs or channels that person into particular kinds of environments that themselves are supportive of that style, and hence sustain the pattern over the life course (e.g. Snyder & Ickes 1985). *Interactional continuity* occurs when a person's interactional style itself tends to evoke reciprocal responses from others that sustain that style across replications of this type of ongoing social interaction (e.g. Carson 1969). Convincing evidence is presented for the operation of these two kinds of sustaining processes in longitudinal studies of ill-tempered, shy, and dependent children (see also Caspi et al 1987, 1988).

**METHODOLOGICAL ISSUES IN THE STUDY OF LIVES** One of the methodological innovations included in Block's (1971) classic book *Lives Through Time* was the classification of subjects into homogeneous groups of personality "types," which had been identified by transposed factor analysis of clinicians' Q-sort ratings of data from both adolescent and adult samples. Continuity and change in subjects' lives were then evaluated with respect to a variety of data sources not involved in typological classification. Stokes et al (1989) have described a variant of this strategy in which typological categories were constructed directly from subjects' responses to biographical questionnaires. Stokes et al's subjects were university students who were first assessed during freshman orientation and assessed again 6–8 years following graduation. At the initial assessment, subjects completed the Biographical Questionnaire (BQ), an instrument designed to measure significant prior experiences and behaviors during childhood and adolescence. At Time 2, subjects completed the Post College Experiences Inventory (PCEI), an instrument designed to assess significant aspects of life history during the decade following college. Separate factor analyses of these two inventories yielded dimensional profiles for describing individuals in terms of their patterns of life history during adolescence (BQ) and young adulthood (PCEI).

Typological groups were formed separately within the BQ and PCEI data by assessing individual's component profile similarities with reference to a generalized distance function ( $D^2$ ). This permitted the examination of individual subject's developmental pathways from adolescent life-history subgroups (e.g. Business-Oriented "Fraternity Joe") to young adult life-history subgroups (e.g. Contented Affluent Conservative). The percentage of persons entering each young-adult subgroup from each adolescent subgroup was calculated and corrected for the base rate of all adolescent subgroups who entered each young-adult group. Thus, for example, 22% of "Fraternity Joes" entered the young-adult subgroup of Conservatives. Some of the paths taken could clearly be interpreted as continuity whereas others just as clearly

suggested discontinuity. Although attempts to predict path-follower vs non-path-follower status from BQ factor scores were largely unsuccessful, some of the trends found were consistent with Block's findings for "changers" and "non-changers" discussed below.

Another methodological contribution of the *Lives Through Time* project was the emphasis given to both variables and persons in the study of personality consistency and change (Block 1971, pp. 9-13). The consistency of *variables* is typically evaluated with reference to correlations between measures administered at different periods to the same group of subjects. A consistent variable is one on which individuals maintain their relative positions within a group over time. The consistency of *persons* may be evaluated with reference to the correlation across a wide variety of attributes between two assessments of the same person at different periods. A consistent individual is one whose attributes on different occasions are highly correlated. Block (1971) emphasized the typically neglected notion of person stability by evaluating personality types and by examining the personality characteristics of "changers" and "non-changers" (1971: Ch. 6).

Ozer & Gjerde (1989) have extended Block's analysis of "changers" and "nonchangers" by employing a "person-centered" approach that permitted the separate and independent assessment of consistency and change for each person studied. Their subjects were drawn from the longitudinal study of Block & Block (1980), and they were assessed at five different periods between the ages of 3 and 18. For each subject, the correlations between consecutive Q-sorts were obtained, the median values of which ranged from moderate to large (.52-.71). A stability "profile" was formed for each subject, based on the four test-retest correlations between Q-sorts obtained at different periods. A cluster analysis of the similarity among subjects' profiles identified four clusters for males and five clusters for females. Ozer & Gjerde (1989) emphasize that "*there is no necessary link between cluster membership and Q-item content*" (pp. 495-96; italics in original). Substantively dissimilar subjects could have highly similar patterns of consistency. For that reason, Q-items were regressed on cluster membership in order to identify the contents that distinguished the cluster groups from one another. A large number of these multiple correlations were significant. The strongest finding was the striking resemblance in personality characteristics between Ozer & Gjerde's largest cluster of consistent males and Block's earlier sample of male "non-changers."

Studies of individual lives often rely heavily upon the accuracy with which subjects can recall and formulate their early attributes and those of significant others. Ross (1989) has recently argued that deviations from accurate recall in such studies may be reliable and systematic across a variety of content domains. In particular, he proposed that subjects' recollections of their earlier attributes are guided by implicit theories of personal change or stability over

the lifespan. To illustrate this possibility, Ross asked university students to draw graphs of how they expected attributes (traits, abilities, opinions) of target persons (self, best friend, average student) to change or remain constant across their lifetimes. Independent raters were able to classify almost 74% of these plots into four prototype categories: 1. stability across the lifetime, 2. a U-shaped curve, 3. an inverted U-shaped curve, and 4. an early rise followed by stability. Ross explored the implications of the possibility that personal recall is influenced by a few relatively simple implicit theories of lifespan development with reference to previous studies in cognitive and social psychology.

Some recent work on attributional style may also increase our understanding of factors that influence the manner in which subjects construct life narratives. Burns & Seligman (1989) have demonstrated that the attributional style of viewing negative life events as caused by internal, stable, and global factors is consistent over the life-span. They recruited older subjects who had saved diaries or letters they had written when they were adolescents or young adults. Thirty subjects whose average age was 72 were asked to provide descriptions of positive and negative events that had occurred in the last year. These narratives, together with letters or diaries written an average of 52 years earlier, were rated for explanatory style. A composite index of explanatory style was stable ( $r = .54$ ) over this 50-year period for negative life events. In contrast, essentially no stability was found for attributions made to *positive events*.

The focus of attributional style research has for the most part been on depression, and the relation between pessimistic attributional style and depression is well documented (e.g. Sweeny et al 1986). Perhaps for this reason, there has been little interest in explanatory styles for positive events that might be of considerable personal significance. In the Burns & Seligman (1989) study, for example, the positive events suggested to subjects (e.g. birthdays, holiday dinners) do not appear to have emotional significance comparable to that for suggested negative events (e.g. an illness or accident, a financial problem). A notable exception to this trend is found in a recent study by Needles & Abramson (1990). These authors have demonstrated the importance both of the occurrence of positive events and of an optimistic or enhancing style of interpreting these events in recovery from depression. It seems likely that optimistic explanatory styles, as well as "positive illusions" (Taylor 1989), may be important in understanding the life narratives of highly effective persons.

### *The Perception of Traits*

In reflecting on his own wide-ranging studies of the accuracy of personality judgments and the ability to perceive traits in others, David Funder (1989) observed, "Somebody once said that what makes a dancing bear so impressive

is not that it dances well, but that it dances at all. I am impressed by human judgments of personality for roughly the same reason—not because judgments are perfect, but because in the face of enormous difficulties it seems remarkable they manage to have any accuracy at all” (p. 212). The study of trait perception and personality judgments is becoming increasingly analytic; rather than simply demonstrating accuracy in terms of interjudge agreement, the goal is to understand “what kind of target, judge, relationship between judge and target, setting of interaction, or dimension of judgment makes accuracy most likely” (Funder 1989:219).

The acquaintance level of judges and targets has been a continuing topic of investigation. Using an unusually rich data set generated by self-reports, peer-ratings (by friends and strangers), and videotaped interactions, Funder & Colvin (1988) found that Q-sort judgments by close acquaintances were in greater agreement with each other and with the self-ratings of targets than were judgments of strangers who viewed a videotaped interaction. Although the correlation was smaller, strangers’ judgments agreed with each other and with the self-ratings of targets beyond a chance level. Greater agreement was also found for traits rated as more observable. The authors conclude that “agreement among acquaintances’ judgments must derive at least partly from experience with and observation of the person who is judged” (p. 149).

Paunonen (1989) framed the variables of target-rater acquaintanceship and trait observability within the context of Brunswick’s (1955) lens model and reasoned that length of acquaintanceship per se may not lead to increased accuracy of ratings because “situational or social constraints may not allow for a wide latitude in behavior, and hence target cues may be highly redundant” (p. 825). He asked judges and targets to rate how well they knew each other on a 9-point scale, and then examined the effects of acquaintanceship and trait observability on personality judgments based on Jackson’s PRF. Using moderated multiple-regression techniques, the acquaintanceship effect was replicated, and level of acquaintanceship was found to interact with trait observability such that, at low to moderate levels of acquaintanceship, agreement improved as trait observability increased. This effect gradually diminished as target-rater acquaintanceship increased, and no overall main effect for trait observability was found. Paunonen concluded that as acquaintanceship increases, knowledge of a target’s behavior predispositions broadens to include less-observable trait domains, and hence the correlation between accuracy and observability found by Funder & Colvin might be attributable to the employment of a less well-acquainted set of participants.

Colvin & Funder (1991) reframed the acquaintanceship-accuracy problem within the set of procedures that Cronbach & Meehl (1955) recommended for establishing the construct validity of psychological tests. They argued that interjudge agreement cannot serve as the ultimate criterion of judgmental accuracy, because both judges and raters may agree but be inaccurate, for a

number of reasons. Considerations of construct validity would require that the additional criterion of *behavioral prediction* be investigated. In so doing, Colvin & Funder required targets to participate in three videotaped interactions (coded by Q-sorts of six observers) and to fill out personality measures. Predictions of strangers' personality characteristics and videotaped interactions were based solely on exposure to a different videotape of the target in a highly similar interaction. Predictions of acquaintances' personalities and interactions relied solely on prior knowledge of the target. Although acquaintances predicted general personality characteristics more accurately than strangers, acquaintances and strangers were approximately equal in their prediction of situation-specific behavior. The authors concluded that situational similarity is a boundary condition on the acquaintanceship-accuracy relationship.

Frequency counts of uncontextualized behaviors may not provide a meaningful unit of analysis for the study of trait perception and personality consistency. Shoda et al (1989) have developed an elegant paradigm for studying the effects of situation-behavior relations on judgments of personality dispositions (see also Wright 1989). Within this paradigm, situation-behavior contingencies may be manipulated with reference to normative data established by naturalistic observation. Over the course of a 6-week summer camp, observers recorded 19 childrens' specific behaviors (e.g. "the child hit") in relation to antecedent situations (e.g. "when a peer teased"). For 19 "targets" these data permitted the construction of statements describing established conditional probabilities between situations and behaviors. These targets were presented to judges in "intact" form, with "altered" relations between situations and behaviors, and with uncontextualized behaviors alone. When camp counselors were presented with a series of veridical situation-behavior descriptions of a previously observed child, their judgments of aggression were highly related ( $r = .84$ ) to total aggression scores based on six weeks of observation in a summer camp. When behaviors were presented without a situational context, predictive accuracy decreased significantly; and when veridical situation-behavior relations were extensively altered, targets were viewed as strange and implausible, rather than aggressive.

Funder & Colvin (1991) make a similar point, albeit from a quite different theoretical perspective:

Research has focused on the consistency of *behavior*. Intuition focuses on the consistency of *personality*. The two are related, but they are not exactly the same thing. When we regard an acquaintance as consistently fearful, or awkward, or cheerful, we are not necessarily expressing an intuition that all the behaviors by which one might manifest these dispositions will be consistent across all situations of the acquaintance's life. Rather, we are expressing a belief that in any situation in which these behaviors are relevant, our acquaintance will manage to exhibit fearfulness, awkwardness, or cheerfulness in some way or another (p. 790).

Funder & Colvin videotaped the interactions of targets in three laboratory situations and obtained personality descriptions of targets from friends and acquaintances. They found that behaviors coded for *social effect* or *psychological meaning* (Cairns & Green 1979) exhibited "impressive consistency" across situations.

Moskowitz (1990) found some limited support for the more traditional frequency-count method. The traits of dominance and friendliness were coded in six different laboratory situations, by direct behavior counts and by global ratings made at the end of each session. Target self-reports of the same two traits were obtained from adjective ratings (e.g. "dominant") and from situationally contextualized questionnaire statements (e.g. "how friendly and outgoing you would be with a close male friend"). The behavior-count method had the highest convergent validity with other measures of dominance and was highly correlated with global ratings of friendliness. However, neither behavior counts nor global ratings were correlated with self-report measures of friendliness.

Basic research on impression formation and trait attribution continues to enrich long-standing areas of inquiry. Topics include: agreement among observers on initial impressions of where targets stand on trait dimensions (Park & Judd 1989); assimilation and contrast effects in spontaneous trait inference (Newman & Uleman 1990); and processing of congruent and incongruent information in impression formation (Casselden & Hampson 1990; Hampson 1990). We are also pleased to note the continuing influence of George Kelly (1955), the first truly cognitive personologist, on contemporary research in the perception of personality characteristics (see Benesch & Page 1989).

## PERSONALITY STRUCTURE: THEN AND NOW

Kenneth Craik (1986) has observed that the history of personality research methods is not "cumulative" in the ordinary usage of that term but rather is characterized by a variety of continuous, arrested, and interrupted trajectories of development (much like the human lives to which these methods are applied). To the extent that the current status of personality research reflects an "identity achieved," some sense of this may be conveyed by comparing the research described in the present review with that covered by an *Annual Review* chapter on personality structure written almost 25 years ago (Wiggins 1968). Any such attempt to discern continuities and discontinuities from this comparison is, of course, necessarily subjective and vulnerable to many sources of error (much like the retrospective process involved in the study of the development of personal identity).

The bulk of the literature reviewed in 1968 was concerned with two rather

different kinds of "styles": *response styles* (e.g. social desirability and acquiescence) and *cognitive styles* (e.g. field dependence and cognitive complexity). The earlier concern with the "problem" of response styles appears to have diminished considerably; much of that concern has been redirected into more fruitful substantive topics, such as the distinction between self-deception and impression management (e.g. Paulhus 1991)—although there are still holdouts (e.g. Edwards 1991). Similarly, a constructive obituary for the once viable area of cognitive styles has been provided by Cantor & Kihlstrom (1987). They observe that despite the conceptual and empirical shortcomings of the earlier work on cognitive styles, we should acknowledge "the precedent set by this tradition for placing interpretive and reasoning processes at the center of a theory of personality" (p. 13).

The personality dimensions underlying the concept of *psychopathy* were of considerable interest in the 1960s, as is evident from the research programs reviewed in the 1968 chapter. There is still an active interest in this topic (e.g. Hare et al 1991), although current interpretations of dimensions are somewhat different, and in the case of one dimension (neuroticism), reversed. These recent interpretations have benefited from the recognition that dimensions of psychopathy may be related to both the interpersonal circumplex (Harpur et al 1989) and the five-factor model (Widiger & Trull 1992).

The current widespread interest in *trait stability* over the lifespan contrasts with the few earlier studies, which were mainly methodological or short term in nature. In the earlier review, the serious student of personality structure was urged to consider more carefully the voluminous writings of *Raymond B. Cattell*, who was then, it appeared, at the height of his ill-deserved unpopularity. Although Cattell is now often cited in the context of the origins of the five-factor model, it is not as widely recognized that he has been generally opposed to that paradigm (Cattell 1973; Wiggins & Trapnell 1992).

Two sections of the earlier review may be related directly to the present one: "The Big Two: Extraversion and Anxiety" and "The Structure of Interpersonal Behavior." In the former section, we find this statement: "If consensus exists within the realm of temperament structure, it does so with respect to the importance of the large, ubiquitous, and almost unavoidable dimensions of extraversion and anxiety (neuroticism)" (p. 309). In the latter section appears this conclusion: "Of all domains of personality study, the interpersonal sphere has recently enjoyed the most active explication of the substantive and structural components of construct validity" (p. 322). If we add three more dimensions to the first quotation and the *external* component of construct validity to the second, we can discern a clear cumulative trend from then to now, despite the intervening "era of challenge and stock-taking" (1968–1980) described by Craik (1986:23).

The preceding trip down memory lane may have provided less nostalgia

than anticipated. Current research appears, in comparison, to be more coherent, purposive, and promising. The back-to-basics movement we have described *may* reflect a renewed sense of continuity within a broader context of change, a clearer identification with certain intellectual forebears, and a more confident commitment to a particular direction of research. These characteristics of a maturing identity (see Stewart et al 1988), if indeed they are present, have been achieved not through a return to basics per se, but through a deeper appreciation of their contemporary implications.

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