

COGNITIVE AND SOCIAL PROCESSES IN PERSONALITY

NANCY CANTOR

*Department of Psychology
Princeton University*

JOHN F. KIHLMSTROM

*Department of Psychology
University of Wisconsin*

The field of personality may be defined as that subdiscipline of psychology concerned with the distinctive patterns of thought, behavior, and experience that characterize the individual's unique adjustment to his or her life situation. This means, first and foremost, that personality theory must be general psychological theory; here knowledge of physiological, cognitive, social, and developmental processes is synthesized into a comprehensive view of individual behavior and experience, as people attempt to understand, respond to, and change the physical and social world in which they live. There was a time when the domain of personality was defined by and restricted to the study of individual differences. However, at present the field has broadened to include a number of general processes relevant to interpersonal behavior, so that it is especially difficult to draw sharp distinctions between the domain of personality and those of cognitive, social, and clinical psychology. The family resemblance is especially strong between personality and clinical psychology. Historically, the field of personality emerged from the psychiatry of 19th-century Paris and Vienna at least as much as it did from the psychometry of 19th-century London. The ranks of major personality theorists have numbered many practicing clinicians, including Freud, Murray, Carl Rogers, and Kelly; more recently, the emergence of behavioral and cognitive-behavioral approaches to treatment has gone hand in hand with the development of a new approach to personality emphasizing cognitive processes and social learning.

There is an important sense, then, in which personality and clinical psy-

chology are related to each other as basic and applied sciences. Just as earlier forms of behavior therapy were closely linked to theory and data emerging from the laboratory study of learning, so it appears that current forms are closely linked to theory and data developed in laboratories studying cognitive and social processes. In this chapter, we seek to paint a broad picture of a cognitive-social approach to personology that seems to us to provide a reasonable scientific basis for clinical practice. After spelling out some of the features of this approach, we trace its historical evolution and compare it with other prominent theoretical views of personality. Then we illustrate some of the salient empirical work associated with this view of personality, particularly emphasizing the processes involved in social cognition and self-perception. Finally, we try to explicate some of the implications of this work for the clinical enterprises of assessment and intervention.

COGNITIVE AND SOCIAL PROCESSES IN PERSONALITY

The central idea of the cognitive-social approach to personality is that people respond flexibly to situations, as they construct them cognitively, and that they act behaviorally to transform situations so that they correspond more closely to their expectations. The proposition is important because it focuses the attention of personologists on the interaction of persons and the social contexts in which they live their lives, rather than on traits, motives, defenses, or "objective" environmental contingencies. It explicitly recognizes both the exquisite sensitivity of human behavior to even subtle features of the situational context, and the extraordinary power of the human cognitive system to give meaning to these contexts. The approach is explicitly dynamic in nature, because it focuses on the cognitive and behavioral transformations that occur as the elements of the social interaction—the person and the situation—assimilate each other and accommodate to each other over the course of time. While the approach is clearly cognitive, giving center stage to the processes by which social information is acquired, organized, and utilized, it seeks to understand the consequences of the mental processes for social interactions, as represented in the overt actions of individuals. While it encompasses the traditional interest of personologists in individual differences, it is centrally concerned with the general processes mediating social cognition and social behavior. Furthermore, by recognizing the importance of the individual's personal constructs in giving idiosyncratic meaning to persons and events, it includes a commitment to idiographic research on the manner in which these general cognitive and behavioral processes are played out in the lives of individual men and women.

For the purposes of explicating the approach further, cognitive-social

personology may be divided into four subareas: structure (the elements of personality); dynamics (the ways in which structural elements interact with each other and with external factors); development (the ways in which structural features and dynamic interactions naturally arise); and change (the ways in which structural and dynamic factors can be altered by means of some intervention). These are topics to which any theory of personality must speak if it is to be comprehensive, and social-cognitive personology is no exception. Briefly stated, the structural and dynamic features of personality may be identified with the structural and dynamic features of the cognitive system that processes social information. These structures, then, may be construed as memory structures representing declarative and procedural knowledge (Winograd, 1975; for a general outline of a cognitive system particularly relevant to personality and social psychology, see Hastie & Carleton, 1980). The principles of personality development and change, accordingly, are the principles of social learning by which declarative and procedural knowledge is acquired and altered on the basis of direct and vicarious experience (Bandura, 1977b; Flavell, 1977; Mischel, 1968, 1973b).

STRUCTURE AND DYNAMICS

Following Hastie and Carleton (1980), the structural features of personality may be identified with that subset of the individual's declarative knowledge that is relevant to social interaction, including both conceptual and event memory. The conceptual aspect includes the individual's implicit theories of personality (D. J. Schneider, 1973); categorical knowledge concerning generalized types of people and situations (Cantor & Mischel, 1979a; Cantor, Mischel, & Schwartz, 1982a); descriptions of historical events; and detailed representations of particular other persons (Hastie, Ostrom, Ebbesen, Wyer, Hamilton, & Carleton, 1980), including the self (Markus & Sentis, 1980; Markus & Smith, 1981; T. B. Rogers, 1981). Another aspect, event memory, includes the individual's record of personal experiences, embedded in a context of space and time (Chew & Kihlstrom, 1981; Robinson, 1976). This is the store of knowledge representing people's understanding of themselves, significant others, and the world in which they live—in other words, the knowledge by which they plan their behavior in the social world.

Similarly, the dynamic features of personality may be identified with that subset of the individual's procedural knowledge that guides the organization and transformation of social information and the process of social behavior. These procedures include the interactional skills that individuals employ in the course of social exchange (Athay & Darley, 1981); self-presentational strategies (E. E. Jones & Pittman, 1980); scripts guiding social interaction (Schank

& Abelson, 1977); preferred strategies of focusing on different sources of social information (Cantor, 1981a); the algorithms by which people make attributions of causality and other inferences (E. E. Jones & Davis, 1965; Kelley, 1967, 1972; Nisbett & Ross, 1980) and form global impressions of themselves and others (D. J. Schneider, Hastorf, & Ellsworth, 1979); and the means by which they encode and retrieve social and personal information (Hastie & Carlston, 1980). This procedural knowledge, then, represents the rules by which individuals supply missing information, make predictions about the future, and generate and test plans for responding.

It should be understood that declarative knowledge and procedural knowledge are intimately related, and ultimately extremely difficult to separate, because a great deal of declarative knowledge is not represented in a form that permits direct, immediate access. The world knowledge employed by an individual to understand himself or herself, to understand another person, or to engage in a social interaction must be generated as needed by applying inferential and transformational procedures to available knowledge (e.g., Nisbett & Ross, 1980; D. J. Schneider *et al.*, 1979). Similarly, few personal experiences are fully represented in the memory store; rather, they appear to be reconstructed by inferential problem-solving procedures applied to fragmentary trace material and general world knowledge (e.g., Neisser, 1967, 1976).

DEVELOPMENT AND CHANGE

These structures and processes develop in the same manner as the other declarative and procedural aspects of the cognitive system—that is, they are largely learned. There are clear developmental trends in such social-cognitive tasks as impression formation (Peevers & Secord, 1973), attribution of causality (DeVitto & McArthur, 1978; Karniol, 1978), and self-regulation (Mischel, 1974). While some of these trends must reflect the course of cognitive development generally (Flavell, 1977), so that children become better able to integrate large amounts of information as they mature, the process of social learning must be crucial to mastering the specifics of declarative and procedural knowledge within a sociocultural and familial framework (Bandura, 1977b; Mischel, 1968). A major point of social learning theory underscores the importance of vicarious learning: Human knowledge about self and others, the rules of social interaction, and strategies for self-regulation may be acquired through observation, modeling, and imitation as much as they are through direct experience. In addition, the importance of language acquisition as a medium for acquiring the specific content of social categories, scripts, and causal judgments cannot be overestimated. Similarly, it is obvi-

ous that the socialization process, as well as television and other media, permits the culture to communicate normative expectations, possible (and acceptable) interaction strategies, values, and the like.

It follows from this view of personality development that personality change also occurs as a function of direct and vicarious experience. Of course, the processes involved here have been analyzed extensively for decades in the form of clinical behavior therapy. These underscore the importance of the environmental context and learning experience in shaping personal and social behavior. Whether their roots were in the systematic behavior theory of Hull (Wolpe, 1958), the functional behaviorism of Skinner (Ayllon & Azrin, 1968), or some other system, all the early approaches to behavior therapy were anchored to the environment: Maladaptive behaviors represented maladaptive learning. Accordingly, the early behavior therapists sought to teach their clients to make more adaptive, realistic responses to situations that troubled them, as well as to change the clients' environment in order to foster behavioral change. With the emergence of a cognitive viewpoint within experimental psychology, there arose in clinical psychology an almost irresistible trend toward a cognitive-behavioral hybrid whose central tenets were that maladaptive cognitions cause maladaptive behaviors and that behavioral change was mediated by cognitive change (e.g., Mahoney & Arnkoff, 1978; Wilson, 1978). Accordingly, cognitively oriented behavior therapists now seek to arrange learning experiences in which their clients can acquire new ways of perceiving themselves, others, and social situations; new scripts for social interaction; new plans for self-regulation; and other aspects of socially relevant declarative and procedural knowledge. When these change, to the extent that they do change, personality may be said to have changed as well.

COMPARISON WITH OTHER APPROACHES

Along with trait and psychoanalytic approaches, the cognitive-social viewpoint outlined here represents a third major paradigm available to guide the study of personality. The distinction between this theoretical approach and the others may be obvious, but it should be stated briefly for the record. Trait theories represent the structure of personality as a matrix of relationships among ostensible underlying behavioral dispositions; psychoanalysis focuses on the topographical division of the mind into id-ego-superego and conscious-preconscious-subconscious. By contrast, "structure" for the cognitive-social viewpoint refers to the mental structures by which social knowledge is organized. Similarly, personality dynamics are construed by trait theorists in terms of variables of individual differences, which moderate the

relations between generalized traits and specific behavioral outcomes; psychoanalysis sees them in terms of the conflict among primitive sexual and aggressive drives, environmental and cultural demands, and internalized defenses. Cognitive-social personology, on the other hand, construes "dynamics" in terms of the mental processes by which social information is acquired, organized, retrieved, and translated into behavior.

Trait theorists characteristically pay little attention to development, except (among some) for an emphasis on the heritability of personality traits; psychoanalysts, for their part, emphasize an inexorable sequence of crises and stages. By contrast, cognitive-social personology construes personality as something that is learned, shaped by particular features of the sociocultural context. Finally, trait theories emphasize the relative stability of personality once it has been established; psychoanalysts are pessimistic about the possibility of doing anything more than coping more effectively with biological and cultural inevitables. Optimism and meliorism are the watchwords of cognitive-social personology, as it affirms that individuals can come to see themselves and their social worlds in new ways, change their environments, and so lead new lives.

THE EVOLUTION OF MODERN PERSONOLOGY

The cognitive-social, process-oriented view of personality outlined above has emerged as the latest step in a historical progression of personality theories, each of which arose in response to specific theoretical and empirical pressures.

FROM TYPES TO TRAITS

According to Greek medicine, as defined and practiced by Hippocrates and Galen, one of four biological substances ("humors") predominated in each individual, leaving him or her with a characteristic temperament: sanguine, melancholic, choleric, or phlegmatic. In his *Anthropology* of 1798, Kant construed these types as pigeonholes into which people could be sorted. There was no possibility of partial expression or combinations of types, and therein lies the problem. Typological approaches to personality have great intuitive appeal and are rewarding from a literary standpoint, because their character portraits seem to capture the gist of many of the people with whom the average person comes into contact on a daily basis. From a scientific point of view, however, they are intrinsically unsatisfying. Any attempt to pigeon-hole people must fail because it is too simplified; some people are more repre-

sentative of a particular type than others are, and some people seem to present a combination of features from many types.¹ In order to allow for partial expression and combinations of types, investigators began to describe personality in terms of a person's location in multidimensional space, rather than his or her location in particular discrete categories.

The movement from a categorical to a dimensional conceptualization of individual differences was initiated by Wundt (1903) as an outgrowth of his concern with analyzing the elements of mental life. Wundt's contribution was to transform Kant's categorical-type system into a dimensional-trait system, in which people could be described in terms of the characteristic strength and rate of change of their emotions. This had the obvious benefit of allowing for partial and combined expression, and it gave a feeling of greater accuracy in describing an individual than was possible with the old pigeonholes. The abandonment of categorical types allowed people to be represented more accurately, but it brought with it its own special problem: namely, how many dimensions are needed to accurately describe the individual? This problem was clearly articulated by Allport and Odbert (1936) in their study of "the problem of trait names." They searched through an unabridged dictionary for any term that could be used to distinguish one person from another, turning up a total of 17,953 adjectives, representing relatively stable traits (4504), temporary states of mind or mood (4541), social judgments (5226), and miscellaneous descriptions of physical qualities, talents, and explanations of behavior. Clearly, if the type approach was in danger of being too simple, the trait approach was in danger of being too complex. What was needed was a system for organizing the chaos of descriptive terms, for reducing it to manageable size while keeping it representative. The desired psychometric techniques soon became available with the introduction of correlational methods, especially factor analysis, and these were applied by Cattell, Guilford, Eysenck, and many others.

The psychometric approach yielded a number of benefits to psychology. Most important was a sophisticated body of test theory, as represented by Cronbach and Meehl's work on construct validity (1955) and Campbell and Fiske's analysis of convergent and discriminant validity (1959). It also produced a rich body of statistical techniques for determining the relations among variables, including factor analysis, cluster analysis, and multidimensional scaling. Finally, it led to the development of complex actuarial models

1. Of course, other typological schemes have been prominent in 20th-century personality. For example, Kretschmer (1921/1925) construed his three temperaments as discrete categorical types, while allowing for variations in intensity of expression. On the other hand, Jung's types (1921/1971) are not exclusive: All attitudes and functions are present in the individual, with one of each dominating conscious life while the others are repressed to form the "personal unconscious."

for predicting behavior (Wiggins, 1973). However, there were also some negative consequences, principally a preoccupation with determining the exact number of dimensions making up the structure of personality (Eysenck, 1977; Guilford, 1975, 1977). In part, these discrepancies can be attributed to differences in the methods of factor analysis adopted by the investigators involved—for example, the choice of orthogonal over oblique rotation or primary over superordinate factors. But even within a single method of analysis, the number of dimensions depends on the kind of data that are being analyzed: observations of subjects in everyday life situations, self-ratings, or performance on laboratory tests. Thus, after more than 50 years of factor analyses, the structure of personality traits remains obscure and controversial.

One attempted resolution has focused on a single domain of data—the universe of trait terms in English. These attempts have all begun with the Allport-Odberth list and have applied factor analysis or similar techniques to determine the relations among the items (Cattell, 1943a, 1943b, 1945; Goldberg, 1977; Norman, 1963; Wiggins, 1979). Another proposed solution rejects the program of determining a universal structure of personality in favor of finding those traits that are important for understanding a single individual. This *idiographic* as opposed to *nomothetic* approach to traits was best articulated by Allport (1937), who rejected most of the notions of trait theorists without at the same time rejecting the notion of traits. Yet a third proposed solution focuses on narrowly defined dimensions of individual differences. This approach retains the assumptions of trait theory, but abandons interest in determining (Idiographically or nomothetically) the structure of personality as a whole. This is the traditional area of personality that is familiar to all of us (Crown, 1979). It emphasizes the questionnaire as an instrument for collecting information concerning individual differences in generalized behavioral tendencies, and it relates these test scores to nontest behavioral indices of the constructs under consideration. Validation of these individual personality constructs, then, yields formulation of narrow theories pertaining to specific domains of personality.

No matter what form the trait position takes, however—nomothetic or idiographic, multidimensional or unidimensional—it still comes up against some serious problems. First is the difficulty in predicting behavior in specific situations from questionnaire scores. This literature, portions of which have been reviewed by Mischel (1968), typically shows a correlation of approximately +.30 between test and nontest manifestations of a trait (Mischel has named this the "personality coefficient"). The second difficulty has to do with demonstrating behavioral stability across situations. Again, literature reviewed by Mischel (1968) shows that the personality coefficient also applies when correlating behavior in one situation with behavior in another situation. Furthermore, the best evidence for temporal stability comes from studies

relying on highly abstract dispositional categories that obscure the flexibility of behavior in concrete situations (Block, 1971, 1977). These two problems, taken together, are generally known as the "consistency issue"; apparently behavior is not as consistent across time and contexts as the trait concept would lead us to expect. A third problem with the psychology of traits is the issue of "realism" versus "idealism." There are reasons to think that much of the structure revealed by factor-analytic studies of personality traits can be attributed to conceptual similarity, as opposed to actual co-occurrences among behaviors—that is, that the structure of personality resides at least as much in the mind of the perceiver as it does in the real world (Mischel, 1968; Passini & Nornian, 1966; Schweder & D'Andrade, 1979).

The counterclaim, of course, is that the use of alternative prediction models would yield better results (e.g., Block, 1977; Epstein, 1979; Hogan, DeSoto, & Solano, 1977), or that the structure of personality remains intact when cognitive factors biasing self-reports and observer ratings are eliminated (Block, 1965; Block, Weiss, & Thorne, 1979). While there is certainly merit in these positions, from our point of view the empirical findings call for a different perspective on the person, rather than an ever-more-refined methodology based on the traditional view. This view must be dynamically sensitive and must take account of the processes by which individuals make sense of their world, plan and execute responses to it, and so respond flexibly and creatively to their life situations. Such a perspective is explicitly offered by modern interactionism in personology, and specifically by the cognitive-social brand of dynamic interactionism outlined earlier in this chapter.

INTERACTIONISM

The conceptual and empirical challenges to trait views of personality came to a head in the 1950s and 1960s. At this time a major alternative to conceptualizations of personality according to individual differences emerged in the hands of the behaviorist movement in psychology, with Skinner (1953) as its guiding spirit. The behaviorists eschewed unobservable constructs such as traits and motives in favor of overt behavior, and focused on the controlling power of environmental contingencies rather than intrapsychic tendencies. The situationist approach to personality held, first, that behavior reflects the prior learning history of the organism (a tenet that, in itself, was not incompatible with the trait position). In addition to direct experience, the social behaviorists drew attention to the possibilities of vicarious learning of event-event and response-outcome contingencies. They further held that behavior change occurred when there was a change in the supporting environmental contingencies, or—perhaps more broadly—in the situational demands.

There was little if any explicit concern with traditional variables of individual difference, and certainly no concern with documenting the larger structure of personality traits. Moreover, situationist personality theory was primarily concerned with personality change rather than with stability and consistency, and was closely tied to the behavior-therapy movement within clinical psychology.

The situationist movement clearly documented the extraordinary sensitivity of behavior to changes in the environmental context. Somewhat gradually, however, there was a reawakening of explicit interest in person variables within the situationist movement. With the cognitive revolution of the 1960s, interest in person variables took a new turn. Mental constructs were no longer hypothetical, but were clearly reflected in overt behavior. The person re-emerged, not in the form of the usual traits, but rather in the form of the cognitive structures and processes that mediate the individual's perception of and response to the environment.

Interactionism was not an entirely new position within personality (Ekhammar, 1974). Its earliest anticipation was in the tradition of field theory within Gestalt psychology, especially the work of Lewin (1935), which held that behavior was a function of both the person and the environment. A little later, Murray (1938) introduced a conceptualization of personality in terms of personal needs and environmental press, and proposed to analyze the individual in terms of the "themas," or combinations of needs and press, which characterized his or her life. Kelly (1955), for his part, proposed that behavior was influenced by the person's construal of events and expectations of outcomes. His "individuality corollary" holds that individuals differ in the way they construe events, while his principle of "constructive alternativism" asserts that the same individual can construe events in different ways. Finally, within cognitive psychology, Neisser (1967) argued that perceptual activity was constructive and that memory was reconstructive. From his point of view, the individual combines fragmentary stimulus or trace information with inferences from preexisting knowledge structures ("schemata") to construct percepts and memories. These schemata are influenced by the individual's expectations and goals, explicitly creating a place for personality within the higher mental processes.

Interactionism provides a framework for thinking about personality, but does not solve the problem of how to go about the task of investigating the subject. In fact, there are a number of approaches within interactionism that, for the moment, need to be kept separate. Among the most prominent of these positions is one modeled on the multidimensional analysis of variance or multivariate correlation; for that reason, it may be labeled "statistical interactionism." One representative of this tradition within contemporary personality research makes use of the "S-R inventory" technique, which

poses a number of specific situations to the subject and asks him or her to indicate the strength of various responses within that situation (e.g., Endler & Hunt, 1966). A typical finding is that the interaction terms account for more variance in test scores than the main effects do (e.g., Bowers, 1973; but see Sarason, Smith, & Diener, 1975). A second type of research is concerned with "aptitude-by-treatment" interactions (ATI), and has been chiefly promulgated by Cronbach (1957, 1975), and his associates. They have examined a number of applied situations, such as educational settings and industry, and have found that the outcome of training programs is best when there is an appropriate match between characteristics of the people and those of the situation in which they are learning or working. Yet a third type is represented by D. J. Bem's emphasis (D. J. Bem & Allen, 1974; D. J. Bem & Funder, 1978; D. J. Bem & Lord, 1979) on variables moderating cross-situational consistency. Bem and his colleagues have employed the Q-sort technique in many of their studies to provide a profile of the characteristics of individuals who behave in particular ways in laboratory and real-life situations.

It should be noted that most of these studies are essentially variants on the familiar trait psychology; agreeing that different people act differently in different situations, they seek through more fine-grained personality assessment to determine *just which* kind of person behaves in such and such a way. "Kind" is assessed, as in traditional trait psychology, in terms of relatively broad behavioral dispositions. Moreover, the interactions are construed as unidirectional: Persons and environments are considered to influence behavior jointly, but the possibility of reciprocal, feedback relations among persons, settings, and behaviors—with each influencing the others—is not addressed openly. Other statements have led to the development of a more truly *dynamic* interactionism. Bowers (1973), for example, responding to what he perceived as an extreme situationist position, pointed out that individuals cognitively construct mental representations of the situations they find themselves in, and suggested that they may actually generate or select these situations through their behavior.

Mischel (1973b) has articulated a highly developed cognitive-social learning approach to personality that remains the most explicit statement of "dynamic interactionism" available to date. Mischel begins with the observation that individual behavior varies across situations; this he attributes not to inconsistency, but, rather, to discriminative facility and adaptive flexibility in active coping behavior. According to his analysis, behavior in a given situation is a function of the individual's prior experiences with related situations, the detailed features of the particular situation at hand, and the meaning that the situation has acquired for the individual. Idiosyncratic personal histories yield idiosyncratic meanings, and these meanings are themselves

modifiable by cognitive transformations—in short, what is in a person's head determines what he or she will do. Mischel goes on to describe five categories of person variables that mediate the individual's response to situations: competencies in cognitive and behavioral construction; encoding strategies and personal constructs; expectancies about outcomes; the subjective values attached to these expectancies; and plans for self-regulation. In a later essay, Mischel (1977) makes clear that these person variables—which, not coincidentally, are also situational variables—must be assessed from the point of view of the subject, not in terms of the experimenter's own categories.

Cognitive-social personology consists of more than simply a point of view and an attempted integration of concepts in personality with those in cognitive and social psychology. The cognitive-social approach to personality rests on a substantial body of empirical research bearing on the processes involved in social cognition and their reciprocal relations with social behavior. This research is of relatively recent vintage and covers a wide variety of specific topics. For this reason, no attempt is made to cover exhaustively the area, or to take a particularly evaluative stance with respect to the methods, findings, and conclusions of individual studies.

INTERPERSONAL PERCEPTION: TASKS AND PRINCIPLES OF NAIVE PSYCHOLOGY

Central to a dynamic interactionist conception of personality are the cognitive-social determinants of individual behavior: The individual's behavior is heavily influenced by the social situation and the individual's cognitive construction and interpretation of social experience. Consequently, we need to ask about the cognitive underpinnings of interpersonal perception and the perception of social events and situations. In other words, it is necessary to creep into the head of the perceiver-actor and see what the world looks like—how it is constructed, remembered, causally analyzed, and reinterpreted after the fact. In this section, we briefly review the tasks of the social perceiver and the principles that seem to characterize the perceiver's accomplishment of these tasks. The underlying theme connecting these tasks and principles is that social stimuli and social knowledge structures are both extremely rich and complex, and it may not be possible to engage in efficient social interactions without applying some shortcuts in information processing. Social cognition, then, involves achieving a tradeoff between the richness and complexity of belief systems and knowledge on the one hand, and the heuristics and processing shortcuts employed by the cognitive system on the other. Environmental information is assimilated to this cognitive structure at the same time

as this structure is accommodated to the environmental input. In the course of this balancing act, the perceiver creates a stable picture of the world in the face of buzzing confusion and crossed signals.

CATEGORIZATION AND CONSTRUCTIVE ALTERNATIVISM

One of the main tasks of the social perceiver-actor is to form abstract generalizations about the social world—that is, to learn from experience about the variety of types of people, events, and situations that he or she is likely to encounter. Individuals come to know the physical world of natural objects and artifacts—birds and trees and chairs and cars—in part by sorting similar objects into categories and assigning names to objects with similar physical and functional properties (Bruner, Goodnow, & Austin, 1956; Markman & Siebert, 1976; Piaget, 1956; Rosch, 1978). So, too, do they come to know their way around the social world by sorting and labeling people, events, and situations on the basis of common features and resemblances (Cantor, 1981b; Cantor & Mischel, 1979a; Cantor, Mischel, & Schwartz, 1982b; Cohen, 1977; Hamilton, 1979). It only requires a brief foray into the dictionary or the "Personals" columns of the *New York Review of Books* for proof of the richness, breadth, and complexity of the social perceiver's implicit personality theories and categorical knowledge of persons and social situations (e.g., Cantor & Mischel, 1979a; Cantor *et al.*, 1982b; Cohen, 1977; Pervin, 1976; Schank & Abelson, 1977).

The social perceiver has an enormous load of cognitive and linguistic baggage with which to structure the social world and communicate about it. A recent content analysis of the features associated with prototypical exemplars of representative categories in the domain of persons (Cantor & Mischel, 1979a), for example, yielded the following distribution²: physical appearance or possessions, 7%; socioeconomic status, 2%; trait dispositions, 73%; behaviors, 18%. The social perceiver has rich categories for situations as well as for persons. A similar analysis of features associated with situation prototypes (Cantor *et al.*, 1982b) yielded the following distribution: physical appearance of people in the situation, 8%; physical appearance of the situation, 28%; feelings and traits associated with people in the situation, 19%; behaviors typically observed in the situation, 18%; atmosphere of the situa-

2. These percentages reflect the distribution of different kinds of attributes in freely generated consensual prototypes of persons and situations, averaged across several "basic-level" categories. See the studies referred to for details of procedure.

tion, 11%; social roles of people in the situation, 7%; events and places associated with the situation, 9%.

These content analyses indicate that many social categories, while mainly focused around either persons or situations, actually cross these traditional boundaries; person categories can convey a great deal of information about the social contexts in which exemplars are found, while situation categories contain substantial information about the people typically encountered in their exemplars. Moreover, the perceiver also seems to possess compound categorical schemes—information about the typical behavioral scripts associated with situations (Schank & Abelson, 1977) and about the prototypical person for a situation (Cantor, 1981a).

A primary principle characterizing social categorical knowledge is "constructive alternativism" (Kelly, 1955). There are multiple, alternative schemes according to which the same set of people, events, or situations can be categorized. Perhaps more than the common object world, the social world provides for numerous cognitive constructions. Any given individual person, for example, can be "interpreted" in terms of numerous personality, social, gender, and occupational categories; by contrast, there seems to be a limited set of alternative constructions for a car or a chair or a bird. Consequently, in studying social categorization, it is particularly crucial to focus on factors that seem to make certain categories salient and cognitively available for particular people under specified conditions. Recent literature in social cognition has isolated a number of factors that influence the salience of particular social categories and induce the perceiver to interpret social experience in certain ways.

1. *Goal set.* Jeffery and Mischel (1979) and Cohen and Ebbesen (1979) have shown that perceivers use dispositional categories to organize information about a person seen in various episodes when they are under instructions to form an impression of the person; however, they focus on contextual attributes when under instructions to recall the information.

2. *Exposure frequency and perceptual perspective.* Higgins and his colleagues (e.g., Higgins & King, 1981) have demonstrated the effects of exposure frequency on the salience and accessibility of category labels. Moreover, perceptual highlighting of certain people or behaviors cues perceivers to organize their interpretations of the events around those perceptually salient aspects (Taylor & Fiske, 1978).

3. *Individual differences.* Numerous personologists have suggested that people differ in the tendency to focus on external, social cues as opposed to more internal, subjective attitudes and dispositional attributes (e.g., Buss, 1980; Rotter, 1966; Snyder, 1979). For example, Snyder and Cantor (1980) found that individuals low on the Self-Monitoring Scale had richer, more

cognitively available images of themselves with regard to a variety of trait domains, while individuals high on that scale produced richer images when they considered prototypical exemplars of these trait domains in the abstract, without reference to themselves.

4. *Self-schemata.* Another factor that seems to influence the salience of particular social categories is the particular pattern of domains (both traits and situations) that are important to an individual's own self-image. For example, trait domains that people see as particularly relevant to and representative of their own personalities tend to be very salient in their interpretations of information about others (e.g., Kuiper & Derry, 1981; Markus & Smith, 1981).

Another aspect of the variability of social categorizations concerns the level of inclusiveness of the categories chosen to describe people or events or situations. The same person, for example, could be characterized with a very inclusive category such as "extravert" or a group of more specific categories like "car salesman" or "clown." In this regard, work by Eleanor Rosch and her colleagues (Rosch, 1978) in the domain of artifacts (e.g., tables and cars) suggests that there are levels of categorization that are particularly salient and "basic" in object perception—that is, levels that are used most frequently in naming objects, learned first by children, verified fastest in category membership tasks, and so on. These basic-level categories are characterized by a rich set of attributes common to all category members that do not overlap a great deal with the attributes of other related categories.

The notion of a basic-level social category is very appealing as an internal control mechanism to simplify the task of social categorization. A number of researchers recently have argued for the investigation of this idea in the social domain (e.g., Brown, 1980; Cantor & Mischel, 1979a; Goldberg, 1977; Wiggins, 1980). For example, Cantor, Smith, French, and Mezzich (1980) showed that psychiatrists have rich and distinctive feature sets associated with some diagnostic categories (e.g., schizophrenia, affective disorder); but that other standard diagnostic categories are either very impoverished (e.g., functional psychosis) or very redundant (e.g., chronic undifferentiated and paranoid schizophrenia). Similarly, Cantor *et al.* (1982b) have considered the notion of the "basic category" in the domain of everyday social situations. Under most circumstances, the label "party" conveys more information than "social situation," while more specific categories (e.g., "cocktail party" vs. "fraternity party") may be highly redundant. It may be possible to demonstrate that certain social categories (those with rich and distinctive features associated with the category members) are also naturally most salient in naming and category-verification tasks. If so, the salience of these basic categories may again simplify the task of ordinary social perception.

Of course, people *can* categorize at either more specific or more inclusive

levels as well, and some conditions may foster or require such categorizations. The goal or purpose of the categorization or the expertise of the perceiver in the domain under consideration would certainly also be expected to influence the relative salience of different categories (Brown, 1980; Wiggins, 1980). However, it is interesting to speculate that there exist natural differences in category salience that may serve a cognitive function of economy in the face of the complexity of the task of social categorization.

IMPRESSION FORMATION

In addition to abstracting generalizations about different social categories, the naive perceiver must also form specific impressions and categorizations of particular individuals, events, and situations that he or she encounters. This, of course, is a companion task to the categorization task described above; to "type" and label particular individuals, the lay perceiver uses the salient person categories in his or her cognitive repertoire. Each of these categories has its own set of features typical of members of the category; we refer to this set of features characteristic of category members as the "category prototype" (Rosch, 1978; Smith & Medin, 1979). The prototype features are only characteristic of members; any given category exemplar would not be expected to possess all features represented in the prototype, but, rather, some subset of these features. Therefore, different category members bear only a *family resemblance* to each other (Rosch & Mervis, 1975; Wittgenstein, 1953). Together, the set of features in the prototype captures the meaning of the category and represents the perceiver's general beliefs about what objects, people, or situations of that sort are like.

Earlier, we spoke of the complexity characterizing the categorization task in terms of the number of different social categories into which people, events, and situations might be placed. There is another level of complexity that also makes the impression formation task difficult: People possess very rich prototypes for all of these different social categories, consisting of a large number of attributes, none of which is necessary or sufficient to define the category. Moreover, there is a whole continuum of *prototypicality* among the exemplars of each category, depending on the number of prototypical features that they possess. To complicate matters further, individual behavior is greatly variable across different situations. The varied set of features in social prototypes, the variety of category exemplars, and the variability of human behavior over time and across situations all serve to complicate the task of impression formation. However, each of these factors forms the basis for a cognitive heuristic or processing shortcut that actually simplifies this task:

1. *Similarity matching.* Early views of categorization described it as a simple feature-checking process: to see whether the four-legged object was a chair, a person simply checked each defining feature of the category "chair" and labeled the object so if and only if it possessed all of these singly necessary and jointly sufficient features (Bruner *et al.*, 1956; Vygotsky, 1965). Given the variety of features in category prototypes and the continuum of prototypicality of category members, the notions of defining features and all-or-none categorizations do not apply well to natural categories. Instead, the "revisionist" view describes categorization as a simpler process of "similarity matching," in which the perceiver takes the features of the target item, checks for overlap with the features in the category prototype, and makes a probabilistic estimation of the degree of category membership (Rosch & Mervis, 1975; Tversky, 1977; Tversky & Kahneman, 1974). Such a prototype-matching process has been documented with respect to personality and psychiatric categorizations by Cantor and her colleagues (Cantor, 1978; Cantor *et al.*, 1980).

2. *Context cues.* Similarly, the naive perceiver can use the fact that people generally adapt to situations, follow norms for situationally appropriate behavior, and are thus variable in their behavior across situations to provide cues that facilitate the task of person categorization. For example, categorization of a person observed acting loud and cheery both at a party and in a library is greatly facilitated by the observation of cross-situational consistency in behavior, but is also enhanced by the observation of loud and cheery behavior in a situation—the library—in which such behavior is counternormative: This person is a prototypical extravert. Similarly, the categorization "extravert" is inhibited if the target person is observed acting cheery and loud in the library but quiet and shy at the party (Cantor, 1978; E. E. Jones & Davis, 1965). Contexts, and the match between behaviors and contexts, serve as powerful cues in the similarity-matching task of person categorization.³

3. *Order effects.* The categorization task of impression formation is also simplified by primacy and recency effects—the tendency to give differential weight to both early- and late-arriving information about a person or event. The particular conditions under which first impressions assimilate new information to existing expectancies, or under which old impressions are accommodated to newly learned facts, are not entirely understood (E. E. Jones & Goethals, 1972). Generally, it seems that primacy effects and assimilation are the more prevalent trends in the social domain. The perceiver-actor typically receives a rich and variable set of cues about a target person; giving differen-

3. As Goffman (1959) pointed out and as most clinicians will attest, a pattern of counternormative, situationally inappropriate behavior might well serve to facilitate the categorization of a person as "weird" if not "crazy."

tial attention and weight to a subset of the information not only reduces the strains on attentional and memory capacity, but probably also allows the perceiver to build a more consistent (though perhaps less faithful) overall picture or impression of the person.

MEMORY AND SCHEMATIC PROCESSING

The perceiver-actor strives not only to draw generalizations about the social world from social experience and categorizations of different individuals, but also to remember facts and events involving specific people and social interactions (Hastie *et al.*, 1980). Cognitive psychologists have devoted considerable effort to documenting a variety of organizational devices and methods used to facilitate the encoding and retrieval of information. Common to all of these methods is the notion that new information is remembered better if it is elaborated in terms of available knowledge or inferences (Bartlett, 1932; Bobrow & Norman, 1975; Hastie, 1980b; Norman & Bobrow, 1979). Schematic processing serves to guide encoding and retrieval, so that extra attention and emphasis is placed on schema-relevant (i.e., both congruent and incongruent) material (Hastie, 1980b). Of course, while this kind of schematic processing saves cognitive effort, it also leads to memory errors, since at retrieval time the perceiver may be prone to remember some schema-consistent features as having been possessed by the particular target that actually were not possessed by it (Cantor & Mischel, 1977, 1979b; Cohen, 1977). Similarly, all of the attention at the time of encoding that is devoted to idiosyncratic, atypical features of the particular stimulus may also result in an overrepresentation of these features at the time of retrieval (Hastie, 1980a; Hastie & Kumar, 1979).

Snyder and Uranowitz (1978) have dramatically illustrated this schema-based reconstructive process. After reading a story about a woman, half of the subjects were told that she was now a homosexual, while the other half were told that she was a heterosexual. Subsequent to this labeling manipulation, memory for facts presented in the story was biased in the direction of the current schema: Subjects selectively recalled information consistent with their current impression of the target and made errors by falsely claiming to have read schema-consistent items that were not in the story. Similarly, Owens, Bower, and Black (1979) showed that when subjects took the point of view of or empathized with a particular character in a story, they were much more likely to remember that character's successes and skills, as opposed to his or her failures and inabilities. Schematic processing simplifies and facilitates the work of person memory, giving organization and coherence to it, but at the cost of some loss of veridicality. The measure of this cost

ultimately depends on the degree of distortion involved, the importance of the selectively ignored or forgotten material, and the sensitivity of the perceiver to new information that should elicit a reevaluation of previous schematic impressions. These factors, in turn, most likely vary tremendously both across particular perceivers and across particular stimulus situations.

ATTRIBUTIONS AND PREDICTIONS: NONNORMATIVE ERRORS

The lay perceiver-actor has frequently been viewed as an intuitive scientist, performing causal analyses of the social world and making predictions about future events and behavior on the basis of past experience (E. E. Jones, Kanouse, Kelley, Nisbett, Valins, & Weiner, 1972). Beginning with the work of Heider (1958) and E. E. Jones and Davis (1965), a number of investigators have studied the way in which people infer causal responsibility from behavior. Heider pointed out that while any behavioral outcome was a function of both personal and environmental forces, people showed an enduring tendency to attribute these outcomes to personal (dispositional) factors. Jones and Davis formalized this statement with their theory of "correspondent inference," in which people assume that actions correspond to intentions, which in turn correspond to dispositions; therefore, actions correspond to dispositions. Correspondence is especially strong, according to the theory, when the behavioral act under consideration deviates from social desirability or is in some other way nonnormative, infrequent, or unexpected. The tendency to downplay the causal role of situational factors in behavior has been thoroughly documented (E. E. Jones, 1979) and is so pervasive that it has come to be known as "the fundamental attribution error" (L. Ross, 1977).

Other theorists have provided extended formal models of the attribution process. The covariation model of Kelley (1967), for example, holds that attribution to internal (personal) or external (situational) causes is a function of three ways in which the actor relates to the target of his or her action: consistency (the degree to which the actor behaves in the same way toward the target across situational contexts); distinctiveness (the degree to which the actor treats other targets in the same manner); and consensus (the degree to which other actors behave in the same way toward the target). This model, of course, requires that the perceiver have available a great deal of information concerning those involved in the interaction. Later, Kelley (1972) proposed a causal-schemata model of attribution, which acknowledges causal inferences to be made under circumstances where the perceiver has only extremely limited information about the interaction. Finally, Weiner and his colleagues (Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1972) have noted that in-

dividuals make attributions to stable or variable causes as well as to internal or external ones; within the domain of achievement motivation, they have provided a model of the ways in which the perceiver uses consistency and consensus information to attribute success and failure to ability, effort, difficulty, and chance. These and other theories, then, provide a set of rules according to which the perceiver may make plausible attributions about the causes of social outcomes.

However, once again, the actual attributions and predictions of the intuitive psychologist are characterized more by deviations from normative principles of inference and decision making than by adherence to the canons of accepted scientific method (Nisbett & Ross, 1980; L. Ross, 1977). Relying on a host of cognitive heuristics and processing shortcuts, the perceiver-actor performs his or her attributional and prediction tasks—specifying the reasons for another's behavior, making predictions about the likely success of a particular job candidate, estimating the co-occurrence of two events, and so on. These tasks are performed efficiently, easily, and with confidence because the perceiver-actor seems to rely on a variety of shortcuts or intuitive principles, a few of which are listed below.

1. *Salience and availability biases.* Causal candidates are frequently evaluated simply on the basis of perceptual salience or the ease with which they come to mind (Tversky & Kahneman, 1974; Taylor & Fiske, 1978).
2. *Fundamental attribution error and false consensus.* People overattribute the causes of another's behavior to internal dispositions, often underemphasizing situational determinants of the behavior (e.g., E. E. Jones, 1979; L. Ross, 1977; L. Ross, Amabile, & Steinmetz, 1977). Similarly, there is a tendency for people to perceive other people as holding similar opinions to their own concerning events (L. Ross, 1977).
3. *Base-rate fallacy and representativeness.* Predictions about people and social events are often influenced too heavily by the degree of similarity or representativeness of the target person's attributes to a stereotype or prototype and too little by the prior odds of finding such a person in the given population (Nisbett & Ross, 1980).

There is no question that it would be more accurate to seek out all the relevant information, carefully and cautiously weigh all information available (including base rates and anecdotes), correct for the potential unreliability and lack of validity of some sources (e.g., first impressions, test scores), search for all possible behavioral determinants (e.g., situational pressures, less available or less salient information), and the like when making a social judgment. Nevertheless, it is also clear that the lay perceiver's heuristics facilitate social decision making and interpersonal communication. The cost of jump-

ing to conclusions about another's dispositions on the basis of insufficient evidence or faulty judgmental processes will vary as a function of the judgmental context. In an everyday interaction, the cost of making precipitous judgments about others may be relatively small; people will frequently have the chance to correct their impressions, or they may simply leave the judgmental situation. However, again, these costs will increase both as the judgmental consequences for the other person become more severe (e.g., a clinical or legal situation), and as the opportunities for revising opinions or encountering disconfirming evidence lessen.

HYPOTHESIS TESTING AND THEORY REVISION

We have repeatedly indicated that the costs of employing schematic processing strategies and judgmental heuristics depend in part on the willingness or proclivity of the perceiver-actor to test and evaluate his or her theories fairly and to revise impressions in the face of disconfirming evidence. To the degree that constructions and impressions of people, events, and social situations are open to change, it is probably most efficient to make decisions on the basis of schematic shortcuts. The tradeoff in costs and benefits depends heavily on achieving a delicate balance between assimilation (of new information to old theories) and accommodation (of old theories to new information). Unfortunately, the evidence to date (though clearly only a partial picture) suggests that the hypothesis-testing procedures of intuitive scientists are biased toward theory confirmation (Snyder, 1980; Wason & Johnson-Laird, 1972), and that the intuitive scientists themselves have proclivities toward theory conservation (Nisbett & Ross, 1980). For example, Snyder and his colleagues (Snyder & Cantor, 1979; Snyder & Swann, 1978b) have asked subjects to test hypotheses about another person's personality either by choosing questions from a list or by retrieving information from memory. These investigations reveal a persistent preference for gathering and/or retrieving theory-consistent data as opposed to facts that might potentially disconfirm the theory. Not surprisingly, people can provide answers to theory-confirming questions—human behavior and experience is varied enough that even the most prototypical introverts will enjoy themselves at *some* parties—and the theory tester leaves the situation quite confident in the validity of the theory.

This bias in hypothesis testing toward theory confirmation is also complemented by a proclivity for theory conservation in the face of disconfirming evidence. L. Ross and his colleagues (e.g., L. Ross, Lepper, & Hubbard, 1975; L. Ross, Lepper, Strach, & Steinmetz, 1977) have demonstrated that experimentally induced impressions of self and others persist even when the

original basis for the impressions has been thoroughly discredited. They explain this reluctance to abandon discredited beliefs by suggesting that, in the process of thinking about the beliefs, subjects marshal other belief-consistent pieces of data (real and imagined); as a result, the discrediting manipulation only serves to harm one weapon in the entire evidentiary stockpile. The validity of this perseverance, of course, depends on the weight of truth in the marshaled data; but ordinary perceiver-actors—not to mention professional scientists—have been known to persist in holding beliefs for which all relevant evidence has been discredited (Nisbett & Ross, 1980). It does appear that human hypothesis-testing and theory-revision procedures are skewed in the direction of assimilation and conservation though the magnitude of the Kurtosis varies across contexts, people, and belief domains and has not yet been thoroughly evaluated.

SELF-PERCEPTION: THE NATURE AND FUNCTION OF THE SELF-CONCEPT

Along with the categorization of people, studies of the self-concept are central to the domain of cognitive-social personology. Historically, most speculations concerning the self-concept have argued that the self is a unified concept representing those characteristics of the person that he or she regards as central to his or her personality; on the other side are those who argue that the person has many "selves," depending on the number of social roles in which he or she is engaged and the number of social contexts in which he or she is found (for a review, see Epstein, 1973). More recently, Epstein (1973) has offered a view of the self-concept as a theory about oneself, part of a person's broader (implicit) theory concerning the entire range of his or her experiences. Mancuso and Ceely (1980), on the other hand, have joined others (e.g., Kulper & Derry, 1981; Markus & Sentsis, 1980; Markus & Smith, 1981; T. B. Rogers, 1981) in thinking of the self as a schema or cognitive structure involved in the processing of self-relevant information.

We begin by defining the self-concept in the same manner as any other concept: as a structured set of features and attributes defining a category represented in semantic memory. The problem, then, is to find out just what attributes belong in the self-concept, how that information is organized, and how the self-concept influences social-cognitive processes and social interactions. Research on the nature and function of the self-concept is in its infancy, but it is clear that the self is no longer simply a topic for speculation; its structure can be explored by means of procedures familiar in cognitive psychology, and its consequences for social interaction can be revealed by methods familiar in personality and in social psychology.

CONTENT OF THE SELF-CONCEPT

The most common techniques for assessment of the self-concept have been reactive: The subject is asked to rate himself or herself on a number of dimensions chosen by the investigator. Carl Rogers (e.g., C. R. Rogers & Dymond, 1954) introduced the Q-sort technique to the study of the self-concept, requiring the subject to sort a batch of first-person statements into categories representing levels of self-descriptiveness. Similarly, T. B. Rogers (1981) has employed an adjective list, in which a set of representative trait terms is rated on a scale of self-descriptiveness. In contrast to Carl Rogers's technique, the subject is not forced to conform to a normal distribution of ratings. It is unclear, however, that either method is appropriate for assessing the self-concept. People may be willing to describe themselves in a particular way, even though that is not ordinarily the way they think about themselves. The categories of self-perception may or may not correspond to those represented on the experimenter's protocol. Markus (1977) has introduced a variation on the self-rating technique, in which trait adjectives are rated in terms of both descriptiveness and importance to the self-concept. An adjective is categorized as part of the person's self-schema (self-concept) if it is rated as both extremely self-descriptive and extremely important to the person's self-concept; where these two conditions do not apply, the person is classified as "aschematic" on the dimension in question, meaning that the dimension is not a salient part of his or her self-concept. The addition of the importance rating is an advance in the assessment of the self-concept; in fact, it may be that the importance rating is the crucial one and that the self includes those features that are important to the person, regardless of how self-descriptive they actually are.

A more important consideration, however, is an idiosyncratic one. Whether an investigator chooses adjectives or first-person statements, forces the subject to use a normal distribution of ratings or not, or chooses descriptiveness or importance as the rating dimension, subjects are still forced to employ the investigator's categories in describing themselves. This is a problem because the investigator's categories may not adequately sample the features of the self-concept. The favorite categories for psychologists are trait adjectives; however, we have noted that in describing other persons, people employ a much more diverse set of features, including physical appearance, socioeconomic status, and typical behaviors. So must it be with the categories representing the self-concept. And, of course, even if trait adjectives were predominant features of self-schemata, there would be no guarantee that the subject would be satisfied with the investigator's choice of trait dimensions, or that subject and investigator would impute the same meaning to a trait term.

Investigators such as McGuire (e.g., McGuire & Padawer-Singer, 1976) and R. A. Jones (R. A. Jones, Sensenig, & Haley, 1974) have recently reintroduced a free-response approach to the assessment of the self-concept, based on earlier techniques such as the Who Am I? Test and the Twenty Sentences Test. In the procedure employed by McGuire, the subject is simply asked to respond, orally or in writing, to the probes "Tell me about yourself" and "Describe what you look like"—questions intended to elicit the general and physical self-concepts, respectively. McGuire and Padawer-Singer (1976) administered these two tasks to a group of sixth-grade pupils in a culturally heterogeneous urban school. A content analysis of the resulting self-descriptions yielded the following results: habitual activities, 24%; relationships with significant others, 20%; attitudes, 17%; school status, 15%; demographic information, 12%; self-evaluation, 7%; physical descriptions, 5%; miscellaneous, 1%.

McGuire's method allows subjects to describe themselves in their own terms without being forced into the experimenter's categories, but gives no information about how the self-concept is organized in the individual. Such information, which is likely to be of great value to practicing clinicians, is provided by Pervin's adaptation (1976) of Rosenberg's technique (1976) for studying personal constructs. In a demonstration study, four subjects provided a list of specific situations encountered in their own current lives, and then described the features of the situations and the ways in which they felt and behaved in them; then every situation was rated on every feature, feeling, and behavior. Factor analysis was employed to produce clusters of situations defined by common features, feelings, and behaviors. Interindividual comparisons revealed appreciable commonalities across the subjects: home-family, friends-peers, relaxation-recreation, work, school, and being alone were commonly represented in the individual factor spaces. However, the characteristics defining these factors were quite different from one person to another. Moreover, comparison of the individual descriptor loadings across factors, within subjects, indicated idiosyncratic patterns of those feelings and behaviors that were relatively consistent across situations, as well as those that were fairly unique to particular situations.

STRUCTURE OF THE SELF-CONCEPT

Whatever they are, the contents of the self-concept are most likely represented in a manner similar to that of any other aspect of semantic memory (for reviews, see Anderson, 1976; Smith, 1978). For example, a number of investigators have construed the self in terms of currently popular network models of memory, such as HAM or ACT (Bower & Gilligan, 1979; Mancuso & Ceely,

1980; Markus & Smith, 1981). According to this view, the self is represented as a conceptual node in memory, embedded in an associative network that links it to other generic concepts and specific episodes. The self-concept, then, includes all other nodes to which the self-node is directly and strongly linked; where the associative links are indirect and/or weak, the concept or event lacks self-relevance. Self-reference involves searching the associative network for concepts linked to the self-node. Alternatively, others have argued that the self-concept consists of a hierarchically ordered collection of self-descriptive features, including traits, values, and specific episodic memories (Kuiper & Derry, 1981; T. B. Rogers, 1981). According to this view, the features vary on a dimension of perceived self-descriptiveness, with those features that are most characteristic combining to form the *prototype* of the self; other features, not perceived as self-descriptive, are not represented in the self-prototype. The self-prototype is conceived as a fuzzy set, with no feature being necessary or sufficient. Self-reference, from this point of view, involves comparing the features of a stimulus with features contained in the self-prototype.

The work of McGuire and Pervin suggests that the self-concept may be much less stable and monolithic than most previous analyses have assumed. What is salient in the self-concept may depend on the particular social context in which it is elicited. More important, perhaps, the self-concept may have some situational specificity, so that people see themselves differently depending on the situation they are in. Thus, instead of a monolithic self-concept, represented as a single node in memory or a prototypical set of features, there may be many "contextual selves." This proposal does not preclude the existence of a unified self-concept as well, consisting of features that are consistent across a wide variety of situations, or perhaps of the rules governing the relationships among different contextual selves.

Features of episodic memory are also important aspects of the self-concept, for the self must serve to organize the individual's autobiographical record of personal experience as much as it organizes the person's conceptual knowledge about his or her characteristic features. Unfortunately, autobiographical memory has not yet been intensively studied by psychologists (Neisser, 1978), so that answers to many questions about the encoding, representation, and retrieval of personal experiences must be speculatively generalized from theoretical accounts developed in the domains of verbal learning and person memory. Network models of memory, such as HAM or ACT, can represent both concepts and events as a series of interconnected nodes (Anderson, 1977; Anderson & Hastie, 1974; Hastie, 1980a; Hastie & Kumar, 1979). According to this view, encoding an episode of experience in memory involves forming associations among nodes representing the facts of the event (e.g., subject, object, and action) and the context (e.g., time, place, in-

ternal state) in which it occurred. It is the explicit representation of context information that distinguishes episodic (event-related) from semantic (conceptual) memory structures (Tulving, 1972). The episode as a whole is represented by a superordinate node, which may be linked to other conceptually or contextually related episodes. All the episodes, in turn, are linked to the conceptual node representing the self.

SELF-PERCEPTION

There is every reason to suppose that the self-concept is acquired in much the same manner as knowledge about other persons is: It is constructed from direct and vicarious observations of a person's own behavior, the behavior of others toward that person, and the context in which these behaviors occur (D. J. Bem, 1967, 1972; Locksley & Lenauer, 1981). Affirming this unified view of the person does not mean that the self-concept is not special in at least some ways. It is likely to be the richest concept that most people possess, and it may have the strongest emotional valence associated with it; and E. E. Jones and Nisbett (1972) have shown that actors are more likely to make situational attributions concerning their own behavior, while observers strongly attribute the same behavior to trait dispositions. We assume, however, that it is based on the same principles of categorization, impression formation, schematic memory processing, attributional and judgmental heuristics, and hypothesis testing just described. For this reason, it does not seem necessary to go into a great deal of detail on the processes of self-perception; what follows is a small sample of the relevant research.

Earlier, it was suggested that the principles of schematic processing operate in such a way as to favor the encoding of highly informative (unpredicted) features of a person, as well as the retrieval of those that are consistent with an overall impression (Hastie, 1980a; Hastie & Kumar, 1979). Both these processes can be observed with respect to the self-concept. In a series of studies, McGuire and his colleagues (McGuire & McGuire, 1980; McGuire, McGuire, Child, & Fujioka, 1978; McGuire, McGuire, & Winton, 1979; McGuire & Padawer-Singer, 1976) have obtained evidence and support of their "distinctiveness postulate"—namely, that a person notices aspects of himself or herself to the extent that they are infrequent in the social context. For example, schoolchildren who are atypical with respect to age, birthplace, hair and eye color, weight, sex, and handedness (compared to their classmates or family members) are more likely to mention these characteristics in their self-descriptions than their more typical counterparts are. On the other side, Markus (1977) found that individuals who possessed well-developed self-schemata for dependence had better access to memories of specific situations in

which they behaved dependently, and vice versa, than did their counterparts who were aschematic on this dimension. Similarly, in a series of self-description tasks, subjects classified as self-schematic on such dimensions as independence-dependence, creativity, masculinity-femininity, and body weight made faster judgments about the self-descriptiveness of relevant trait terms than aschematics did (Markus & Sentis, 1980; Markus & Smith, 1981).

Self-attributions of causality are also made according to the same kinds of rules of thumb, and subject to the same kinds of heuristic biases, as those described for observers' attributions. There is, as clearly documented by E. E. Jones and Nisbett (1972), a tendency for actors to make situational attributions concerning their own behavior, in contrast to the dispositional attributions preferred by observers. As they note, this seems likely to be due more to differences in available data than to differences in the attributional process itself. The observer has only the behavioral event(s) at hand and normative information, which has probably been inferred from biased and unrepresentative samples of other behavior, upon which to base conclusions. Because the actor knows his or her past better than any observer, he or she may possess information about consistency and distinctiveness (Kelley, 1967) that, if known to an observer, would lead the latter to make a situational attribution as well; moreover, it is likely that the actor's attention is focussed more on contextual cues that, again, if noticed by the observer, would lead to a situational attribution. Studies of intrinsic motivation, in which interest in a task can be undermined by rewarding its performance, provide a good example of the operation of one of Kelley's causal schemata (1972) in self-attribution (Lepper & Greene, 1976). In these situations, there are at least two plausible reasons for subjects to perform a task: because they want to do it, and because it is rewarded. Under conditions where the controlling features of the reward are made salient (e.g., by being made contingent on performance level), subjects apparently discount their intrinsic interest in the task (Harackiewicz, 1979).

From time to time, individuals are given the opportunity to test and revise their hypotheses about themselves. In a recent study, Markus (1977) placed subjects classified as schematic or aschematic on the dimension of dependence-independence in a situation where this feature of their self-concept was contradicted. After administration of a putative suggestibility test, subjects for whom independence was part of their self-schema were told that they were highly susceptible to suggestions, while others who viewed themselves as dependent were told that they were highly resistant to social influence; half the aschematics were given each kind of false feedback. The schematics of either type were less likely to endorse the accuracy of the description, and more likely to express frank disagreement or disbelief, than were the asche-

matics. Moreover, when asked to rate their suggestibility, the schematics were significantly less influenced by the feedback than the aschematics were. Finally, the subjects were asked to rate themselves on a variety of adjectives pertaining to independence and dependence. Compared to self-ratings made at the beginning of the experiment, the schematics showed longer response latencies but more stable ratings than those of the aschematics. Thus the schematics were more likely to consider, but finally to reject, information contrary to their self-concepts. Here, then, may be observed the same sorts of assimilative and conservative tendencies that influence the testing of hypotheses and revising of theories about other persons.

AUTOBIOGRAPHICAL MEMORY

A fair amount of effort is now being devoted to understanding the processes involved in encoding and retrieving episodic memories in general and autobiographical memories in particular (Kihlstrom, 1981). Both encoding and retrieval can be described in terms of the "depth-of-processing" account offered by Craik and his associates (Craik & Lockhart, 1972; Jacoby & Craik, 1979; Lockhart, Craik, & Jacoby, 1976). According to this view, perceptual events can be more or less elaborately processed in the cognitive system at the time of their occurrence; the degree of elaboration depends in part on the task orientation of the subject and in part on the congruity between the event and the cognitive structures brought to bear on it; elaborate processing yields distinctive encodings; and distinctive traces are more memorable. Once an event has been encoded, retrieval depends on the interaction of information supplied by the retrieval cue and that contained in the target memory trace and associated knowledge structures. Early and sufficient overlap between the two kinds of information supports a problem-solving, reconstructive activity until an adequate memorial representation of the event has been formed. In the case of autobiographical memories, remembering involves reconstructing the spatiotemporal and experiential context in which the event originally took place.

From this point of view, a number of factors should combine to produce rich, distinctive, and highly accessible encodings of autobiographical memories. First, autobiographical memories by definition contain unique spatiotemporal context features that must make them distinctive—although, as Tulving (1972) argues, these features may be particularly fragile and prone to decay or interference. Also, many personal experiences are associated with some affective valence that should serve to heighten their distinctiveness; again, however, there is evidence that this valence diminishes over time, negative valence at a faster rate than positive valence (Holmes, 1970, 1974). To the

extent that these contextual features are lost or obscured, the episode will be harder to retrieve as a uniquely specified event, and the memory may take on a more generic, semantic quality (Reed, 1979). Furthermore, the central tasks of the perceiver-actor—impression formation, inference, judgment, and causal attribution—must promote extensive processing of personal experiences. Merely a self-referent task orientation, which would seem to be a necessary aspect of having any personal experiences at all, appears to produce more memorable traces than does any other encoding condition studied to date (Keenan & Baillet, 1980; T. B. Rogers, 1981). When perceptual events are incongruent with prior expectations, thus calling for extra attentive effort in order to revise an impression or inference, the events involved will be especially highly memorable (Hastie, 1980a; Hastie & Kumar, 1979). The good encoding of unexpected events of high personal relevance is clearly exemplified by the "flashbulb" memories of the sort that most readers have for the assassination of John F. Kennedy (Brown & Kulik, 1977).

In the past, most research on autobiographical memory has focused on people's earliest recollections from childhood, as collected in clinical interviews (Ansbacher, 1947) or questionnaires (Dudycha & Dudycha, 1941; Kihlstrom & Harackiewicz, in press). Recently, investigators have begun to study the retrieval phase of autobiographical memory with a broader range of targets and more controlled procedures. A particular popular technique, introduced by Crovitz (Crovitz & Quina-Holland, 1976; Crovitz & Schiffman, 1974) and Robinson (1976), involves presenting words as cues for the retrieval of discrete personal experiences related to them. In research by Chew and Kihlstrom (1981), words varying on such dimensions as concreteness, meaningfulness, pleasantness, and self-relevance were employed as cues for memories of events occurring in the recent or remote personal past. Examination of response latencies and the characteristics of the memories recovered in this manner has begun to reveal the interactive process in which the individual extracts relevant semantic and contextual features from the retrieval cue, matches these with the stored contents of memory, and so begins to reconstruct the original experience. Another paradigm has been introduced by Linton's marathon study (1975, 1978) of her own autobiographical memories: Every day for 6 years she recorded a sample of the day's events, along with ratings of their uniqueness, importance, and emotionality; and every month she tested her memory for these events in terms of recognition and temporal ordering. The individual test protocols from Linton's research, like the eyewitness testimony studies of Loftus (e.g., Loftus & Loftus, 1980), clearly underscore Bartlett's (1932) point that memory for experiences in the real world is reconstructive rather than reproductive, and that the final product of the retrieval process is based as much on inference as on fragments of the original memory trace (Jenkins, 1974; Neisser, 1967, 1976; Norman & Bobrow, 1979).

COGNITIVE AND BEHAVIORAL CONSEQUENCES
OF SELFHOOD

At this point, investigators are beginning to know something about the content and structure of the self-concept, but we have not discussed the cognitive and behavioral consequences of having one. As already noted, it appears that making a self-referent decision about a stimulus—deciding whether a trait adjective is self-descriptive, for example—facilitates later retrieval of that information (e.g., Kuiper & Rogers, 1979; T. B. Rogers, Kuiper, & Kirker, 1977). This is what would be expected if the self-concept is a richly differentiated aspect of the cognitive system. Moreover, a self-referent orientation during encoding can lead to false recollections of self-relevant information (T. B. Rogers, P. J. Rogers, & Kuiper, 1979)—just as in interpersonal perception, where cognitive economics and the vicissitudes of reconstructive memory can lead to a confusion between the veridical and inferred attributes of a person or event. Moreover, Markus (1977) has shown that having a clear concept of the self in a particular domain leads to shorter response times when rating schema-relevant traits for self-descriptiveness, greater accessibility of schema-relevant behaviors in memory, greater temporal stability in schema-relevant self-descriptions, and more confidence in the prediction of schema-relevant behavior. Most interesting, subjects with self-schemata for independence and dependence were more likely to consider, and finally to resist, information contrary to their self-concept.

Markus and Smith (1981) and Kuiper and Derry (1981) indicate that the contents of the self-concept influence person perception in a variety of ways. Briefly put, the same categories appear to be involved in the perception of self and of others: People ascribe to others traits that they see themselves as possessing, attribute to them more extreme attitudes on issues in which they are personally involved, and believe that the behaviors and opinions of others conform more closely to or diverge more widely from their own than actually is the case. For example, Shrauger and Patterson (1974) gathered free descriptions of acquaintances from subjects, coded them in terms of 57 representative dimensions, and also collected self-ratings on these same traits. For each subject, a subset of categories was classified as salient or nonsalient, according to a joint criterion of frequency and order of output. On the self-rating task, salient categories were rated higher on both self-relevance and self-satisfaction than were nonsalient categories. More recently, research by T. B. Rogers and Kuiper (1981) has found that when rating others, subjects made significantly faster judgments on trait dimensions that they had rated as extremely high or low in self-descriptiveness, compared to their judgments on moderately self-descriptive items. Similarly, Markus and Fong (1981) found that subjects with self-schemata for dependence-independence were more

discriminating about the independence of a target person than were aschatics.

These findings are reminiscent of the psychoanalytic concept of projection. However, projective attribution is not restricted to undesirable qualities. Moreover, as Holmes (1968, 1978) has pointed out, the projective attribution of undesirable qualities is as commonly directed to desirable as to undesirable targets, and does not lead to more favorable evaluation of these qualities or any other kind of stress reduction. Apparently, the self-concept provides readily accessible categories against which the perception of social stimuli can be structured, as well as baseline information that serves as an anchor point for various sorts of quantitative judgments.

The apparent relation between the categories involved in the perception of self and perception of others exemplifies a primary feature of social-cognitive processes: their egocentrism. There appears to be an enduring tendency for people to attribute more than is warranted to themselves. Much of the relevant evidence has been summarized by Greenwald (1980), who has argued that the self may be construed as a historian who observes and records the life of the person. The self as historian has certain peculiar properties, however. For example, it appears to be extremely egocentric; self-relevant information is easier to process and dominates perception and memory, and self-generated material is easier to remember than that generated by others. It is also self-aggrandizing; under conditions of a threat to self-esteem, the "reverse Zeigarnik effect" favors the recall of successes as opposed to failures, and even where outcomes were determined entirely by chance or external manipulation, there is a tendency for the person to assert that he or she had control over them. Finally, it is revisionist; it seeks information from memory and the perceptual field that confirms its hypotheses, and it reencodes memories so that they correspond more closely to current attitudes and knowledge. In these respects, Greenwald argues that the ego as historian operates in the same manner as do the official historians of a totalitarian state, such as the ones described by Orwell in 1984. In the totalitarian state, Orwell argues, these qualities are motivated by considerations of power. As in the case of projective attribution, however, the totalitarian appearance of the ego seems to reflect less on motives and more on the properties of schematic processing and other vicissitudes of cognitive economics. Just as people make attributions about themselves in the same way as they make attributions about others, self-perceptions are subject to the same sorts of biases as perceptions of other people.

Egotism in self-attributional judgments has been repeatedly demonstrated, especially in the domain of ability-linked attributions (Snyder, Stephan, & Rosenfield, 1976, 1978; Weiner *et al.*, 1972). For example, people show a marked tendency to ascribe a success to their own ability and a failure

to task difficulty, especially if the task has been ego-involving and important to the subject (e.g., Miller, 1976). Moreover, as M. Ross and Sicoly (1979) have found, subjects are very likely to exaggerate their own contributions to joint enterprises (book chapters, household work, team sports) as compared to those of their collaborators. Similarly, Snyder and his colleagues (Snyder *et al.*, 1976) have demonstrated an actor-observer divergence in ability attributions: Actors take more credit for their successes and less blame for their failures than observers attribute to them. Interestingly, this "glow effect" is diminished in the self-ratings of depressives; while normals present inflated self-characterizations relative to observer ratings, depressives see themselves as *less* socially adept and successful (Lewinsohn, Mischel, Chaplin, & Barton, 1980). In either case, that of the unrealistically positive self-assessments of normals or that of the unrealistically negative ones of depressives, it is important to point out that a self-theory or self-schema that leads the perceiver to overemphasize certain data or experience in a theory-confirming manner is operative. This process is conceptually similar to that underlying person perception in general; it need not necessarily be attributed to "special" motives associated with self-perception. If an actor has a relatively positive self-theory, then theory-congruent past and present behavior and experience may be overly salient and available, leading the actor to see a simple failure experience as relatively unique or rare in comparison with his or her entire history. This biased sampling of self-relevant information may induce the actor toward a pattern of egocentric attribution.

THE LINKS BETWEEN SOCIAL COGNITION AND SOCIAL BEHAVIOR

A main tenet of the cognitive-social interactionist view of personality is that individual social behavior emerges out of a process involving *reciprocal determinism* between the social world (both as a physical and a social force) and the individual's constructions and reactions to that world (as manifested in perceptions of self and others, emotional experiences, etc.). Conceptual transitions in the work of personologists in the behavioral tradition (e.g., Bandura, 1977a; Mischel, 1980) provide illustrations of developments in this direction. For example, consider Mischel's work on the determinants of delay of gratification in children (1974, 1980). This work has evolved from concern with the influence of objective stimulus factors in isolation (e.g., the presence or absence of the desired reward) to studies of cognitive strategies and plans that children spontaneously use to transform the perceived situation in order to facilitate delay (e.g., imagining a desired marshmallow as a cloud floating in the sky or some other nonconsummatory image). The child's waiting be-

havior is determined, then, through a reciprocal interaction between features of the situation and the child's behavioral and cognitive operation on that situation. It is easy to see that adult self-regulation processes may be similarly shaped through a process of assimilation and accommodation between the individual and his or her social environment.

GENDER DIMORPHISM

The course of psychosexual dimorphism, as recounted by Money and Ehrhardt (1972; see also Ehrhardt & Meyer-Bahlburg, 1979), is an excellent example of a full-fledged, dynamic, reciprocal interaction between the person and the environment, involving biological, behavioral, and cognitive variables. In a series of fascinating cases of hermaphroditism, sex reannouncement, sex reassignment, and sex reversal, delayed and precocious puberty, and transsexualism, these investigators have shown how the program for psychosexual dimorphism is passed from the chromosomes to the hormones to the genitals, and then exchanged continually between the person and his or her social environment. Nothing is given, in a biological sense, except the appearance of the external genitalia. One aspect of the reciprocal interaction between person and situation is represented by the manner in which the appearance of the external genitalia structure the social environment, as parents, siblings, and others respond differently to and impose different demands on children who are declared to be boys and girls. The wider social environment contributes another aspect to the interaction, as cultural stereotypes of masculinity and femininity determine how children will be treated and which of their behaviors will be positively reinforced. As a third component of the interaction, the child identifies himself or herself as a boy or a girl on the basis of the appearance of external genitalia, and thus begins to search for cues in the environment concerning sex-appropriate behavior. Social demands are no more "givens" than biological factors, however, as evidenced by those "androgynes" who seek to adopt attitudes and behaviors consistent with cultural stereotypes of both masculinity and femininity (S. L. Bem, 1979; Spence & Helmreich, 1978, 1979), as well as by those women identified with the feminist movement (and men influenced by it) who seek to transcend and abolish these stereotypes altogether.

The scope of the reciprocal interaction between person and situation as it affects gender identity and gender role is made particularly clear in cases of children who are genetically male or female, with a normal chromosome count, but whose sexual anatomy is improperly undifferentiated. Typically, this involves fetal androgenization in genetic females or a failure of andro-

genization in genetic males. Correct diagnosis of these conditions is difficult, so that the child's sex is often reassigned postnatally or reannounced during infancy or childhood, followed by corrective surgery and hormone treatment. When the social environment is clear about the sex of the child, the process of gender-identity establishment and gender-role identification unfolds smoothly; when the environment is more ambiguous, the child matures uncertain of his or her identity and role. When sex is reassigned neonatally, the environment is extraordinarily flexible, and the parents (with professional and social support) shift easily from one set of socialization practices to another; after the child has begun to establish his or her identity and to practice appropriate role behaviors (at about 18 months), the shift is much more difficult. In any event, initial uncertainty with respect to a child's sex may lead parents to be more sensitive to cross-sex-typed behavior, and to reinforce behavior appropriate to the reassigned or reannounced sex more strongly, than parents who have never doubted whether their child was a boy or a girl may do. Even young children have clear expectations about sexual dimorphism in body features, the timing of the changes involved, and behaviors appropriate to sex roles; if the original reassignment or reannouncement is not successful from their point of view, they may well seek another one. Here the reciprocal interaction reaches completion, as the dissatisfied child attempts to transform his or her own environment behaviorally so that it more closely matches his or her expectations.

SKewed INTERACTIONISM

Thus far, we have pointed to links between social cognition and social behavior in cases where there is a fairly balanced or reciprocal interaction between the actor's cognitive-behavioral constructions and the actual "objective" social environment. However, the cognitive heuristics emerging in the literature on perception of self and others imply an interaction more heavily skewed toward cognitive assimilation (of the perceived event toward cognitive expectancies) and conservation (of cognitive-social theories). Assimilation and conservation at the cognitive level should be reflected at the behavioral level in an interaction skewed in the direction of the perceiver-actor's prior expectancies—an interaction in which the perceiver-actor's power to shape that social environment is demonstrated. This form of imbalanced interactionism has also been investigated, principally by social psychologists.

Social psychologists have gathered a great deal of empirical evidence suggesting that cognitive expectancies can often lead an actor to treat another person in such a way as to elicit from that other person behavior that con-

firms the actor's original expectations, thus creating a *self-fulfilling prophecy* (for a review, see Darley & Fazio, 1980). This phenomenon of cognitive-behavioral confirmation has frequently been demonstrated in interactions involving asymmetric natural power relationships such as teacher-student (Rosenthal, 1973; Rosenthal & Jacobson, 1968), experimenter-subject (Orne, 1962, 1973; Rosenthal, 1963; Rosenthal & Rubin, 1978), and interviewer-interviewee (Snyder & Swann, 1978b; Word, Zanna, & Cooper, 1974). Snyder and his colleagues (Snyder & Swann, 1978a; Snyder, Tanke, & Berscheid, 1977) have also demonstrated the phenomenon of behavioral confirmation among sets of randomly paired undergraduates in laboratory studies. For example, Snyder and Swann (1978a) had subjects playing an experimental game involving reaction time in which each partner could disrupt the performance of the other by means of a burst of noise. One partner, randomly selected as the perceiving labeler, began the session with an experimentally induced expectation (categorization) of the target partner as a hostile person. During the course of their interaction, the perceiving labeler treated the target with more hostility than would ordinarily be expected; the target returned this show of hostility, thus confirming the perceiving labeler's original expectancy. Moreover, under some conditions the randomly labeled "hostile" target came to perceive himself or herself as more hostile, and the experimentally induced hostile behavior generalized to another interaction with yet a third, naive perceiver. The expectancy or interpersonal categorization of the labeling perceiver with regard to his or her target so guided behavior in these laboratory interactions that the data available in the environment were shaped by and assimilated to that prior categorization.

Cognitive expectancies can also produce contrast effects in which only the slightest bit of disconfirmatory evidence from a partner in an interaction leads the actor to reverse his or her original categorization and to take an even stronger position in the opposite direction. However, such phenomena of behavioral contrast have been difficult to study under the controlled conditions of the laboratory. Nevertheless, in both confirmation and contrast phenomena, the reciprocal interaction between the perceiver-actor and others in his or her environment is skewed in the direction of the perceiver-actor's construction of the social world. In other words, the perceiver-actor takes a primary role in creating the environmental data base.

Another sphere in which actors take controlling roles in shaping the environment is in the domain of strategic *self-presentation* (Goffman, 1959; E. E. Jones & Pittman, 1980). This may be defined as the deliberate attempt on the part of an actor to shape an observer's definition of a situation, impression of the actor, attribution of causality, or some other social judgment. This is not to imply that such a judgment is necessarily false or erroneous, but only that it is deliberately fostered by the actor, usually in the service of

augmented power. Jones and Pittman have reviewed a number of self-presentational strategies, including ingratiation (i.e., creating an impression of likability; E. E. Jones, 1964; E. E. Jones & Wortman, 1973); intimidation (creating an impression of dangerousness); self-promotion (creating an impression of competence); exemplification (creating an impression of integrity); and supplication (creating an impression of dependence). Jones and Pittman make it clear that this is not just another typology of persons. Rather, these are strategies that are available for use under appropriate circumstances; people are capable of shifting from one to another. Similarly, while self-presentation and management of impressions are common components of social interactions, they are not necessary ones; there are many circumstances in which strategic self-presentations will be modulated by social goals overriding those goals having to do with power relationships.

As an example of self-presentation in the area of success and failure, consider the strategy that Jones and his colleagues have called "self-handicapping." The self-handicapper strategically avoids giving others the opportunity to make an ability-linked attribution for his or her performance by setting up roadblocks to good performance or withdrawing effort before or during the task. Berglas and Jones (1978) demonstrated this self-handicapping pattern in the controlled conditions of the laboratory. Subjects were given success feedback after working on a set of insoluble problems (noncontingent success) or soluble problems (contingent success). They were then given the opportunity to take an ostensibly performance-inhibiting or performance-facilitating drug (actually a placebo) before engaging in a retest on similar problems. Males in the noncontingent success condition showed a unique preference for the performance-inhibiting drug, thus creating attributional ambiguity with regard to their likely failure on the retest problems. There is clearly an interaction of person and environment embedded in this pattern of self-handicapping. Yet, as in the sequence of behavioral confirmation described earlier, here the actor has taken a decided and disproportionate role in shaping the social environment according to his or her prior expectations. And the behavioral reflection or playing out of the social perceiver's cognitive heuristics may be seen here—schematic processing in the phenomena of behavioral confirmation, and ego-defensive attribution in self-handicapping.

SOME UNRESOLVED ISSUES

The cognitive-social approach to personality is well developed in some areas (e.g., impression formation and attribution theory), while other areas (e.g., the self-concept and links between cognition and action) remain relatively unexplored. Research proceeds apace on all of these fronts and others. As re-

search and theory continue to progress, a number of difficult topics will have to be addressed.

COGNITION AND BEHAVIOR: AFTER-THE-FACT RATIONALE?

A persisting thorn in the side of a cognitive-social theory of personality is the apparent variability and discriminativeness of behavior—so finely tuned to the nuances of situations—in contrast with the rather entrenched, stable, and conservative foundations of social knowledge. In constructing a view of the social world, the perceiver-actor seems to abstract a very smoothed, consistent, ego-protective picture, using a host of schematic memory processes and attributional-judgmental heuristics. Individual behavior seems to be far more discriminative and open to change and revision than individual cognition is. It is sometimes difficult to fit the pieces in this cognitive-behavioral puzzle together: Can such a conservative cognitive system mediate behavior that is fundamentally variable and situation-specific? Perhaps the cognitive descriptions of social reality given by the perceiver-actor are orthogonal to actual behavior—closer, that is, to after-the-fact rationalizations than to causal determinants. Nisbett and Wilson (1977) and Langer (1978) have recently argued this position. According to their analyses, social behavior is often "mindless"; individuals' after-the-fact introspections on their own behavior are frequently inaccurate because they rely on naive causal theories about the cognitive determinants of behavior. As an example, Nisbett and Wilson (1977) cite people's misinterpretations of their supermarket-shopping behavior: People claim to buy what they like, while their actual choices can be shown to be determined by serial position on the shelf. Despite persistent beliefs in the cognitive control of behavior, then, it may be that attributions, categorizations, and memories serve mostly to provide a stable view of social life, operating independently of behavior as a post hoc explanatory system.

It is certainly the case that some social behavior is reflexive in quality and that implicit causal theories can interfere with accurate introspections. Clearly, cognitive heuristics do help paint a consistent and secure social world at very little cost in processing energy. However, it may also be that the laboratory approach—restricted as it frequently is to short-term interactions and superficial decisions—underestimates the degree of reciprocal determinism that obtains between cognition and behavior in the natural social environment and overestimates the conservative, entrenched nature of everyday social cognition. Perhaps if investigators took larger temporal chunks of social interactions, varying as they naturally do over tasks and interaction partners, a truer picture of reciprocal determinism would emerge in which cognition

and behavior are seen to be more intimately connected. Moreover, if researchers studied social cognition and behavior in more significant life domains (such as parent-child interactions) and with respect to more weighty social decisions (such as whether or not to drop out of college), again, the self-reports and cognitive constructions of social actors might turn out to have more impact and credibility. Therapists are in a unique position to chart the extended course of social cognition and social behavior in important life domains and to monitor changes in both thought and behavior.

THE PROBLEM OF CONSCIOUSNESS

For a time, the need for a more dynamic approach to personality was satisfied by psychoanalytic theory as developed by Freud and those who followed him. With the introduction of the "iceberg" metaphor, psychoanalysis initiated a tradition of "depth" psychologies that hypothesized invisible processes mediating surface behavior. Unfortunately, psychoanalysis suffered its own set of conceptual and empirical problems, which space does not permit us to review here (Kline, 1972; Mischel, 1973a). It is, in part, the intention of the cognitive-social personology proposed here to develop a dynamic theory of personality that does not rely on primitive drives, defenses against them, and a conceptualization of men and women as fundamentally irrational and motivated by fear. There is one issue in psychoanalytic theory which is not explicitly addressed by cognitive-social personology, however—the possibility of unconscious mental processes.

The concept of unconscious mental processes has a long and rich history in psychology (Ellenberger, 1970). Although there has been a tendency to identify them with the motives and defenses of psychoanalysis (e.g., Erdelyi, 1974; Erdelyi & Goldberg, 1979), an alternative conceptualization has been available at least since the time of James, Janet, and Prince, and has been revived as the "neodissociation" theory of divided consciousness by Hilgard (1977). The theory begins with the fact that attention can be divided and simultaneously directed to multiple cognitive tasks (Kahneman, 1973; Neisser, 1976). In some instances, one of these tasks appears to be performed subconsciously—that is, outside of the person's awareness. In an experiment by Spelke, Hirst, and Neisser (1977), for example, subjects were taught to read prose and take dictation simultaneously. With practice, they achieved high levels of performance, as measured by tests of comprehension and accuracy. The subjects were largely unable to recall the words that had been dictated to them, however. Similar divisions in awareness may be observed in a variety of clinical and experimental settings. In cases of cerebral commissurotomy, patients are unable to name stimuli processed in the nonverbal hemisphere

(Gazzaniga, 1970); normal subjects who are unequivocally asleep may respond to instructions given by an experimenter, yet have no recollection of these activities upon awakening (Evans, 1979). In the well-known phenomenon of state-dependent learning, both human and infrahuman subjects may show poor memory for material learned while under the influence of a drug until that drug state has been reinduced (Eich, 1977; Weingartner, 1978).

Hypnosis offers a particularly good medium for studying these processes, because some hypnotizable subjects appear to have a high capacity for dividing consciousness in such a way that percepts, memories, thoughts, and actions are processed outside of phenomenal awareness (Brenneman, Kihlstrom, & Hilgard, 1981; Hilgard, 1965). In hypnotic analgesia, subjects appear to be able to reduce or eliminate their awareness of pain, even though psychophysiological responses to the stimulus are unaffected (Hilgard & Hilgard, 1975). Subjects experiencing posthypnotic amnesia are unable to remember the events and experiences which transpired during hypnosis; nonetheless, these memories may be recovered after the administration of a prearranged cue, and while outside of awareness can still affect ongoing cognitive processes (Kihlstrom, 1981; Kihlstrom & Evans, 1979). Although the phenomenon has not yet been systematically studied in the laboratory, clinical lore has it that hypnotized subjects may be able to remember material that ordinarily is not accessible to them. There is also evidence that subjects can act posthypnotically on suggestions given during hypnosis, without knowing the reason for their actions (Bowers, 1966, 1975).

These and other phenomena, encountered in the clinic, the laboratory, and everyday life, converge on the conclusion that complex, intentional cognitive processes related to perception, memory, and action can take place subconsciously—that is, without being controlled or monitored by a central executive structure. The “unconscious” of neodissociation theory is different from that of some other conceptions of the unconscious in contemporary cognitive psychology (e.g., W. Schneider & Shiffrin, 1977), in that it is not limited to procedural knowledge and can carry out complex and controlled mental processes; it is also different from that of psychoanalysis in that it is not restricted to primitive sexual and aggressive contents and not necessarily employed for purposes of defense.

In contrast to its reigning position in psychoanalytic theory, the concept of consciousness is not central to the cognitive-social personology described here. Yet the notion of multiple systems for monitoring and controlling thought and action, as well as the possibility that divisions in consciousness may occur in such a manner that the lines of communication between two or more systems may be cut, is entirely compatible with recent theoretical developments in cognitive psychology and ought to be incorporated into any cognitive personology. The ability to divide consciousness so that some aspects of behavior and experience are not represented in phenomenal awareness is a

cognitive competency that some individuals, at least, can bring into the service of personality. From a clinical point of view, the concept of divided consciousness is important in understanding a diverse set of complaints, from the dramatic symptoms of multiple personality to the more common ones of functional amnesia, anesthesia, analgesia, and paralysis.

COGNITION AND AFFECT

Another important issue concerns the relation between cognitive and affective aspects of personality and social behavior. Ours is not a view of men and women as coldly calculating processors of information. In fact, we see cognition and emotion as interacting reciprocally, just as persons and situations do. First, it appears to be the case that affective experiences are cognitively constructed. There are no unique patterns of psychophysiological response associated with any particular emotional experience (Johnson, 1970; Mandler, 1975). Following Schachter and Singer (1962) and Mandler (1975), we may assert that an emotional experience is a joint function of (relatively undifferentiated) physiological arousal and the situational context in which that arousal occurs (for limitations on this assertion, see Marshall & Zimbardo, 1979, and Maslach, 1979; for a stronger objection, see Zajonc, 1980). In effect, the individual explains his or her perceived arousal state in terms of available situational cues. The arousing situation, of course, is itself cognitively constructed according to the principles of social categorization, and the inference from arousal to emotion is subject to the kinds of heuristics and biases inherent in any judgmental process. Changes in the perception of the situation or in the processes guiding social inference may well alter the quality of the emotional experience elicited by an arousal state.

Moreover, once an emotional experience has been cognitively constructed, it in turn can influence the course of cognitive processing (Kihlstrom, 1980). Affective valence, whether positive or negative, is a common attribute of percepts and memories (Bower, 1967; Underwood, 1969; Wickens, 1972), even among young children (Kail & Siegel, 1977). Given the availability of evaluative and affective features in perception and memory, there is no reason to suppose that the selectivity that pervades the human cognitive system cannot bias the processing of emotionally colored material (Erdelyi, 1974; Erdelyi & Goldberg, 1979; Mandler, 1975). At the least, emotional-evaluative attributes increase the salience or availability of the information with which they are associated (Holmes, 1970, 1974), thus probably interacting with the availability bias in judgment discussed earlier.

There is appreciable evidence that mood can affect performance on both semantic (Weingartner, Miller, & Murphy, 1977) and episodic (Bower, Monteiro, & Gilligan, 1978; Nasby, 1980) memory tasks. While most of these

studies have not employed stimulus materials relevant to perceptions of self or others, Montelro and Bower (1979), employing a story-recall task, found better memory for information about a happy character when the story was read by an elated subject, and for information about a sad character when it was read by a depressed one. Lloyd and Lishman (1975) and Teasdale and Fogarty (1979), working respectively with clinically and experimentally depressed patients, found that retrieval times associated with pleasant and unpleasant autobiographical memories were related to the mood (normal or depressed) experienced by the subjects at the time of the test. Whether positive and negative moods exert complementary effects on positive and negative memories, and whether mood can induce "state dependency" in memory, is not yet clear (Kihlstrom, 1981; Kihlstrom & Nasby, 1981). Nevertheless, the apparent reciprocal influence of cognition and emotion leaves open the possibility for a maladaptive, vicious cycle—one that will be extremely hard for a therapist to correct (Beck, 1967).

ASSIMILATION AND ACCOMMODATION IN SCHEMA-BASED COGNITION

Another important detail that has not been satisfactorily resolved concerns the precise nature of schematic effects on perception and memory (Hastie, 1980a, 1980b; Taylor & Crocker, 1980). One of the functions of schemata is to anticipate environmental events, facilitating the pickup of relevant information from the perceptual field or its retrieval from memory. According to Neisser (1967, 1976), schemata accept information and are modified by it—the process of assimilation and accommodation referred to earlier. One of the signs of the assimilative process is the good retention of schema-consistent information as compared to schema-irrelevant information (e.g., Hastie, 1980a), coupled with inference-based false recall or recognition of other information, also schema-consistent, that was not actually represented in the stimulus material (e.g., Cantor & Mischel, 1977, 1979b; Snyder & Uranowitz, 1978). Schema theory is less clear, however, on the fate of information that is incongruent with the expectations represented by active schemata. Hastie (1980b), reviewing the large literature that has accumulated on schematic processing in visual perception, verbal learning, and person memory, has proposed that schematic principles operate to favor the encoding of schema-incongruent and the retrieval of schema-congruent information. According to his argument, information perceived as incongruent with expectations receives more attention as the individual attempts to comprehend its relation with other stimulus-based information and schema-based expectations and inferences; this results in a rich, highly memorable trace. At the point of retrieval, on the other hand, the schema supplies cues that facilitate contact

with congruent information represented in trace fragments, as well as congruent inferences on which memorial reconstruction is based. These proposals are consistent with the outcomes of a large number of experiments on person memory performed by Hastie (1980a) and his collaborators.

The assimilative function of schemata sometimes seems to dominate cognition to such an extent that a person might seem able to perceive and remember events in almost any way that he or she desires (Kelly, 1955). In domains where the available stimulus is relatively rich and explicit, of course—as in the case of visual or auditory perception—the operation of schemata is greatly constrained by the stimulus information. In memory, however, where trace information is likely to be rather fragmentary, there is much more latitude for schemata to operate (e.g., Bartlett, 1932; Bower, 1976; Jenkins, 1974; Paul, 1959). In social cognition tasks, even when available information is not fragmentary, it is often extremely ambiguous, so that it can be just as easily assigned one meaning as another. Taylor and Crocker (1980) have shown that schematic processing can have powerful distorting effects on social cognition, as when the person applies the wrong schemata to the task of perception, judgment, or memory. They also document a number of other liabilities of schematic processing: Schemata may provide an illusory data base for making evaluations and decisions; they may lead the individual to accept as schema-consistent information that is widely at variance with prevailing expectations; and they may alter the perceived magnitude of empirical covariations between events or attributes.

While the assimilative aspect of schematic processing has by now been well documented, there is a much less clear understanding of accommodation—the ways in which schemata change in response to violations of expectancies, and the circumstances promoting such change. In social cognition studies—such as Hastie's (1980a), for example—the effect of presenting information incongruent with a first impression of a person on the final impression is not yet known. The results of experimental research on social cognition, which document so well the assimilative power of schemata, lead us to be pessimistic about the degree of accommodation which may reasonably be expected to occur. Given the assumptions of a cognitive-social approach to personality concerning personality change as outlined earlier, and the assumption of many behavior therapists that behavior change is mediated by cognitive change, this problem would seem to be worth vigorous pursuit.

THE ROLE OF INDIVIDUAL DIFFERENCES

Throughout this chapter, we have emphasized the central concern of cognitive-social personality with the general processes involved in social cognition and social interaction. However, at some point both personologist and clinician

must confront the problem of individual differences. That problem is this: individual differences *in what?* Throughout most of its history, differential psychology has focused on traits on such dimensions as intellectual capacity, cognitive style, interests, values, or behavioral dispositions (e.g., Tyler, 1973; Willerman, 1979). However, as pointed out by Mischel (1968, 1973b) and many others, these trait dimensions, assessed objectively or projectively and largely without regard for the situational context, do not have much validity or utility in predicting actual behavior in laboratory or real-world settings. As made clear by Mischel (1973b, 1977), a cognitive-social approach to personology does not ignore individual differences; however, it does construe them quite differently—no longer in terms of cross-situational behavioral dispositions, but in terms of categorization systems, attentional foci, expectations, inferences, incentives, aversions, and strategies and plans relating to self-regulation and social interaction. Some of these categories of individual differences have been described in detail by Mischel (1973b); others are represented by such specific constructs of individual differences as self-monitoring (Snyder, 1979); self-awareness (Buss, 1980); locus of control (Rotter, 1966); and attributional style (Abramson & Metalski, 1981).

An interesting aspect of Mischel's summary (1973b) is that there is no attempt to develop a finite list of these variables, exhaustively representing all the dimensions within each domain on which people could vary. Thus the traditional concern with documenting an overarching, comprehensive matrix of social-cognitive individual differences, analogous to those developed to represent the "structure" of intellectual or personality traits, has disappeared. Moreover, cognitive-social personology gives little sense that its person variables are necessarily to be construed as stable, enduring, or resistant to change. Human beings are adaptive and flexible, capable of changing goals and expectations, modifying personal construct systems and inferences, learning new plans, and shifting from one plan to another. For cognitive-social personology, stability and consistency are more empirical questions than they are pretheoretical assumptions.

Regardless of whether the personal variables of cognitive-social personology are conceived as enduring or transient dispositions, they must be assessed if they are to play a role in experimentation, therapy, and theory development. The primary purpose of such assessments must be to develop a picture of how individuals view themselves and their social world. In the service of this goal, a cardinal feature of assessment procedures dictated by cognitive-social personology must be that they allow people to speak for themselves, in their own terms, without being forced to employ constructs named and defined by the clinical or laboratory investigator (Kelly, 1955; McClelland, 1980; Mischel, 1977). Actions speak louder than words, and for this reason personality assessment must expand its use of direct observational

techniques to determine which situations people prefer to place themselves in, how they present themselves, how they act to transform these settings to more nearly fit their expectations and goals, and how they conduct themselves in situations requiring social exchange—a theme, not coincidentally, that is prominent in the functional analyses advocated by behavior therapists. Similarly, more attention should be paid to the assessment of features of environments, especially of their psychological as opposed to their physical properties (Magnusson, 1980).

As already indicated, the cognitive-social approach to personology provides its own set of person variables. In assessing such features of personality, the temptation is to introduce a new set of questionnaires and similar objective tests into the psychologist's armamentarium. The literature on the comparative validity and utility of various types of objective assessment instruments (e.g., Ashton & Goldberg, 1972; Hase & Goldberg, 1967; Mischel, 1968, 1972, 1977), however, indicates that the best technique involves asking people directly about their goals, expectations, inferences, and the like, under conditions that allow them to reflect honestly and dispassionately on themselves. If investigators want to know what people can tell them, they should ask them. But sometimes people cannot tell them—either because they do not have good introspective access to knowledge of themselves and their social environment, or because they cannot articulate that knowledge. Under these conditions, some indirect assessment methodology may be desirable. Rather than advocate a new generation of projective personality tests, it seems more appropriate to attempt to adapt existing laboratory paradigms, originally developed for research purposes, to the task of clinical assessment. Kihstrom and Nasby (1980) have suggested a number of techniques that may permit assessment of the declarative and procedural knowledge involved in social cognition and social interaction.

Whatever assessment method is chosen, personality assessment must be functional and idiographic from a cognitive-social point of view, at least in spirit. In order to understand what people do in social situations, investigators must understand the knowledge, competencies, and expectations that they bring into the behavior setting; their goals and plans for carrying out the interaction itself; and the ways in which these factors change as the interaction unfolds. Person variables are not to be assessed in the abstract, but rather with a view toward their reciprocal relations with social behavior and the contexts in which they occur. We see little advantage to the collection of norms, in the usual sense of standards against which individual persons or situations are to be compared. In some instances, of course, it may be helpful to have knowledge concerning gross departures from normative competencies, expectations, goals, scripts, and plans. For the most part, however, we would advocate criterion-referenced rather than norm-referenced assessment (e.g.,

McClelland, 1973; Mischel, 1977), in which investigator and subject, clinician and client, collaborate to clarify the subject's or client's perceptions of the social environment in the service of adaptive social behavior.

CLINICAL IMPLICATIONS

The cognitive-social perspective on personality presented here has definite implications for clinical assessment and intervention. According to the position sketched in this chapter, behavior change is cognitively mediated by a process of assimilation (of social reality to existing cognitive structures) and accommodation (of cognitive structures to social reality). The client is, like anyone else, first and foremost an intuitive psychologist, trying to make sense of his or her life situation. The troubles that bring him or her to the attention of the clinician reflect just this sense—the way in which the person has come to categorize the world, make attributions and predictions, draw inferences, test hypotheses, and plan behavior. To facilitate behavior change, the clinician must get “inside the head” of the client and see the world as he or she does; and then must arrange the client's experience to alter persistent, dysfunctional declarative and procedural knowledge.

TAKING EVERYDAY SOCIAL COGNITION SERIOUSLY

The first clinical task—that of seeing the world as the client does—requires an understanding of the principles of categorization, schematic memory, and attribution that characterize everyday social cognition. As an initial lesson, it is clear that even the most “normal” of information processors among individuals relies on heuristics and shortcuts that may result in nonveridical and non-normative perceptions, memories, and judgments. While the model of a hypothesis-testing scientist has facilitated research in social cognition, the naive perceiver-actor, not surprisingly, turns out to be far from the ideal or prototypic scientist (Nisbett & Ross, 1980). However, empirical research on social cognition has documented a variety of everyday cognitive tricks that do characterize social cognition and can be useful in clinical analysis. It may be useful to think of many clinical syndromes as having a basis in an overapplication or distortion of many of these standard cognitive heuristics on the part of the client. For examples of such an approach, we suggest the following analyses: attributional analyses of learned helplessness in terms of expectancies and attributions (Abramson, Seligman, & Teasdale, 1978; Seligman, 1975); analyses of delusions in terms of attributions and biased hypothesis testing (Maher, 1974; Maslach, Zimbardo, & Marshall, 1979); and analyses of de-

pression in terms of schematic memory processes (Beck, 1967). These analyses raise a familiar theme in psychology—namely, that "abnormal" behavior may be fed by cognitive processes that share more than a family resemblance to those processes characteristic of "normal" social cognition (see also Kihlstrom & Nasby, 1981).

The second clinical task—that of arranging experiences so as to teach new, perhaps more functional cognitive rules and structures—is a central goal of contemporary behavior therapy (see Chapter 7 of this volume). Social skills training, for example, attempts to provide clients with new scripts for coping with troublesome life experiences (Lazarus, 1966), while attributional therapy (Valins & Nisbett, 1972) seeks to lead the client to make proper judgments about the nature of his or her difficulties as a first step toward coping with them. Readers of this volume do not need to be reminded of these and other cognitively oriented therapeutic approaches. It is simply our intention to stress the utility of gearing such retraining experiences so that they articulate with and build upon the known properties of everyday social cognition. Once again, this requires careful attention to the social environment as it is cognitively constructed by the client, and to individual differences in competencies and styles in cognitive construction. Moreover, it is fundamental that researchers and clinicians learn to be more sensitive to the impact of social interactions in shaping clients' self-perceptions and behavior. Social cognition has too frequently been studied in isolation from social interaction, and social behavior has too often been analyzed in a vacuum, independent of the actor's perceptions, beliefs, and rules.

PITFALLS IN CLINICAL APPLICATION

Empirical research on social cognition and social behavior clearly has a great deal to contribute to the work of the applied behavior analyst (e.g., Kihlstrom & Nasby, 1981; Mischel, 1979). Yet some of the research covered in this chapter suggests that this application may not be a straightforward enterprise. We have suggested that the clinician needs to provide the client with experiences and information that will promote cognitive change—experiences that facilitate theory revision and the development of new processing heuristics. The literature on social cognition, by contrast, paints a picture of cognitive beliefs and heuristics that are greatly resistant to change, quite entrenched, and perhaps not easily abandoned. Similarly, we have more or less explicitly worked under the assumption that cognitive change will lead to behavioral change. Yet recent evidence suggests a less than clear causal connection between cognition and behavior. Such inconsistencies cause us to wonder whether empirical personality research will, in fact, prove useful in the clini-

cal domain. And, in the course of such cognition, we confront two of our own beliefs. First, we believe that cognition and behavior are intimately related and that cognitions do change, if perhaps slowly. Second, we do not feel that the standard laboratory paradigms are sufficiently ego-involving, dynamic, interactive, or temporally extended to capture or induce cognitive change and accompanying behavior change. Consequently, the tables are in some sense turned: It is the clinical behavior therapist who is now in the position to help provide the data for a cognitive-social theory of personality.

In considering the task of the clinician from the point of view of cognitive-social personality, we cannot help but remark on the pitfalls inherent in the clinical enterprise. The scientist-practitioner, despite training in statistics and experimental methodology, is also an intuitive psychologist and thus is prey to such foibles in data gathering, memory, and judgment as have been documented in the literature on social cognition (e.g., Chapman & Chapman, 1967; Nisbett & Ross, 1980). The clinician may be theory-driven in data gathering and interview techniques, and the clinical hour is a social interaction subject to the same problems of cognitive and behavioral confirmation as those of any other interpersonal encounter. So a psychoanalytically oriented therapist enters a clinical interview with a very different set of salient preconceptions than does a behavior therapist (Langer & Abelson, 1974; Mischel, 1976): The psychoanalyst focuses on psychosexual stages, is interested in developmental data and information about childhood experience, and elicits information from the patient concerning dreams, memories, and fantasies; in the same manner, the behavior therapist comes to the interaction with a set of beliefs about specific behavioral problems, is concerned with the current environments in which the client is operating, and asks questions about current situational stresses and goals. The course of each of these clinical interactions is shaped, at least to some degree, by the clinician's particular beliefs and expectancies and by his or her tendency to focus on, ask about, and differentially recall certain aspects of the client's current and past life. In order to get into the client's head, the clinician must strive to overcome the many biases that characterize the social information-processing system.

We have argued that the clinician will need to get beyond his or her own cognitive schemata and take the point of view of the client in analyzing the situation as it is perceived by and functions for the client. Yet taking the role of the client in analyzing social experience brings another problem for the clinician. The literature on social cognition suggests that once a person takes another's point of view, he or she easily falls prey to a host of cognitive biases that serve to construct an image of the world in an ego-enhancing and ego-protective light, from the perspective of that other person. Consequently, if the clinician does too good a job of seeing the world from the client's point of view, he or she may comfortably fall into some of the same cognitive traps as

the client has done. For example, successfully adopting the perspective of a client who has a certain theory about a particular stressful interpersonal relationship may lead the clinician also to focus on the negative aspects of that relationship; to gather data confirming its problematic nature; and to recall an overrepresentation of hurtful, stressful events. This, of course, involves accepting the client's theory of his or her problem at face value, when the true source of difficulties lies elsewhere and remains untouched.

In order to create theory-disconfirming experiences for the client that will promote cognitive change and thus behavior change, the clinician must both enter the world of the client and retain a distance from it. Otherwise, he or she may achieve the first goal of therapy (to take the client's perspective), but fail to reach the second one (to provide experiences that will retune and retrain the client's cognitions and thus change maladaptive behavior). If both clinician and client get swept away by their theories, all is lost. This problem of achieving a tradeoff between empathy and distance is not a new one, and it is certainly not unique to behavior therapy. But the literature on social cognition and social behavior makes it painfully clear just how difficult a task that may be. The fundamental task for the cognitively oriented behavior therapist is to remain objective when everything about the therapeutic enterprise—the formal theories of the clinician as scientist and the implicit theories of the client as scientist—militates against objectivity.

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REFERENCES

- Abramson, L. Y., & Metalsky, J. Attributional styles in adults. In P. C. Kendall & S. D. Hollon (Eds.), *Assessment strategies for cognitive-behavioral interventions*. New York: Academic Press, 1981.
- Abramson, L. Y., Seligman, M. E. P., & Yeudale, J. D. Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, 1978, 87, 49-74.
- Allport, G. W. *Personality: A psychological interpretation*. New York: Holt, 1937.
- Allport, G. W., & Odbert, H. S. Trait-names: A psycho-lexical study. *Psychological Monographs*, 1936, 47(Whole No. 211).
- Anderson, J. R. *Language, memory, and thought*. Hillsdale, N.J.: Erlbaum, 1976.
- Anderson, J. R. Memory for information about individuals. *Memory and Cognition*, 1977, 5, 430-442.

- Anderson, J. R., & Hastie, R. Individuation and reference in memory: Proper names and definite descriptions. *Cognitive Psychology*, 1974, 6, 495-515.
- Ansbacher, H. L. Adler's place today in the psychology of memory. *Journal of Personality*, 1947, 3, 197-207.
- Ashton, S. G., & Goldberg, L. R. In response to Jackson's challenge: The comparative validity of personality scales constructed by the external (empirical) strategy and scales developed intuitively by experts, novices, and laymen. *Journal of Research in Personality*, 1972, 7, 1-20.
- Ahlay, M., & Darley, J. M. Toward an interpersonal action centered theory of personality. In N. Cantor & J. F. Kihlstrom (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981.
- Ayllon, T., & Azrin, N. H. *The token economy: A motivational system for therapy and rehabilitation*. New York: Appleton-Century-Crofts, 1968.
- Bandura, A. Behavior theory and the models of man. *American Psychologist*, 1974, 29, 859-869.
- Bandura, A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 1977, 84, 191-215. (a)
- Bandura, A. *Social learning theory*. Englewood Cliffs, N.J.: Prentice-Hall, 1977. (b)
- Bandura, A., & Walters, R. H. *Social learning and personality development*. New York: Holt, Rinehart & Winston, 1963.
- Barluff, F. C. *Remembering: A study in experimental and social psychology*. Cambridge, England: Cambridge University Press, 1932.
- Beck, A. T. *Depression: Clinical, experimental, and theoretical aspects*. New York: Harper & Row, 1967.
- Bem, D. J. Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, 1967, 74, 183-200.
- Bem, D. J. Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6). New York: Academic Press, 1972.
- Bem, D. J., & Allen, A. On predicting some of the people some of the time: The search for cross-situational consistencies in behavior. *Psychological Review*, 1974, 81, 506-520.
- Bem, D. J., & Funder, D. C. Predicting more of the people more of the time: Assessing the personality of situations. *Psychological Review*, 1978, 85, 485-501.
- Bem, D. J., & Lord, C. G. Template matching: A proposal for probing the ecological validity of experimental settings in social psychology. *Journal of Personality and Social Psychology*, 1979, 37, 831-846.
- Bem, S. L. Theory and measurement of androgyny: A reply to the Pedhazur-Tetenbaum and Lockaley-Colten critiques. *Journal of Personality and Social Psychology*, 1979, 37, 1047-1055.
- Berglas, S., & Jones, E. E. Drug choice as a self-handicapping strategy in response to noncontingent success. *Journal of Personality and Social Psychology*, 1978, 36, 405-417.
- Block, J. *The challenge of response sets*. New York: Appleton-Century-Crofts, 1965.
- Block, J. *Lives through time*. Berkeley, Calif.: Bancroft, 1971.
- Block, J. Advancing the psychology of personality: Paradigmatic shift or improving the quality of research? In D. Magnusson & N. S. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology*. Hillsdale, N.J.: Erlbaum, 1977.
- Block, J., Weiss, D. S., & Thorne, A. How relevant is a semantic similarity interpretation of personality ratings? *Journal of Personality and Social Psychology*, 1979, 37, 1055-1074.
- Bobrow, D. G., & Norman, D. A. Some principles of memory schemata. In D. G. Bobrow & A. Collins (Eds.), *Representation and understanding*. New York: Academic Press, 1975.
- Bower, G. H. A multicomponent theory of the memory trace. In K. W. Spence & J. T. Spence (Eds.), *The psychology of learning and motivation* (Vol. 1). New York: Academic Press, 1967.

- Bower, G. H. Experiments on story understanding and recall. *Quarterly Journal of Experimental Psychology*, 1976, 28, 511-534.
- Bower, G. H., & Gilligan, S. G. Remembering information related to one's self. *Journal of Research in Personality*, 1979, 13, 420-432.
- Bower, G. H., Monteiro, K. P., & Gilligan, S. G. Emotional mood as a context for learning and recall. *Journal of Verbal Learning and Verbal Behavior*, 1978, 17, 573-585.
- Bowers, K. S. Hypnotic behavior: The differentiation of trance and demand characteristic variables. *Journal of Abnormal Psychology*, 1966, 71, 42-51.
- Bowers, K. S. Situationism in psychology: An analysis and critique. *Psychological Review*, 1973, 80, 307-336.
- Bowers, K. S. The psychology of subtle control: An attributional analysis of behavioral persistence. *Canadian Journal of Behavioral Science*, 1975, 7, 78-95.
- Bransford, J. D., & Johnson, M. K. Contextual prerequisites for understanding: Some investigations of comprehension and recall. *Journal of Verbal Learning and Verbal Behavior*, 1972, 11, 717-726.
- Brenneman, H. A., Kihlström, J. F., & Hilgard, E. R. *Patterns of hypnotic abilities*. Manuscript in preparation, 1981.
- Brown, R. *Natural categories and basic objects in the domain of persons*. Paper presented at the Katz-Newscomb Memorial Lecture, University of Michigan, Ann Arbor, May 1980.
- Brown, R., & Kulik, J. Flashbulb memories. *Cognition*, 1977, 5, 73-99.
- Bruner, J. S., Goodnow, J. J., & Austin, G. A. *A study of thinking*. New York: Wiley, 1956.
- Buss, A. *Self-consciousness and social anxiety*. San Francisco: W. H. Freeman, 1980.
- Campbell, D. T., & Fiske, D. W. Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 1959, 56, 81-105.
- Cantor, N. *Prototypicality and personality judgments*. Unpublished doctoral dissertation, Stanford University, 1978.
- Cantor, N. Perceptions of situations: Situation prototypes and person-situation prototypes. In D. Magnusson (Ed.), *The situation: An interactional perspective*. Hillsdale, N.J.: Erlbaum, 1981. (a)
- Cantor, N. A cognitive-social analysis of personality. In N. Cantor & J. F. Kihlström (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981. (b)
- Cantor, N., & Mischel, W. Traits as prototypes: Effects on recognition memory. *Journal of Personality and Social Psychology*, 1977, 35, 38-48.
- Cantor, N., & Mischel, W. Prototypes in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12). New York: Academic Press, 1979. (a)
- Cantor, N., & Mischel, W. Prototypicality and personality: Effects on free recall and personality impressions. *Journal of Research in Personality*, 1979, 13, 187-205. (b)
- Cantor, N., Mischel, W., & Schwartz, J. Social knowledge: Structure, content, use, and abuse. In A. Hastorf & A. Isen (Eds.), *Cognitive social psychology*. New York: Elsevier North-Holland, 1982. (a)
- Cantor, N., Mischel, W., & Schwartz, J. A prototype analysis of psychological situations. *Cognitive Psychology*, 1982, 14, 45-77. (b)
- Cantor, N., Smith, E. E., French, R. D., & Mezzich, J. Psychiatric diagnosis as prototype categorization. *Journal of Abnormal Psychology*, 1980, 89, 181-193.
- Cattell, R. B. The description of personality: I. Foundations of trait measurement. *Psychological Review*, 1943, 50, 559-592. (a)
- Cattell, R. B. The description of personality: II. Basic traits resolved into clusters. *Journal of Abnormal and Social Psychology*, 1943, 38, 476-507. (b)
- Cattell, R. B. The description of personality: III. Principles and findings in a factor analysis. *American Journal of Psychology*, 1945, 58, 69-90.
- Chapman, L. J., & Chapman, J. P. Genesis of popular but erroneous psychodiagnostic obser-

- vation. *Journal of Abnormal Psychology*, 1967, 72, 193-204.
- Chow, B. R., & Kihlstrom, J. F. *Probing for remote and recent autobiographical memories*. Manuscript in preparation, 1981.
- Cohen, C. E. Cognitive basis of stereotyping: An information-processing approach to social perception (Doctoral dissertation, University of California at San Diego, 1976). *Dissertation Abstracts International*, 1977, 38, 421B. (University Microfilms No. 77-13681)
- Cohen, C. E., & Ebbesen, E. B. Observational goals and schema activation: A theoretical framework for behavior perception. *Journal of Experimental Social Psychology*, 1979, 15, 305-329.
- Craik, F. I. M., & Lockhart, R. S. Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 1972, 11, 671-684.
- Cronbach, L. J. The two disciplines of scientific psychology. *American Psychologist*, 1957, 12, 671-684.
- Cronbach, L. J. Beyond the two disciplines of scientific psychology. *American Psychologist*, 1975, 30, 116-127.
- Cronbach, L. J., & Meehl, P. E. Construct validity in psychological tests. *Psychological Bulletin*, 1955, 52, 281-302.
- Crowitz, H. F., & Quina-Holland, K. Proportion of episodic memories from early childhood by years of age. *Bulletin of the Psychonomic Society*, 1976, 7, 61-62.
- Crowitz, H. F., & Schiffman, H. Frequency of episodic memories as a function of their age. *Bulletin of the Psychonomic Society*, 1974, 4, 517-518.
- Crowne, D. P. *The experimental study of personality*. Hillsdale, N.J.: Erlbaum, 1979.
- Darley, J. M., & Fazio, R. Expectancy confirmation processes arising in the social interaction sequence. *American Psychologist*, 1980, 35, 867-881.
- DeVitto, B., & McArthur, L. Z. Developmental differences in the use of distinctiveness, consensus, and consistency information for making causal attributions. *Developmental Psychology*, 1978, 14, 474-482.
- Dudycha, G. J., & Dudycha, M. M. Childhood memories: A review of the literature. *Psychological Bulletin*, 1941, 38, 668-682.
- Ehrhardt, A. A., & Meyer-Bahlburg, A. F. L. Pre-natal sex hormones and the developing brain: Effects on psychosexual differentiation and cognitive function. *Annual Review of Medicine*, 1979, 30, 417-430.
- Ekehammar, B. Interactionism in personality from a historical perspective. *Psychological Bulletin*, 1974, 81, 1025-1048.
- Eich, J. E. State-dependent retrieval of information in human episodic memory. In I. M. Birnbaum & E. S. Parker (Eds.), *Alcohol and human memory*. Hillsdale, N.J.: Erlbaum, 1977.
- Eisenberger, H. P. *The discovery of the unconscious: The history and evolution of dynamic psychiatry*. New York: Basic Books, 1970.
- Endler, N. S., & Hunt, J. M. Sources of behavioral variance as measured by the S-R Inventory of Anxiousness. *Psychological Bulletin*, 1966, 65, 336-346.
- Epstein, S. The self-concept revisited, or a theory of a theory. *American Psychologist*, 1973, 28, 404-416.
- Epstein, S. The stability of behavior: I. On predicting most of the people much of the time. *Journal of Personality and Social Psychology*, 1979, 37, 1097-1126.
- Erdelyi, M. H. A new look at the New Look: Perceptual defense and vigilance. *Psychological Review*, 1974, 81, 1-27.
- Erdelyi, M. H., & Goldberg, B. Let's not sweep repression under the rug: Toward a cognitive psychology of repression. In J. F. Kihlstrom & F. J. Evans (Eds.), *Functional disorders of memory*. Hillsdale, N.J.: Erlbaum, 1979.

- Evans, F. J. Hypnosis during sleep: Techniques for exploring cognitive activity during sleep. In E. Fromm & R. E. Shor (Eds.), *Hypnosis: Developments in research and new perspectives*. New York: Aldine, 1979.
- Eysenck, H. J. Personality and factor analysis: A reply to Guilford. *Psychological Bulletin*, 1977, 84, 405-411.
- Flavell, J. H. *Cognitive development*. Englewood Cliffs, N.J.: Prentice-Hall, 1977.
- Gazzaniga, M. S. *The bisected brain*. New York: Appleton-Century-Crofts, 1970.
- Goffman, E. *The presentation of self in everyday life*. Garden City, N.Y.: Doubleday Anchor Books, 1959.
- Goldberg, L. R. *Language and personality: Developing a taxonomy of trait-descriptive terms*. Paper presented at the meeting of the American Psychological Association, San Francisco, August 1977.
- Greenwald, A. G. The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, 1980, 35, 603-618.
- Guilford, J. P. Factors and factors of personality. *Psychological Bulletin*, 1975, 82, 802-814.
- Guilford, J. P. Will the real factor of extraversion-introversion please stand up? A reply to Eysenck. *Psychological Bulletin*, 1977, 84, 412-416.
- Hamilton, D. A cognitive-attributional analysis of stereotyping. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12). New York: Academic Press, 1979.
- Harcickiewicz, J. M. The effects of reward contingency and performance feedback on intrinsic motivation. *Journal of Personality and Social Psychology*, 1979, 37, 1352-1363.
- Hase, H. D., & Goldberg, L. R. Comparative validity of different strategies of constructing personality inventory scales. *Psychological Bulletin*, 1967, 67, 231-248.
- Hastie, R. Memory for behavioral information that confirms or contradicts a personality impression. In R. Hastie, T. F. Ostrom, E. Ebbesen, R. Wyer, D. L. Hamilton, & D. Carlston (Eds.), *Person memory: The cognitive basis of social perception*. Hillsdale, N.J.: Erlbaum, 1980. (a)
- Hastie, R. Schematic principles in human memory. In E. T. Higgins, P. Herman, & M. P. Zanna (Eds.), *Social cognition: The Ontario symposium*. Hillsdale, N.J.: Erlbaum, 1980. (b)
- Hastie, R., & Carlston, D. Theoretical issues in person memory. In R. Hastie, T. F. Ostrom, E. Ebbesen, R. Wyer, D. L. Hamilton, & D. Carlston (Eds.), *Person memory: The cognitive basis of social perception*. Hillsdale, N.J.: Erlbaum, 1980.
- Hastie, R., & Kumar, P. A. Person memory: Personality traits as organizing principles in memory for behaviors. *Journal of Personality and Social Psychology*, 1979, 37, 25-38.
- Hastie, R., Ostrom, T. M., Ebbesen, E. B., Wyer, R. S., Hamilton, D. L., & Carlston, D. E. (Eds.). *Person memory: The cognitive basis of social perception*. Hillsdale, N.J.: Erlbaum, 1980.
- Heider, F. *The psychology of interpersonal relations*. New York: Wiley, 1958.
- Higgins, E. T., & King, G. Accessibility of social constructs: Information-processing consequences of individual and contextual variability. In N. Cantor & J. F. Kihlstrom (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981.
- Hilgard, E. R. *Hypnotic susceptibility*. New York: Harcourt, Brace & World, 1965.
- Hilgard, E. R. *Divided consciousness: Multiple controls in human thought and action*. New York: Wiley-Interscience, 1977.
- Hilgard, E. R., & Hilgard, J. R. *Hypnosis in the relief of pain*. Los Altos, Calif.: William Kaufman, 1975.
- Hogan, R., DeSoto, C. B., & Solano, C. Traits, tests, and personality research. *American Psychologist*, 1977, 32, 255-264.
- Holmes, D. S. Dimensions of projection. *Psychological Bulletin*, 1968, 69, 248-268.
- Holmes, D. S. Differential change in affective intensity and the forgetting of unpleasant person-

- at experiences. *Journal of Personality and Social Psychology*, 1970, 15, 234-239.
- Holmes, D. S. Investigations of repression: Differential recall of material experimentally or naturally associated with ego threat. *Psychological Bulletin*, 1974, 81, 632-653.
- Holmes, D. S. Projection as a defense mechanism. *Psychological Bulletin*, 1978, 85, 677-688.
- Jacoby, L. L., & Craik, F. I. M. Effects of elaboration or processing at encoding and retrieval: Trace distinctiveness and recovery of initial context. In L. S. Cermak & F. I. M. Craik (Eds.), *Levels of processing and human memory*. Hillsdale, N.J.: Erlbaum, 1979.
- Jeffery, K., & Mischel, W. Effects of purpose on the organization and recall of information in person perception. *Journal of Personality*, 1979, 47, 397-419.
- Jenkins, J. J. Remember that old theory of memory? Well, forget it! *American Psychologist*, 1974, 29, 785-795.
- Johnson, L. C. A psychophysiology for all states. *Psychophysiology*, 1970, 6, 501-516.
- Jones, E. E. *Ingratiation: A social-psychological analysis*. New York: Applton-Century-Crofts, 1964.
- Jones, E. E. The rocky road from acts to dispositions. *American Psychologist*, 1970, 34, 107-117.
- Jones, E. E., & Davis, K. E. A theory of correspondent inferences: From acts to dispositions. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2). New York: Academic Press, 1965.
- Jones, E. E., & Goethals, G. R. Order effects in impression formation: Attribution context and the nature of reality. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, N.J.: General Learning Press, 1972.
- Jones, E. E., Kanouse, D. E., Kelley, H. H., Nisbett, R. E., Valins, S., & Weiner, B. (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, N.J.: General Learning Press, 1972.
- Jones, E. E., & Nisbett, R. E. The actor and observer: Divergent perceptions of the causes of behavior. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, N.J.: General Learning Press, 1972.
- Jones, E. E., & Pittman, T. S. Toward a general theory of strategic self-presentation. In J. Suki (Ed.), *Psychological perspectives on the self*. Hillsdale, N.J.: Erlbaum, 1980.
- Jones, E. E., & Wortman, C. *Ingratiation: An attributional approach*. Morristown, N.J.: General Learning Press, 1973.
- Jones, R. A., Seaman, J., & Haley, J. V. Self-descriptions: Configurations of content and order effects. *Journal of Personality and Social Psychology*, 1974, 30, 36-45.
- Jung, C. G. Psychological types. In H. Read, M. Fordham, & C. Adler (Eds.), *The collected works of C. G. Jung* (Vol. 6). Princeton: Princeton University Press, 1971. (Originally published, 1921.)
- Kahneman, D. *Attention and effort*. Englewood Cliffs, N.J.: Prentice-Hall, 1973.
- Kail, R. V., & Siegel, A. W. The development of mnemonic encoding in children: From perception to abstraction. In R. V. Kail & J. W. Hagen (Eds.), *Perspectives on the development of memory and cognition*. Hillsdale, N.J.: Erlbaum, 1977.
- Karniol, R. Children's use of intention cues in evaluating behavior. *Psychological Bulletin*, 1978, 85, 76-85.
- Keenan, J. M., & Baillet, S. D. Memory for personally and socially significant events. In R. S. Nickerson (Ed.), *Attention and performance VIII*. Hillsdale, N.J.: Erlbaum, 1980.
- Kelley, H. H. Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska Symposium on Motivation* (Vol. 15). Lincoln: University of Nebraska Press, 1967.
- Kelley, H. H. Causal schemata and the attribution process. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of*

- behavior. Morristown, N.J.: General Learning Press, 1972.
- Kelly, G. A. *The psychology of personal constructs*. New York: Norton, 1955.
- Kihlstrom, J. F. Posthypnotic amnesia for recently learned material: Interactions with "episodic" and "semantic" memory. *Cognitive Psychology*, 1980, 12, 227-251.
- Kihlstrom, J. F. On personality and memory. In N. Cantor & J. F. Kihlstrom (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981.
- Kihlstrom, J. F., & Evans, F. J. Memory retrieval processes during posthypnotic amnesia. In J. F. Kihlstrom & F. J. Evans (Eds.), *Functional disorders of memory*. Hillsdale, N.J.: Erlbaum, 1979.
- Kihlstrom, J. F., & Harackiewicz, J. M. The earliest recollection of childhood: A new survey. *Journal of Personality*, in press.
- Kihlstrom, J. F., & Nashby, W. Cognitive tasks in clinical assessment: An exercise in applied psychology. In P. C. Kendall & S. D. Hollon (Eds.), *Assessment strategies for cognitive-behavioral interventions*. New York: Academic Press, 1981.
- Kline, P. *Fact and fantasy in Freudian theory*. London: Methuen, 1973.
- Kretschmer, E. *Physique and character*. New York: Harcourt, 1925. (Originally published, 1921.)
- Kuiper, N. A., & Derry, P. A. The self as a cognitive prototype: An application to person perception and depression. In N. Cantor & J. F. Kihlstrom (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981.
- Kulper, N. A., & Rogers, T. B. Encoding of personal information: Self-other differences. *Journal of Personality and Social Psychology*, 1979, 37, 499-514.
- Langer, E. Rethinking the role of thought in social interaction. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), *New directions in attribution research* (Vol. 2). Hillsdale, N.J.: Erlbaum, 1978.
- Langer, E., & Abelson, R. A. A patient by any other name . . . : Clinician group differences in labelling bias. *Journal of Consulting and Clinical Psychology*, 1974, 42, 4-9.
- Lazarus, A. A. Behaviour rehearsal vs. non-directive therapy vs. advice in effecting behavior change. *Behaviour Research and Therapy*, 1966, 4, 209-212.
- Lepper, M. R., & Greene, D. On understanding "overjustification": A reply to Reiss and Sushinsky. *Journal of Personality and Social Psychology*, 1976, 33, 25-35.
- Lewin, K. *A dynamic theory of personality*. New York: McGraw-Hill, 1935.
- Lewinsohn, P. M., Mischel, W., Chaplin, W., & Burton, R. Social competence and depression: The role of illusory self-perceptions. *Journal of Abnormal Psychology*, 1980, 89, 203-212.
- Linton, M. Memory for real-world events. In D. A. Norman, D. E. Rumelhart, & the LNR Research Group (Eds.), *Explorations in cognition*. San Francisco: W. H. Freeman, 1975.
- Linton, M. Real world memory after six years: An *in vivo* study of very long term memory. In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.), *Practical aspects of memory*. New York: Academic Press, 1978.
- Lloyd, G. G., & Lishman, W. A. Effect of depression on the speed of recall of pleasant and unpleasant experiences. *Psychological Medicine*, 1975, 5, 173-180.
- Lockhart, R. S., Craik, F. I. M., & Jacoby, L. Depth of processing, recognition and recall. In J. Brown (Ed.), *Recall and recognition*. New York: Wiley-Interscience, 1976.
- Locksley, A., & Lennier, M. Considerations for a theory of self-inference processes. In N. Cantor & J. F. Kihlstrom (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981.
- Loftus, E. F., & Loftus, G. R. On the permanence of stored information in the human brain. *American Psychologist*, 1980, 35, 409-420.
- Magnusson, D. (Ed.). *The situation: An interactional perspective*. Hillsdale, N.J.: Erlbaum, 1980.
- Maher, B. A. Delusional thinking and perceptual disorder. *Journal of Individual Psychology*,

- 1974, 30, 98-113.
- Mahoney, M. J., & Arakoff, D. B. Cognitive and self-control therapies. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change: An empirical analysis*. New York: Wiley, 1978.
- Maneuvo, J. C., & Ceely, S. G. The self as memory processing. *Cognitive Therapy and Research*, 1980, 4, 1-25.
- Mandler, G. *Mind and emotion*. New York: Wiley, 1975.
- Markman, E., & Seibert, J. Clusters and collections: Internal organization and resulting holistic properties. *Cognitive Psychology*, 1976, 8, 361-377.
- Markus, H. Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 1977, 35, 63-78.
- Markus, H., & Fong, C. *The role of the self in other processing*. Manuscript in preparation, 1983.
- Markus, H., & Sautis, H. The self in social information processing. In J. Suls (Ed.), *Social psychological perspectives on the self*. Hillsdale, N.J.: Erlbaum, 1980.
- Markus, H., & Smith, J. The influence of self-schemata on the perception of others. In N. Cantor & J. F. Khlitson (Eds.), *Personality, cognition, and social interaction*. Hillsdale, N.J.: Erlbaum, 1981.
- Marshall, G. D., & Zimbardo, P. G. Affective consequences of inadequately explained physiological arousal. *Journal of Personality and Social Psychology*, 1979, 37, 970-988.
- Maslach, C. Negative emotional biasing of unexplained arousal. *Journal of Personality and Social Psychology*, 1979, 37, 953-969.
- Maslach, C., Zimbardo, P. G., & Marshall, G. D. Hypnosis as a means of studying cognitive and behavioral control. In E. Fromm & R. E. Shor (Eds.), *Hypnosis: Developments in research and new perspectives*. New York: Aldine, 1979.
- McClelland, D. C. Testing for competence rather than "intelligence." *American Psychologist*, 1973, 28, 1-14.
- McClelland, D. C. Motive dispositions: The merits of operant and respondent measures. *Review of Personality and Social Psychology*, 1980, 1, 10-41.
- McGuire, W. J., & McGuire, C. V. Salience of handedness in the spontaneous self-concept. *Perceptual and Motor Skills*, 1980, 50, 3-7.
- McGuire, W. J., McGuire, C. V., Child, P., & Fujita, T. A. Salience of ethnicity in the spontaneous self-concept as a function of one's ethnic distinctiveness in the social environment. *Journal of Personality and Social Psychology*, 1978, 36, 511-520.
- McGuire, W. J., McGuire, C. V., & Winton, W. Effects of household sex composition on the salience of one's gender in the spontaneous self-concept. *Journal of Experimental Social Psychology*, 1979, 15, 77-90.
- McGuire, W. J., & Padawer-Singer, A. Trait salience in the spontaneous self-concept. *Journal of Personality and Social Psychology*, 1976, 33, 743-754.
- Miller, D. T. Ego involvement and attributions for success and failure. *Journal of Personality and Social Psychology*, 1976, 34, 901-906.
- Mischel, W. *Personality and assessment*. New York: Wiley, 1968.
- Mischel, W. Direct versus indirect personality assessment: Evidence and implications. *Journal of Consulting and Clinical Psychology*, 1972, 38, 319-324.
- Mischel, W. On the empirical dilemmas of psychodynamic approaches: Issues and alternatives. *Journal of Abnormal Psychology*, 1973, 82, 335-344. (a)
- Mischel, W. Toward a cognitive-social learning theory of personality. *Psychological Review*, 1973, 80, 252-283. (b)
- Mischel, W. Processes in delay of gratification. In L. Berkowitz (Ed.), *Advances in experimental social psychology*. New York: Academic Press, 1974.
- Mischel, W. *Introduction to personality* (2nd ed.). New York: Holt, Rinehart & Winston, 1976.
- Mischel, W. On the future of personality assessment. *American Psychologist*, 1977, 32, 246-254.

- Mischel, W. On the interface of cognition and personality: Beyond the person-situation debate. *American Psychologist*, 1979, 34, 740-754.
- Mischel, W. *Objective and subjective rules for delay of gratification*. Paper presented at the Symposium on Cognitions in Human Motivation, Louvain, Belgium, 1980.
- Money, J., & Ehrhardt, A. A. *Man and woman, boy and girl: Differentiation and dimorphism of gender identity from conception to maturity*. Baltimore: Johns Hopkins University Press, 1972.
- Monteiro, K. P., & Bower, G. H. *Using hypnotic mood induction to study the effect of mood on memory* (Hypnosis Research Memorandum #155). Stanford, Calif.: Laboratory of Hypnosis Research, Department of Psychology, Stanford University, 1979.
- Murray, H. A. *Explorations in personality: A clinical and experimental study of fifty men of college age*. Oxford, England: Oxford University Press, 1938.
- Nasby, W. *An experimental approach to the study of affect and memory in children*. Unpublished doctoral dissertation, Harvard University, 1980.
- Neisser, U. *Cognitive psychology*. New York: Appleton-Century-Crofts, 1967.
- Neisser, U. *Cognition and reality: Principles and implications of cognitive psychology*. San Francisco: W. H. Freeman, 1976.
- Neisser, U. Memory: What are the important questions? In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.), *Practical aspects of memory*. New York: Academic Press, 1978.
- Nisbett, R. E., & Ross, L. *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, N.J.: Prentice-Hall, 1980.
- Nisbett, R. E., & Wilson, T. D. Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 1977, 84, 231-259.
- Norman, D. A., & Bobrow, D. G. Descriptions: An intermediate stage in memory retrieval. *Cognitive Psychology*, 1979, 11, 107-123.
- Norman, W. T. Toward an adequate taxonomy of personality attributes: Replicated factor structures in peer nomination personality ratings. *Journal of Abnormal and Social Psychology*, 1963, 66, 574-583.
- Orne, M. T. On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, 1962, 17, 776-783.
- Orne, M. T. Communication by the total experimental situation: Why it is important, how it is evaluated, and its significance for the ecological validity of findings. In P. Pilner, L. Kraines, & T. Alloway (Eds.), *Communication and affect: Language and thought*. New York: Academic Press, 1973.
- Owens, J., Bower, G. H., & Black, J. The "soap opera" effect in story recall. *Memory and Cognition*, 1979, 7, 185-191.
- Passini, F. T., & Norman, W. T. A universal conception of personality structure? *Journal of Personality and Social Psychology*, 1966, 4, 44-49.
- Paul, J. H. Studies in remembering: The reproduction of connected and extended verbal material. *Psychological Issues*, 1959, 1 (Whole No. 2).
- Peeters, B. H., & Secord, P. F. Developmental changes in attribution of descriptive concepts to persons. *Journal of Personality and Social Psychology*, 1973, 27, 120-128.
- Pervin, L. A. A free-response description approach to the analysis of person-situation interaction. *Journal of Personality and Social Psychology*, 1976, 34, 465-474.
- Pervin, L. A. The representative design of person-situation research. In D. Magnusson & N. S. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology*. Hillsdale, N.J.: Erlbaum, 1977.
- Piaget, J. *The origins of intelligence in the child*. New York: International Universities Press, 1956.
- Reed, G. Everyday anomalies of recall and recognition. In J. F. Kihlstrom & F. J. Evans (Eds.),

Functional disorders of memory. Hillsdale, N.J.: Erlbaum, 1979.

- Robinson, J. A. Sampling autobiographical memory. *Cognitive Psychology*, 1976, 8, 578-595.
- Rogers, C. R., & Dymond, R. F. (Eds.). *Psychotherapy and personality change: Co-ordinated studies in the client-centered approach.* Chicago: University of Chicago Press, 1954.
- Rogers, T. B. A model of the self as an aspect of the human information-processing system. In N. Cantor & J. F. Kihlstrom (Eds.), *Personality, cognition, and social interaction.* Hillsdale, N.J.: Erlbaum, 1981.
- Rogers, T. B., & Kulper, N. A. *Processing personal information about others: Effects of familiarity and self-relevance.* Manuscript in preparation, 1981.
- Rogers, T. B., Kuiper, N. A., & Kirker, W. S. Self-reference and the encoding of personal information. *Journal of Personality and Social Psychology*, 1977, 35, 677-688.
- Rogers, T. B., Rogers, P. J., & Kulper, N. A. Evidence for the self as a cognitive prototype: The "false alarms effect." *Personality and Social Psychology Bulletin*, 1979, 5, 53-56.
- Rosch, E. Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.), *Cognition and categorization.* Hillsdale, N.J.: Erlbaum, 1978.
- Rosch, E., & Mervis, C. Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology*, 1975, 8, 382-439.
- Rosenberg, S. New approaches to the analysis of personal constructs in person perception. In A. W. Landfield (Ed.), *Nebraska Symposium on Motivation* (Vol. 23). Lincoln: University of Nebraska Press, 1976.
- Rosenthal, R. On the social psychology of the psychological experiment: The experimenter's hypothesis as unintended determinant of experimental results. *American Scientist*, 1963, 51, 270-282.
- Rosenthal, R. *On the social psychology of the self-fulfilling prophecy: Further evidence for Pygmalion effects and their mediating mechanisms.* New York: MSS Modular Publications, 1973.
- Rosenthal, R., & Jacobson, L. *Pygmalion in the classroom.* New York: Holt, Rinehart & Winston, 1968.
- Rosenthal, R., & Rubia, D. B. Interpersonal expectancy effects: The first 345 studies. *Behavioral and Brain Sciences*, 1978, 3, 377-415.
- Ross, L. The intuitive psychologist and his shortcomings. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10). New York: Academic Press, 1977.
- Ross, L., Amabile, T. M., & Steinmetz, J. L. Social roles, social control, and biases in social-perception processes. *Journal of Personality and Social Psychology*, 1977, 35, 485-494.
- Ross, L., Lepper, M. R., & Hubbard, M. Perseverance in self-perception and social perception: Biased attributional processes in the debriefing paradigm. *Journal of Personality and Social Psychology*, 1975, 32, 880-892.
- Ross, L., Lepper, M. R., Sitach, F., & Steinmetz, J. L. Social explanation and social expectation: The effects of real and hypothetical explanations upon subjective likelihood. *Journal of Personality and Social Psychology*, 1977, 35, 817-829.
- Ross, M., & Sleofi, F. Egocentric biases in availability and attribution. *Journal of Personality and Social Psychology*, 1979, 37, 322-336.
- Rotter, J. B. *Social learning and clinical psychology.* Englewood Cliffs, N.J.: Prentice-Hall, 1954.
- Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 1966, 80(Whole No. 609).
- Sarason, I. G., Smith, R. E., & Diner, E. Personality research: Components of variance attributable to the person and the situation. *Journal of Personality and Social Psychology*, 1975, 32, 199-204.
- Schachter, S., & Singer, J. E. Cognitive, social, and physiological determinants of emotional

- state. *Psychological Review*, 1962, 69, 379-399.
- Schank, R., & Abelson, R. *Scripts, plans, goals, and understanding: An inquiry into human knowledge structures*. Hillsdale, N.J.: Erlbaum, 1977.
- Schneider, D. J. Implicit personality theory: A review. *Psychological Bulletin*, 1973, 79, 294-309.
- Schneider, D. J., Hastorf, A. H., & Ellisworth, P. C. *Person perception* (2nd ed.). Reading, Mass.: Addison-Wesley, 1979.
- Schneider, W., & Shiffrin, R. M. Controlled and automatic human information processing: I. Detection, search, and attention. *Psychological Review*, 1977, 84, 1-66.
- Schweder, R. A., & D'Andrade, R. G. Accurate reflection or systematic distortion? A reply to Block, Weiss, and Thorac. *Journal of Personality and Social Psychology*, 1979, 37, 1075-1084.
- Seligman, M. E. P. *Helplessness: On depression, development, and death*. San Francisco: W. H. Freeman, 1975.
- Shrauger, J. S., & Patterson, M. B. Self-evaluation and the selection of dimensions for evaluating others. *Journal of Personality*, 1974, 42, 569-585.
- Skinner, B. F. *Science and human behavior*. New York: Free Press, 1953.
- Smith, E. E. Theories of semantic memory. In W. K. Estes (Ed.), *Handbook of learning and cognitive processes* (Vol. 6: *Linguistic functions in cognitive theory*). Hillsdale, N.J.: Erlbaum, 1978.
- Smith, E. E., & Medin, D. *Representation and processing of lexical concepts*. Paper presented at the Sloan Conference on Cognitive Science, San Diego, March 1979.
- Snyder, M. Self-monitoring processes. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12). New York: Academic Press, 1979.
- Snyder, M. Seek, and ye shall find: Testing hypotheses about other people. In E. T. Higgins, C. P. Herman, & M. P. Zanna (Eds.), *Social cognition: The Ontario symposium*. Hillsdale, N.J.: Erlbaum, 1980.
- Snyder, M., & Cantor, N. Testing hypotheses about other people: The use of historical knowledge. *Journal of Experimental Social Psychology*, 1979, 15, 330-342.
- Snyder, M., & Cantor, N. Thinking about ourselves and others: Self-monitoring and social knowledge. *Journal of Personality and Social Psychology*, 1980, 39, 222-234.
- Snyder, M., Stephan, W. G., & Rosenfield, D. Egotism and attributions. *Journal of Personality and Social Psychology*, 1976, 33, 435-441.
- Snyder, M., Stephan, W. G., & Rosenfield, D. Attributional egotism. In J. H. Harvey, W. Jekes, & R. F. Kidd (Eds.), *New directions in attribution research* (Vol. 2). Hillsdale, N.J.: Erlbaum, 1978.
- Snyder, M., & Swann, W. B. Behavioral confirmation in social interaction: From social perception to social reality. *Journal of Experimental Social Psychology*, 1978, 14, 148-162. (a)
- Snyder, M., & Swann, W. B. Hypothesis-testing processes in social interaction. *Journal of Personality and Social Psychology*, 1978, 36, 1202-1212. (b)
- Snyder, M., Tanke, E. D., & Bercheid, E. Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. *Journal of Personality and Social Psychology*, 1977, 35, 556-566.
- Snyder, M., & Uranowitz, S. W. Reconstructing the past: Some cognitive consequences of person perception. *Journal of Personality and Social Psychology*, 1978, 36, 941-950.
- Spelke, E., Hirst, W., & Neisser, U. Skills of divided attention. *Cognition*, 1976, 4, 215-230.
- Spence, J. T., & Helmreich, R. L. *Masculinity and femininity: Their psychological dimensions, correlates, and antecedents*. Austin: University of Texas Press, 1978.
- Spence, J. T., & Helmreich, R. L. The many faces of androgyny: A reply to Locksley and Colten. *Journal of Personality and Social Psychology*, 1979, 37, 1032-1046.

- Taylor, S. E., & Crocker, J. Schematic bases of social information processing. In E. T. Higgins, P. M. Hyman, & M. P. Zanna (Eds.), *Social cognition: The Ontario symposium*. Hillsdale, N.J.: Erlbaum, 1980.
- Taylor, S. E., & Fiske, S. T. Salience, attention, and attribution: Top of the head phenomena. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 11). New York: Academic Press, 1978.
- Tenandale, J. D., & Fogarty, S. J. Differential effects of induced mood on retrieval of pleasant and unpleasant events from episodic memory. *Journal of Abnormal Psychology*, 1979, 88, 248-257.
- Tulving, E. Episodic and semantic memory. In E. Tulving & W. Donaldson (Eds.), *Organization of memory*. New York: Academic Press, 1972.
- Tversky, A. Features of similarity. *Psychological Review*, 1977, 84, 321-352.
- Tversky, A., & Kahneman, D. Judgment under uncertainty: Heuristics and biases. *Science*, 1974, 185, 1124-1131.
- Tyler, L. E. *Individuality: Human possibilities and personal choice in the psychological development of men and women*. San Francisco: Jossey-Bass, 1978.
- Underwood, B. J. Attributes of memory. *Psychological Review*, 1969, 76, 559-573.
- Valins, S., & Nisbett, R. E. Attribution processes in the development and treatment of emotional disorder. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, N.J.: General Learning Press, 1972.
- Vygotsky, L. S. *Thought and language*. Cambridge, Mass.: MIT Press, 1965.
- Wason, P. C., & Johnson-Laird, P. N. *Psychology of reasoning: Structure and content*. Cambridge, Mass.: Harvard University Press, 1972.
- Weiner, D., Fileze, L., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. Perceiving the causes of success and failure. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, N.J.: General Learning Press, 1972.
- Weingartner, H. Human state-dependent learning. In B. T. Ho, D. W. Richards, & D. L. Chute (Eds.), *Drug discrimination and state-dependent learning*. New York: Academic Press, 1978.
- Weingartner, H., Miller, H., & Murphy, D. L. Mood-state-dependent retrieval of word associations. *Journal of Abnormal Psychology*, 1977, 86, 276-284.
- Wlekins, D. D. Characteristics of word encoding. In A. W. Melton & E. Martin (Eds.), *Coding processes in human memory*. Washington, D.C.: V. H. Winston, 1972.
- Wiggins, J. S. *Personality and prediction: Principles of personality assessment*. Reading, Mass.: Addison-Wesley, 1973.
- Wiggins, J. S. A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology*, 1979, 37, 395-412.
- Wiggins, J. S. Circumplex models of interpersonal behavior in personality and social psychology. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 1). Beverly Hills, Calif.: Sage, 1980.
- Witteman, L. *The psychology of individual and group differences*. San Francisco: W. H. Freeman, 1979.
- Wilson, G. T. Cognitive-behavior therapy: Paradigm shift or passing phase? In J. P. Foreyt & D. P. Rathjen (Eds.), *Cognitive-behavior therapy: Research and applications*. New York: Plenum, 1978.
- Winograd, T. Computer memories: A metaphor for memory organization. In C. N. Cofer (Ed.), *The structure of human memory*. San Francisco: W. H. Freeman, 1975.
- Wittgenstein, L. *Philosophical investigations*. New York: Macmillan, 1953.

- Wolpe, J. *Psychotherapy by reciprocal inhibition*. Stanford, Calif.: Stanford University Press, 1958.
- Word, C. O., Zanna, M. P., & Cooper, J. The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology*, 1974, 10, 109-120.
- Wundt, W. *Grundzüge der physiologischen Psychologie* (5th ed.). Leipzig: Engelmann, 1903.
- Zajonc, R. B. Feeling and thinking: Preferences need no inferences. *American Psychologist*, 1980, 35, 151-175.