1 Social Intelligence and Cognitive Assessments of Personality

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Many personality theorists have spoken of the need for more integrated approaches to questions of individual adaptation to the social world. In this chapter, we take the study of human intelligence as source and inspiration for such an integrative endeavor. We have been greatly influenced by recent analyses of intelligence that focus on three aspects of problem solving: expertise, context, and pragmatics. We adopt this perspective in our own treatment of the social intelligence that, in our view, forms the cognitive basis of personality.

Social intelligence is multifaceted, domain and task specific, and reformulated in each significant life context. Therefore, there is little point in making global comparisons of individuals—measuring their "social IQ," as it were. We disavow, explicitly and at the outset, any intention of offering yet another abstract individual-difference dimension for the psychometrician's mill. Nor do we wish to parlay the multidimensional nature of social intelligence into a new taxonomy of people that, like its forebears, will miss the flexibility and discriminative nature of human experience, thought, and action. We assume, by direct analogy to language, that an infinite variety of individual differences can be produced by the interactions among a finite set of general principles encompassing social learning, social cognition, and social interaction. Therefore, our primary task is to describe the general social-cognitive processes out of which human individuality is constructed. In addition, we wish to describe research that indicates how social intelligence is acquired, altered, and utilized in everyday life and clinical situations, throughout the life cycle. We pay particular attention to people's use of social intelligence in dealing with the mundane and monumental problems that they confront in the ordinary course of everyday living.

PERSONALITY AND COGNITION: EARLIER TREATMENTS

From a social-cognitive point of view, the study of personality can be viewed as the analysis of the ways in which people interpret situations, set goals within them, and plan and execute behavior that is consistent with these interpretations and goals. This viewpoint is not original to us, of course, and any unique contribution of ours must be viewed in the context of what came before.

Cognitive Styles as Personality

One of the longest standing traditions in personality and cognition has to do with the characteristic styles for perceiving and thinking that people develop (Gardner et al., 1959; Kagan & Kogan, 1970). Whereas these styles are typically measured in impersonal perceptual-cognitive tasks, the assumption is that they generalize to the interpersonal domain as well; that is, the proponents of the cognitive-style approach assume that performance on standard laboratory tasks is indicative of broad personality characteristics that mediate the person's behavior in the social world outside the laboratory. Many early theorists of cognitive style were influenced by psychoanalytic ego psychology, and related various stylistic dimensions to defensive as well as adaptive functions. However, one does not have to embrace psychodynamic theory in any form to appreciate the heritage of cognitive-style theory for modern cognitive approaches to personality. In fact, recent work in the cognitive-style tradition has emphasized the role they play in mediating adaptive social behavior rather than in defending against intrapsychic drives.

This trend is clearly illustrated in work on field embeddedness (also known as field dependence–independence, analytic-global style, and psychological differentiation; see Witkin et al., 1962; Witkin & Goodenough, 1977). In the laboratory, psychological differentiation is measured by a variety of impersonal laboratory tasks such as the Body Adjustment Test, Rod and Frame Test, and Embedded Figures Test. Witkin and Goodenough (1977) argue that there is a complex relationship between psychological differentiation and social behavior. For example, field-dependent people tend to be more conforming, dependent, and other directed than field-independent people. Another popular cognitive style is impulsivity–reflectivity (also called conceptual tempo; see Kagan et al., 1964; Messer, 1976), which describes the individual's tendency to reflect on the validity of the problem-solving process under conditions of uncertainty. Again, the style is typically measured by an impersonal laboratory task, such as the Matching Familiar Figures Test or the Design Recall Task, but performance on these tests is held to predict social behavior. For example, impulsivity predicts aggressiveness, shyness, and attention seeking in children—although not, somewhat paradoxically, risk taking or delay of gratification.

Field independence–dependence, impulsivity–reflectiveness, and other cognitive-style constructs have been subject to vigorous criticism (Baron, 1982; Laboratory of Comparative Human Cognition, 1982; Scribner & Cole, 1973). For example, the generality of the supposed cognitive style is often at issue: The various ostensible laboratory measures of psychological differentiation do not intercorrelate highly, and reflectivity does not appear to be consistent across various phases in the problem-solving process. In both cases, external relations with criterion social behaviors have proved difficult to replicate or subject to many qualifications. Moreover, cross-cultural studies often turn up evidence of value bias—who wants to be labelled field dependent or impulsive?—in apparent contradiction to the central tenet of cognitive style that opposite styles are equally adaptive.

The cognitive-styles tradition provides us with some important lessons about possible pitfalls in the study of cognition and personality. First, it is probably fruitless to attempt to develop a small set of basic cognitive styles derived from very abstract individual-difference constructs. Second, there should be no expectation that any aspect of problem solving necessarily will be generalizable across markedly different problem contexts, or different phases in the life cycle. Third, the effectiveness of any mode of thinking must be evaluated not with respect to normative standards within a culture, but rather with respect to the individual's own goals, as perceived within the framework of the life tasks in which he or she is currently engaged.

The Social Cognitivists

A more immediate and substantial source of the social-intelligence view of personality may be found in the work of the major proponents of social-learning theory: Rotter, Bandura, Kelly, and Mischel. We recognize that social-learning theory was originally formulated by Neal Miller and John Dollard. But their account of social learning was so closely tied to Hullian S–R formulations that it cannot be called cognitive in the modern sense. We also recognize that Kelly is not, strictly speaking, a social-learning theorist. In fact, in the preface to his 1955 monograph, he argued for throwing learning theory out altogether. Yet Kelly's theory is clearly social in its scope and clearly has a major learning component to it. Because Kelly's work has been so much of an influence on our own thinking (chiefly through Mischel), we include him in this statement of our intellectual history.

In any history of the development of social-cognitive approaches to personality, pride of place must go to Rotter, who proposed the first theory of social learning to employ cognitive concepts (Rotter, 1954; Rotter, Chance, & Phares, 1972). Rotter broke with the classic behaviorist view of social learning, as represented by the work of Miller and Dollard, in a number of critical respects. Whereas behaviorists defined reinforcements objectively, he defined them sub-

jectively in terms of the value attached to various outcomes; whereas the behaviorists defined reinforcement contingencies objectively in terms of stimulus–response probabilities, he defined them subjectively in terms of the individual's expectations. Whereas the behaviorists defined the situation objectively in terms of the array of stimuli impinging on the individual, he defined it subjectively in terms of the meaning ascribed to stimulus events. The result was an expectancy-value theory of choice, in which the individual regulates his or her own behavior in terms of goals, the expected probability of certain outcomes, and the values attached to them.

Alongside the various ideas pertaining to cognitive style, Rotter's construct of locus of control represents one of the earliest attempts to postulate an explicitly cognitive dimension of individual differences in personality. Somewhat paradoxically, however, the cognitive thrust of Rotter's theory has been obscured somewhat by the later conversion of locus of control into a broad trait-like construct. It is true that Rotter himself postulated individual differences in the person's generalized expectancy and developed a questionnaire measure permitting people to be classified as generally internal or generally external. But it is important to point out that Rotter also argued that the individual's generalized expectancies stood alongside specific expectancies tailored to the particulars of the situation. Moreover, Rotter viewed these expectancies as learned beliefs and thus subject to considerable change as a result of life experiences or therapeutic intervention. Conceptually, then, locus of control should not be viewed as a stable, consistent, trait-like dispositional entity, regulating behavior independent of environmental events and unresponsive to attempts at change.

Rotter's other contribution to the development of a cognitive approach to personality has also been obscured by the later emphasis on locus of control. In the preface to his seminal 1954 book, Rotter explicitly stated that his goal was to produce a social-learning theory of personality that would integrate the theories of Hull and Tolman. In other words, Rotter anticipated current concern with the interaction of cognitive elements such as expectancies with motivational elements such as goals and values. In fact, Rotter postulated a set of secondary psychological needs (including recognition status, dominance, and physical comfort), derived from physiological drives through learning in early childhood, which determine differences in the value attached to various reinforcements. By attending to needs, goals, and values as well as expectations, Rotter anticipated the current emphasis on hot as opposed to cold cognition in the social domain.

Rotter's theory is a theory of choice. It states that choices are determined by expectancies and values, and that expectancies and values are learned. However, despite Rotter's titular emphasis on social learning, he does not delve too much into the learning process itself. This aspect of social-learning theory has been analyzed most thoroughly by Bandura and his colleagues (Bandura, 1977b, 1986; Bandura & Walters, 1963) in terms of the distinction between learning by response consequences and learning by modelling. His emphasis on modelling

gave even his earliest theoretical work a clearly cognitive flavor: Knowledge can be acquired through precept and example, simply by observation, without reinforcement (and without repeated exposure). However, even his analysis of learning by response consequences was cognitive in nature: direct experience of reinforcement provided the person with information about environmental outcomes and what must be done to gain or avoid them. As a result of either type of learning, the individual forms mental representations of experience that permit anticipatory motivation in the form of act–outcome expectancies. The cognitive emphasis in Bandura's work is so strong that his most recent statement is of a social-*cognitive* rather than a social-*learning* theory.

More recently, Bandura has moved away from analyses of the social-learning process in general to the more specific topic of the learned expectancies governing behavior. This recent work has focused on the role of self-efficacy expectations in regulating behavior and promoting behavior change. Bandura has distinguished between outcome expectancies—beliefs concerning the consequences of certain actions—and efficacy expectancies—beliefs concerning the ability to perform the actions required to produce certain outcomes. Individuals' expectations about their personal efficacy influence their attempts to perform important tasks, their persistence in the face of failure, and their responses to stress. Within a particular domain, an individual is only as skilled as he or she thinks is the case; performance cannot be optimal without a sense of mastery. Note that self-efficacy is context specific. Thus self-efficacy theory is quite different from more generalized formulations concerning attributional style and locus of control. Note that it is not consistent with Bandura's emphasis to develop a test of *generalized* self-efficacy. Instead, self-efficacy serves as an example of how anticipatory expectations develop and change through social learning.

In keeping with his emphasis on self-efficacy expectancies, Bandura has considered in detail the role of internal standards and self-evaluation processes in motivating performance. Individuals engaged in goal-directed behavior match their progress with an internal standard of performance and evaluate their success or failure in accordance with their perceived self-efficacy at the task at hand. When self-efficacy is high, motivation will also be high even when current performance is substandard. When self-efficacy is low, motivation will be low even when current performance meets relevant standards. Self-regulation is a cyclical process, in which standards are set, performance monitored and evaluated, and standards revised; motivation and self-esteem rise and fall accordingly.

Kelly (1955) was probably the first major theorist to provide a thoroughly cognitive and fully idiographic treatment of personality. He characterized people as naive scientists engaged in explaining events in terms of hypotheses derived from personal constructs about themselves and the world. People differ in the nature of their personal constructs, how many they have available, and which they choose to apply at any given time. This constructive alternativism forms the basis for flexibility in the construal of social situations and events, and thus for

discriminativeness in social behavior. Constructs are abstract cognitive frameworks—we might today call them schemata—composed of similarities and contrasts. Once a construct is applied to an object or event, it carries implications that the perceiver can use to anticipate other features or future events. Kelly assumed that individuals develop highly personalized, unique repertoires of personal constructs to interpret situations and events. People cannot understand the world except through their own constructs; but just as important, we cannot understand other people unless we understand the constructs that they bring to bear on the interpretive process.

Just as Rotter's concept of expectancies came to be identified with his construct of generalized locus of control, so Kelly's concept of personal constructs is often identified in terms of cognitive complexity. Some individuals have highly differentiated systems, involving many different constructs and a rich network of relations among them; others have very simple systems consisting of only a few constructs. In some individuals the personal construct system is so simple as to be monolithic. Kelly assumed that a high degree of complexity was characteristic of the personal construct systems of well-functioning adults, in that it afforded more opportunity for constructive alternativism. Following Kelly's own example, a number of investigators have proposed quantitative indices of cognitive complexity (Scott, Osgood, & Peterson, 1979). In a manner reminiscent of the various cognitive styles, and of the abuse of Rotter's concept of generalized locus of control (Rotter, 1975), this attempt to capture the cognitive basis of personality with a single individual-difference dimension seems fundamentally misguided. The core of personal construct theory is best viewed as residing in the *content* of the individual's personal constructs, the uniqueness of which effectively prohibits any simple nomothetic comparisons. Kelly's work is seminal because it showed how a theory of personality could give central weight to the interpretations that people make of their social world without assuming that individuals can be characterized in terms of a small number of enduring cognitive styles or dispositions. Like Allport, he celebrated the uniqueness of the individual personality and preferred idiographic analyses of individuals rather than nomothetic comparisons among people based on widely shared dimensions.

Rotter's emphasis on values and expectancies, Bandura's emphasis on the social-learning process, and Kelly's emphasis on personal constructs are all brought together in Mischel's development of a cognitive social learning theory of personality (Mischel, 1973, 1977, 1979, 1981, 1984). Mischel concluded that the variability of social behavior across situations reflected the fact that people are acutely responsive to small changes from one setting to another. Far from substituting external for internal control, however, Mischel emphasized the determining power of the subjective meaning of the situation, and the ability of people to modify these meanings by means of cognitive transformations. Hence, for Mischel the critical task is to study the cognitive structures and operations that are involved in forming and transforming mental representations of stimulus

situations. As an exemplar of cognitive control, Mischel has chosen to study delay of gratification in children; observing that children learn to control their wishes and their environments in large part by thinking in nonconsummatory ways (e.g., Mischel, 1981).

It is important to note that Mischel does not deny the occurrence of cross-situational consistency and temporal stability—although he does tend to view rigidly consistent and thus indiscriminate behavior as rather pathological. However, he does consider these matters to be empirical questions rather than a priori assumptions, and he is at pains to account for both stability/consistency and variability with the same theoretical language. Behavioral consistencies, when they are observed, derive from the consistent application of particular modes of construal. Often, consistency is observed when the person enters an unfamiliar situation and, not knowing what else to do, relies on time-worn strategies of construal and response. Most people, however, retain the ability to alter their construals, as appropriate, and fine-tune their behavior as appropriate (Wright & Mischel, 1987). Similarly, stability is to be found not so much in how people behave in various situations, but in their repertoire of behavioral possibilities. Cognitive and behavioral competencies are not acquired anew every time they are used. Once acquired, they remain available in the subject's repertoire, to be tuned and used as required.

The various social-cognitive treatments of personality seem to agree with the cognitive-style theorists that adaptation involves a process of problem solving, with interpretation and inference at the center. However, cognitive social-learning theory goes beyond the cognitive-style tradition by emphasizing the construal and reasoning process as central to social adaptation. All the social cognitivists provide fairly concrete specifications of the cognitive structures and processes underlying social behavior in particular life domains. Kelly's Role Construct Repertory Test provides an analysis of the context, organization, and complexity of the person's system for categorizing people, situations, and events. Rotter emphasizes both general and specific outcome expectancies, whereas Bandura focuses on people's expectancies concerning themselves. Mischel explicates processes of cognitive transformation and planning that constitute a basis for self-regulation and for taking control over environments.

The social cognitivists differ from the cognitive stylists on a number of dimensions, for example. The first is the level of specificity. Whereas the cognitive stylists postulated abstract, molar dimensions of individual differences with trait-like properties of consistency and stability, the ideas of the social cognitivists are much more concrete and molecular. All avoid the ranking of individuals on continuous dimensions and other classificatory exercises. Rather than emphasizing widely shared and highly generalized cognitive dispositions, they emphasize unique attributes manifested in more or less specific contexts.

The social-cognitive stress on individual learning history provides an account of both personality development and change and provides a basis for understand-

ing the complexity, diversity, and uniqueness of each individual personality. There is also a difference in value. Although the cognitive stylists were at great pains to deny it, one could not help but get the impression that one style—field independence, for example—was better or more adaptive than its opposite member. The social-cognitive approach is rather less judgmental in this respect. In their emphasis on individual differences in goals and values, the social-cognitive theorists are reluctant to characterize any particular response or style as objectively better than another: Value can only be determined with respect to adaptiveness for the individual. If social-cognitive theorists celebrate any value it is flexibility, enabling people to adjust their behavior to the demands and constraints of whatever situations they may encounter. Hence, by implication at least, the social cognitivists place a premium only on "intelligent" thought—intelligent in the sense of being unprogrammed, nonrigid, and creative.

PERSONALITY AND INTELLIGENCE

Adaptive behavior is the natural domain for the study of personality, and adaptive behavior has all the qualities of intelligent action. It is purposive, flexibly attuned to the individual's goals, not rigidly stereotyped or indiscriminate. Our view of personality focuses on human intelligence because we believe that people use their intellectual resources to frame problems and search out solutions, give meaning to their life situations, and adapt to the demands of the settings in which they live. We are aware of the irony in proposing to place intelligence at the center of a cognitive theory of personality. In the past, the analysis of social behavior has often proceeded by analogy to intellectual behavior. Our approach can be misconstrued as postulating a single overarching dimension of social IQ, consistent and stable, on which individuals can be comparatively ranked. As noted earlier, we specifically disavow any such intent. Nevertheless, it does seem to us that any presentation of a social-intelligence view of personality requires some consideration of the ways in which intelligence has been conceptualized in the past.

Conceptualizations of Intelligence

Historically, the most popular construal of intelligence has been psychometric—that is, intelligence has been defined as that which is measured by intelligence tests (Gould, 1981). Psychometricians hold that individuals differ in their capacity to perceive relations, organize and remember information efficiently, draw logical inferences, and reason through problems to solutions. Although they may differ among themselves on the question of whether these abilities cohere to form a single unitary intellectual ability, all agree that intelligence tests provide a means of ranking people with respect to their relative intelligence (Gould, 1981).

A hallmark of the psychometric approach is the assumption that intelligence is an entity that can be measured, largely independent of the individual's specific knowledge about different domains in the real world (Baltes, 1986). Thus, intelligence is commonly tested with items that do not relate to the particular everyday tasks and life goals of the testees. A good example of this tendency is the distinction between fluid and crystallized intelligence (Cattell & Horn, 1978). Fluid intelligence is measured with tests of perception, memory, and reasoning that are assumed to be equally familiar (or unfamiliar) to all testees. Crystallized intelligence is measured by tests of real-world knowledge that is heavily influenced by social and cultural experience. Crystallized intelligence gives form and content to the raw potential of fluid intelligence.

In contrast to the psychometric view is the popular or naive conceptualization of intelligence, which makes no reference to performance on standardized tests but appears to be based on performance in everyday life contexts (Sternberg, Conway, Keton, & Bernstein, 1981). The popular concept classifies intelligence into three categories: practical problem-solving ability, verbal ability, and social competence. The various features associated with these categories are typical rather than defining in nature (Neisser, 1979). The clear implication is that there is no one right way, or even two or three, to be intelligent. Whereas the popular concept is similar to the psychometric one in its emphasis on problem-solving skills and verbal ability, these elements are generally described with reference to social tasks and practical life problems. Moreover, social interaction is given an emphasis in the popular concept that is generally missing in the psychometric approach. Finally, intelligence in the popular sense of the word is inextricably linked to a specific sociocultural environment.

Although people generally feel capable of characterizing social intelligence, and recognizing it when they see it manifested, it has proved difficult to devise any test that adequately captures a person's ability to solve practical problems in ordinary life domains (Denney, 1984; Denney, Pearce, & Palmer, 1982). Part of the problem is that the lay conception of intelligence is more implicit than explicit. Moreover, the problems in social life that tap practical intelligence will vary from one individual to another and are not easy to translate into paper-and-pencil format. Even if one could achieve consensus on the kinds of real-life social situations that tap practical intelligence, the difficult task would remain of specifying the knowledge base and problem-solving skill(s) most appropriate to that situation. Finally, even slight changes in context may result in substantial changes in the individual's preferred approach to a problem. If the assessment of practical intelligence requires systematic in vivo sampling, all hope of comparative ranking vanishes (this, of course, is just as things should be from our perspective).

The psychometric and popular conceptions of intelligence also differ with respect to two central assumptions of the doctrine of traits: stability across time and consistency across contexts. Because psychometricians characterize the indi-

vidual's basic intellectual resources as a trait analogous to eye color or hair texture, their expectation is that intelligence will remain relatively stable over most of the life-span, perhaps declining in old age. By contrast, the popular conception does not clearly distinguish between a basic intellectual reserve and those skills and knowledge acquired through social experience. Thus, it allows for considerable growth in intelligence over the whole life course. In the face of the individual's growing capacity to confront the problems of life in specific domains, it is difficult to point to a stable core of intelligence that remains unchanged.

Psychometricians, like trait theorists in general, also assume that the individual's characteristic level of intelligence will be displayed consistently across a wide variety of different domains. By contrast, from a popular perspective intellectual performance rests on experiences that are specific to particular domains of social life. Far from being discouraged when people show intelligence in one domain but not another, the intuitive psychologist expects that people will vary in their intelligence across different life domains by virtue of differences in exposure to those domains. In addition, the social ecology in which an individual conducts his or her life will have an enormous impact on intelligent behavior by setting up certain tasks or problems as worthy of attention and certain outcomes as worthy of achievement (Baltes, 1986; Sternberg, 1984).

Intelligence: Expertise, Context, and Pragmatics

In a manner paralleling recent treatments of intelligence in general (e.g., Sternberg, 1982), our analysis of social intelligence borrows from both the psychometric and lay conceptions of intelligence, with an emphasis on the latter. Intelligence is displayed in real-world problem-solving behavior, on tasks related to the goals encouraged by the individual's social-life context. Understanding social intelligence, then, requires some characterization of the expertise that people bring to bear in solving life problems, the contexts that render certain problems more important than others, and the pragmatic considerations that define the goals to be achieved in an intelligent solution.

At the core of any characterization of intelligence is expertise—the repertoire of knowledge used in solutions to problems. Many analyses of this repertoire distinguish between declarative and procedural knowledge (e.g., Anderson, 1981). Declarative knowledge consists of the individual's fund of information concerning real and imagined objects and events in the world. It includes information about facts (or presumed facts), categorical relations, beliefs, and attitudes. Procedural knowledge includes the rules, skills, and strategies available to the person for acquiring, manipulating, storing, and retrieving declarative knowledge—in other words, the basic cognitive operations performed in the course of perceiving, remembering, and thinking. In addition to the formal rules of inductive and deductive reasoning, the procedural knowledge repertoire in-

cludes a number of less formal cognitive heuristics that may be applied to judgment and inference (Nisbett & Ross, 1980; Tversky & Kahneman, 1974). Finally, the knowledge repertoire includes a set of higher order "metarules" for planning, monitoring, and making decisions about what problems need to be worked on and how they are best approached (Baron, 1981, 1982).

A central assumption here is that any individual's store of declarative knowledge will be highly elaborate and organized in some domains and rather sparse in others. Selective exposure creates many irregularities in the knowledge base: Children can only acquire expertise about the objects and events that are most familiar to them. Various interests and skills may be differentially encouraged by parents, teachers, peers, and institutions—the 5-year-old's expertise about dinosaurs likely contrasts markedly with her knowledge of other aspects of natural history and is not a product of her genetic endowment. Directed social learning is important (especially once the child gets to school), as are the unintentional communications of informal models and other, even more subtle, environmental influences. Analyses of cognitive development support this domain-specific view of declarative expertise (Keil, 1984, 1986). In addition, experts may execute certain procedures automatically, without conscious attention and effort, even though performance on other tasks may require considerably more cognitive effort (Smith, 1984; Sternberg, 1984). Accordingly, any characterization of intelligence as expertise must be fine-tuned to specific domains. This effectively precludes interindividual comparisons and rankings of the kind commonly associated with the psychometric view of intelligence.

Recent theoretical approaches to intelligence also reflect a concern that intelligence be measured on tasks that are relevant to the contexts in which individuals live their lives (Baltes, 1986; Denney, 1984; Neisser, 1976; Sternberg, 1984). This argument is familiar from life-span developmental psychology (Erikson, 1950; Ryff, 1982): The life tasks of a child or adolescent are different from those of a young adult or a retiree. Along the same lines, we must recognize the different life tasks that confront urban and rural dwellers, people in 19th and 20th century, people in the First and Third Worlds. Expertise, and the opportunity to acquire and display it, will naturally vary according to the contexts to which people are exposed.

Recognition of this fact leads to a concern with the features that differentiate contexts. Veroff (1983) has suggested five major contextual determinants of personality: historical, cultural, developmental, organizational, and interpersonal. Similarly, Baltes and his colleagues (Baltes, Dittman-Kohli, & Dixon, 1984) have proposed that life tasks are age graded, history graded, and nonnormative. These life contexts shape not only the general problem domains that people emphasize but also constrain their levels of expertise. Optimal task performance may only be achieved when a problem is framed in such a way that it taps into the person's current life experience.

Motivation and choice play an important role in intellectual performance

(Baron, 1982; Sternberg, 1984). Optimal task performance can only be evaluated with reference to the life goals of the individual. Long ago, Simon (1955) argued that the maximal value was not necessarily optimal; in many circumstances, the optimal outcome is one that is merely satisfactory. Personal goals distinguish between important problems and trivial ones, and between preferred and undesirable solutions. Thus, analyses of intelligence must be relativistic, recognizing that intelligent solutions will differ from time to time, place to place, and person to person.

It follows from an emphasis on real-life contexts and personal goals that intelligence can only be assessed with tasks that are familiar to the individual. The seeming paradox here is that both the psychometric and popular conceptions of intelligence involve the ability to handle novel tasks or circumstances. Moreover, we have defined intelligent behavior as that which is flexible and sensitive to varying circumstances—which cannot be demonstrated if subjects focus exclusively on the familiar. Thus, efforts at assessment must achieve some balance between familiarity and novelty. Tasks must be familiar enough to tap the individual's expertise; but they must be novel enough to give the person an opportunity to adjust to new demands and feedback. This may be accomplished by allowing the person to practice a novel task, or to place a familiar task in a novel context. Periods of life transition provide a nice real-world analogue to a laboratory task that balances familiarity and novelty of demands (Stewart & Healy, 1985).

When analyses of intelligence are directed at the tasks of social life, the question arises whether social intelligence is an entity separate from academic intelligence (Neisser, 1976). Guilford (1967), like Thorndike (1920), answered in the affirmative and proposed that social intelligence be measured with tests that tap social perceptiveness—the ability to identify the feelings, traits, and actions of other people. Unfortunately, in psychometric terms the various attempts to describe a distinct and coherent set of social abilities independent of academic intelligence have met with little success. Tests designed to measure social intelligence do not hang together as they should; and social intelligence tests are not better than academic intelligence tests at predicting criteria of social effectiveness (Keating, 1978).

Rather than concluding that the concept of social intelligence has no (discriminate) validity, we conclude (with, among others, Ford & Tisak, 1983) that people draw on the same set of intellectual resources to solve the problems of both academic and social life. Whatever differential validity social-intelligence tests prove to have may be due to the fact that the tests themselves more closely resemble the criteria of behavioral effectiveness and social functioning (e.g., Ford & Tisak, 1983). Even this difference may disappear as tests of nonsocial intelligence attend more to real-world problem-solving contexts. As the distinction between academic and social intelligence gets ever more fuzzy, social intelligence remains a distinct repertoire only because its relevant knowledge base is explicitly and importantly interpersonal.

Social Intelligence: Expertise, Context, and Pragmatics

The concept of *social* intelligence is a convenient organizing principle; we believe it does not necessarily involve any unique cognitive structures and processes. The social-intelligence repertoire contains declarative and procedural knowledge relevant to, and directed at, the tasks of social life (Cantor & Kihlstrom, 1987). It consists of concepts about ourselves, other people, and the social situations in which we encounter them, including a more or less continuous historical record as well as more abstract descriptive information; the rules governing impression formation, causal attribution, and other social judgments and inferences; and problem-solving metaknowledge used in goal setting, planning, monitoring, and evaluating action. There are no a priori reasons for thinking that these mental structures and processes are any different from those applied in the nonsocial domain. Social knowledge seems unique because of its immediacy and salience to us as social creatures, the pressure created by the interactional contexts in which it is used, its ability to elicit strong feelings in us, and —perhaps—the consequences of making mistakes. From this perspective, nonsocial knowledge may be defined as information whose content, contexts of application, and pragmatics of usage are less directly and less obviously linked to personal and social approval (if not survival).

We realize that our emphasis on the continuity between social and nonsocial intelligence risks ignoring the important emotional and motivational sources of social behavior (Isen & Moore, 1987). The risk is exacerbated by the strong emphasis in laboratory studies on cold, dry social cognition (cf. Fiske, 1982). Yet, as cognitivists, we are not at all uninterested in emotions and motives. Rather, we start by viewing emotions and motives as integrated within cognitive structures and processes of life-task problem solving (Showers & Cantor, 1985). For the present, we simply wish to explicitly recognize these reciprocal relations between cognition and emotion: Emotions are subject to cognitive construction and control, but cognitions are clearly influenced by emotional and motivational processes (e.g., Isen, Daubman, & Nowicki, 1987; Niedenthal, 1987). Although some theorists have raised the possibility of emotion without cognition (Zajonc, 1980b), it is virtually impossible to consider cognition and emotion separately when discussing life-task problem solving (Norem & Cantor, 1988). People are emotionally involved in their life tasks: They are highly motivated to solve them, and they achieve their solutions through the application of social-cognitive structures and processes. In the process of analyzing ("cold") social intelligence, we must not simply analyze the social knowledge stored in the mind, in a vacuum; we must also identify the critical *social tasks* and *life contexts* in which this knowledge is used and has meaning, as well as the individual *purposes* to which it is put. The intelligent person is one who can employ social knowledge flexibly and adaptively to meet personal goals and create good feelings. Intelligent people know their limits, and shape and select environments in which they can act competently and feel efficacious (Emmons, Diener, & Larsen, 1986).

In this vein, the assessment of social intelligence centers on the problems or *life tasks* on which an individual sees himself or herself as working in a particular period in life; the *self-concepts and personal memories* that constitute an important part of the expertise for those life tasks; and the *cognitive strategies* or preferred procedures for implementing one's goals in specific life-task contexts. Because we believe that all personality assessment procedures should begin with a search for general principles and processes of social thought and behavior, our assessments start with the life tasks, concepts and memories, and problem-solving strategies that characterize a group of people undergoing a shared life experience, moving to patterns of individual differences only after a "normative" social-intelligence portrait has been developed.

For example, Cantor and her colleagues (Cantor et al., 1987) have studied the interpersonal and achievement life tasks of college students, following these students as they navigate relevant tasks over 4 years of college life. Students in this longitudinal sample typically appraised their interpersonal life tasks as far less threatening and more rewarding than their achievement life tasks, brought to bear self-concepts and plans that differed in content and in complexity when thinking about their social and academic activities and involvements at college, and reacted to discrepancies between their "actual" and "ideal" standards for personal performance in the two domains with opposite patterns of thoughts, feelings, and effort. Their "social" self-concepts indicated far more confidence and control over these life tasks than did their "student" self-concepts. Accordingly, they worried more about the achievement domain and had more detailed and intricately thought-through plans for how to handle those situations, as compared with their plans for social situations. Self-concept discrepancy seemed to serve as an inspiration to these students in the social domain, and as a debilitating reminder of anxiety in the achievement domain. For one group of (21) students, for example, activity, energy, and feelings of satisfaction experienced at an on-campus social event, were positively related to self-concept discrepancy (after Higgins, Klein, & Strauman, 1985) in their "social" self-concepts. In contrast, across the full longitudinal sample of 147 students (and for those same 21 students), self-concept discrepancy in their images of actual and ideal "student" self was strongly related to feelings of life stress and anxiety measured at the end of a college grading period. Moreover, these general patterns of life-task appraisal, self-evaluations, and performance strategies characterized the students' specific ("on-line") reactions to academic and social-life activity, as measured by experience sampling (Hormuth, 1986).

Additionally, within any one domain of life-task activity, different strategies emerged to characterize students' approaches to their shared life-task concerns. For example, whereas all the students appraised their achievement tasks as more threatening and less immediately rewarding than their interpersonal task activity,

some students worked to cast as optimistic a light as possible on those academic pursuits, and other students—the "defensive pessimists" in the sample—seemed to actually emphasize, even exaggerate, the negative when facing achievement tasks. Each groups' strategic construction of the achievement-task context seemed to serve them well, as students in both groups initially maintained their excellent records of achievement; but the path to success differed markedly across these groups. The defensive pessimists did well to the extent that they reflected in detail about forthcoming hurdles in the achievement domain; so much so that for them, self-concept discrepancy in the "student" self domain was actually positively related to academic performance success. Optimists, in contrast, excelled by framing their achievement tasks in a relatively rosy light, and they did best when not reflecting much before these tasks and when the discrepancy between actual and ideal "student" self-concepts was only minimal. These students had strikingly different ways of handling their anxieties in the achievement domain, although their thoughts, feelings, and actions in the social life-task domain did not differ (see Cantor et al., 1987 for a detailed report of these data).

This portrait of shared life tasks and individualized strategies evoked in the transition to college life illustrates several general features of a social-intelligence assessment. Unlike the cognitive-styles tradition that precedes this work, we look for patterns of problem solving in social-life contexts that are highly specific to the nuances of those contexts and to the goals of the individuals as they face those particular life tasks. Adaptiveness is judged relative to the nature of the "problems" (as framed by the participants themselves) inherent in each context. As such, it is not necessarily "good" or "bad" to perceive self-concept discrepancy or to have complex plans across all life-task situations; the adaptiveness of this social intelligence depends on the particular demands that these individuals see in their social and achievement activity and on the specifics of their self-appraised expertise for handling those problems.

As one illustration of the relativity of standards for effective life task problem solving, consider the different role played by expectations, plans, and self-concept ideals in the case of optimists and defensive pessimists. As noted previously it is not always the case that reflecting in detail about the potential risks in a task, or setting seemingly unwarranted, low expectations for self-performance at a task, is always self-defeating—the utility of these strategic task constructions can only be judged in the context of the particular individual's "problems" in the situation at hand. For defensive pessimists in our studies (Norem & Cantor, 1986 a, b), it has been critical to their academic success that they are afforded the opportunity to "harness" anxiety by engaging in negative task construals and self-assessments of precisely this (counterintuitive) kind. Of course, the pessimists' strategy is not without its costs, for it is a stress-engendering one that takes a toll in other aspects of the pessimists' well-being, even while serving a positive function in the achievement domain (Cantor & Norem, 1988).

Each strategy has its own way of handling the shared aspects of these students' life tasks, and yet the key to the adaptiveness of these strategies is that they each also address the unique version of these shared achievement tasks, as cognitively constructed by the pessimists and the optimists. For optimists and defensive pessimists, the strategic process of task construal, effort modulation, and self-evaluation works in very different ways to maintain motivation, self-esteem, and successful task performance in achievement contexts.

A central feature of the social-intelligence framework for the analysis of personality is that it provides a set of criteria for judging "intelligence" that are importantly different from those applied before in the evaluation of the desirability of different cognitive styles. In this regard, one standard for intelligent action is whether the person can select and shape a living environment in which he or she can effectively carry out a preferred strategy, without incurring social censure or jeopardizing other personal goals. Defensive pessimists, for example, seem to find a comfortable social-support network of very close friends who apparently allow the pessimists to engage in "worst-case" anticipatory reflections without interference (Cantor & Norem, 1988). As such, the "pessimists" can embrace their rather odd but effective achievement strategy and still feel good about their social-life interactions. The same successful selection of a comfortable environment is not typically observed in the case of individuals who embrace a strategy of "self-focused depression" (e.g., Pyszczynski & Greenberg, 1987). In that case, the response of the social environment is often quite negative, perpetuating a debilitating cycle of self-censure for the "depressed" individual. This standard for intelligent action recognizes, therefore, the existence of considerable variation in strategy by environment fit: Some environments simply do not allow or reward some strategies; some strategies have very particular requirements for a comfortable environment. Individuals must, with some measure of self-awareness, find ways to maximize the match between their preferred strategies and their life environments.

A related criterion for "intelligent" action assesses the sensitivity to feedback, to the costs and benefits of embracing different strategies in different task contexts, which an individual exhibits. For example, although defensive pessimists seem quite aware of their need to find environments that will quietly support their preparatory cognitive work, they appear to be less consistently in tune with the potential costs (in emotional wear and tear and motivation) of continued use of such a confrontive, troubleshooting strategy. Defensive pessimists are good at finding ways to use their strategy, but they may well miss signals as to *overuse* of the strategy, with subsequent losses in life satisfaction, intrinsic task motivation, and, sometimes, even in performance itself (Norem, 1987). In fact, our longitudinal data suggest that over time defensive pessimism generates its own set of negative feedback in feelings of exhaustion, overpreparation, and stress, perhaps watering down any ultimate enjoyment of the achievement success (Cantor & Norem, 1988). In that respect, intelligent responding would dictate that the individual greatly restrict use of such a strategy to a select

set of truly threatening and risky life-task events—an aspect of social intelligence that one suspects is not routinely exhibited.

SOCIAL CONCEPTS AND INTERPRETIVE RULES

From a cognitive point of view, the structure of personality is identified with the social intelligence repertoire used in interpersonal problem solving. Just as traditional approaches to personality are concerned with the nature and organization of personality traits and motives, so the cognitive approach is concerned with the nature and organization of social knowledge. In this way basic research on social cognition, once thought of as belonging to the domain of social psychology, becomes part and parcel of the psychology of personality. Defined in this way, however, one despairs of ever distilling personality structure into a few basic trait dimensions or type categories. Some simplification may be achieved by assuming a high degree of continuity between social and nonsocial knowledge—an assumption that is admittedly controversial (Lingle, Altom, & Medin, 1983; Ostrom, 1984; Zajonc, 1980a). So much work in social cognition is derived from the efforts of our nonsocial colleagues. However, there are reasons for thinking that the investigation of social cognition may reveal, or at least highlight, aspects of cognition in general that are obscured when social knowledge is ignored.

In keeping with the continuity assumption we have adopted the distinction, articulated in the nonsocial domain, between declarative and procedural knowledge. The social-intelligence repertoire contains both concepts about the social world and rules for manipulating and transforming this conceptual information, and putting it to work. For the present we confine ourselves to knowledge of others and the situations in which we encounter them; a later section is devoted to knowledge of ourselves.

Conceptual Knowledge of People, Situations, and Events

Building on the insights of Kelly (1955), we accord privileged status to the social concepts that organize our knowledge about kinds of people, situations, and events encountered in everyday life. The most familiar examples of such conceptual knowledge are social stereotypes based on race, gender, religious or ethnic background, and social status (Deaux & Lewis, 1984; Hamilton, 1981). They also include personality types such as workaholics and yuppies (Andersen & Klatzky, 1987; Cantor & Mischel, 1979), psychiatric diagnoses such as neurotic and psychopath (Cantor & Genero, 1986), broad classes of social situations such as dates and parties (Cantor, Mischel, & Schwartz, 1982; Pervin, 1976), trait-based categories of social behavior such as dominance and nurturance (Buss & Craik, 1983; Hampson, 1982), and generic scripts for social interactions

(Abelson, 1981; Forgas, 1982). (Social scripts are unique in the social-knowledge repertoire in that they have both declarative and procedural status: As declarative knowledge structures, they help us identify situations we find ourselves in and anticipate what will happen next; as procedural knowledge structures, they serve as guides to action.)

It is generally acknowledged that conceptual knowledge is not organized into proper sets, with singly necessary and jointly sufficient defining features, perfect vertical nesting and sharp horizontal boundaries, and homogeneity of instances. Social concepts, like natural concepts generally, comprise fuzzy sets, with central and peripheral characteristic features, imperfect nesting, variations in typicality, and heterogeneity of instances. Whereas there remains a dispute between prototype and exemplar forms of representation (Smith & Medin, 1981), we do not wish to take sides in this argument. Because exemplars can be imaginary, it seems reasonable to conclude that whether a concept is organized around a single prototype or multiple exemplars is an empirical question that must be answered anew for each particular case.

Although concepts about people, situations, and events are probably organized in a similar manner, they certainly differ with respect to content. Concepts of all kinds, of course, carry information concerning attributes that are characteristic of the category in question. Rather than being simple features lists, moreover, categories serve as schemata by preserving information about co-occurrence relations among these attributes—information that can serve as the basis for inference and prediction.

With respect to persons, these attributes are often expressed in terms of physical and psychological traits—for example, the "Big Five" of extraversion, agreeableness, conscientiousness, emotional stability, and culturedness (Norman, 1963). These broad trait dimensions might be considered "blind date questions"—the basic information that we would want about a stranger with whom we have to interact. Person categories also carry information about general evaluation, goals, and intentions (Hoffman, Mischel, & Mazze, 1981).

Whereas the study of social knowledge has traditionally focused on persons, more recently attention has turned to situations as well (Fredericksen, 1972; Moos, 1973). Situation categories contain information about the local physical environment, as well as the types of behaviors that are appropriate to the context: situations both constrain and elicit behavior (Price & Bouffard, 1974). They also carry affective and evaluative information. There is an interesting symmetry between person and situation categories, in that person categories contain information about the kinds of situations in which various types of people are likely to be found, whereas situation categories contain information about the kinds of people likely to be encountered in various settings (Cantor, Mischel, & Schwartz, 1982).

Our intuitive knowledge of persons and situations is united in our knowledge of interpersonal events—a knowledge that gives life to these otherwise static

concepts (Zuroff, 1982). In navigating the social world, people are guided by their knowledge of typical interpersonal behaviors and common social tasks. Social events can be described in terms of the motives or needs that are involved in them, and the different social domains in which they are played out; the roles played by the various participants, the individual plans and scripts that they follow, and the norms that regulate their interactions (Trzebinski, McGlynn, Gray, & Tubbs, 1985). Event concepts also carry affective meaning, and their invocation is an occasion for emotional arousal (Fehr & Russell, 1984; Plutchik, 1980; Shaver, Schwartz, O'Connor, Kirson, Marsh, & Fischer, 1985). Some event concepts pertain to the mundane episodes and rituals that consume the everyday life and have clear and well-practiced behavioral scripts associated with them. Others concern more monumental activities, such as the "basic evolutionary tasks" of Plutchik (1980): establishing dominance and maintaining control (over something), exploring one's territory, finding out who we are and where we belong, and coping with separation and loss. These are less well-defined problems that admit of many different representations, and many different solutions. And these events are especially revealing of the individual's social intelligence.

As noted earlier, social concepts are structured as fuzzy sets organized around typical examples or summary prototypes (Holyoak & Gordon, 1984; Lingle et al., 1983; Smith & Medin, 1981). It seems possible that the representation of concepts may shift from exemplars to prototypes and (perhaps) back again, as a person accrues relevant social experience (e.g., Homa, Sterling, & Trepel, 1981). In any event, social concepts must be represented in such a way as to highlight the central tendency of the category but not obscure variability that characterizes its constituent instances—for the simple reason that people routinely make use of both types of information. The internal structure must also permit people to retrieve information (or make judgments about) the typicality of different category members.

Although social concepts contain information about the affective connotations of category members, most models represent this information in relatively cold, static form—as features linked to concepts (e.g., Bower, 1981). However, the activation of social concepts frequently evokes actual feelings in terms of specific patterns of vascular and motor activity. Recently, some models have argued for a more dynamic representation of affect—that is, as a set of motor procedures that will actually produce the corresponding emotion when a concept is activated in memory (Gilligan & Bower, 1984; Lang, 1979; Leventhal, 1984). In other words, "hot, wet" content may be represented directly in the formerly "cold, dry" conceptual structure (Zajonc & Markus, 1985). Such models remain to be fully developed, but the effort may result in a radical departure from the propositional, list-structure form often assumed in models of concept representation (Holyoak & Gordon, 1984).

Social construal is so complex because people must bring so many different

concepts to bear when making sense of a particular person, situation, or event (Srull & Wyer, 1980). Therefore, it is important to consider the relations among concepts, both within and across these domains. Some of these relations within domains include level of abstraction, class inclusion, perceived similarity. Of particular interest, from the point of view of personality, are the idiosyncratic relations among concepts not generally thought to be related. These descriptive and evaluative associations derive from the person's unique experience (direct and vicarious) with the categories in question (Wyer & Srull, 1981). They cannot be predicted from the dictionary or common meanings of the category labels, and they are the basis for many of the surprises and misunderstandings that occur in social intercourse.

An important question in both social and nonsocial domains concerns the existence of a preferred or basic level of categorization: Is there a level, somewhere in the tangled hierarchy of superordinate and subordinate concepts, that provides particularly rich, distinctive, vivid, and easily accessible category labels for social entities (Hampson, John, & Goldberg, 1986)? Probably not. The preferred level of categorization necessarily depends on the individual's processing goals, as well as his or her particular areas of expertise and ignorance. Nevertheless, something about "basic levels" seems right. Individuals do seem to have preferred levels of categorization, even if these levels are not widely shared. Perhaps, in turn, analysis of these preferred levels can serve as the basis for describing the expertise and processing goals that characterize the individual in their respective domains.

Person and situation concepts have implications for each other, and both have implications for behavior. Therefore it is also important to examine the relations among concepts across as well as within domains. Concepts from the three domains may be united by virtue of their shared association with different life tasks. For example, dominance tasks involve, among other things, power-hungry people, the settings where interpersonal conflict occurs, and the ways in which conflict is displayed and resolved. Accordingly, a key to understanding the tangled webs of people's individual social-knowledge repertoires is to understand the life tasks that they confront.

The uniqueness of life experiences and of life tasks raises the problem of individual differences in social concepts and how they are to be construed. As Kelly (1955) pointed out, individuals differ in their construals in large part because they differ in the content and organization of their personal construct systems. One way to characterize these individual differences, as noted earlier, is in cognitive complexity (e.g., Linville, 1985). Another way is in social expertise (Showers & Cantor, 1985). Expertise may be manifested in the degree to which particular concepts are elaborated within the declarative knowledge system, greater elaboration permitting the person to make finer distinctions; in the number of levels available in the hierarchy within various domains, more levels permitting more flexibility in construal; and in the number of links across con-

ceptual domains, a greater density of connections permitting the person to see the implications of various social entities for his or her current life tasks.

Interpretive Rules in Social Construal

In addition to social concepts, the social-intelligence repertoire consists of the interpretive rules by which we make sense of social experience. However, although people can often articulate their declarative knowledge of the social world, we seem to have little or no direct introspective access to procedural knowledge (Kihlstrom, 1984; Nasby & Kihlstrom, 1986). A major portion of research within cognitive social psychology is devoted to uncovering the implicit rules that govern social categorization (Cantor & Mischel, 1979), inferences concerning dispositional traits and emotional states (Jones & Davis, 1965; Shaver et al., 1985; Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1972), evaluating likability (Anderson, 1974; Fiske & Pavelchak, 1986), making attributions of causality (Kelley, 1967, 1972) and other judgments (Nisbett & Ross, 1980), testing hypotheses (Skov & Sherman, 1986; Snyder, 1981b), and processing social memories (Hastie, 1981).

The earliest research in this domain appeared to suggest that procedural knowledge involves fairly extensive information integration and complicated calculations—as in Anderson's cognitive algebra or Kelly's ANOVA cube. More recently, however, the field has recognized the degree to which people may deviate from potentially time-consuming algorithms and rely instead on more efficient shortcuts, as in Tversky and Kahneman's (1974) quartet of heuristics: representativeness, availability, simulation, and anchoring. Such procedural economies have now been identified in practically every domain of social perception, memory, and judgment (Nisbett & Ross, 1980). The field has also come to appreciate the liabilities associated with the use of judgmental heuristics, as exemplified by the "fundamental attribution error" (Ross, 1977). Nevertheless, on balance these heuristic principles appear to serve us rather well, as evidenced by the frequency with which they are used (Miller & Cantor, 1982). The paradox of social judgment is that people get along rather well with procedures that, in normative terms, are nonoptimal and prone to bias and error.

It may be, as some have suggested, that a reliance on heuristic principles signals a lapse of normative rationality, and our poor ability to test hypotheses effectively prevents us from becoming aware of our errors. It may also be that this reliance is dictated by the nature of the declarative knowledge base on which procedural knowledge must operate. The network of social knowledge is very rich, but it is also very tangled and sports many informational gaps. Moreover, the variability of human social behavior presents the observer with stimulus information that is often fragmentary, inconsistent, and ambiguous. Under these circumstances it might be inordinately time-consuming to have to analyze all the possibilities and implications, and more efficient instead to render a quick judg-

ment—especially if there are few important consequences of making a mistake (Hogarth, 1981).

Now that many judgmental heuristics have been identified, the major task remains to determine the circumstances in which they are evoked, and the actual consequences of overreliance on them (e.g., Borgida & Howard-Pitney, 1983). Our reading of the literature in several different areas suggests that certain shortcut procedures are often quite efficient modes of social information processing. For example, in the face of a continuously shifting social episode, it may be adaptive to deploy attention away from a person who is behaving in accordance with expectations. Reliance on inferential activity to fill in the resultant memory gaps may occasionally lead to judgmental error, but it will also free processing resources for use in the event that something surprising occurs (Hastie, 1984; White & Carlston, 1983).

Whereas most social psychological research has examined the general processes underlying social perception, memory, and judgment, some investigators have begun to document consistent individual differences in the manner in which people process social information. In addition to the literature on attributional style and complexity (Fletcher et al., 1986; Metalsky & Abramson, 1981), there have been studies of evaluative styles (Ostrom & Davis, 1979), styles of attentional focus (Carver & Scheier, 1981), and coping styles (Miller & Mangan, 1983). The link to the earlier literature on cognitive styles is tempting. Nevertheless, it is important to note that the more recent work does not employ tasks lacking social content to make predictions about personality and social behavior. Rather, the instruments by which these individual differences are assessed make explicit (and usually exclusive) reference to social content. Moreover, some of the new processing styles pertain to rather narrow domains, rather than possessing trait-like generality across situations.

One important dimension of procedural individual differences concerns the degree of effort required to invoke various processing routines. By virtue of extended practice, some procedures become automatic and effortless. They are invariably invoked by certain environmental events, and their execution consumes little or no processing capacity. Automaticity in the procedural domain, like elaboration in the declarative, is an index of differential expertise. Experts may also differ in their tendency to utilize diagnostic information when it is available, rather than relying on stereotypes and other abstract categorical knowledge (Higgins & Bryant, 1982; Linville & Jones, 1980); and in the intensity of their response to social events (Linville, 1982).

A final dimension is personal involvement. Under conditions of low motivation, involvement, or commitment people may be content to rely on judgmental heuristics and other processing shortcuts. Involved, motivated, committed people may perform more careful, systematic cognitive analyses of events (Borgida & Brekke, 1981; Borgida & Howard-Pitney, 1983). Of course, from a social-cognitive point of view people cannot be characterized as more or less

motivated, involved, or committed *in general*. Rather, these features will vary according to the setting in which the person is observed. As in the domain of declarative knowledge, procedural expertise, context, and pragmatics are closely linked.

SELF-KNOWLEDGE AND SELF-REFLECTION

The cognitive basis of personality is found in the mental structures that represent information about persons, situations, and events, and the mental processes that operate on them in the course of adaptive problem solving. Although oneself is a person like other people, the self also has a special status, being subject and object simultaneously; that is, personality involves mental representations of the self as well as others, but it is the self that is doing the representing. Because of this special status, the self deserves separate treatment.

Knowledge about the self can be classified in the same manner as other knowledge: declarative and procedural, episodic and semantic (Kihlstrom & Cantor, 1984; Kihlstrom, Cantor, Albright, Chew, Klein, & Niedenthal, 1988). Semantic self-knowledge is what is generally meant by the self-concept: It is the mental representation of one's own personality—and, we might add, one's own body. Episodic self-knowledge consists of the continuous record of autobiographical memory. Procedural self-knowledge includes the skills, rules, and strategies that we employ to process information about ourselves.

Concepts of the Self

The self-concept is the person's mental representation of his or her own personality, but it is selective and not an exhaustive list of features. A number of theorists have attempted to characterize this selectivity by asserting that the self includes only stable characteristics (Snygg & Combs, 1949), those over which the person has control (Rogers, 1951), or those that are generalized across situational contexts (Allport, 1955). Based on recent theories of categorization, however, we can say that the self-concept qua concept consists of those features that distinguish oneself from other people—that is, features that are highly characteristic of oneself but not highly characteristic of others. This means that the self-concept encodes the uniqueness of the personality that it represents. One implication of this point of view is that people actively construct their self-concepts by comparing themselves to others (McGuire, 1984). Another is that the self-concept encodes only those personality features of which the individual is aware—although nonconscious self-concepts may be observed in certain forms of psychopathology such as fugue or multiple personality (Kihlstrom, 1984).

Traditional approaches generally assume that the self is a unitary structure—a

kind of "one person, one self" rule. However, some social psychologists have raised the possibility that each person has many selves, corresponding to different social roles or contexts (Cooley, 1902; Gergen, 1971; Mead, 1934; Sarbin, 1952). Our view of the self as a concept leads us to endorse a version of the multiplicity view. Natural concepts are arranged in hierarchies, and if the self functions as a concept it must also be part of a hierarchy. Of course, the unitary self could be one element in a hierarchy of persons. But we suspect that there is a tangled hierarchy of selves, each specific to a different situational context. There is no reason to think that the self-concept does not incorporate information about the discriminativeness and flexibility of the person's social behavior. Furthermore, the self includes not only those features that comprise the personality—the actual self—but also those features that the person wants to have—the ideal self—as well as those that others want the person to have—the ought self (Higgins, Strauman, & Klein, 1986). Possible selves are objects of both hope and fear, and they lend a strong motivational quality to the self-concept (Markus & Nurius, 1986). Finally, great diversity is given to the self-concept by the availability of autobiographical memory, which provides the possibility for retaining mental representations of oneself at different periods of life.

The multiplicity of selves does not mean that the self is fragmentary or incoherent. The self is a family of selves, related to each other through family resemblance: each self shares some feature overlap with other selves (Rosenberg & Gara, 1985). The unity of self comes from these overlapping resemblances. Some selves may be central, by which we mean that they share many features with other selves; others may be peripheral, sharing relatively few features. Further, at least in well-adjusted individuals, there may be considerable overlap between the actual, ideal, and ought selves. A sense of unity may also be given by the existence of a basic level of self-conception—that is, a level at which people prefer to focus their self-awareness. Alternatively, at the very top of the hierarchy there may well be a superordinate self-concept whose features show the most overlap across the various context- and epoch-specific selves. Further unity to the self is given by the autobiographical record, which preserves the transitions from one self to another and provides the person with memories of the actions and experiences of his or her various selves: This continuous autobiographical record is what is missing in fugue, multiple personality, and other cases of the divided self (Kihlstrom, 1984).

The self-concept raises the same questions concerning internal structure and interconcept organization that were addressed in our discussion of other people. Again, we feel that there is no reason to take a position in the exemplar-prototype debate; but for purposes of simplicity we assume that each entry in the self-concept repertoire is a summary prototype abstracted from memories of the self in specific situations and at specific times. The features of this prototype are those that distinguish (or, more properly, are perceived as distinguishing) oneself

from others in that setting (McGuire & Padawer-Singer, 1976). The extent to which these self-concepts are elaborated is determined by the amount of experience in relevant settings, and by the amount of processing devoted to the task of distinguishing self from others.

As noted earlier, not all attributes of personality feature in the self-concept, and the features linked to the self-concept vary in centrality. A person is self-schematic with respect to some feature when he or she defines that feature as somehow important to his or her own self-concept. Self-schematic (Markus, 1977) features are, obviously, central features of the self-concept; they may also be features of the "prototypical" self and figure prominently at the "basic" level of the self-concept hierarchy. Viewed in terms of associative network theory, self-schematic features are those linked directly to the node representing the self, permitting rapid access without intervening inferential activity (Kihlstrom & Cantor, 1984; Kihlstrom et al., 1988).

Like social behavior itself, the self is flexible. Of all the available self-concepts, only one—the working self-concept (Markus & Nurius, 1986)—will be the focus of attention at any particular time. Precisely which self is activated may be determined by personal goals—the life tasks that the person confronts at any particular time. In addition, certain self-concepts may be primed by contextual cues in the immediate social setting (Bargh, 1982). Alienation may occur when a person is forced to adopt a view of self that is nonpreferred or inconvenient. By the same token, flexibility in self-construal permits people to try out new identities in various situations. Throughout, however, the prototypical or basic-level self may serve as an anchor in a variety of social interactions (Lewicki, 1984).

Memories of the Self

Although psychologists have been studying episodic memory since the time of Ebbinghaus (Tulving, 1972), we know surprisingly little about the structure and organization of the continuous record of autobiographical memory (Neisser, 1982). In principle, episodic memories contain three different types of information: a raw description of some event in the person's history; a description of the spatiotemporal context in which that event occurred; and some reference to the self as the agent or experiencer of that event. Personal recollections tend to be hot and wet rather than cold and dry: They often involve vivid images and feelings that are lacking in the raw factual material drawn up from semantic memory. Consider, for example, our remarkably vivid and detailed flashbulb memories that preserve highly salient, unexpected, emotionally arousing events (Brown & Kulik, 1977). Of course, not all autobiographical memories have all these features: It often occurs that we remember something that we cannot date or locate precisely; and we may be uncertain whether something actually happened or we

merely imagined it. And not all personal experiences are recorded in autobiographical memory, as indicated by the childhood amnesia that typically covers the first 5 to 7 years of life (Kihlstrom & Harackiewicz, 1982).

The contextual specificity of autobiographical memory gives it an organizational structure that is lacking in purely semantic memory; that is, autobiographical memory is temporally organized to provide a sense of continuity across the life-span (Kihlstrom & Evans, 1979). This is not to say that one's personal recollections are encoded in an unbroken stream, like a videotape. The temporal stream may well be segmented into salient epochs marked by salient transitions—for example, entering school (Brim & Ryff, 1980; Cohler, 1982). But temporal sequencing does not preclude other schemes from organizing memory as well. Events may be categorized by the contexts in which they occurred, the personality traits they exemplified, the feelings they evoked, or the goals they served. In any case, there seems to be a sense of narrative integrity to autobiographical memory, with people able to reflect on the beginning, middle, and potential end of their life stories. Gaps in the record may be filled in, and other events set aside, to enhance the person's sense of continuity (Greenwald, 1980). One's history, however inchoate it may appear at the moment, makes sense in retrospect: Whereas it may have a linear component, the personal narrative is also woven around personal goals and life tasks (Levinson, 1978; Valliant & McArthur, 1972). Far from being an unbiased record, autobiographical memory is an important clue to what the person considers to be important in his or her own life. The subjective history of the personality is the personality (Murray, 1938).

Interpretive Rules for Self-Reflection

Finally we turn to procedural aspects of selfhood: the skills, rules, and strategies employed in processing information about oneself. Some of these procedures have already been touched on in our discussion of the semantic and episodic aspects of declarative self-knowledge. For example, we seem to selectively encode those aspects of ourselves that distinguish us from others (McGuire & Padawer-Singer, 1976). We tend to ignore or reconstrue information that is incongruent and focus on information that is congruent, with our preferred self-concepts (Markus, 1977). We tend to focus on information and events with positive rather than negative emotional connotations (Matlin & Stang, 1978). A number of processing strategies are revealed in self-evaluation—whether in the literature on the self–other differences in causal attribution (Jones & Nisbett, 1972), self-efficacy (Bandura, 1977a, 1982), social comparison (Tabachnik, Crocker, & Alloy, 1983), self-evaluation maintenance (Tesser & Campbell, 1983), and the various illusions that surround the self (Alloy & Abramson, 1979; Lewinsohn, Mischel, Chaplain, & Barton, 1980).

A question remains whether any of this procedural knowledge is unique to the

self. The same processing principles might apply to any other person whom we liked, and with whom we were intimately familiar. A case in point is the self-reference effect in memory (Greenwald, 1981; Kihlstrom, 1981; Kuiper & Derry, 1981; Rogers, 1981), which was once thought to indicate that the self was a uniquely rich and elaborate memory structure. It now appears that the self-reference effect has little specifically to do with either the self as a memory structure or self-reference as a processing strategy but rather reflects more familiar principles of organization and elaboration (for reviews see Kihlstrom et al., 1988; Klein & Kihlstrom, 1986).

One feature of self-knowledge that is distinctive results from our privileged access to information about our own internal thoughts and feelings, as well as the availability of memories from our personal past. Although there are limitations on this access (Nisbett & Wilson, 1977), and the information retrieved is not always reliable (Greenwald, 1980), there is growing evidence that people make use of their privileged data base of self-knowledge when making judgments and inferences about themselves (e.g., Andersen, 1984; Andersen & Ross, 1984). For example, one reason for the actor–observer difference in causal attribution may be that people have access to more information about the contextual variability of their own behavior than is available to an external observer; alternatively, people may act on their awareness of discrepancies between situational constraints and their own internal goals and intentions. But access does not require use. There appear to be marked individual differences in the focus of attention toward, or away from, the internal, subjective self (Carver & Scheier, 1981; Snyder, 1979).

LIFE TASKS AND PROBLEM-SOLVING STRATEGIES

Social knowledge is employed in interpreting and solving life tasks, and these life tasks provide the unit of analysis in understanding the application of social intelligence in everyday problem solving. Some life tasks are freely undertaken, others are imposed on us by our life situations, but all are highly salient, attention-consuming problems that possess motivational properties for individuals and offer goal states around which large portions of life are organized (Klinger, 1975, 1977). Thus, the life task of "being productive at work" may be a self-imposed "desire," whereas the "demand" of "getting tenure" is a salient, institutionally imposed life task for most academicians (Reich & Zautra, 1983). As a starting position, we assume that these life tasks are relatively accessible to awareness, although people do not think about them all the time, and they may need some help in articulating them. Life tasks vary from long-term, abstract goals to short-term, concrete ones: Effective research depends on selecting tasks of appropriate size for analysis (Goldfried, 1983; McFall, 1982). Some life tasks of territoriality, identity, hierarchy, and safety may well be universal, whereas

others may be specific to particular cultures or subcultures (cf. Plutchik, 1980; Veroff, 1983); each individual, of course frames these shared life tasks in a unique manner. If we are lucky, they do not become full-fledged crises. As ill-defined problems, however, they admit of many different solutions, all potentially acceptable from the point of view of adaptation.

Some theorists have argued that there exists a set of universally experienced psychological needs that motivate goal-directed human behavior. Accordingly, everyone works on the same life tasks throughout their lives, although there are individual differences in the salience of various categories of needs and goals (Maslow, 1968; Murray, 1938; Plutchik, 1980; Rogers, 1951; Rotter, 1954). Others have argued that life tasks are linked to stages or epochs in the life-span (Erikson, 1950; Levinson, 1978). We are particularly interested in those life tasks that confront us at particular epochs in the life course; tasks for the recent retiree, for example, of "enjoying leisure time," "feeling connected to people," "finding 'jobs' to do" (Ryff, 1982). These seem to provide an appropriate balance of characteristics for research purposes: They are relatively universal, relatively significant, relatively concrete, relatively enduring, relatively frequent in appearance.

The concept of life task is not new with us. One of its origins is Adler's (1931) notion of "style of life," by which he meant the individual's characteristic pattern of approach to feelings of inferiority. Another is Klinger's (1977) concept of "current concerns": the goals to which people commit themselves, and which give meaning to their lives. More recently, Little (1983) has developed the concept of "personal projects," around which people organize their daily lives. Little asserts: "A personal project is a set of interrelated acts extending over time, which is intended to maintain or attain a state of affairs foreseen by the individual" (pp. 276). Similarly, Emmons (1986) has investigated "personal strivings," such as "finding intimacy" or "being less competitive," that provide future-states towards which individuals strive. Individuals select their personal strivings or projects, but these selections are constrained by the opportunities afforded them by their environments. Still, most people have a wide range of options available to them, and their choices both reveal and shape their personalities.

A person's current life tasks may be defined as those that the person perceives to be central and important to him or herself during a specified period in life (Cantor & Kihlstrom, 1985b, 1987). They are defined by individuals themselves as self-relevant, time consuming, and meaningful: They cannot be defined for individuals by external authorities. Nevertheless, life tasks are responsive to the structures, demands, and constraints of the social environment. In fact, such tasks, by their very nature, tend to crop up at particular periods in the person's life. Times of life transition into new age subcultures or new social relationships provide an impetus to the individual to reconsider his or her pressing concerns (Veroff, 1983). When the school-age child becomes the high school adolescent,

there are new expectations of "future careers" and "close relationships" to embrace (Higgins & Parsons, 1983). Similarly, joining the marriage partnership cannot help but force on one a host of salient life tasks; those that vary from the mundane chores of "financial management" to the existential tasks of "achieving equity in the relationship." Still, although external and uncontrollable factors of social development may pose tasks for people, individuals still do select those that they will solve, and in what order.

If infancy prepares the child for working intentionally toward self-understanding (Kopp, 1982), then childhood prepares the adolescent for selecting and defining his or her own life tasks (Harter, 1983). With an organized and differentiated self-awareness, the adolescent has what it takes to turn shared demands into personal projects. Adolescents (at least late adolescents!) are able to use themselves as reference points without imposing their own perspectives on others (Bannister & Agnew, 1977; Higgins, 1981); they are able to see themselves as others do, or might (Nicholls, 1984), and to evaluate themselves as they might other people (Ruble & Rholes, 1981). Their feelings of self-efficacy are highly differentiated, and they are able to reflect on the logic and appropriateness of their own internal processes (Flavell & Ross, 1981). With these skills in hand, adolescents are able to confront their age-graded normative tasks. Having spent so many years of social learning, they are exceptionally well versed in the demands of their family, peer, and school cultures; and they know enough about themselves to want a uniquely defining set of life tasks. The late adolescent seems ready to be an intentional social problem solver, ready to construct and achieve and avoid his or her own cherished set of possible selves (Markus & Nurius, 1986).

Social Learning and Life-Task Choices

The study of life-task problem solving involves therefore the interplay between environmentally and biologically given tasks, and the individual's own version of those shared demands as he or she actually experiences them. In this regard, it is critical to acknowledge our cognitive-social-learning orientation: Social interactions provide the context in which social intelligence is acquired and life tasks are selected and negotiated, and this principle extends even to the earliest exchanges between parent and infant (Hay, 1986). Bruner (1981), for example, has shown how mothers pose ever more complex developmental tasks of role playing, intentionality, and self-correction, by speaking to their toddlers in language that is always just one step beyond the current expertise of the child (see Vygotsky, 1962)—social environments keep even the youngest of children goal directed and channel their energy towards the "right" life tasks. And, despite Piaget's emphasis on egocentricity, even very young children are responsive to the goals and values of their parents; as Rheingold (1982) has demonstrated in her insightful analysis of the beginnings of prosocial behavior in little children's

participation in household chores. For older children and young adults, as Higgins and Parsons (1983) suggest, the messages as to age-appropriate life tasks are much less subtle—practically all adolescents know that they are supposed to be "struggling to achieve an independent identity," even before they read it in the popular press or see it portrayed on "family ties." As Bandura (1977b) outlined, children learn a great deal in a very short period of time about the morays of their culture, from a diverse set of messages provided through direct and indirect tutelage.

Whereas it is in fashion these days to take some of the burden (of social tutelage) off parental caregivers and teachers and peer models by stressing the biological and genetic basis of personality development (Goldsmith, 1983), it is wise not to forget that the social environment has the power to solidify and even exaggerate those behavioral tendencies in the process of "teaching" individuals about themselves. Patterns of individual differences in temperament and in gender differentiation are likely candidates for such social influence because there exist widely shared implicit theories about the behavioral correlates of infant reactivity (see Lewontin, Rose, & Kamin, 1984) and of gender (Frieze et al., 1978). These social influences are especially important in the present account of life-task problem solving precisely because parents and teachers and peers can "help" to pose the child's life tasks by their emphasis on certain features of personality that they presume to be givens for that person. The child who is constantly told that he or she is "naturally" high strung will likely look for outlets for that energy in tasks that are compatible with this personality. Significant figures in a social environment sometimes strongly shape behavior simply by their messages about the tasks for which a person is so "uniquely" well suited!

There is one major way in which the social-intelligence perspective, as a *cognitive*-social learning theory, does very definitely relieve parents and teachers and peers of the onus in individuals' choices of life tasks to embrace. Consistent with literature on cognitive-social development (e.g., Higgins, Ruble, & Hartup, 1983), we assume that the child (and adolescent and adult) plays an active and selective role in his or her own social learning (Bandura, 1977b, 1986). There is, for example, rarely complete overlap between the child's "theory of self" and the parents' view of their child's personality, intelligence, and life goals (Harter, 1983). Individuals develop their own reading of their life experience, self-attributes, and the values of their subculture, and those autobiographical narratives (Cohler, 1982) and self-theories (Epstein, 1973) are the critical forces behind their choices of tasks to pursue. The social environment can lay out the possibilities, but the individual does the ultimate selecting, with or without full awareness of that responsibility. The highly able child, in a family of achievement-oriented parents and siblings, who persists in viewing his or her successful performances as reflective of effort rather than of ability (Phillips, 1984), is unlikely to gravitate towards high-pressure achievement life tasks, even in the

face of parental messages to the contrary. That "obstinate" child may well have developed a personal theory of intelligence—one that construes intelligence to be a fixed entity, perhaps—such that pursuit of those highly valued life-task goals is believed to lead to a punishing dead end (Dweck, 1986). In this way, a more complete account of individual's choices of life tasks resides in their theories and perceptions of self and of others, the autobiographical baggage that sets the tone for how they address those environmentally and biologically given life tasks.

Uncovering Life Tasks

The possibilities for alternative readings of life tasks present both advantages and disadvantages for empirical analysis of personality, as many have noted. One clear disadvantage is that it is easy to become overwhelmed with the idiographic complexity of individuals' unique construals and difficult to find simplifying dimensions that capture the richness of those personal construals. Several solutions to this idiographic/nomothetic dilemma are currently being pursued, with reasonable success. Typically, the aim is to find a group of people who, at some level, share a common task or problem or goal in a particular environment, and then to see how individuals within the group diverge in their specific construals of, and strategies for handling, the problem to be addressed. In our own work, for example, we have chosen to study life tasks in periods of life transition, in the hopes that times of transition present individuals with relatively clear normative demands, such as the message experienced by most first-year college students to "be independent" and to "carve a career goal" (Cantor et al., 1987; see also, Stewart & Healy, 1985; Veroff, 1983). In a similar vein, Oyserman and Markus (1987) have studied the possible selves of a group of juvenile delinquents coping with the shared burden of enforced detention; whereas Fincham and his colleagues (e.g., Fincham, Beach, & Nelson, 1987) have investigated differences in couples' construals of their marriage situation, holding relatively constant certain basic parameters of the interpersonal intimacy context.

Another familiar hurdle posed by the multiplicity and complexity of construals is that individuals will not always be able to, or find it easy to, report on "problems" to which their efforts are addressed in any given context. One way around the limitations of introspective access is to use methods that are not directly dependent on self-reports of task construal. In this regard, Eric Klinger's work on current concerns, in which he analyzes the focus of attention, fantasy life, and conversations that tap into the incentives that motivate action for different individuals in similar situations, is a model program of research (Klinger, 1975, 1977). Similarly, Higgins and his colleagues (e.g., Higgins, King, & Mavin, 1982) have used nonobvious priming techniques and free-recall measures to make inferences about individuals' chronically accessible constructs. Another approach to this obstacle in the investigation of life tasks is to combine data on

self-articulated tasks or constructs or projects with data gathered from experience-sampling studies in which on-line behavior, mood, and activity reports can serve as a validity check on self-reports collected "out of context" (Hormuth, 1986). Emmon's (1986) work on personal strivings, as well as our own investigations of the life-task activity of college students, suggests that experience-sampling techniques are very useful in mapping the goal-directed activity of individuals.

Cantor et al. (1987) found six categories of life-task activities—"making friends," "being on own," "working on identity," "getting good grades," "choosing a career," "handling time-management"—that accounted for 88% of the activities reported by their college student sample in an experience-sampling study. Moreover, the students' mood–emotion profiles in different activity contexts reported in the experience-sampling study converged with life-task appraisals that they had provided one year earlier: achievement life tasks were appraised in general as much more stressful and threatening than were social-life tasks, and the on-line mood reports paralleled those appraisals. The convergence between life-task appraisals and on-line mood reports was also strong with regard to patterns of individual differences—defensive pessimists, for example, who appraised their achievement life tasks as especially more threatening than their social-life tasks also showed significantly greater mood variability than did optimists in the experience-sampling study (Cantor & Norem, 1988). Such methods are especially effective in capturing fluctuations in mood and appraisal over time and across situations; providing a window on the dynamics of person-in-situation interactions (e.g., Larsen, 1987).

Strategies for Problem Solving in Life Tasks

Analyzing personality in terms of life tasks permits the investigator to draw on concepts familiar in the literature on nonsocial problem solving (Abelson, 1981; Gagne, 1984). Each life task begins at some starting state; there is some goal state to be attained; and there are operations that will move the individual from Point A to Point B, usually by proceeding through a hierarchy of subgoals. A critical feature of this approach is that it also encourages an emphasis on *processes* that translate those goals into action in specific situations. Individuals' construals of situations in terms of personal projects or current concerns or life tasks set up problems to be addressed, from which strategies of action follow to insure preferred outcomes and insure against undesirable outcomes (Bruner, Goodnow, & Austin, 1956; Showers & Cantor, 1985).

Cognitive strategies, as patterns of thoughts, feelings, and effort, before, during, and after events, serve as important guides to action in many arenas of personality functioning (Kuhl & Beckmann, 1985). For example, cognitive strategies, such as those that characterize illusory-glow optimism or self-handicapping or self-focused depression, play a significant role in achievement behavior

(Norem & Cantor, 1986a, b; C. R. Snyder, 1985) and often set the tone for important interpersonal interactions (Pyszczynski & Greenberg, 1987). These strategies involve both interpreting the problem and planning the solution. Problem-solving strategies involve the coordination of declarative and procedural knowledge.

One of the most common ways in which people begin working on a problem is to simulate a number of possible outcomes or endstates (D'Zurilla & Nezu, 1980; Kahneman & Tversky, 1982). As the simulation unfolds various hypotheses may be tested—often by searching autobiographical memory for similar episodes in one's own past, or by searching semantic memory for comparable situations about which something is known. After playing through several outcomes, one may formulate a plan, carry it into action, and monitor the results (Spivak, Platt, & Shure, 1976). Sometimes, of course, this process of anticipatory strategizing is actually reversed: A person finds him or herself having performed a particular strategy that in turn leads then to the acknowledgment of an "appropriate" goal (Vallacher & Wegner, 1985). In any case, the challenges involved in planning social interaction are increased by the fact that others may not cooperate, requiring frequent revisions. In contrast to nonsocial problem solving, social problem solving is inherently interactive: Each participant's plans must be coordinated with the others'. Things are guaranteed to run smoothly only when all participants are executing well-defined scripts—in which case, of course, little or no planning is needed.

Throughout the social problem-solving cycle each person has to monitor the success of his or her plans, the discrepancy between intended goals and actual outcomes, and the responses of the other people involved (D'Zurilla & Goldfried, 1971). The monitoring process is complicated by the richness of even mundane social interactions: There is so much to attend to, including the costs as well as the benefits associated with potential outcomes, and the fluctuating values attached to various goals. Much of the cognitive activity that occurs during problem solving involves understanding the causes of the various behaviors observed, evaluating the person's level of control over outcomes, and reviewing past events that are similar to the current situation. The demands of these activities can be reduced considerably by various heuristics and other shortcut procedures. Accordingly, people may develop habitual strategies for allocating resources to various sources of information, or they may learn to shift attention back and forth between sources. Of course, as various procedures become highly practiced, progressively fewer attentional resources are required, and much monitoring can proceed outside of conscious awareness (Kihlstrom, 1984).

Nevertheless, it is also very effective, as a self-regulatory aid, to maintain heightened self-awareness in key problem-solving contexts (Duval & Wicklund, 1972). Despite the existence of individual differences in self-awareness (Fenigstein, Scheier, & Buss, 1975; Snyder, 1979), self-awareness can also be increased for everyone by arranging to be reminded of a particular intention

(Abelson, 1982; Fazio & Zanna, 1978); by selectively inhabiting situations that are closely related to one's self-concept (Markus, 1983), or by creating a critical audience—either in fact or in fantasy (Baldwin & Holmes, 1987). When people fail to reach their goals, they may engage in symbolic self-completion, finding alternative outlets through which to solidify a treasured identity, attitude, or skill (Gollwitzer & Wicklund, 1985). Kuhl (1985) describes a set of such self-regulatory strategies that people can use in action control, maintaining intentions in the face of obstacles and competing interests by, for example, enlisting social support for one's objectives or observing "stop-rules" that prevent endless rumination and instead provoke action. In many contexts, there is this need for conscious self-regulation to "keep on track," and to stay away from distractions or debilitating cycles of self-criticism (Nolen-Hoeksema, 1987).

Although the strategies just described lead to successful self-regulation, a number of other processes can lead to failure (we leave aside those failures that are due to low motivation or uncontrollable contingencies). Intentional self-control can be broken down when the person relies mindlessly on familiar, automatized patterns (Langer, 1987; cf. Langer & Piper, 1987). On other occasions, the person's own thoughts or mood can interfere with performance (Kuhl, 1985; Salovey & Rodin, 1985). Negative mood states are especially disruptive (Carver & Scheier, 1981), especially when they reinforce negative views of self and self-efficacy. Conditions that encourage external orientations and focus on performance evaluation can also diminish feelings of competence and self-efficacy (Deci & Ryan, 1980; Harackiewicz, Manderlink, & Sansone, 1984). Finally, the motivation for intentional self-regulation can be impaired when people perceive obstacles to be insurmountable or events to be uncontrollable. Such conditions, when combined with a proclivity for rumination, self-focus, or self-defeating attributions, may lead to depression and withdrawal of effort (Abramson, Seligman, & Teasdale, 1978; Peterson & Seligman, 1984; Pyszczynski & Greenberg, 1987).

Individual Differences in Preferred Strategies

Another way in which people can reduce the cognitive demands of life-task problem solving is by relying on a small number of preferred strategies. Such reliance obviously obviates the need to solve each problem anew. Analyses of achievement behavior offer a good opportunity for observing these kinds of individual differences (Dweck, 1983; Klinger, 1977; Nicholls, 1984; Weiner, 1985). Most achievement situations invoke competing goals—succeeding at the task, or at least avoiding failure, are the most obvious; others involve enhancing feelings of competence or self-esteem. The relative salience of these goals will differ from problem to problem; but once evoked, they may lead to consistent patterns of goal-directed activity.

Perhaps the most commonly described strategy is optimism based on positive

past experiences and the desire to support a self-image of high competence. The confident optimist selects tests carefully to maximize not just the probability of success but also the diagnosticity of success with regard to true ability (Jones & Pittman, 1982; Trope, 1986). Having selected a task in light of expected outcome and its attributional consequences, the optimist must then adjust his or her effort in response to actual progress and ultimately cope with actual success or failure by asserting or denying personal control over the outcome. In other contexts, the desire to protect a sense of competence may overwhelm the desire to attain success. In this case, some self-protective strategies are available to cushion blows to self-esteem before the fact (Showers & Cantor, 1985)—for example, self-handicapping (Jones & Berglas, 1978) and defensive pessimism (Norem & Cantor, 1986a, b). Self-handicapping and defensive pessimism do not lead people to be happy or satisfied with failure. Nevertheless, self-handicapping will enhance self-esteem in the event of success, whereas defensive pessimism may motivate increased effort. Thus, even though they look self-defeating, both strategies may reflect quite adaptive problem-solving behavior.

In this regard, cognitive strategies are best viewed as *patterns* of cognition–effort–action that follow from characteristic construals of particular situations as presenting particular problems, rather than as isolated tendencies to make certain kinds of interpretations or attributions. Illusory glow optimism, for example, involves the following cognitive maneuvers that present the self in a rather rosy light as well as maintaining perceptions of control and motivation for a task: positive self-appraisals and expectations, self-serving excuses, strategic effort withdrawal, self-enhancing performance evaluations and attributions (Taylor & Brown, 1988). Defensive pessimism, in contrast, seems also to be an effective strategy for handling achievement pressures, but it follows a very different pattern: In this case, the bulk of the protective and motivating cognitive work occurs *before* the event, as the (successful) "pessimist" anticipates the possibility of negative, rather than positive outcomes, and reflects in detail about ways to cope with the impending task (Cantor et al., 1987).

These divergent paths to success in the achievement domain make most sense (and the action appears most coherent) when considered in light of the *problems* to which they seem to be addressed, i.e., in terms of the individual's construal of the life task. For example, experimental work has shown that subjects using defensive pessimism have higher levels of test anxiety than subjects using illusory glow optimism, even in the face of equivalently good records of past performance success (Norem & Cantor, 1986b). Managing this anxiety thus seems to be part of the problem for the defensive pessimists more so than for the optimists. For defensive pessimists the problem is one of approaching the task itself, whereas optimists seem to focus more on evaluations of performance *after* the task has been completed. Optimists are managing their own and others' reactions to performance (Snyder, Stephan, & Rosenfield, 1978); pessimists are guarding against immobilizing anxiety and/or effort withdrawal that would interfere with

the task process. Pessimists are worried about *how* the task works; optimists are worried about *what* the outcome will look like. It is not that pessimists do not care about evaluation, or that optimists do not need to stay motivated and relaxed during the task itself; but each group has an overriding concern that is apparent in their task construals and that gives their strategic work its special purpose. In this way, the strategy analysis provides insight into the coherence of actions and also makes apparently irrational behavior seem somewhat more understandable, in light of its strategic function for the individual.

Strategies and Dispositions

It would be easy to reify strategies such as self-handicapping and defensive pessimism into trait-like dispositional dimensions. It would also be wrong. Self-handicapping and defensive pessimism are available to everyone, and a pessimist in one situation is often an optimist in another. Our data support the discriminative use of strategies within the life-task contexts for which they are intended: Academic defensive pessimists look very different from optimists in terms of their characteristic thoughts, feelings, and actions in achievement situations, and, yet, they overlap substantially on these measures with their optimist peers in social situations (Cantor & Norem, 1988). These are not simply "moderate" pessimists; they are extremely "pessimistic" prior to academic tasks and quite "optimistic" in their approach to social task situations. Typically, there is only a modest correlation (around .30) in our college student samples between self-reported use of defensive pessimism in academic and in social situations (see Showers, 1986 for a discussion of a negative thinking strategy in social contexts).

More to the point, the defensive-pessimist strategy shares features of both the negative-thinking characteristic of dispositional pessimism and the confrontive-coping activity that typically characterizes an optimistic orientation (Scheier, Weintraub, & Carver, 1986). Whereas there is nothing in principle that precludes dispositional pessimists from using defensive pessimism to overcome immobilizing self-doubts, the academic defensive pessimists whom we have been studying are not those individuals—they acknowledge their past successes, take control of their current anxieties via use of the strategy, and are indistinguishable from optimists on measures of generalized hopelessness (see Cantor & Norem, 1988). In fact, we assume that the functional character of this strategy is intimately related to its *selective* use in appropriate contexts—to the extent that defensive pessimism as a strategy devolves into real pessimism as a generalized negative orientation to all problems in living, then, indeed, it puts the individual at risk for depression and distress (Scheier & Carver, 1985).

Rigid and overgeneralized reliance on a single strategy as a "solution" to diverse life-task problems constitutes a failure of intelligent action, in our opinion. Intelligent use of strategies like defensive pessimism or self-handicapping is

better reflected in the behavior of students who learn, over time, to restrict their strategic negativity (for defensive pessimists) or excuses (for self-handicappers) to a few critical situations that present sure risks to self-esteem (Norem, 1987; C. R. Snyder, 1985). Of course, this theoretical standard for intelligent behavior may not always be realized in the reactions of real people in the face of real threats and anxieties; yet neither is there reason to assume instead that people inevitable rely rigidly on generalized coping strategies—as with most answers to questions of human behavior, both the strategic and the dispositional models provide reasonably good descriptions of some people's ways of coping.

ASSESSING INDIVIDUALS' LIFE TASKS AND STRATEGIES

Every program for personality assessment involves building a story about particular individuals working on their own version of common life tasks. Our assessment program (Cantor & Kihlstrom, 1985a, 1985b, 1987) applies an intelligence model—of context, expertise, and pragmatics—to the study of individuals by searching for connections between the individual's particular reading of life tasks, relevant perceptions of self and family life, and preferred strategies (for regulating thoughts, feelings, and effort) to address those life tasks *as he or she "sees" them*. In this regard we have found it useful to focus attention on groups of individuals who show a decidedly distinctive or "deviant" pattern of life-task appraisal, relative to the modal perceptions of people in the same life-transition period. We look for meaningful deviations (from the norm) in feelings about a life task, assuming that behind these deviant appraisals are unique versions of common life-task problems; versions that derive from the specifics of the person's self-knowledge and personal experiences. These unique "problems," in turn, are likely to bring forth unique strategies in relevant task contexts, and the strategies will have particular consequences for personality adjustment. Our aim is to trace a path from life-task appraisal to cognitive strategy to consequences for adjustment and functioning in that life-transition period. In evaluating those consequences, we try to take a relativistic attitude toward standards of performance and adjustment: The strategy has to fit the individual's version of the normative life-task problem, as well as address more widely held goals of social functioning and personal health. It is not always the case that the "objectively" best solution to a common life task serves the individual as an answer to his or her particular set of current concerns.

To illustrate the process of building personal stories in the present approach, we draw again from the longitudinal study of the transition to college life, as described earlier (Cantor et al., 1987). Whereas most students in that sample entered college with relatively positive appraisals of the ease, rewardingness, and potential for progress of their *social*-life tasks, one group of (27) students

was clearly distinguishable from a (modal) group (of 84 students) by their tendency to see these social-life tasks as more threatening than rewarding (Langston & Cantor, 1988). The distinctive reaction of these same students was also reflected in their strategy for working on social-life tasks: These students favored a highly constrained interaction strategy in which they frequently considered the possibility of "social failure," evaluated their specific social-life tasks as very difficult and stressful to handle, felt inhibited in initiating actions in social situations and looked to the guidance of others, and focused on the self after disappointing social interactions. These same students were *not* more likely to embrace an ineffective strategy in the academic domain, nor were they diffusely more immobilized, defeated, or prone to withdraw effort from their life-task activities. (Characterization of the strategy emerged from Q-sort ratings provided by trained judges on the basis of videotaped interviews with the students about their current social and academic life-task activities, goals, successes, and failures. The Q-sort deck was comprised of 92 items constructed to represent the specific elements in a variety of well-researched self-regulatory strategies. Each item in the deck was phrased in a way that mapped onto these students' current college life experiences in achievement and social-life domains. See Norem (1987) for a detailed description of the Q-sort deck and rating procedure.)

Specification of these students' problem-solving strategy for social interactions is a very basic ingredient of the social-intelligence assessment. The strategy, which we label as a *social constraint* strategy, contained a diverse set of 19 Q-sort items that cohered well in ratings of these students (alpha = .91) and also decomposed well into four subscales that seemed to constitute the components of a strategic approach to social-life tasks. The strategy components included: task appraisal (e.g., "finds social tasks stressful"), self-appraisal (e.g., "sees discrepancy between actual and ideal social self-concepts"), self-in-action (e.g., "picks friends to facilitate goals" as uncharacteristic), and relations to groups and to others ("comfortable with structure imposed by others"). Importantly, the strategy was comprised of elements of thoughts, feelings, and actions that spanned a temporal period before, during, and after relevant events. Moreover, whereas the elements had some functional coherence in that they all, in one way or another, addressed the social life-task goals of these students, their descriptive content came from many traditional dispositional categories (e.g., anxiety, shyness, conformity, and so forth). The strategy description captured the diversity and richness of these students' approach to their pressing problems, without sacrificing a handle on coherences in their personalities that were predictive of adjustment.

In turn, students who fit the profile of the social-constraint strategy were experiencing significantly more stress and dissatisfaction with their social lives at college, although they were performing on par with the typical Honors student in their academic endeavors. The appraisal–strategy–outcome relations were quite clearly defined within the social-life arena. A path model performed on data from

the sample as a whole over 3 years at college, tracing a causal-temporal chain from appraisal of social-life tasks (gathered in the first year at college) to degree of endorsement of the social-constraint strategy (gathered from observer ratings of interviews in sophomore year) to adjustment outcomes of perceived daily life stress and social-life satisfaction (gathered in the junior year at college), provided a good fit to these patterns of personality functioning. Most importantly, the social-constraint strategy provided the key link between life-task appraisal (e.g., balance of reward to threat) and the adjustment outcomes, as measured 2 years later; the more direct links between goals and outcomes were not significant in these path models. In other words, students' appraisals impacted on their subsequent adjustment to college life via the problem-solving strategies that those individuals embraced when they confronted those life tasks. It is not sufficient for personality prediction to know that an individual has framed a pressing life task in a particularly negative or positive light; rather, the task appraisal provides insight into the likely strategy for working on the task, which, in turn, provides the clearer path to particular (good or bad) outcomes.

The social-constraint strategy seems to have had rather specific consequences for social adjustment. Students in the "deviant" group in this sample appraised the social-life tasks as important and engaging, but difficult to master; as if they felt ineffective and worried about making interpersonal mistakes. They embraced a strategy of self-focused humility in which they were predominantly guided by others in their "actions" in social contexts–a strategy that may well have made sense as a reflection of their unique concerns, but one that was not likely to be personally very satisfying in the long run. As such, these data raise a central question in the social-intelligence analysis: *Why* exactly do (otherwise) competent individuals embrace seemingly self-defeating strategies, such as this one, as they work on specific life tasks?

To address this question it is important to consider the individual's own version of each relevant life task, and, in this regard, we look to people's autobiographical knowledge and experiences to provide special insight into the personal rationale for a seemingly self-defeating strategy. For example, the perceptions of family life reported by the students in this sample provided a view of the unique "problems" of social relations that those with the deviant pattern of life-task appraisals may well have felt the need to address in social life at college. Students in the deviant appraisal group, in contrast with the other (modal) group of students, perceived their families to be relatively nonexpressive in interpersonal interactions and affectively inhibited with family members, especially when provocative issues arose at home (as measured on the Expressiveness Subscale of the Moos Family Environment Scale, 1974). They were more likely than their peers to endorse items of the following kind in describing their family life: "It's hard to "blow off steam" at home without upsetting somebody"; "We are usually careful about what we say to each other"; "We tell each other about our personal problems (negatively scaled)." In turn, recall that

the central theme of their strategic approach to social life seemed to be one of constraint, inaction, and otherdirectedness; a theme that at the least fits well with this portrait of a somewhat inhibited and affectively restrained family-life atmosphere.

Of course, these data on perceptions of family interactions can not stand on their own in tracing the etiology of these students' self-defeating strategy in social-life contexts. Without behavioral observation data in the family context it is difficult to assess the accuracy of the students' retrospective reports. However, from our perspective, these data provide valuable insight into the "cognitive baggage" that the students bring with them to college; baggage that is likely to influence their reading of college-life tasks regardless of the actual truth-value of these beliefs. For example, it may well be that the inhibition in action and affective expression that these particular students perceived in their family lives set the tone for their perceptions of difficulty in actively structuring their own social environments in an assertive and rewarding fashion. In other words, the salient "problem" for these students may have been that they felt a lack of skill and control in the social domain, an inability to "make social life work for them," and, perhaps in reaction to this perception, they embraced a rather self-deprecating strategy of otherdirectedness and restrained action (or, rather, inaction). From this perspective, the social-constraint strategy, whereas certainly not optimal as a solution to their broader life-task goals, may have felt rather "obligatory" to these individuals as a temporary solution to their more specific perceptions of social incompetence and fear of embarrassment in social relations—in this very narrow way, the strategy "makes sense" for their subjectively conceived "problem."

As Baumeister and Scher (1988) point out in their recent analysis of self-defeating strategies, quite frequently individuals trade off broader adjustment goals for answers to more pressing, specific needs. Of course, solutions to these pressing, local problems may entail further unanticipated costs that only seem worthwhile when the strategy brings more immediate rewards (e.g., defensive pessimists pay a price for their success, but they do at least succeed). These students who embraced the social-constraint strategy were not likely to feel good about their chosen strategic trade-off; the costs in subjective stress and social satisfaction were relatively heavy given that the benefit was itself only an implied one, i.e., avoiding social embarrassment. Yet, satisfied or not, they may well have perceived the strategy as the only available path towards their broader social goals. And such a restricted vision of one's strategic alternatives speaks poorly to the effectiveness of their social intelligence. Intelligent action implies a level of problem-solving flexibility and innovation that does not appear to exist for these particular students as they approach problems in their social life-task domain. In fact, assessments of strategies in different life-task contexts suggest a potential for nonrigid problem solving, but a strong pull towards routinization, with non-optimal consequences for personality growth and change (Nasby & Kihlstrom, 1986).

ASSESSMENT FOR CHANGE

From a cognitive point of view, maladaptive behavior occurs because the social intelligence used to interpret situations and plan actions is somehow inadequate or inappropriate to the task. Corrective change—whether incidentally evoked in the course of social interaction or more deliberately elicited in therapeutic encounters—requires articulation of the person's repertoire of social knowledge so that it can be critically examined and revised. In a series of papers, we have outlined a clinical assessment technology based on experimental tasks familiar in the laboratory study of social cognition (Kihlstrom & Nasby, 1981; Nasby & Kihlstrom, 1986). Some of these tasks are intended to tap consciously accessible declarative knowledge, whereas others are intended to permit valid inferenees about unconscious procedural knowledge.

Self Awareness and Corrective Change

The first step in clinical assessment should be to determine the life tasks in which the person is currently engaged, placing them into the twin contexts of the individual's personal history and the demands of the external social world. Fortunately, people apparently find it rather easy to articulate their life tasks by means of simple and direct self-reports (Emmons, 1986; Little, 1983). If there are concerns about the validity of self-reports, it is possible to employ more direct time-sampling methods to gain an "on-line" picture of the distribution of the person's daily thoughts and activities (Diener & Larsen, 1984; Nezlek, Wheeler, & Reis, 1983). In addition, Little (1983) has proposed a method for assessing the degree to which each current life task facilitates or impairs progress on each of the others; the same kind of technique could be used to assess conflict between two different individuals' life tasks. Using techniques for probing autobiographical memory (Robinson, 1976), clients can be asked to recall incidents that are relevant to their life tasks. And using a free-listing method for assessing situations (Pervin, 1976), they can be asked to indicate how their life tasks interact with the settings in which they commonly find themselves.

Life tasks are approached through the individual's fund of declarative social knowledge. Procedures such as Kelly's (1955) Role Construct Repertory Test (and its more current, high-tech variations: Pervin, 1976; Rosenberg, 1977; Rosenberg & Gara, 1985) capitalize on the person's ability to articulate the meanings they attribute to the people and events they encounter. For example, subjects might be asked to list and freely describe the people they know (Rosenberg, 1977), the situations they encounter (Pervin, 1976), or the identities they experience and present to others (Rosenberg & Gara, 1985). Each is then freely described, and then every target (person, for example) is rated on every descriptor. The resulting cluster analysis shows how that aspect of the person's social world is organized. Other investigators have proposed similar techniques for assessing possible selves (Markus & Nurius, 1986) and self-ideal discrepancies

(Higgins, Straumann, & Klein, 1986). Quantitative analyses can be applied to index the complexity of the mental representations, their agreement with cultural consensus, and the like.

Where direct introspective reports are undesirable (perhaps because of the possibility that some declarative social knowledge is not accessible to consciousness or easily put into words; Shevrin, 1986) the social cognition laboratory provides other procedures that can be adapted to the purposes of individual assessment: Priming tasks can assess the accessibility of declarative knowledge, whereas divided-attention tasks can determine the degree to which social-stimulus information is processed automatically (e.g., Bargh, 1982). Similarly, clustering in free recall can be used to index the organization of social knowledge (Kihlstrom, 1981). The yield from such procedures may be of interest to the assessor. But our (admittedly limited) experience suggests that many of them are also intrinsically interesting to clients and provide a valued opportunity for self-reflection.

Uncovering procedural social knowledge involves special problems precisely because it is not consciously accessible to clients (Kihlstrom, 1984; Nisbett & Wilson, 1977). For this reason, self-report methodologies are obviously of no use. Nevertheless, it is possible to produce tasks that assess attentional selectivity in response to positive and negative feedback (Mischel, Ebbesen, & Zeiss, 1972), hypothesis-testing strategies (Fong & Markus, 1982; Riggs & Cantor, 1982; Snyder, 1981b), styles of planfulness (Frese, Stewart, & Hannover, 1987), and attributional style (Metalsky & Abramson, 1981). Unobtrusive measures of response latency and incidental memory may be useful in assessing the degree to which these individual differences reflect truly automatized procedures (Nasby & Kihlstrom, 1986)—thus giving some indication of how hard they might be to correct.

Effecting Change

Change, after all, is the major purpose of assessment. We see little point in assessment as an academic exercise in person ranking; careful assessment is arduous for subject and investigator alike, expensive and time consuming, and should be reserved for those occasions where the results will be put to useful purpose. Change may be directed toward developing new life tasks, finding new solutions to old ones, or embracing new possibilities for the self. None of this is going to be easy. Even maladaptive social intelligence developed because it was once useful (or promised to be), and much of the person's expertise is going to be firmly entrenched and difficult to correct. In fact, the social-knowledge repertoire seems structured in such a manner as to resist revision—except, perhaps, by adding knowledge to the repertoire. The situation is especially bleak for procedural expertise, because conscious awareness would seem to be a prerequisite for conscious control and deliberate restructuring. Still, because new knowl-

edge creates new possibilities for constructive alternativism, and thus for behavioral change, adding rather than eliminating social intelligence may be enough—provided that others in the person's social environment are also open to change. If the expectations of others are firmly entrenched, expectancy confirmation may outweigh self-verification (Swann & Ely, 1984). The self-fulfilling prophecy can be a powerful adversary.

We are not clinicians, though one of us has clinical training and both of us work with clinical psychologists and clinical social workers. Still, from a cognitive perspective the techniques of cognitive therapy (or cognitive behavior modification) seem the best approach to affecting adaptive change in client's personalities (Meichenbaum, 1977; Wilson & Franks, 1982). These techniques work by altering the client's repertoire of social knowledge, and helping the client to acquire new behavioral routines based on what he or she has learned. For example, new images of a "perfect relationship" can be considered, hopefully overwhelming the client's prior, self-defeating standards (Ruhrold, 1986). Video reconstruction of a marital "debate" can help a client to "see" his or her dysfunctional interaction strategies. Through active intervention efforts the client is then taught to develop and master new scripts for social interaction (Jacobson, 1984), and to avoid slipping into old ones (Meichenbaum & Cameron, 1982). Relapses are to be expected, in part because many procedures are automatically executed, but the clinician actively encourages the client to persist in self-reflection and efforts to change (Meichenbaum & Cameron, 1982).

CONSISTENCY AND INTELLIGENCE

The major issue in personality is consistency. Traditionally, consistency in experience, thought, and action has served as prima facie evidence that people have personalities. The social-intelligence approach involves many different types of consistency, but the most important of these is the consistency of action with perceptions and intentions (Kuhl & Beckmann, 1985). Intentional consistency is apparent when people express their life goals and strive to achieve them, and when people act in accordance with their subjective impressions of the situation. People construct consistency in their lives, but this consistency is not always readily apparent to an external observer. Rather, it can only be appreciated from the point of view of the actor.

The life-task strategy approach should give additional insight into these regions of intentional consistency in personality functioning because it forces a rather fine-tuned person-by-situation analysis (e.g., Wright & Mischel, 1987). Such an approach asks direct questions about the person in that situation: What is this person likely to see as the problem to be addressed in this situation? How does he/she typically try to address such a problem? What patterns of strategic effort will this situation afford or allow? These are all questions of strategy-by-

environment fit that recognize both the propensity of individuals to select personally compatible environments (Emmons, Diener, & Larsen, 1986; Snyder, 1981a) and the constraints placed on effective action by the "rules" implicit in most social contexts (Argyle, 1981). For example, Smith and Rhodewalt (1986) suggest that a key ingredient to understanding "Type A" behavior is the mapping of patterns of construal and of situation choice: Type A individuals consistently choose to be in stress-engendering task contexts; moreover, they "see" competition and the need for an assertive (i.e., stress-engendering) response where others might not, and in contexts in which a competitive response will not always be rewarded.

A thorough analysis of the opportunities afforded by certain environments for certain forms of strategic work, or, on the other hand, of the problems most likely to be engendered by particular people's favorite strategies in particular environments, would perhaps give us a better sense of the limits on personality change and consistency. One could ask of a person whether he or she managed to find sufficiently encouraging environments for preferred strategies; or, whether particular environments came to bend the rules to allow a broader range of "acceptable" responses. The emphasis on the "fit" or match between particular construals and strategies on one hand and particular environments on the other, recognizes a value system for personality functioning, without being overly specific or constraining as to a standard for "normal" or "good" behavior.

Too much consistency—of the wrong kind—can be a bad thing. People can persist in self-defeating patterns of construal and action. Or, a strategy like defensive pessimism or self-handicapping that is functional in some contexts can be rigidly embraced, creating a set of undesirable "side-effects" over time (Berglas, 1985; Cantor & Norem, 1988). Even a highly beneficial orientation to life-task problem solving, such as the ego-protective optimism observed to promote mental health (Scheier & Carver, 1985; Taylor & Brown, 1988), can be detrimental to adjustment if it precludes personality growth in reaction to social feedback. Intentional consistency is adaptive only insofar as the person possesses a knowledge base broad enough to permit flexibility in constructive alternativism—the ability to view things from different perspectives, and to entertain alternative hypotheses. This cognitive flexibility, and the resulting flexibility of action and potential for self-correction, makes the difference between adaptive and maladaptive social intelligence.

Social Intelligence and Personality Change

Cognitive approaches to personality, in which goals and self-concepts and personal memories and strategies for self-regulation and self-fulfillment, take center stage, are by no means new. However, there is a renewed interest in this tradition, with excitement about pursuing the cognitive representation of goals (Pervin, 1988), the dynamics of a "cognitive self" and of autobiographical nar-

ratives (Cohler, 1982; Markus & Wurf, 1987), and cognitive strategies for protecting self-esteem and bolstering persistence towards goals (Bandura, 1986; Kuhl & Beckmann, 1985). This interest is flourishing in large part because of trends in cognitive-social psychology to "heat up" the study of social cognition (e.g., Fiske, 1982; Isen & Moore, 1988), and to show ways in which social cognition impacts on (and is then shaped by) motivation in central domains of social life (Sorrentino & Higgins, 1986). These trends increase the attractiveness of social intelligence as a centerpiece for personality, because the study of lives and of people must, almost by definition, be primarily concerned with personal adjustment and growth—concerns that until relatively recently seemed far from the purview of the laboratory study of cognition.

In turn, these cognitive models of personality enable us to join once again in common cause with clinical psychologists, as the limits of self-control and mutability of personality are tested (Ingram, 1986). As we have noted throughout this chapter, there are in our opinion two main ways in which the constructs that are popular with today's cognitivists differ, at least in principle, from the cognitive styles of past theorists: concepts of self, autobiographical memories, life tasks and strategies, are *specific* to particular life contexts (in the past, present, or future); and they should be *mutable*. Our review (Cantor & Kihlstrom, 1987) of experimental literature in social cognition and personality uncovered many reasons to be optimistic about the specificity and mutability of social intelligence. Of course, we also found many less encouraging signs, and much future work to be done in assessing the potential for personal growth.

On the side of mutability. The store of multiple self-concepts, each characterizing different context-specific aspects of personality (Kihlstrom & Cantor, 1984), and the record of autobiographical memories which provides the basis for a multiplicity of event-specific feelings of self-efficacy and inefficacy (Bandura, 1982), serve as critical resources for self-reflection and self-change—grist for the mill of cognitively oriented therapists (e.g., Segal, 1988). Unfortunately, these diverse aspects of self are often buried somewhat under the weight of a few chronically accessible constructs (Higgins, King, & Mavin, 1982), and there is a strong pull towards overgeneralizations about self-esteem that mask the specificity of feelings of self-efficacy (Harter, 1983). Nevertheless, it is encouraging that such a diverse base of self-knowledge can be uncovered, and the more that one's life situations can be varied too, the more likely that these distinct aspects of self will be evoked as guides to behavior; providing the basis for ever-more positive feedback to bolster efforts at self-change. Major life transitions provide such arenas for self-reflection and growth (Levinson, 1978), but even routine variations in everyday life activities can be used to facilitate recognition of new aspects of self and remembrance of easily forgotten selves (Wilson & Franks, 1982).

On the side of rigidity. There is little reason to doubt that this process of bolstering a "mutable self" is a very difficult one indeed. Even when we do

uncover or recover hidden selves, the tendency is to quickly incorporate them neatly into a smoothed-over personal narrative, thus missing the opportunity to intentionally mark a change of course in one's old routines. There may well be many selves stored in memory, but a few selves are always accorded special attention, always elaborated with special associations, and always most likely to push to the forefront of consciousness (Markus, 1977). These special selves are also most often connected to well-learned behaviors. Part of the "double-edge" of expertise is that it is so very easy to use (Smith, 1984), and so very comfortable for others to incorporate (Nasby & Kihlstrom, 1986). Other people expect that we will be this same person at all times, rewarding routines, even when they leave everyone feeling badly (Barnett & Gotlib, 1988). As any family visit so vividly demonstrates, it takes an act of will to break out of well-worn habits and scripted patterns of social interaction (Carlson, 1981).

The reality of compromise. The entrenched expertise of self-knowledge and of social scripts should not entirely be cause for pessimism, for it also sometimes provides the personal motivation, and some of the necessary knowledge, to change and to develop new life patterns. When, for example, the "shy schematic" decides to work on assertiveness, a new possible self (as the life of the party) is probably embellished with knowledge from that old shy self-schema (Markus & Wurf, 1987). Similarly, self-defeating routines, when they are brought to conscious attention by someone else's remark or through personal retrospection, can serve as a basis for acknowledging possible benefits of new interaction strategies (Goldfried, 1983). Of course, people can also make themselves feel very discouraged by focusing on the discrepancy between their current existence and an ideal future state (e.g., Higins et al., 1985); but it is also the case that sometimes that knowledge can provide the impetus for constructive action, especially when an alternative, more positive possible self seems feasible to attain (Markus & Nurius, 1986). Although, these efforts to try on "new faces" (Hochschild, 1979) are clearly risky, and they sometimes seem more likely to promote self-deception than self-understanding and growth (Wilson & Stone, 1985), they also provide the only real avenue for self-change because personal expertise is not easily banished or even modified. Behavior *modification* is probably only achieved through more indirect routes of cognitive-behavior *supplementation*—the old knowledge doesn't go away, it just gets used less and less often, in fewer and fewer life contexts. And we, as researchers, do not really know yet how often the process of supplementation occurs, or, how well it works, as people try to master their life tasks with ever new strategic solutions. The future holds, we hope, new methods for testing this critical aspect of social intelligence.

To date the accessible database on the mutability of strategies, and on the proclivity of individuals to try to control and diversify their habitual ways of solving life tasks, remains sketchy. Still, the important contribution of current cognitive-assessment approaches is to force a more detailed consideration of the

ways in which people actually try to achieve goals, and of their reactions to failures to do so (e.g., Dweck, 1986; Kuhl & Beckman, 1985). It is surprising that so little literature has accumulated on how (and whether) "normal" individuals try to modify self-defeating and disappointing behavior patterns in the course of everyday life; personality psychologists have been too ready to leave questions of mutability and flexibility in the hands of clinicians. Instead, we have focused almost exclusively on questions of structure and of stability in personality, often at the expense of thorough analyses of processes that guide actions, and reactions to feedback, in specific life situations. This imbalance of attention needs to change, for as Allport (1937) said some time ago, personality *is* something and personality *does* something. It seems to us that our field knows too little about what personality does, and about how it changes when those "doings" do not lead to satisfactory outcomes.

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