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Goal Effects on Action and Cognition

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Research and theorizing on goals and their effects on affect, behavior, and cognition has become very popular in social psychology, as documented by the many recent edited books (e.g., Frese & Sabini, 1985; Gollwitzer & Bargh, 1996; Halisch & Kuhl, 1987; Higgins & Sorrentino, 1990; Kuhl & Beckmann, 1985; Pervin, 1989) and review chapters (e.g., Bargh, 1990; Chaiken, Liberman, & Eagly, 1989; Karniol & Ross, 1996; Karoly, 1993; Kruglanski, 1990; McIntosh & Martin, 1992; Tetlock, 1992) on this theme. The reasons for this are manifold. Some are rooted in the theoretical developments in the psychology of motivation (see Geen, 1995; Gollwitzer, 1991; Heckhausen, 1991; Kuhl, 1983), others within the impact of the cognitive revolution on social psychology (see Fiske, 1993b; Higgins & Bargh, 1987; Smith, 1994; Stevens & Fiske, 1995).

The psychology of motivation has progressed within recent years from a focus on describing the choice of action goals (an emphasis on goal content) to explaining the processes involved in the willful control of goal-directed action (an emphasis on goal-related behavioral regulation). This new interest in volition led to the embracing of the goal concept, as goals are at the starting point of the willful control of action. Assuming that cognitive activity serves the purpose of controlling action (as noted by James, 1890, "My thinking is first and always for my doing"), process models have begun to examine goal effects on cognition that mediates the regulation of the individual's actions.

But goals also affect cognition for the purpose of aiding the perception of others and deriving meaning from observed social events (though one might argue that ultimately such cognitions are used to help one plan actions—what Bruner, Goodnow, & Austen, 1956, p. 12, called "instrumental activity"). In examining this theme within social psychology, there has been a similar progression from a

focus on describing the impact of a goal on social judgments (goal content) to explaining the willful control of the processes involved in producing judgments (goal-related regulation). This has produced a metaphor of humans as "flexible strategists" who perhaps have a predisposition toward being "cognitive misers," but are capable of exerting their will and controlling the nature of the cognitive processing they expend on a given task. This interest in volitional control of cognitive processing similarly has embraced the goal concept. Thus, despite the impact of the cognitive revolution on social psychology and the attempted neglect of motivational terms (e.g., needs, motives), the goal concept could not be swept away (see Miller, Galanter, & Pribram, 1960; Simon, 1967). Perhaps the goal concept was spared because goals and plans are highly suitable to a cognitive analysis (Carver & Scheier, 1981; Kruglanski, 1996) and played an important role in cognitive science and artificial intelligence (e.g., Wilensky, 1983).

CONSTRUCTION AND REGULATION AS BASIC PRINCIPLES

Research focused on goal content, within the domains of both action and thought, examines how the type of goal a person selects determines some measured outcome variable. Such research begins with a basic assumption that people are active builders of what is experienced as reality. By this it is meant that people bring to their meetings with stimuli from the environment more than the appropriate hardware that simply awaits being triggered by some property of that environment. People have selective interests (reflected by their needs, motives, and goals), either transient or long term, that help to shape the construal of their

social world. This makes action and cognition more than environmentally determined responses. We shall refer to this fundamental assumption as the principle of *active construction*.

Thus behavior is not triggered simply by features of the environment, but by the interaction of those features with the properties of the individual. People choose between many possible courses of action within a particular situation, with any given individual's chosen response to identical environmental features subjected to the review of that person's prevailing idiosyncratic goals. Similarly, features of the environment do not automatically trigger cognition. Rather than there being a one-to-one correspondence between the physical attributes of a stimulus and its mental representation (in which the processing system is seen as a recorder or camera, transcribing fact), perception and inference are viewed as subjectively determined (Allport, 1954). People choose between many possible interpretations within a particular situation, with any given individual's judgments and inferences from identical environmental features subjected to the review of prevailing goals. The individual contributes somewhat more than "a healthy pair of eyes and the appropriate response mechanisms" (Postman, Bruner, & McGinnies, 1948, p. 142). As Vives (1540) noted: "When we affirm that a thing is or is not . . . we judge not according to the things themselves, but rather according to the concept of our mind, because for us the mind is measure of reality, not reality itself."

Research focused on the processes through which goal effects are exerted also begins with a basic assumption. The assumption is that people have desired states toward which they aspire and continue striving toward these ends until the experienced state sufficiently approximates the desired state (or the desired state is altered). Attaining this state provides a sense of coherence for individuals as it allows them to experience the world in a manner that conforms to their beliefs, wishes, desires, values, and needs. Failure to attain it energizes the individual to strive toward achieving coherence. Such strivings, however, are of a procedural nature, and the procedures must somehow be regulated. They need to be protected from obstacles, altered in the face of changing environments and needs, and brought to a halt when either deemed no longer attainable or when sufficiently reached. We shall refer to this assumption regarding processes through which people pursue goals as the principle of *regulated coherence*. Thus, in examining action we shall see that the processes through which goals guide striving toward desired states are regulated through steps such as deliberating, planning, shielding an ongoing course of action, stepping up efforts, and evaluating one's attainments. Similarly, process models in social cognition describe people as striving toward having a sense of coherence with respect to their judgments and inferences. This desired state is met when currently accepted knowledge is experienced as being valid or sufficient (i.e., held with confidence). The processes through which people strive toward this desired state are regulated through steps such as utilizing (or not utilizing) categorizations, schemas, elaborations on new information, effortful consideration of individuating information and information inconsistent with

prior beliefs, reevaluations of previously processed information, and selective recall and attention.

Our objective in this chapter is to review the evidence for these goal-related principles as demonstrated through research on goal effects on action and social cognition. In each of these domains, we focus first on what we have labeled as goal content research and then on what we have labeled as regulated-process research. In each section, goal content research is described as concerned with goal influences on some outcome—how having a goal of a particular content versus one of a different content (or having no goal specified) determines responses. Goal content research on both action and cognition contains assumptions about the sources and the selection of goals, but each has focused more on the impact of a goal of specified content rather than on the manner in which that content becomes specified. Regulated-process research is described as concerned with the processes through which goals help the individual regulate a goal-directed response—how people go about negotiating their strivings. We begin with goal influences on behavior because traditionally goals have been analyzed as directors of action.

Before turning to the analysis of goal effects on action and cognition, we wish to stress the following two points:

1. The goal-related principles previously introduced are in fact partly derived from an assumption about human psychological functioning that has little to do with goals. This initial assumption is simply the belief that humans are bounded in their abilities to respond to the social world. Thus, with regard to action, all possible behavioral strategies within any given situation cannot be implemented, and thus needs and desires must be fulfilled by specifying subsets of goal-directed behavior, only some of which the individual can carry out. Additionally, certain behaviors within this subset may not be feasible to enact because the person lacks the *capability* to do so. It is within this realm of first deliberating on wishes and desires and then implementing the processes through which these get translated into action (in the face of obstructions and diversions) where goals exert their impact, and the choice as to how to regulate behavior begins.

Similarly, with regard to cognition, the stimuli presented in any situation are too numerous and complex for total representation by the information processing system.¹ Thus, only certain elements from the "great blooming, buzzing confusion of the outer world" (Lippman, 1922, p. 55) are selected for cognitive processing, with other information being "filtered" out (see Broadbent, 1958; Bruner, 1957; Deutsch & Deutsch, 1963; Treisman & Geffen, 1967). Additionally, certain information that the individual desires to process that passes through the attentional filter may not be feasible to deliberate on because he or she lacks the cognitive *capacity* to do so. Whereas performance of many tasks (such as identifying the letters on this page) proceeds relatively automatically (Bargh, Chapter 6, this volume), other more effortful tasks (such as making complex judgments) require mental operations that usurp capacity and may suffer deficits when requisite capacity is unavailable (e.g., Gilbert, 1989). It is within this realm of first selecting and

then processing information where needs, motives, and goals exert their impact, and the struggle as to how the individual will perceive a given piece of information begins. This human struggle to "capture" elements from the complex stimulus array bombarding their senses, and in so doing understand and attain meaning from their social world is the focus of social cognition.

2. In discussing willful control of action and thought, goals as related to issues of volition, and people as guided by *selective* interest, we are not suggesting that such control and selection must be conscious and effortful. Control can be passive—and this does not mean that people do not have volition, have not selected their goals, or are under the control of the environment (see also Fiske, 1989; Uleman, Newman, & Moskowitz, 1996). When goal pursuit is surrendered to an environmental triggering stimulus, this is not equivalent to saying the environment alone is determining responses. The environment is still interacting with goals simply in a passive way by routinizing the goals so that they operate efficiently and effortlessly (see Bargh, 1990; Bargh & Gollwitzer, 1994). People are active, flexible constructors of social reality, but this construction and their contribution to it either can be under conscious control, or it can be passive—exertions of the will need not be effortful and carried out only after other passive processes, such as inference or belief formation, have already been carried out (a position in contrast to arguments by Devine, 1989; Gilbert, Tafarodi, & Malone, 1993, and one we will return to later).

GOAL INFLUENCES ON BEHAVIOR

Historical Background

Behaviorism

According to the behaviorists, goal-directed behavior is easily recognized by a number of observable features. Tolman (1925) highlighted the following characteristics:

When a rat runs a maze, it is to be observed that his running and searching activities persist until food is reached. And it appears that his persistence is the result of the physiological condition of hunger. We do not know whether the rat, in so "persisting," is "conscious"; we do not know whether he "feels a purpose" (to use the terminology of the mentalists); but we do know that, given (1) the physiological condition of hunger and given (2) the objective conditions of the maze, the rat thus persists until the food is reached. It is this purely objective fact of persistence until a certain specific type of goal object is reached that we define as goal seeking. (pp. 285–286)

Later behaviorists (e.g., Bindra, 1959) extended this definition. Besides persistence, the main definitional feature mentioned by Tolman, researchers pointed to the appropriateness of goal-directed behavior in the sense that the goal-directed organism adopts an effective course of action in response to variations in the stimuli connected with the goal. If one route to goal attainment is blocked, another course of action to the same goal is taken. Or if the goal changes in its location (e.g., a rat trying to escape a cat), the goal-directed organism (i.e., the cat) readily adapts to these

changes by actions that correspond to the variations of the goal. Finally, besides persistence and appropriateness, goal-directed organisms also show hyperactivity when exposed to the stimuli associated with a previously experienced goal. This restlessness is commonly referred to as searching for the goal.

The behaviorists spelled out the observable features of goal-directed behavior (persistence, appropriateness, and searching), but what qualifies as an actual goal? According to the behaviorists, goals specify powerful incentives, whereby incentives are defined as objects and events that affect an organism's behavior radically and reliably (e.g., food, sexual stimulation, sudden loud noise). Whether an object or event is treated as a goal or an incentive, however, depends solely on the investigator's perspective on the organism's behaviors. If the investigator selects a certain incentive as the reference point for the description of behavior, this incentive becomes a goal. A behaviorist researcher's statement that food is a goal to the hungry organism means nothing more than (1) that it is known that food is an incentive to this organism, and (2) that the researcher has chosen to describe the behavior of the organism in relation to food rather than in relation to any other object or event.

In the behaviorist tradition, the reference point for goal-directed behavior is apparently not the intention or the goal set by the organisms themselves. Behaviorists do not analyze the internal goal or the goal-setting processes, and whether or how a self-set goal affects behavior. For the behaviorist, a goal is just an incentive that is chosen by the investigator as a reference point for describing observed behavior. Skinner (1953) phrased this most cogently when he referred to goal directedness as an effective and easy-to-handle category for the description of behavior resulting from some kind of operant conditioning.

The reference point of modern goal theories is, in contrast to the behavioristic view, the internal, subjective goal. Goal-directed behavior is studied in relation to goals held by the individual (e.g., a person's goal to stop smoking serves as a reference point for his or her efforts to achieve this goal). Research questions focus on whether and how setting such goals affects a person's behaviors. Some critics of modern theorizing on goals claim that goals are not important determinants of behavior; if anything, goals qualify as effective categories for the objective description of a person's course of action. This criticism, however, is uncalled for, given the many empirical demonstrations of the behavioral and cognitive effects of subjective goals in recent years (to be reported in this chapter). This critique is obviously stimulated by the behaviorist tradition of using goal-directedness as a descriptive category. But behaviorists never doubted that subjective goals may affect a person's behavior; they simply did not bother to analyze such effects and the mechanisms on which they are based (see Bindra, 1959).

Another behaviorist tradition has survived in modern theorizing about goals, this one being more profitable than harmful. It is the classic distinction between needs (motives), incentives, and goals. As seen in Tolman's vivid description of the hungry rat's persistent striving for food, it is the need (hunger) that points to a respective incentive

(food), and it is the animal's efforts at approaching the incentive that qualifies as goal striving. In a parallel way, social psychologists today speak of needs (e.g., need for approval) as circumscribing various classes of incentives (e.g., being popular or accomplishing outstanding scientific achievements), and of goals as intentions to attain these incentives. Geen (1995) has defined the concept of incentive as denoting a broadly defined desired outcome that subsumes several classes of lower order goals. Incentives (e.g., being popular with friends or outstanding scientific achievements) are considered to be the product of a person's need (i.e., the need for social approval) and aspects of the experienced situational demands (i.e., the person's friends or the scientific community, respectively). The intentions to attain the incentive to be popular or to accomplish outstanding achievements are understood as higher order goals that may be served by a multitude of lower order goals (e.g., intending to use the weekend to visit friends or to write an outstanding article, respectively).

Mentalism

The modern theoretical perspective that goal-directed behaviors are to be analyzed in relation to people's subjective goals has its own historical precursors. These reach back far beyond the heyday of behaviorism. William James (1890), in his *Principles of Psychology*, included a chapter on the will in which he discussed the following questions: How is it possible that a behavior which a person intends to perform (i.e., has been set as a goal by this person) fails to be executed? James referred to such problems as issues of the obstructed will, but he also raised questions related to what he called issues of the explosive will (i.e., How is it possible that an undesired behavior is performed even though we have set ourselves the goal to suppress it?). How different James's analysis of goal-directed behaviors is to that of the behaviorists becomes quickly apparent by considering James's well-known example, in which goal setting fails to have its desired effect:

We think how late it shall be, how the duties of the day will suffer; we say, I must get up, this is ignominious, etc. But still the warm bed feels too delicious, the cold outside too cruel, and the resolution faints away and postpones itself again and again just as it seemed on the verge of bursting the resistance and passing over into decisive act. Now how do we ever get up under such circumstances?

This example rests on the assumption that behavior can potentially be regulated by a person's resolutions (or intentions, subjective goals) even though in certain situations and at certain times this may be difficult. In any case, the individual's subjective goal is the reference point for the goal-directed action and not a powerful incentive focused on by an outside observer (or scientist). The question raised by James is whether people meet their goals in their actions, not whether their actions toward an incentive carry features of persistence, appropriateness, and searching.

A further prominent historical figure in the theorizing about subjective goals and their effects on behavior

is William McDougall. In his *Social Psychology* (1908/1931) he was so intrigued by the issue of purposeful or goal-directed behavior that he proposed a novel psychological theorizing (i.e., hormic psychology) to account for its uniqueness. McDougall explicitly saw the reference point for goal-directed behavior in a person's subjective purpose or goal. He postulated that subjective goals guide a person's behavior. This guidance is thought to be achieved through cognitive activity that pertains to the analysis of the present situational context and the envisioned event or goal state to be realized. Furthermore, progress toward and attainment of the goal are seen as pleasurable experiences, and thwarting and failure are seen as painful or disagreeable. With respect to the observable features of goal-directed activity, however, McDougall referred to the same aspects as the behaviorists (e.g., persistence, appropriateness).

German Will Psychology

In the history of German psychology, the issue of goal-directedness of behavior played a particularly prominent role and resulted in an intensive exchange of opinions. This controversy started at the beginning of this century and lasted up to the 1930s. The main protagonists were Narziss Ach (1905, 1910; for a summary, see Ach, 1935) on the one hand, and Kurt Lewin (1926) on the other. In an attempt to establish a scientific analysis of the phenomenon of volitional action or willing (*Willenspsychologie*), Ach employed a simple experimental paradigm. Subjects were trained to respond repeatedly and consistently to specific stimuli (e.g., numbers, meaningless syllables) with certain responses (e.g., add, rhyme). When these responses had habituated, subjects were instructed to employ their will and execute antagonistic responses (e.g., subtract, read). Ach discovered that forming the intention to respond to the critical stimuli with an antagonistic response helps "to get one's will."

The theorizing on how an intention achieves the reliable execution of the intended action was based on the concept of *determination*. Ach assumed that linking in one's mind an anticipated situation to a concrete intended behavior creates what he called a determination, and that this determination in turn would urge the person to execute the intended action when encountering the specified situational stimulus. The strength of the determination should depend on how concretely people specify the anticipated situation; concreteness was thought to intensify determination. Moreover, the intensity of the act of intending (willing) should also increase determination, because intensive willing induces a heightened commitment. Determination was expected to directly elicit the intended behavior without a person's conscious intent to get started. Ach speculated that determination may affect perceptual and attentional processes so that the specified situation is cognized in a way which favors the initiation of the intended action.

Kurt Lewin (1926), who scornfully termed Ach's ideas a "linkage theory of intention," proposed a need theory of goal striving. Intentions, like needs, are assumed to assign a valence (in German: *Aufforderungscharakter*) to objects and events in people's social and nonsocial surroundings.

For a person who intends to mail a letter (Lewin's favorite example), a mailbox entices (or at least calls or reminds) him or her to deposit the letter, much like food entices a hungry person to eat. Because needs can be satisfied by various types of behaviors, which may all substitute for each other in reducing need tension (e.g., eating fruit, vegetables, or bread), many different intention-related behaviors qualify for satisfying the quasi-need associated with an intention. The amount of the tension associated with the quasi-need was assumed to directly relate to the intensity of a person's goal strivings. The exact amount of tension may vary. First, it is affected by the degree of quasi-need fulfillment (i.e., tension comes to a final rest only when the goal is achieved), but it is also thought to depend on the strength of relevant real needs (i.e., superordinate drives and general life goals) and how strongly these are related to the quasi-need. For a person with strong affiliative needs but weak achievement needs (or professional goals) a mailbox, for example, acquires more valence when that person intends to send off letters inviting people to a party than when he plans to send out a job application. Lewin's tension state metaphor effectively accounts for the flexibility of goal striving (which is pointed to by the behaviorists with the concept of appropriateness). It is assumed that people commonly see more than just one route to goal achievement (e.g., contacting a friend), and that all these routes may substitute for each other (e.g., phone, fax, e-mail, letter). In other words, an intention can be realized many different ways, and the blocking of one of them should readily lead to attempts to realize the intention through alternative routes (Lissner, 1933; Mahler, 1933; Ovsiankina, 1928).

The major difference between Ach's and Lewin's accounts of how intentions affect behavior is the following: Lewin employed classic motivational variables such as needs and incentives (valences), and attempted to predict the effects of intentions on the basis of these variables. Ach, however, focused on how people form intentions, and attempted to predict the effects of intentions by the intensity of the act of intention formation and the framing of the intention. He postulated that these volitional (willing) variables functioned independently of the motivational basis of an intention.

Modern Goal Theories

Many of the ideas on goal-directed behaviors as presented by James, McDougall, the German psychology of will, and to a smaller degree the behaviorists, will be recognized by the reader as we proceed to present-day goal theories. There is a general difference in style of theorizing and doing research between then and now, however. Historic theorizing on goals is characterized by relentless conceptual and empirical battles (e.g., McDougall against the behaviorists, Lewin against Ach), but a scarcity of different ideas on the functioning of goals (e.g., only two opposing views in the German will psychology: Ach vs. Lewin). Today there are no big theoretical controversies, and we hardly observe experiments that critically compare different theories; but there is a wealth of different theories and ideas on goals and goal-directed behavior. To arrive at a

comprehensive presentation of these many different views, we have grouped them according to aspects of similarity, which has led to two major categories:

1. Content theories of goal striving, which attempt to explain differences in goal-directed behaviors and their consequences in terms of what is specified as the goal by the individual. Differences in goal content (in terms of structural or thematic features) are expected to drastically affect a person's behaviors.
2. Self-regulation theories of goal striving, which attempt to explain the volitional processes that mediate the effects of goals on behavior. Of the two types of self-regulation theory, one is more motivational, the other is more cognitive.

Goal Content Theories

Goal contents vary as goals may be challenging or modest, specific or vague, abstract or concrete, proximal or distal, framed with a negative or positive outcome focus, and so forth. But goal contents may differ not only in these structural features, but also in their thematic issues, as goals cover different themes depending on the type of needs and incentives on which they are based. Moreover, the kind of implicit theory the individual holds on the functioning of the subject matter involved further determines goal content.

Goal content theories analyze the effects of differences in goal content on various aspects of goal achievement (e.g., quantity and quality of goal achievement) and with respect to relevant side effects (e.g., subjective well-being) of the goal pursuit at hand. The research strategy adopted by goal content theorists contrasts goals of the dimension of interest (e.g., specific vs. vague goals, goals based on autonomy needs vs. goals based on material needs) on a relevant dependent variable (e.g., quantity or quality of performance or subjective well-being).

Goal Specificity. The prototype of a goal content theory is the goal-setting theory put forth by the organizational psychologists Locke and Latham (for a summary, see Locke & Latham, 1990). The theory was meant to offer applied psychologists a "theory of work motivation that works." The basic thesis is that challenging goals that are spelled out in specific terms have a particularly positive effect on behavior. In more than 400 mostly experimental studies (as counted by Locke & Latham, 1990), challenging, specific goals were superior to modest, specific goals, as well as to challenging, vague goals (i.e., "do your best" goals). In a typical study conducted in a work setting (Latham & Yukl, 1975), wood-cutters were sent out to the forest equipped with goals of different contents or no goals at all. Challenging goals (i.e., standards above what can be achieved with normal effort expenditure) led to higher productivity than that observed in the no-goal control group, but only when these challenging goals were formulated in specific terms (e.g., exact number of trees to be cut or number of m²). Specific nonchallenging goals implying modest standards failed to increase productivity, as did challenging but vague goals, such as "do your best."

Over many years of research, Locke and Latham have explored moderators and mediators of the observed goal specificity effect. What modifies the effect? Subjects need to get frequent performance feedback, they should feel highly committed to work on the tasks at hand, the tasks should not be too complex, and limitations in talent or situational constraints should not make task performance impossible. What does not seem to matter is whether goal setting is determined from outside (i.e., assigned goals) or freely chosen by the individuals themselves (i.e., self-set goals) or in interacting with others (i.e., participative goals). Locke and Latham speculate that assigned goals with high standards create a challenge similar to self-set goals of the same difficulty, and that difficult assigned goals are interpreted as a hint that somebody believes the individual can achieve the goal. This in turn should stimulate stronger feelings of self-efficacy and thus better performance.

Locke and Latham also raised the question of what mediates the goal specificity effect. Specific challenging goals increase people's persistence—they work longer on the task at hand. If the time to be spent on the task is limited, people work with greater intensity or effort. As heightened persistence and effort affect the quantity and quality of most task performance, these variables qualify as effective mediators of the goal specificity effect. Finally, Locke and Latham report that people with specific challenging goals focus their attention on the execution of behaviors that lead to goal achievement, while ignoring possible distractions. In addition, it is speculated that people with specific challenging goals show a greater readiness to plan their goal pursuits, which leads to conceiving more and better strategies to implement the goal. But most likely, specific challenging goals have feedback and self-monitoring advantages as is assumed by Bandura and Schunk (1981) for proximal goals compared with distal goals (to be discussed).

But what are the sources of specific challenging goals? Locke and Latham (1990) list two determinants, each affected by different factors. The first is the individual's perceived performance capability; the second is the perceived desirability of performance. The former is influenced by the individual's previous performance history and how it is interpreted by the individual (i.e., relevant outcome expectations, causal attributions, perceived ability, and experienced feelings of self-efficacy). The latter is affected by outside factors (e.g., goal assignments, role models, group norms, competitions, group goals) and inside factors (e.g., the valence of the goal as determined by the individual's needs, dissatisfaction with previous performances, or mood). For Locke and Latham (1990), however, it is not the difference in sources (e.g., different needs) that matters. What matters is whether the goal content is framed in a challenging specific or nonspecific way. They focus on a structural feature of goal content (i.e., specificity, challenge), and not whether the goal is based on one source or another.

Needs as Sources of Goals. Deci and Ryan (1991; see also Deci, 1992) have criticized this point of view by stating

that not all goals are "created equal." According to Deci and Ryan, goals affect a person's behavior differently depending on the kind of need that is the source of a person's goal setting. If two students in an art class contemplate creating an interesting painting, Student A may set herself the goal of pleasing her parents, whereas Student B focuses on her intrinsic joy in creating an interesting piece of work. Based on their self-determination theory, Deci and Ryan postulate that goals in the service of autonomy, competence, and social integration needs lead to better performances in the sense of greater creativity, higher cognitive flexibility, greater depth of information processing, and more effective coping with failure. Deci and Ryan argue that these effects are mediated by a certain kind of self-regulation; the respective needs of autonomy, competence, and social integration are assumed to further autonomous, self-determined, and authentic goal striving. This positive kind of goal activity is contrasted with being unreflectively controlled from outside (e.g., goal assignments by authorities) or from inside (e.g., goal setting based on feelings of obligation).

Deci and Ryan also discuss side effects of goal-directed actions. The effects of a person's goal-directed actions are not only analyzed in terms of the successful realization of the goal, but also in terms of various desired and undesired side effects. Goals based on autonomy, competence, and social integration needs are associated with more positive subjective well-being and higher life satisfaction. Kasser and Ryan (1993) differentiated the contents of various life goals in terms of how well they correspond to autonomy, competence, and social integration needs. Goal contents in accordance with these needs are, for instance, to cultivate one's relationships to friends, or to become active in communal services. Goal contents such as making money, becoming famous, and acquiring high status do not qualify. If people are setting themselves goals of the latter type, they experience a reduced level of subjective well-being. According to Kasser and Ryan, this is particularly true for people who feel highly efficacious with respect to relevant goal-directed actions. This finding implies that people who successfully implement materialistic goals are particularly at risk for low subjective well-being.

Subjective well-being has been analyzed within the framework of other goal content approaches as well. Emmons (1989, 1996) focuses on goals that specify what a person is typically trying to do. Examples of such personal strivings are "trying to overcome shyness with strangers," "avoiding being dependent on others," and "making others feel good about themselves." These goals, which cannot be achieved by a single course of action are, like other personality attributes, relatively stable over time and consistently expressed in a variety of situations. Emmons (1991, 1996) reports that a strong predictor of a person's positive subjective well-being is having a high proportion of intimacy strivings within the total number of strivings. A high proportion of achievement and power strivings, however, tends to be related to higher levels of negative well-being. The level of concreteness/abstractness of a person's strivings also seems to play an important role (Emmons, 1992). High-level

strivings (e.g., making new friends) tend to be associated with psychological distress, particularly anxiety and depression, whereas low-level strivings (e.g., speak clearly and plainly to strangers) are linked to greater levels of psychological well-being but also to more physical illness. It also makes a difference whether people frame their goal as approaching a positive outcome (e.g., spend time with others or try to stay calm even under taxing circumstances) versus avoiding a negative outcome (e.g., avoid being lonely or avoid getting upset). Holding a high proportion of avoidance strivings is associated with suppressed positive moods, reduced life satisfaction, heightened anxiety, and weaker physical health.

Implicit Theories as Sources of Goals. Dweck (1991; Elliott & Dweck, 1988) has suggested a different type of goal content theory than discussed so far. Dweck's theory focuses on achievement goals and postulates a distinction between learning goals and performance goals. The source of goal setting considered here is a person's implicit theory about the nature of ability—not a person's needs as focused on in Deci and Ryan's theorizing. Whether in a given achievement situation people set themselves either one or the other type of goal depends on whether they hold an entity theory (i.e., believe that the amount of ability is fixed and cannot be easily changed) or an incremental theory (i.e., believe that the amount of ability can be improved by learning). People with different theories about the nature of ability set themselves quite different types of goals in achievement situations. Entity theorists try to find out through task performance how capable they are, thus making inferences on the amount of their respective talent. Accordingly, they set themselves performance goals. But incremental theorists want to know where and why they are making mistakes in order to learn how to improve, and thus they set themselves learning goals. These distinct types of goals have important behavioral consequences, particularly when coping with failure. For individuals with performance goals, negative outcomes signal a lack of intelligence and thus result in helpless reactions (e.g., low persistence). People with learning goals, on the other hand, view setbacks as cues to focus on new behavioral strategies. Their behavior is oriented toward mastering the causes of the setback. Similar distinctions between various types of achievement goals have been suggested by Ames and Archer (1988) who talk about mastery versus performance goals, or by Nicholls (1979), who differentiates between task involvement and ego involvement.

Dweck (1996) has recently extended her theorizing to the issue of moral character, thus moving beyond issues of goal effects on achievement. Entity theorists are contrasted to incremental theorists in their choice of goals where another person's disreputable actions and transgressions raise the question of his or her moral character. Whereas entity theorists set themselves the goal of judging the other person's relevant moral attributes, incremental theorists pursue the goal of understanding the dynamics of the other person's behavior in the given situation. Again, these different goal contents have behavioral consequences. When subjects are asked how they

would deal with the other person's disreputable actions or transgressions, entity theorists propose punishment and retaliation, incremental theorists propose education and reform.

Further Goal Content Differences. Before ending the section on goal content theories, two important structural differences between types of goal contents need to be mentioned. The first is discussed by Bandura (1989, 1991) and relates to the time frame of goal attainment. Proximal goals relate to what the individual does in the present or the near future, whereas distal goals point far into the future. Bandura and Schunk (1981) observed children who were deficient and uninterested in mathematics pursue a program of self-directed learning (7 sessions per 30 minutes; total of 42 pages of instructions) under conditions involving either the distal goal only (i.e., 42 pages in 7 sessions), proximal subgoals that led up to the distal goal (i.e., 6 pages per session for 7 sessions), or without reference to concrete goals (i.e., subjects in the control group were asked to complete as many pages as possible). The distal goal alone had no effect compared with the control group, whereas entertaining proximal goals improved the children's arithmetic attainments. This effect was mediated by an increase in the children's strength of self-efficacy and intrinsic interest in mathematics. As adopting additional proximal goals leads to receiving more feedback on performance than adopting only a distal goal, subjects with proximal goals should find it easier to monitor the progress of their goal pursuit. Apparently, distal goals are too far removed in time to effectively guide a person's actions and fail to provide small successes that promote self-efficacy and interest.

A second important difference in the framing of goals has recently been introduced by Higgins et al. (Higgins, Roney, Crowe, & Hymes, 1994; Roney, Higgins, & Shah, 1995) and pertains to the valence of the goal pursuit. It is argued that goals with a positive outcome focus (i.e., goals concerned with the presence or absence of a positive outcome, such as being popular) are responsive to nurturance needs and associated with a predilection for approach strategies. Goals with a negative outcome focus (i.e., goals concerned with the presence or absence of a negative outcome, such as being lonely), on the other hand, are said to be responsive to security needs and associated with a predilection for avoidance strategies. Finally, individuals with chronic discrepancies between their actual and ideal selves (i.e., people who fall short of their ideals) show a predilection for goals that aim at approaching matches to desired end states. Individuals with actual/ought self-discrepancies (i.e., people who fall short of their duties) on the other hand select goals that aim at avoiding mismatches to desired end states and goals that aim at avoiding matches to undesired end states. This new conceptualization and research raises the interesting question of whether goals with a positive or negative outcome focus have a better chance to be attained depending on whether they are framed as approach or avoidance goals, and whether the typical framing of goals associated with different self-guides (i.e., ideal vs. ought) leads to differences in performance and action.

Self-Regulation Theories of Goal Striving

As experience tells us, there is often a long way from goal setting to goal attainment. Having set a goal is just a first step toward goal attainment, which is commonly associated with a host of implementational problems that need to be solved successfully. These problems of goal pursuit are manifold, as they pertain to initiating goal-directed actions and bringing them to a successful ending. To effectively solve these problems, the individual needs to seize good opportunities to act, ward off distractions, flexibly step up efforts in the face of difficulties, bypass barriers, compensate for failures and shortcomings, and negotiate conflicts between goals. Self-regulation theories analyze how the individual effectively solves these problems of goal implementation. Often they focus on one of these problems in particular and ignore the others. But all of them try to propose general principles that apply to the problems of implementation of all goals despite differences in context. In addition, one type of self-regulation theory is primarily based on ideas cultivated in the psychology of motivation, whereas the other type prefers a purely cognitive view.

Nuttin (1980) defined the central features of a motivational goal theory as follows: Goals and action plans are not simply "cold" cognitions that specify standards or reference points. Rather, goals and plans are cognitively explicated and elaborated needs. Whereas goals describe desired events and outcomes, plans specify how the person intends to attain these events and outcomes. The intensity of goal-directed actions is thought to be determined by the individual's motivation to reach the goal and by the instrumentality of the plan on which these actions are based.

The Model of Action Phases. In their model of action phases, Heckhausen and Gollwitzer (1987; see also Gollwitzer, 1990; Heckhausen, 1991) followed Nuttin's prescription of a motivational goal theory and explicated it in more detail. The model assumes that a person's motives and needs produce more wishes and desires than can possibly be realized. Therefore, the individual is forced to make a choice, which is preceded by deliberating the feasibility and desirability of his or her wishes and desires. Only the feasible and attractive wishes are chosen for implementation and thus turned into goals. Whether goal-directed behaviors are initiated in a given situation depends on the desirability and feasibility of the goal, but also on the perceived suitability of the present situational context with respect to the execution of relevant goal-directed actions. All of this is considered in relation to the desirability and feasibility of other competing goals that also press for realization in the given situation and to possible future situational contexts that may be more or less suitable than the one at hand.

These ideas of the action phases model rely on the classic motivational variables (see Atkinson, 1964) of desirability (i.e., expected value of the goal) and feasibility (i.e., beliefs on whether and how the goal can be realized). They are reminiscent of Ajzen's (1985, 1988) theory of planned behavior that is also based on traditional motivational

theorizing. There, too, it is assumed that the attitude toward an action (i.e., its expected value) and the perceived controllability of this action (i.e., its feasibility) conjointly determine whether the individual decides to execute it. Whereas the action phases model talks of action goals as the result of this decision, the theory of planned behavior speaks of behavioral intentions.

But the action phases model was introduced as a critique of traditional motivational theorizing on goal-directed action, and therefore suggests a host of further hypotheses. Gollwitzer (1990; see also Klinger, 1977; Kuhl, 1983) argues that for issues of goal choice (or the choice of goal-directed actions) the classic motivational variables of desirability and feasibility may suffice. But when it comes to the implementation of a chosen goal (or goal-directed behavior), further variables need to be taken into account. The action phases model was designed to explicate the differences between the motivational issue of goal choice and the volitional (willful) issue of goal implementation (a conceptual distinction proposed by the German will psychologists, but also more recently by Lewin, Dembo, Festinger, & Sears, 1944), and to stimulate hypotheses on the conditions and processes of the willful implementation of chosen goals.

The model takes a comprehensive temporal (horizontal) view of goal pursuit, which extends from the origins of a person's wishes and desires to the evaluation of attained outcomes. It is suggested that goal pursuit entails four different, consecutive action phases. At each phase, people are expected to face a qualitatively distinct task that must be accomplished to promote goal completion. The first of these tasks, which is accomplished in the predecisional phase, is deliberating wishes in light of the evaluative criteria of feasibility and desirability to arrive at a decision on whether to act on one's wishes. A positive decision transfers the wish or desire into a binding goal, which is accompanied by a feeling of determination or obligation. Accordingly, the next task to be solved is promoting the initiation and successful execution of goal-directed action. This may be simple when the necessary goal-directed actions are well-practiced or routine or complex when the person is still undecided about where and how to act. In complex cases, the execution of goal-directed action needs to be prepared. The action phases model refers to this period as the preactional phase. In moving from wishes to action, the individual creates plans by reflecting and deciding on when, where, how, and how long to implement action.

With the initiation of goal-directed behaviors, the individual enters the actional phase, which involves bringing goal-directed behaviors to a successful conclusion. For this purpose, the individual must readily respond to situational opportunities and demands, must jump at all opportunities that allow progress toward the goal and, when encountering difficulties and hindrances, should readily increase his or her efforts. This responsiveness to situational opportunities and demands promotes goal achievement.

The final action phase is called postactional. Here the task is to evaluate goal achievement by comparing what has been achieved with what has been desired. Often reality does not live up to our wishes and desires even when we are determined to act on them. We may have to admit that we simply did not perform as well as we had hoped or

that the environment was not as supportive as we had expected, and therefore we fell short of attaining our goals. But even if we fully attain them, we may learn that our successes are not as sweet as we had hoped. Accordingly, in the postactional phase we look back at the original deliberation and evaluation of our wishes and desires, which triggers renewed deliberation and reevaluation of their feasibility and desirability. As a consequence, we may reduce our standards of performance with respect to the goal at hand, but we may also start to consider other, competing wishes and desires that now appear comparatively more feasible and desirable. In this sense, the postactional phase directs us toward the past as well as the future and, most importantly, brings us to where we started—our wishes and desires.

Action Phases and Mind-Sets. The primary objective of the action phases model is to identify the typical problems people encounter in their goal pursuits. But the model has also stimulated theoretical concepts that help to understand people's functioning at the various stages of goal pursuit. One of these is the concept of mind-set. This concept was introduced by the Würzburg school of thought (Külpe, 1904; Watt, 1905) to explain the experimental observation that instructing subjects to solve a specific task creates a related cognitive orientation (i.e., a set) that furthers the solution of that task, but hampers solving other, unrelated tasks. Apparently, when a person becomes involved with a given task, relevant cognitive procedures become activated and hence more easily accessible. Applying this idea to the model of action phases (Gollwitzer, 1990, 1991), it follows that different mind-sets (i.e., general cognitive orientations with distinct features) should emerge when a person addresses the distinct tasks associated with the various action phases. These mind-sets should be endowed with those cognitive features that facilitate the respective tasks and are thus beneficial to task completion.

By initiating the mind-sets that correspond to the action phases they are currently traversing, people can effectively promote their goal pursuits. Studies conducted on the mind-sets associated either with deliberating wishes and desires (i.e., the deliberative mind-set of the predecisional phase) or with planning the initiation of goal-directed actions (i.e., the implemental mind-set of the preactional phase) support this idea. When subjects are asked to engage in intensive deliberation of whether to turn an important personal wish or desire into a goal, a cognitive orientation (i.e., the deliberative mind-set) with the following features originates: Subjects become more open-minded in processing available information; heeded information is processed more effectively while peripheral information is also encoded (Gollwitzer, 1991; Heckhausen & Gollwitzer, 1987). Second, subjects process information that is relevant to making decisions (e.g., desirability related information) more effectively than implementation-related information (e.g., information on the sequencing of actions; Gollwitzer, Heckhausen, & Steller, 1990). Finally, with desirability-related information, the pros and cons of making a decision are analyzed in an impartial manner (Beckmann & Gollwitzer, 1987). Moreover, feasibility-related information (i.e., another

type of information relevant to making decisions) is analyzed in a relatively objective, nonillusionary way. Compared with a control group, Gollwitzer and Kinney (1989) observed reduced illusion of control judgments with subjects in a deliberative mind-set, and Taylor and Gollwitzer (1995) obtained more modest self-perceptions (on personal attributes such as creativity, intellectual ability, social intelligence) and self-evaluations (i.e., answers on the Rosenberg Self-Esteem Scale). The various features of the cognitive orientation associated with the deliberative mind-set should facilitate the making of "good" (i.e., realistic) goal decisions, because it prevents perceiving wishes (i.e., the potential goals) as more desirable or feasible than they actually are.

When subjects are asked to plan the implementation of a chosen goal or project, a cognitive orientation (i.e., the implemental mind-set) with quite different attributes originates: Subjects become closed-minded in the sense that they are no longer distracted by irrelevant information (Gollwitzer, 1996). They are also very effective in processing information related to implementation-related issues (e.g., the sequencing of actions; Gollwitzer et al., 1990). Moreover, desirability-related information is processed in a partial manner favoring pros over cons (Beckmann & Gollwitzer, 1987), and feasibility-related information is analyzed in a manner that favors illusionary optimism. This optimism extends to the illusion of control in the face of uncontrollable outcomes (Gollwitzer & Kinney, 1989), but also to a person's self-perception of important personal attributes (e.g., cheerfulness, academic ability, sensitivity to others, self-respect, drive to achieve, leadership ability), to the perceived vulnerability to both controllable and uncontrollable risks (e.g., developing an addiction to prescription drugs or losing a partner to an early death, respectively). Finally, the implemental mind-set elevates people's mood and their self-esteem. Of importance is that the mind-set effects on self-perception and perceived vulnerability to risk are not mediated by mood or self-esteem changes (see Taylor & Gollwitzer, 1995). All the listed features of the implemental mind-set should facilitate goal achievement as they allow the individual to effectively cope with classic problems of goal implementation, such as being distracted with irrelevant things, doubting the attractiveness of the pursued goal, or being pessimistic about its feasibility.

In summary, it appears that the stages of goal pursuit are more efficiently traversed when a person adopts the appropriate mind-sets at the various phases of goal pursuit. For setting goals, a deliberative mind-set seems most conducive. The individual can create this mindset by intensively weighing the desirability and feasibility of wishes and desires. When implementing chosen goals, however, an implemental mind-set seems more conducive. People can establish this mind-set by planning the implementation of their goals.

Implementation Intentions versus Goal Intentions. A second concept stimulated by the action phases model is implementation intention (Gollwitzer, 1993, 1996). It is a form of planning that involves the individual's commitment to perform a certain goal-directed behavior in response to a

particular situation. Implementation intentions take the format of "I intend to do x when I encounter situation y " thus linking an anticipated future situation (opportunity) to a certain goal-directed behavior. Implementation intentions are different from goal intentions. The latter take the format of "I intend to achieve x "; the x specifies a desired end-state, which may be the execution of a desired concrete behavior or the attainment of a desired outcome. Goal intentions are commonly the end result of the deliberation of wishes and desires in the predecisional phase, and thus mark the transition to the preactional phase (accordingly, the behavioral intentions discussed in the theory of planned behavior qualify as goal intentions; Ajzen, 1985, 1988). Goal intentions create a feeling of commitment to achieve the specified desired end-state but do not commit the individual to execute a certain goal-directed behavior when a specified situational context arises. Such additional commitments may be added with implementation intentions whenever problems of goal realization are anticipated.

Implementation intentions constitute a powerful strategy to overcome these problems. First, forming implementation intentions increases a person's commitment to the respective goal intention (Gollwitzer, Heckhausen, & Ratajczak, 1990). Second, it helps people get started with goal-directed actions. Goal intentions with implementation intentions are completed about three times more often than mere goal intentions (see Gollwitzer, 1993). Because implementation intentions spell out links between situational cues and goal-directed behaviors, it is assumed that by forming such intentions people pass on the control of goal-directed behavior to environmental cues thus facilitating the initiation of goal-directed actions. On a microlevel of analysis, it is hypothesized that the mental representation of the specified situational cues becomes highly activated, thus making these cues more accessible. Results of various experiments support this view (for a summary, see Gollwitzer, 1993, 1996). Situational cues specified in implementation intentions are more easily detected and remembered, as well as more readily attended to than comparable nonintended situations. Moreover, it is hypothesized that implementation intentions create strong associative links between mental representations of situations and actions that are commonly only achieved through repeated and consistent acting in these situations. Accordingly, the initiation of the intended goal-directed behavior in the presence of the critical situation should resemble the initiation of a habitualized response. Various experiments demonstrate that the goal-directed behaviors specified in implementation intentions are initiated swiftly and effortlessly in the presence of the critical situation. Moreover, the subliminal presentation of the critical situation suffices to activate cognitive concepts and knowledge relevant to the efficient execution of the intended behavior. The heightened accessibility of these concepts should in turn facilitate the efficient initiation of the intended behavior. Finally, patients with a frontal lobe injury—who are known to be plagued by deficient conscious and effortful control of behavior but known to be blessed with effective effortless control of habitualized behaviors—greatly benefit from having formed implementation intentions when it comes to the swift initiation of intended behaviors.

In summary, forming an implementation intention is an act of will that changes conscious control of goal-directed action over to direct, environmental control (Bargh & Gollwitzer, 1994). The situational stimuli specified in implementation intentions become direct elicitors of goal-directed action. People may turn to this self-regulatory strategy when they anticipate problems with making use of good opportunities to act (e.g., when they are tired, absorbed in some other activity, lost in thoughts) and when they attempt to fight bad habits or unwanted stereotypical thought patterns. In the latter case, the stimuli that habitually trigger the unwanted responses only have to be linked to desired antagonistic responses. All of this is reminiscent of Ach's analysis of willing, as described earlier. The data obtained are in support of Ach's "linkage theory of intention" and weaken Lewin's critique. Apparently, implementation intentions (i.e., intentions that link situations to behaviors) strongly affect a person's goal-directed behaviors. They are not superfluous, as Lewin thought. On the other hand, recent data suggest (Gollwitzer, 1996) that a vital goal intention is the precondition for the effects of implementation intentions, which is in line with Lewin's view of the primacy of goal intentions.

Competing Goal Pursuits and Action Control Strategies. Kuhl (1983, 1984; for a recent summary, see Kuhl & Beckmann, 1994) focuses on self-regulatory processes that contribute to goal achievement in the face of competing action tendencies. Following Atkinson and Birch's (1970) theorizing on the dynamics of action, it is assumed that at any given point many different action tendencies coexist with waxing and waning strengths. Atkinson and Birch's ideas did not initially receive due attention, as most research on motivation and goals traditionally analyzed a person's strivings separately in an episodic fashion. However, Kuhl assumes that for an ordered action sequence to occur, a current guiding goal has to be shielded from competing goal intentions (e.g., the goal of making an important phone call from the competing intention to tidy up one's messy desk). He terms this shielding mechanism *action control* and differentiates a number of different, but compatible control strategies, such as attention control, emotion control, motivation control, and environment control. Through environment control, for example, the individual prevents the derailing of an ongoing goal pursuit by removing any competing temptations or enticements from the situational context in which goal pursuit is to occur.

Whether and how effectively these strategies are employed depends on the current control mode of the individual. An action-oriented person concentrates on the planning and initiating of goal-directed action, responds flexibly to the respective contextual demands, and employs the listed control strategies effectively. Things are quite different with a state-oriented person. This person cannot disengage from competing incomplete goals, is caught up in uncontrollable perseveration of thoughts related to aversive experiences or to dysfunctional thoughts about future successes. State orientation may be induced by situational variables (e.g., a surprising event, persistent failure) but is also founded in a personal disposition. The model of action control has seen many

refinements (see Kuhl & Beckmann, 1994) and has arrived at a high level of complexity. It is assumed that action control cannot be understood without considering the many different mental subsystems (e.g., a memory system specialized on the retention of goals) involved. In addition, experimental research on state orientation as a personality attribute has discovered a further volitional handicap called self-infiltration (Kuhl & Kazen, 1994). State-oriented individuals readily misperceive assigned goals as self-generated, and the degree of such false self-ascriptions is closely associated with a reduced enactment of self-chosen as compared with assigned goals.

Resumption of Disrupted Goal Pursuit. Kuhl's action control theory focuses on self-regulatory strategies that shield goal pursuit from distractions. But even if a certain attempt to achieve a goal gets disrupted or fails, the individual does not need to give up on the goal. Many goals have multiple alternative pathways to approach them. The latter is particularly true for higher order goals (e.g., being popular), as they can be approached through many alternative lower order goals (e.g., giving parties, making compliments, helping others). Self-completion theory has explicitly addressed the issue of compensation with alternative goal-directed efforts by analyzing a certain type of higher order goal called self-defining goals (Gollwitzer & Wicklund, 1985a; Wicklund & Gollwitzer, 1982). Self-defining goals specify some kind of identity as the desired end state, such as being a scientist, good mother, physician, or politically liberal person. As many different things indicate the possession of such identities, the theory conceives the individual's striving for an identity as an enduring process of collecting these indicators (or self-defining symbols). These indicators extend from possessing the relevant material symbols (e.g., books, journals, and awards for a scientist) to relevant self-descriptions (e.g., using titles) and performances (e.g., obtaining and publishing interesting research findings). The theory postulates that whenever shortcomings with respect to one type of symbol are encountered, the individual will experience self-definitional incompleteness, which leads to compensatory efforts aimed at substitution. These may take the form of either pointing to the possession of alternative symbols or acquiring new symbols.

The compensation principle has been supported in many studies with various self-defining goals and different types of symbols (e.g., Gollwitzer, Wicklund, & Hilton, 1982; Wagner, Wicklund, & Shaigan, 1990; Wicklund & Gollwitzer, 1981). Brunstein and Gollwitzer (1996) demonstrated that easily accessible symbols (e.g., self-descriptions) are equally powerful substitutes for symbols that are harder to come by (e.g., relevant performances). This implies that newcomers to a field of interest (e.g., science) can already symbolize having the related identity even though they are not yet in full command of the relevant performances. Further, elderly people do not have to "leave the field" when age-related deficits hamper performance (see Gollwitzer & Kirchhof, in press) as self-descriptive allusions to relevant performances in the past or to acquired possessions and titles effectively substitute for weak performances.

Research on self-completion theory also has discovered that effective self-symbolizing needs social reality. In line with the social reality notion developed by Lewin's students (Lissner, 1933; Mahler, 1933), compensatory efforts were found to be particularly effective when other people noticed them (Gollwitzer, 1986). Self-completion theory also points to the interpersonal costs of compensatory goal pursuits. When subjects respond to incompleteness with compensation, they interpret the presence of others in terms of their capability to notice their compensatory efforts and thus lack social sensitivity about the personal interests of these people (Gollwitzer & Wicklund, 1985b).

Self-completion theory is reminiscent of Lewin's (1926) quasi-need theory of goal pursuit. As with Lewin's theory, it is assumed that a person's goals persist until they are reached. A person's readiness to act on a goal is greater when tension is high or, as self-completion theory states, when a sense of the goal's incompleteness is present. It differs from Lewin's theorizing in the assessment of the commitment to the goal. Following Lewin, commitment depends on how well the goal is integrated into relevant higher order needs. Because self-completion theory focuses on self-defining goals, which in Lewin's terms would already qualify as higher order needs by themselves (e.g., being a good mother), commitment cannot be assessed by considering the integration with higher order needs. Accordingly, commitment is assessed more directly in terms of a person's hanging on to the goal and refusing to let go. It is inquired whether people consistently use opportunities to act on their goal, and whether people would consider the idea of having to quit their goal as highly aversive. In all the research on self-completion, it was always the individuals with high commitment (in the sense described) who showed compensatory efforts as a response to incompleteness, whereas noncommitted individuals failed to do so. In other words, goal commitment is a powerful moderator of self-completion effects. This is in line with other findings on the moderating role of commitment on goal effects, for instance, the goal specificity effect (see Locke & Latham, 1990) or the effects of personal strivings on subjective well-being (Brunstein, 1993).

Self-completion theory may sound similar to Steele's (1988) self-affirmation theory, but self-affirmation is a self-esteem theory, not a goal theory. According to Steele, anything that makes you feel good will reaffirm your self-esteem. In other words, when self-esteem is threatened, the individual can do a broad array of things (e.g., affirm values) to reaffirm self-esteem. For self-completion theory, the focus is on self-defining goals in which an incompleteness can only be substituted for by acquiring an alternative symbol of this self-defining goal. When a self-definition is threatened, the things the person can do are more limited as he or she must acquire a substitute with respect to this very self-definition, rather than anything that is affirming.

Mobilization of Effort. People may promote goal achievement by compensating for experienced failures, but they may also try to avoid committing failures in the first place. Warding off failures becomes a pressing issue whenever difficulties are mounting and success becomes less

likely or even impossible. When do people step up their efforts to confront experienced difficulties and when do they succumb to failure? Brehm (Brehm & Self, 1989; Wright & Brehm, 1989) has offered an energization theory of motivation that offers answers to these questions.

This theory assumes that a person's energization in terms of the readiness to exert effort is directly determined by the perceived difficulty of the task at hand. As the perceived difficulty increases, so does the person's effort expenditure, and this is true unless the task is perceived as unsolvable or impossible. But there is a second limit to this linear increase of effort expenditure in response to heightened task difficulty. Brehm introduces the concept of potential motivation to describe this limitation. What feeds into potential motivation are the classic motivational variables of the strengths of the related need or higher order goal, the incentive value of the task, and the instrumentality of task completion for need satisfaction or attainment of the higher order goal. For the individual with high potential motivation, the linear relationship between the perceived difficulty of the task at hand and respective effort expenditure is expected to extend even to tasks of very high difficulty levels, whereas with low levels of potential motivation this linear relationship is expected to end at tasks of moderate difficulty. When the level of potential motivation is low, people do not find it worthwhile to extend more effort when an easy task becomes more difficult. When potential motivation is high, however, an increase in difficulty is matched by investing more effort, and this responsiveness holds up to high levels of difficulty.

Empirical tests of the theory have varied potential motivation either by offering rewards for task completion (that were described as either low or high) or by suggesting to subjects that successful task completion makes them eligible for winning an attractive prize (and the probability of winning was described as either low or high). Effort mobilization was assessed either directly in terms of psychophysiological arousal (i.e., systolic blood pressure; Wright & Gregorich, 1989) or indirectly in terms of the attractiveness of success just before the subject began working on the task (Biner & Hammond, 1988), because the theory defines immediate attractiveness of success as a direct function of the amount of energy mobilized. In general, low potential motivation curbs the predicted linear relationship between task difficulty and exerted amount of effort; if potential motivation is low, people no longer mobilize more effort when task difficulty increases. This finding parallels observations made in research on self-completion theory: Only people who were strongly committed to their self-definitions (or higher order goals) responded to failure with heightened compensatory efforts. As people with weak commitments can be assumed to experience low levels of potential motivation at a given self-definitional task, it appears that the exertion of effort to prevent failure (effort mobilization) as well as efforts aimed at the compensation of failure (self-symbolizing) can only be expected when the respective goal pursuit is perceived as motivationally worthwhile.

Negotiating between Goals. Researchers on goals are becoming increasingly aware that goals are not created in

solitary. People set themselves many goals, and these goals may come into conflict with each other. When goals are short term, it makes sense to shield an ongoing goal pursuit from competing others until the ongoing goal pursuit is completed (see Kuhl's research described earlier). Things get more tricky, however, when the conflicting goals are enduring, such as self-defining goals (Wicklund & Gollwitzer, 1982), personal strivings (Emmons, 1989), or life tasks (Cantor, 1994). Emmons and King (1988) observed that conflict between and within personal strivings is associated with poor well-being. Conflict was found to relate to negative affectivity and physical symptomatology, both concurrently and prospectively. Emmons (1996) argues that creative integrations of a person's strivings might reverse the negative effects of conflict. The observation that so-called generativity strivings (i.e., strivings that demand both the creating and giving up of a product) are associated with higher levels of subjective well-being is cited in support of this idea, as generativity may be understood as the creative blending of intimacy strivings and power strivings. Through creative integration of agentic (power) and communal (intimacy) strivings, the generative individual is able to achieve a reconciliation between power and intimacy. It appears then that subjective well-being needs more than the possession and progression toward important life goals. It demands the integration of separate goal strivings into a coherent gestalt or philosophy of life.

Conflict between goals has also been discussed in the theoretical framework of life tasks (Cantor & Fleeson, 1991, 1994). Life tasks, such as doing well academically, exert specific influences on behavior as they are interpreted differently over the life course and across situational contexts. Life tasks are often confronted with difficulties, frustrations, anxieties, and self-doubts, and the individual's style of appraising these hindrances leads to a typical pattern of action goals aimed at overcoming such obstacles. For example, college students who worry about their abilities when they experience failure (i.e., outcome-focused individuals; Harlow & Cantor, 1994), may, in a strategic effort to meet their academic life task, turn for reassurance to others whom they regard as confidants and encouragers. In this case, social goals are put in the service of academic goals. But for others, different patterns of action goals may be more suitable to meet the academic life task. College students who worry about losing their composure and thus failing to perform in an upcoming test or exam (i.e., defensive pessimists; Norem & Cantor, 1986) may instead try to meet their academic life task by mentally playing through worst case scenarios prior to taking the test. Apparently, people tune the goal pursuits in the service of their life tasks to their ideographic appraisals of experienced obstacles, thus trying to find the most suitable solutions for them personally.

Goals and Discrepancy Reduction. The goal theories discussed so far implicitly or explicitly conceive goals as something attractive (i.e., a positive incentive corresponding to some vital need) that the individual feels committed to attain. The goal thus pulls the individual in the direction of goal attainment. This motivational perspective is rivaled by a more cognitive view that conceives goals as

solely specifying a performance standard. Prototypical are Bandura's (1989, 1991) ideas on the self-regulation of action. According to Bandura, goals have no motivational consequences per se; they only specify the conditions that allow a positive or negative self-evaluation. If the set goal is attained through one's actions, a positive self-evaluation prevails; whereas staying below one's goal leads to a negative self-evaluation. The individual thus is pushed by the negative self-evaluation associated with the discrepancy, and pulled by the anticipated positive self-evaluation that is "intrinsically" linked to closing the gap between the status quo and the goal (i.e., the performance standard).

These basic ideas imply that goals stimulate effortful acting toward goal attainment (what Bandura calls high performance motivation) only when people cognize a discrepancy between the status quo and the set goal (Bandura & Cervone, 1983). Bandura therefore proposes giving frequent feedback as a powerful measure to stimulate a person's goal pursuit. Moreover, people are expected to engage in efforts to reduce the experienced discrepancy only when they feel self-efficacious with respect to the required actions (Bandura & Wood, 1989). Doubts about possessing the capabilities necessitated by these actions undermine a person's readiness to act on the goal.

What is interesting in Bandura's goal theory is the hypothesis that goal pursuit does not come to an end when the goal is reached. The idea that goal pursuit ends with goal attainment was originally voiced by the behaviorists and was uncritically accepted by most later goal theorists. Wood and Bandura's (1989) research suggests, however, that goal attainment raises people's self-efficacy feelings, which results in setting more challenging goals. In this way, new discrepancies are created that stimulate new efforts at discrepancy reduction.

Bandura's ideas bear certain similarities to control theory as suggested by Carver and Scheier at the beginning of the 1980s (1981; Scheier & Carver, 1988). But what are the differences? Control theory is a branch of engineering that was originally developed to enable machines to do things previously done by people (Powers, 1978). As suggested by Miller et al. (1960), Carver and Scheier apply a control theoretical framework to the study of goal-directed action. The central conceptual unit of their analysis is the negative feedback loop. In a negative feedback loop, a reference criterion is compared with a perceptual input in a comparator. If there is a difference between the two, a signal is generated (i.e., an error is detected). The detected error elicits behavior that reduces the discrepancy between the reference criterion and the perceptual input. Following Powers's (1973) proposal that behavior is organized hierarchically, Carver and Scheier assume a cascading loop structure. In the feedback loop placed at the top of the hierarchy, self-related goals (e.g., being a nice person), termed *system concepts*, describe the reference criterion. Abstract action goals, termed *principles* (e.g., be friendly to one's colleagues), provide the reference criterion at the middle level loop. And at the lowest level one finds goals that specify a *course of action* (so-called programs; e.g., sending a greeting card).

The model assumes that the outcome of a higher loop constitutes the reference criterion for the next-lower loop.

For example, the reference criterion for a program is the output of the respective principle. Each loop knows its own comparator, which is thought to become activated when the person's attention is focused on the respective goal. Behavior is usually regulated at the program level, with action at higher levels suspended until attention is focused on higher level reference criteria (e.g., when the individual becomes self-aware; Scheier & Carver, 1983). The comparator's task is to discover discrepancies and to trigger lower-level goals or behaviors geared at discrepancy reduction. When impediments to goal-directed behaviors are encountered, striving is halted. An individual is expected to continue to strive for the goal only when outcome expectations are high (Carver & Scheier, 1982). A positive affective response as a consequence of goal attainment is not assumed, however, nor is the detection of error associated with negative affect. Rather, the speed of progress toward a goal is seen as the source of positive or negative feelings in a person's goal pursuit. The intensity of these feelings is regulated again in a feedback loop: If the speed meets a set reference criterion, positive feelings emerge, whereas negative feelings will be experienced with any speed that stays below this criterion (Carver & Scheier, 1990).

The most pronounced difference between the Carver and Scheier model and Bandura's ideas is the role of affect. In Bandura's view, anticipated discrepancy reduction implies a positive affective state (i.e., a positive self-evaluation) that entices the individual to act, and the negative affect associated with the experience of a discrepancy pushes the individual toward reducing the discrepancy. In the Carver and Scheier model, action is triggered by the comparator that has discovered a discrepancy. The experiential aspect of this process is the salience of the respective reference criterion (i.e., the person's attention needs to be focused on the goal). Another differential feature of the Carver and Scheier model is its hierarchical nature. Many goal theories (including Bandura's) implicitly acknowledge that goal pursuits are hierarchically organized, but they do not explicitly consider it in their theorizing (for an explicit treatment of the hierarchical nature of action, see Valacher & Wegner, 1985, 1987).

The most pronounced similarity between Bandura's goal theory and that of Carver and Scheier is that both theories do not address the motivational importance of the goal. As noted, the goal is conceived as a "cold" mental representation of a performance standard. This conceptualization of goals makes it difficult to explain why a person's motivation to achieve the goal (see Brehm's notion of potential motivation) moderates the relationship between task difficulty and effort. According to Bandura and Carver/Scheier, heightened task difficulty should suppress people's efforts to try to complete the task, because an increase in task difficulty is commonly associated with reduced self-efficacy feelings (Bandura) and less positive outcome expectations (Carver & Scheier). As Brehm and associates (see Brehm & Self, 1989; Wright & Brehm, 1989) have repeatedly demonstrated, however, high potential motivation makes it worthwhile for people to mobilize additional effort when heightened difficulties threaten task completion. And high commitment to superordinate

self-defining goals does stimulate compensatory efforts when failures are experienced (Wicklund & Gollwitzer, 1982), although experienced incompletenesses should create low self-efficacy feelings and negative outcome expectations.

Automatic Goal Pursuits. For all the goal theories discussed so far, investigators would agree that a person's goal striving may present both an intentionally controlled, effortful and conscious endeavor and an environmentally controlled, effortless process that proceeds outside the person's awareness. But the possibility of direct goal effects almost always remains just a tacit assumption, and no explicit efforts are made to theoretically and empirically explicate this possibility. There are a few exceptions to the rule however. First, as mentioned, the concept of implementation intentions has been used to explore when and how people switch from conscious control of goal-directed actions to a more automated control (Gollwitzer, 1993, 1996). It is argued that this route to direct control is strategically employed by the individual to attain desired goals when difficulties in attaining desired ends are anticipated, and forming implementation intentions places the initiation of goal-directed actions under direct environmental control. But a further type of automated control of goal-directed actions is spelled out in Bargh's (1990; Bargh & Barndollar, 1996) auto-motive theory. It is suggested that strong mental links develop between the cognitive representations of situations and the goals the individual chronically pursues within them. As a consequence of this repeated and consistent pairing in the past, these goals become automatically activated when the individual enters the relevant situation. The automatically activated goal then guides behavior within the situation, without the individual choosing or intending the respective goal-directed line of action. There may have been a deliberate choice of the goal in the past, but this conscious choice is now bypassed. The situational cues directly guide the person's goal-directed actions.

If, for example, a person has repeatedly and consistently chosen social gatherings (e.g., parties) to discuss his work problems, the contextual cues associated with parties will sooner or later directly trigger behaviors serving this goal. The goal then operates without the need for conscious attention or guidance and without the individual having a phenomenal experience of choosing that line of behavior. Data from recent experiments (Bargh & Barndollar, 1996; Bargh & Gollwitzer, 1994) support the central hypotheses derived from auto-motive theory. Chronic goals can be directly activated by environmental cues, and these goals then guide behaviors without the individual's awareness.

Summary

Research stimulated by modern theorizing on goals has resulted in several discoveries about goal pursuits:

First, it matters how people frame their goals and their choice of thematic content. How people formulate their goals—in specific or vague terms, challenging or modest, proximal or distal, as an approach or avoidance goal—affects how successfully they strive for the goals. Similarly,

whether people's goals are based on one type of need or another, one kind of implicit theory or another, determines how successfully they pursue their goals, and how successfully they go through their lives in terms of psychological and physical well-being. Future research on goal content theories should include questions about further important goal content dimensions. In addition, goal content theorists should start to explore how goal content effects are mediated by self-regulatory processes, thus suggesting different self-regulatory systems for different kinds of goals (e.g., Deci & Ryan, 1991; Dweck, 1995; Higgins et al., 1994). This type of theorizing would transcend the common self-regulatory notions of goal pursuit, which assume that the same principles of self-regulation apply to all kinds of different goal pursuits.

Second, goal striving is recognized as a volitional (willful), self-regulatory endeavor. Classic theorizing on motivation (Atkinson, 1964; McClelland, 1951; Nuttin, 1980; Weiner, 1972) construes goal pursuit as an issue of need satisfaction. A person's needs are conceived as the ultimate source of goals, as needs (e.g., the need for affiliation) produce wishes and desires that specify attractive incentives. The demands of situational contexts determine what becomes a person's action goal, because depending on the situation, certain actions are seen as more instrumental than others for the satisfaction of needs (i.e., acquiring the respective incentives). Following this line of thought, it is tempting to assume that the intensity of a person's goal pursuit is exclusively determined by the strength of his or her need and the instrumentality of the pursued goal-directed behaviors.

Most modern goal theories do not deny that people's needs or motives affect their goal pursuits, but they do not rely solely on motivational determinants of goal pursuit either. The focus of modern goal theories is on the superimposed self-regulatory strategies. These strategies are assumed to help the individual overcome the many problems of goal implementation. Even when goals are highly attractive and the respective action plans are highly instrumental, people still may experience problems with getting started, warding off distractions, compensating for shortcomings, mobilizing effort, and negotiating conflicts between goals. In this sense, modern goal theories have returned to the theories of willing suggested by Ach (1905, 1910), James (1890), and McDougall (1908), which were prevalent prior to the heyday of motivational need theories (Atkinson, 1964; Lewin, 1926; McClelland, 1951; Murray, 1938). Today, goal pursuits are again seen as subject to volition, and modern goal theorists attempt to identify those volitional (willful) strategies that make a person's goal-directed efforts most successful.

According to contemporary theories (e.g., Gollwitzer, 1990, 1993; Kuhl, 1983), the will is not construed as *akrasia*, however—the term of the Greek philosophers for the character trait of willpower. Rather, modern goal theories analyze the willful employment of self-control as anticipated by Walter Mischel's analysis of the two volitionally most taxing tasks or goals: delay of gratification (i.e., rejecting an immediate smaller reward for a delayed bigger reward; Mischel, 1974) and warding off attractive distractions while performing a boring task (Mischel &

Patterson, 1976; Patterson & Mischel, 1976): In both cases, it was the quality of the mental strategies employed that determined whether subjects were successful in their tasks. Delay of gratification was affected by the mental construction of the goal object (i.e., cold vs. hot cognitions), whereas warding off distractions was influenced by the mental construction of the action plan (i.e., distraction-inhibiting plans vs. task-facilitating plans).

Future research on the self-regulation of goal pursuit should continue to search for effective mental strategies and ask questions of when these are employed and what cognitive processes they are based on. Two issues deserve enhanced attention in future research. The first extends to the termination of goal pursuit, the second to the self-defensive aspects of self-regulation. Because people hold various different goals at the same time and keep adding goals to the ones already set, goals can easily come into conflict. When these conflicts are resolved through creative integration (Cantor, 1994; Emmons, 1996), people can keep their goals. But whenever they fail to discover an integrative solution, they will have to disengage from conflicting goals to achieve psychological well-being and physical health. With respect to the self-regulation of disengagement from goals, we still observe a scarcity of theorizing. Although Klinger (1975) offered a stage theory of disengagement that describes the phases of a person's giving up on an incentive, there should be more theorizing and research on both the conditions that trigger disengagement and the self-regulatory processes that promote it (Oettingen, 1996).

Finally, most self-regulation theories of goal pursuit portray the individual as nondefensive (e.g., Gollwitzer, 1990). The individual attempts to achieve his or her goals with the best of efforts. But people do not only have to serve their goals, they also need to protect their self-esteem. As Jones and Berglas (1978) pointed out in their research on self-handicapping, people often undermine the attainment of an achievement goal in an effort to protect self-esteem. Researchers should therefore try to explore how people integrate self-regulatory strategies of goal pursuit with self-defensive strategies aimed at the protection of self-esteem (Baumeister, 1996).

GOAL INFLUENCES ON SOCIAL INFORMATION PROCESSING

In the previous section, the effects of goals on information processing have been discussed, but in the context of self-regulation and goal-directed behavior. The reported research on *mind-sets* is most relevant (Gollwitzer, 1990). Research comparing the effects of deliberative and implemental mind-sets on information processing showed that these mind-sets differentially affect subjects' thought production, the recall of task-relevant information, the analysis of desirability-related information, the inferences based on feasibility-related information, and finally the attentional processes associated with the encoding of task-irrelevant information. These findings suggest that the deliberative and implemental mind-sets make any knowledge more accessible that helps to solve the distinct tasks associated

with the predecisional or postdecisional action phase. Part of this knowledge is categorical or episodic and related to the specific task at hand (i.e., making a decision between certain wishes or coming up with plans on how to implement a specific chosen project, respectively). The other part is procedural and relates to how wishes are deliberated (deliberative mind-set) or how projects are planned (implemental mind-set) in general. The deliberative and implemental mind-sets carry more of the qualities of active sets than of passive sets (Higgins & King, 1981). Although subjects are *not* aware of most of the mind-set effects observed (e.g., illusion of control in the implemental mind-set; Gollwitzer & Kinney, 1989), if subjects were made aware of them, they should be able to halt (control) them. In addition, deliberative and implemental mind-set effects would not occur in the absence of an explicit intention to deliberate an unresolved problem or to plan a chosen project, respectively.

Klinger's (1977; Klinger, Barta, & Maxeiner, 1980) research on *current concerns* also analyzes goal effects on the processing of information. Klinger assumes that setting goals activates current concerns, which stay active until the individual either reaches or abandons these goals. One of the effects of current concerns is that they make people particularly sensitive to stimuli in the environment that pertain to those concerns (i.e., specify what the individual wants to attain). In support of this hypothesis, Klinger and associates demonstrate that subjects in a dichotic listening task attend more to material relevant to subjects' current concerns than to irrelevant material. Follow-up research suggests that information relevant to current concerns is attended to more than other information, because it is affectively arousing (e.g., Bock & Klinger, 1986). Nikula, Klinger, and Larson-Gutman (1993) had subjects listen to recordings of words that either were closely related to subjects' current concerns or unrelated. Greater increases in skin conductance were elicited by words associated with current concerns than by unrelated words.

Although Klinger's theorizing is based on a similar rationale than that of the mind-set research, it appears that current concerns are more similar to so-called passive sets (Higgins & King, 1981) than the deliberative and implemental mind-sets. Klinger's current concerns describe goal outcomes that the individual is committed to achieve in a decisional act. As long as this decision is not revoked, any stimuli associated with the goal outcome are affectively charged, and processed more effectively. Mind-set theory, on the other hand, postulates the effective processing of mind-set congruous information (e.g., implementation-related information in the implemental mind-set; Gollwitzer, Heckhausen, and Steller, 1990), because this type of information helps perform the task at hand. The involvement with deliberating a decision or planning the implementation of it makes certain types of information more useful (i.e., functional for solving the task at hand) than others, and consequently, these congruous types of information are processed more effectively.

Apparently, Klinger's current concerns and Gollwitzer's mind-sets point to different steering mechanisms by which goals affect a person's cognitive activity. Klinger focuses

primarily on mechanisms related to holding onto (or disengaging from) the goal, as he analyzes cognitions related to the goal state. Gollwitzer, on the other hand, focuses primarily on mechanisms related to successfully accomplishing the various tasks that need to be tackled when the individual traverses the various action phases on his or her long way from wishes to action. Both notions (current concerns and mind-sets) are similar, however, in the sense that they explore cognitive activity as it relates to a person's pursuit and ultimate attainment of his or her goals.

But the effects of goals on information processing can also be analyzed from a different perspective that focuses more on the processing of the outside social world, and less on the individual's progress with his or her goal pursuit. It is to this impact of goals on person perception and social cognition that we turn to in this section.

Historical Background

Social psychological examinations of person perception emerged from the "Holistic" and "Instrumentalist" philosophical perspective. After its incorporation within Gestalt psychology and William James's brand of Pragmatism, this perspective was passed down to early research in person perception aimed at demonstrating that perception of the social world is actively built—determined by person-based factors meeting environmental data and shaping its interpretation.

James (1890) was among the challengers to the empiricist position that "regards the creature as absolutely passive clay upon which experience rains down. The clay will be impressed most deeply where the drops fall thickest" (p. 403). Opposing this view of humans as passive mirrors, James suggested: "Subjective interest may, by laying its weighty index finger on particular items of experience, so accent them as to give to the least frequent associations far more power to shape our thought than the most frequent ones possess. The interest itself . . . makes experience more than is made by it" (James, p. 403). James not only believed that selective interests shape how information is interpreted, but that they also determine which information will be processed at all—which of the millions of items of the outward order presented to the senses will pass through attentional filters and enter into one's experience.

The assumption that selective interests of the individual shapes perceptions of others represents a direct application of the principle of active construction, similar to Lewin's use of it to describe behavior as based on aspects of the observed data speaking to one's needs. This principle can prominently be seen in Lippman's (1922, p. 55) suggestion that we "perceive that which we have picked out in the form stereotyped for us"; Sherif's (1936, p. 64) *preparedness*, in which expectations established by cultural norms guide what is noticed and how it is perceived; Allport's (1954, p. 168) *autistic thinking*, in which private obsessions color interpretation of the situation; Kelly's (1955) *personal constructs* that serve as idiosyncratic devices through which individuals scan the environment and detect meaning; Harvey's (1963) *systems of meaning*, through which impinging events are coded, translated, and stamped with personal effects; and Tajfel's (1969)

discussion of *categorization, assimilation, and the search for coherence*. It is also seen in Heider's (1944) belief that the type of dispositional cause one assigns as an explanation of another's behavior depends on the value of that person in the life-space. "If we are inclined to disparage him we shall attribute his failures to his own person, his successes to his good luck or unfair practices. When Nietzsche says 'Success is the greatest liar,' he refers to this error in attribution" (p. 361). More generally, it is seen in Bruner's (1957) *perceptual readiness* and the research that came to be known as the "New Look" (see Erdelyi, 1974, for a review). The "newness" was the empirical examination of the assumption that the meaning we derive from the environment depends not only on the response of the sensory organs to the qualities of the environmental stimuli (autochthonous factors), but on the qualities of the perceiver as well (behavioral factors; e.g., Ittelson & Slack, 1958).² This was seen in research examining the impact of needs on perceptual selection (e.g., Postman et al., 1948) and judgment (e.g., Bruner & Goodman, 1947, in which poor children that desired wealth had biased perceptions of coin sizes).

In demonstrating the principle of active construction, these researchers took a functional approach to the study of person perception—they ask, "What can be achieved by engaging in active constructions?" The answers inevitably draw from James's observation that the stimulus field is too complex for complete representation and direct discerning of meaning from data. Bruner et al. (1956, p. 1) referred to this as a paradox—we possess the capacity to discriminate at minute levels between stimuli ("an exquisite capacity for making distinctions"), but if we were to utilize this capacity, we would be "overwhelmed by the complexity of our environment . . . slaves to the particular." By actively constructing, we negotiate around the paradox by allowing our interests to aid in the selection of information attended to and its categorization.

Categorizing involves placing a stimulus input into a class by virtue of its attributes and discerning the fit between the properties of the stimulus and the specifications of the category (Bruner, 1957). Although there are infinite ways of grouping things into classes of equivalence, actively determining categories allows for the "placing" process to appear more immediate (i.e., it makes another's attributes seem less ambiguous) and to proceed with greater ease. Allport (1954) labeled this propensity to use simplifying strategies, while hoarding capacity-draining discriminatory skills, as "the principle of least effort." This allows for meaning to be derived from complex/ambiguous stimulus arrays without the individual being a slave to the particular.

Thus, one function of actively constructing categories is that it serves to reduce the complexity of the environment, and in a manner that is not perceived as taxing a bounded processing system. A second function is evident, however, when we further consider why stimuli need to be categorized at all. Bartlett (1932) discussed the effort of cognition as operating in the service of finding meaning. Categorizing satisfies this general need because it provides meaning through ordering and relating classes of events (Bruner et al., 1956), while minimizing the effort. It enables one to go beyond the information given

and predict as yet untested properties by virtue of the mapped relations between categories. This "predictive veridicality" allows one to estimate attributes, predict what can be expected from others, and prepare action accordingly. It provides the foundation for effective interactions and the direction for instrumental activity. The direction provided, however, is dependent not only on "the environmental probabilities of objects that fit these categories, but also [on] the search requirements imposed by my needs, my ongoing activities, my defenses, etc." (Bruner, 1957, p. 132)—on what categories are accessible. From this perspective, the cognition that impels planning interpersonal action operates in the service of cognitive needs. As Allport (1954, p. 167) states: "Thinking is basically an endeavor to anticipate reality. By thinking we try to foresee consequences and plan actions that will avoid whatever threatens us and will bring our hopes and dreams to pass." Thus, cognitive activity is stimulated by the need to place things, to identify and give meaning to them, to plan appropriate action, and in so doing gain control over a dynamic social world.

As stated earlier, this approach linking the function of person perception to cognitive needs owes a debt to Instrumentalists, such as C. S. Peirce and John Dewey. Unlike Associationists, who saw data as strictly driving perception and humans as seeking *accurate* knowledge (truth), Instrumentalists instead posited that people seek not truth, but simply an end to *doubt*. Peirce states (1877, p. 66) that the irritation of "doubt is an unhappy and dissatisfied state from which we struggle to free ourselves and pass into a state of belief, while [the feeling of believing] is a calm and satisfactory state which we do not wish to avoid, or change into a belief in anything else." The struggle to end doubt was labeled as a process of *Inquiry* that produced what Gestaltists called *closure*.³ According to Dewey (1938), this process of turning indeterminate situations to determinate ones, of turning a state of inconstancy to one of constancy, "like all activity is stimulated by discomfort, and the particular discomfort concerned is called 'doubt,' just as hunger is the discomfort that stimulates eating and thirst is the discomfort that stimulates drinking." Thus, the processing system operates in the service of needs to gain a sense of control, seek meaning, and reduce doubt (similar to what Festinger, 1957, labeled avoidance of dissonance). An upset or imbalanced system, one beset by doubt, sets the person off on to what Dewey (1929) called a quest for certainty (see also Tajfel's, 1969, search for coherence). This quest can occur through pursuing accurate knowledge or through the pursuit of any knowledge that will end doubt quickly and produce closure (so long as it is experienced as being a good enough or sufficient conclusion).

Heider (1944; Hamilton, 1981) similarly stated that inferring traits in others is motivated out of a desire for coherence. When we observe behavior, we assign an explanation to it because a situation that was once comprehended has now been changed. Attributing the cause for the change as lying in another's disposition is one resolution to the resulting doubt. And it is one that most easily returns equilibrium in the life space when "otherwise irreversible changes have disturbed it. Persons, as absolute

causal origins, transform irreversible changes into reversible ones" (p. 361). Thus, there is a tendency to ascribe changes to persons, although such changes are often caused by factors in the environment either instead of, or in concert with, factors related to persons. This tendency for "behavior to engulf the field" (Heider, 1944, 1958) and to interpret behavior in terms of traits (noted first by Ichheiser, 1943, in his discussion of the tendency to overestimate the unity of personality) is best known as the correspondence bias (Jones, 1979). By utilizing this tendency to see actions as corresponding with traits, behavior is transformed into disposition, doubt into meaning, and control for the action is placed within the observed other, thus making their actions seem predictable and coherent.

This position does not maintain that gaining control through trait inference is the *best* strategy to adopt. One could argue, as did Mischel and Shoda (1995), that the best way to establish control is through learning about situations; the more one knows about how people behave in specific situations, the better they can predict and control the interactive environment. But ubiquitous trait inference, while not the best strategy, is an easy, well-learned strategy that totally accounts for changes in the environment; it allows the individual to "represent the disturbing change in its entirety" (Heider, 1944, p. 361), to end doubt, and provides the experience of having sufficient judgments.

The consequence of this is that people are depicted as assimilating new information; preferring to cling to their interests and expectancies; to actively construct a reality that is secure, stable, and understandable; to see the world in a way consistent with what they already believe (thus adding new meaning to the old expression "seeing is believing"). This position holds that the default processing strategy, as suggested by Allport's (1954) least effort principle, is the one that can lead to coherence through the use of as little processing effort as is necessary. Rather than expending effort to produce the most accurate judgment, people instead seek what Jones and Davis (1965) called "reason enough" or "sufficient reason." Thus, the search for an explanation (what Kelley, 1973, called psychological epistemology) comes to a stop once people feel they have what Allport (1954) called "sufficient warrant" and Tajfel (1969) called a "satisfactory explanation" to support their judgments and beliefs. This can be subjectively experienced despite not seeking to be as accurate and effortful as possible.

Although people adopt these simplifying strategies "in the service of cognitive and emotional economy" (Jones & Thibaut, 1958, p. 152), such a *Bureaucratic mind*, which ignores variety, can turn toward becoming a slave to the particular. If people require a greater sense of confidence in the products of their cognitive processing, people can break from being "cognitive misers" and use a more refined discriminatory analysis. But this hinges on active constructions produced through this "least effort" route being deemed insufficient (when one lacks "reason enough"), such as when interests and intent lead the individual to question his or her existing knowledge. As Jones and Thibaut (1958) posited, although people typically apply the most readily available hypothesis to account for observed behavior, this is neither necessary nor inevitable. Goals can lead to forsaking a strategy of cognitive economy; goals that promote accuracy can

have such an effect. Closure and coherence can be achieved through effortlessly assimilating new information in a consistent manner, but it can also be achieved through effortfully seeking accurate representations.⁴

This implies that goals can not only guide the *type* of conclusions we draw, but *regulate* the amount of effort expended in evaluating social information as well. Thus, an antidote to the potentially nonveridical perception produced by the bureaucratic mind is what Bruner (1957) called "the constant close look." By this, he meant that with enough time, capacity, and desire, some stimuli could be assessed to determine their best fit to a category. A perceiver's goal-directed strategies for pursuing coherence are flexible and reflect the notion of "potential motivation" reviewed earlier. For tasks that require cognitive effort, high potential motivation is required to instigate a strategy other than least effort and consistency seeking.

However, the manner in which it is determined when simplifying strategies are not sufficient or valid, when increased discrimination will yield a satisfactory cognitive product and the quest for knowledge can be halted, and how the system reacts to hindrances to close looks, discrimination, and seeking accuracy, are all issues that move beyond the mere functional question and toward the question of cognitive regulation. The functional question is an essential first step, for as Bruner et al. (1956, p. 12) noted, without understanding the functional and motivational underpinnings of the perceptual process "the later questions about 'how' [regulation occurs] must surely miscarry." But the functional question alone, and the focus on the general impact of "cognitive needs" is not sufficient and is "little more than a restatement of the fact that cognitive activity achieves something for the organism" (p. 16). For the goal notion to be viably applied, it must specify the antecedent conditions that arouse the need to reduce doubt, allow us to anticipate which strategy the flexible processing system will pursue, and describe the regulated processes through which cognitive behavior is directed. Only relatively recently have questions emerged that focus on the regulatory processes involved in the search for coherence and moved the field beyond illustrating the functional aspects of person perception (such as producing confidently held judgments and beliefs, shaped by personal effects, that produce a perception of the world as controllable and comprehensible).

Perhaps the clearest links between the early outcome-oriented approach and more modern-day theories concerned with regulation are found within Bruner's research. An example is his discussion of how the stages involved in categorization, from identification to inference, allow for a coherent sense of others to develop by letting the perceiver infer beyond the information given. The presence or lack of coherence regulates whether the individual need further elaborate on the qualities of the other or terminate the inference process with a sufficient sense of "knowing" the observed other. This is seen in Postman and Bruner's (1948) demonstration that when the ability to identify stimuli is frustrated, it results in "reckless" identification because the categorizations produced are the result of inadequate cues, that leave the individual searching for disconfirmation in subsequent stimulation. Bruner et al. (1956) further suggested that the frustrated categorization

process produces a tension, likened to the desire produced by blocked sexual activity. They postulate that such a tension provides a kind of feedback that regulates search behavior and keeps it going. It yields greater discrimination and entices the individual to more fully engage the "exquisite capacity for making distinctions."

This historical review suggests that social psychological approaches to the study of how people cognize their social world developed with needs, motives, and goals being considered conjointly with cognition, and with questions regarding their relationship central to the discipline (Fiske, 1993b; Fiske & Taylor, 1991). Like the goal content theories in the action domain, early research in this domain focused on documenting the impact that goals of a particular content had on *outcomes*, with the outcomes in the current case being cognitive in nature (e.g., attitudes, judgments, decisions). With the cognitive revolution in psychology, social psychology "temporarily abandon[ed] motivational constructs to concentrate upon those informational, perceptual, and cognitive factors" (Ross, 1977, p. 183). But, in the past 20 years, research on goals and cognition has been growing, as will be seen in the next section.

Modern Goal Theories

In the 1970s, researchers embraced cognitive methods as a tool to assess information processing, moving from a focus on cognitive potential/capabilities to one on heuristic strategies utilized by a limited processing system (what Fiske & Taylor, 1991, called a switch from "the naive scientist" approach to "the cognitive miser" approach). But even the earliest research with a focus on cognitive processing heuristics continued to stress the active and constructive nature of person perception (e.g., Markus, 1977; Rogers, Kuiper, & Kirker, 1977; Taylor & Crocker, 1981). Consider the following from Markus (1977):

Self-schemata will be generated because they are useful in understanding intentions and feelings and in identifying likely or appropriate patterns of behavior. While a self-schema is an organization of the representations of past behavior, it is more than a "depository." It serves an important processing function and allows an individual to go beyond the information available. (p. 64)

What is striking, aside from the similarity to Bruner's (1957) discussion of the active nature of categorization, is a dissimilarity. Gone is any reference to needs (or Bruner). What now was described as allowing the individual to "go beyond the information" and actively construct reality was the activation of a cognitive structure, a schema. For example, Rogers et al. (1977) showed that tasks that activate a self schema, and a reservoir of self-related information, lead to embellishing and elaborating on incoming information. Anderson and Pichert (1978) added that not only self-schemas, but tasks as simple as taking a particular perspective (a burglar "casing" a home vs. a person intending to buy a home) can determine how information is interpreted.

In such early social-cognitive research, goals were equated with "task sets" or "instructions." But research

adopting this simplified, explicit role for goals, as well as research that appeared to ignore goals altogether, did carry an implicit role for goals. Take as an example, research focused on the processing of schema-consistent versus inconsistent information. Srull and Wyer (1989, Postulate 5) posit: "Once an evaluative concept of a person is formed, the person's behaviors are interpreted in terms of it." This is consistent with Carlston's (1980) point that later judgments are biased toward the evaluative implications of earlier inferences. As summarized by Stangor and Ruble (1989, p. 20), "Strong expectations will lead perceivers to 'filter' or ignore inconsistent information, in an attempt to maintain the established expectancy intact . . . they rely on 'top down' rather than 'bottom up' processes to guide impression formation." The reason suggested by Srull and Wyer implicates an implicit goal in impression formation—to form a coherent representation.

However, coherence does not always mean consistency (e.g., Trope & Bassok, 1982). When expectancies are weak, or when behavior is unambiguously inconsistent with existing knowledge, it creates what Srull and Wyer (1989) call "uncertainties" that need to be reconciled; not unlike the doubt that earlier models labeled as creating a need that impels cognition. Asch and Zukier (1984) describe people seeking coherence in such a fashion—through reconciling apparently discrepant pieces of information. In the Srull and Wyer model, the manner in which uncertainty impels cognition is borne out in Postulates 6 and 7. Inconsistent information (that which cannot be assimilated easily into existing structures) instigates extensive (bottom-up) processing in which associative links form between the concept-inconsistent items and other locations in memory (Bargh & Thein, 1985). Such links lead to superior recall for inconsistent information, and an increased chance of utilizing such information in judgments (though this does not mean people will abandon using consistent information in their judgments, thus resulting in a low correlation between recall and judgment; see Hastie, 1980; Hastie & Kumar, 1979; Rothbart, Evans, & Fulero, 1979). There is an implicit goal of striving for coherence either through assimilating information to match prior knowledge (even when inconsistent information has been reflected upon) or through establishing new structures to accommodate inconsistencies.

Goals have not simply been examined as explicit instructional tasks, leaving more abstract goals such as seeking coherence completely implicit. Later research on variables such as need for cognition, need for structure, desire for control, and uncertainty orientation (to name just a few) explicitly returned the concept of needs, and their links to goals, to the discussion. Finally, in the 10 years following Sorrentino and Higgins's (1986) *Handbook of Motivation and Cognition* (Vol. 1) there has been an ever-increasing trend for social psychologists to shift from a focus on the impact of goals on the outcomes of cognitive processing toward exploring goal influences on the regulation of information processing. In this section, we first review research focused on the impact of goal content on cognitive outcomes and then turn to the regulation of social cognition.

Goal Content Theories

Goals sometimes focus the individual on accomplishing a specific task; to process information a certain kind of way (e.g., form an impression of a person from a set of stimuli vs. trying to memorize stimuli) that establishes instructional sets (e.g., impression set vs. memory set). These are concrete and proximal goals that describe short-term objectives. Goals can also be more abstract, self-defining, long term, and distal (e.g., saving processing capacity, achieving accuracy, establishing control, defending the ego). These provide the individual with general direction and allow persistence in the face of obstacles to proximal goals. In this section, we will review how these different goals affect the outcomes of information processing.

Goals as Proximal Tasks. In research on cognitive tuning effects (Zajonc, 1960; see also Brock & Fromkin, 1968; Cohen, 1961; Leventhal, 1962), proximal goals are analyzed in terms of how they affect the perception of other people (i.e., target persons). In a cognitive tuning paradigm, subjects are assigned different tasks. For example, half are told to transmit impressions of a target person to others (i.e., to play the role of communicators), whereas the other half are told to receive others' impressions of the target person (i.e., to play the role of recipients). Subsequently, it is observed how subjects organize information on the target person and what kind of information is suppressed. Task assignments are shown to steer organization of the presented information so that communicators polarize and distort stimulus information to a greater extent than recipients. Higgins, McCann, and Fondacaro (1982) extend this point by noting that speakers and listeners (or, more generally, encoders and decoders) engage in communication to achieve higher order proximal goals, such as "social relationship goals" (e.g., initiating or maintaining social bonds with a communicative partner), "face" goals (e.g., maximizing self-image), and "social reality" goals (e.g., achieving a common definition of social reality). These goals put constraints on an individual's interpretation of the task goals associated with playing the role of listener (e.g., try to understand the message) or speaker (e.g., try to be understood) in the "communication game" (for use of the communication game metaphor, see Grice, 1975; Gumperz & Hymes, 1972).

Another classic research paradigm examining proximal goals and their role in constructing social knowledge is the analysis of the effects of observational purpose on how the behavior of others is cognized. Such observational purposes (or information processing goals) include tasks such as memorizing an observed sequence of behaviors, predicting the behavior of an observed person in new situations, or simply forming an impression of a target person. The effects of information processing goals were demonstrated on a multitude of diverse cognitive processes, such as categorization (Jeffery & Mischel, 1979), trait ascription (Cohen & Ebbesen, 1979; Higgins, 1981), personal goal ascription (Hoffman, Mischel, & Mazze, 1981), and memory (Anderson & Pichert, 1978; Cohen & Ebbesen, 1979; Jeffery & Mischel, 1979). Like the cognitive tuning research, the focus of research on observational purposes

rests on the question of how these purposes (or processing goals) affect the cognizing of information related to a target person. Whether and how the subject meets her or his observational purpose is not at issue. It is not surprising then that research on information processing goals employs a similar general epistemic strategy as the goal content theories of action reviewed earlier; that is, the effects of different types of goals (this time information-processing goals) are compared with each other.

For example, Hamilton, Katz, and Leirer (1980) demonstrated that recall for information was affected by the subjects' processing goal when encoding stimulus information. Subjects were given a set of behavior statements to read either under instructions to memorize the material or to form impressions of the persons in the stimulus sentences. When an impression set existed, subjects recalled the information in clusters of related traits; thematically related information was stored together, linked in memory. But when subjects had a memory goal, information was not thematically organized. Instead, it was recalled in the order in which it was presented; this suggests subjects did not cluster the information or make linkages between items. Additionally, the impression set actually led to *better* recall of the stimulus information than the goal of trying to memorize the items for a recall test (see also Hamilton, 1981; Srull, 1981, 1983).

These findings have been replicated and extended within an area of social cognition labeled as *person memory* (Hastie, Ostrom, Ebbesen, Wyer, Hamilton, & Carlston, 1980) that examines memory for information about particular individuals (see Srull & Wyer, 1986, 1989, for comprehensive reviews). Srull (1983) posited that the superior recall associated with having an impression set arises because the goal initiates attempts to consider behaviors in relation to one another—a process that Asch and Zukier (1984) labeled as serving the higher order goal of seeking coherence. That is, traits are inferred from several stimulus sentences pertaining to the same individual, and these traits, behaviors, and persons are then integrated when forming impressions of the target persons. Forming such links facilitates recall because the retrieval process is said to occur through traversing the pathways established in the network. The more paths established, the better the recall, and impression goals lead to more pathways than memory goals. Srull also shows that manipulations other than processing objectives can promote the formation of links, such as presenting information blocked by target persons (e.g., Ostrom, Pryor, & Simpson, 1981). A "blocked format" similarly promotes links by making salient a higher order category (target persons) with which to ease organization of the stimulus sentences in memory.

Srull and Brand (1983) also examined the conditions that promote using persons as an organizing principle (i.e., utilizing "person nodes"), once again suggesting that processing objectives affect encoding—impression sets lead to organization in person nodes, memory sets do not. This results in superior recall under an impression set. In a second experiment, however, they found that having a memory set versus an impression set did not lead to recall differences when the superordinate node that was serving

as the organizing principle did not contain several competing categories. In other words, if the stimulus items all pertained to the same target person (no competing categories) then the target person was not seen as a logical superordinate cue. Thus, no person node was established and there could, therefore, be no facilitation of links between items and the node to give subjects with an impression set an advantage at recall.

These studies demonstrate that when no meaningful organizing principle exists, subjects do not organize information, regardless of their processing goal. But if there is a logical organizing principle in the stimuli, goals can point subjects to it. Thus, an impression set can suggest using person nodes for organization because such a goal promotes both trait inferences being formed from stimulus items and attempts to integrate these isolated inferences into a unified representation (e.g., Carlston & Skowronski, 1986; Newman & Uleman, 1993). According to many person memory researchers, without an impression set, subjects with the mere goal of memorizing information would neither spontaneously infer traits while encoding the behavioral stimuli nor attempt to subsequently integrate these inferences around a person node (e.g., Bargh & Thein, 1985, p. 1130; Srull, 1983, p. 1161). Thus, the less developed cognitive structure, which failed to make links between persons, behaviors, and traits, suffers in comparison during memory tests (even though the goal was to memorize).

While this research is process oriented, it is not focused on the role that goals play in regulating the process. Goals of different contents are simply said to affect the extent to which inferences are formed from individual stimulus items and the extent to which links are formed between these inferences and the stimulus items. Thus, its focus is goal content; but a particular type of goal content is examined—goals as processing objectives or task instructions. An exception to this is found in Srull and Brand (1983), who in addition to asking subjects to form an impression of target persons also led them to expect to interact with target persons. Such an expectancy produces a higher order goal of being accurate in addition to the impression set (though Srull & Brand do not discuss this implication of their expectancy manipulation); it leads subjects to feel accountable for their impressions (e.g., Tetlock, 1992).

Goals as Distal Tasks. In the early 1980s, researchers began to consider higher order (distal) goals that were more than simple processing objectives. The general theme that cut across such research was that although people often apply simple heuristics in their social information processing (top-down, or "top of the head" processing, Taylor & Fiske, 1978), higher order goals can limit such effects not by instigating a specific processing strategy, but through a general desire for what seem to the individual to be "more valid" judgments. Such goals raise the individual's threshold for deciding they have, what Allport (1954) called, sufficient warrant.

For example, Tetlock (1983) suggested that the goal of forming accurate judgments can attenuate top-of-the-head effects and lead to vigilant information processing (see also Chaiken, 1980). Focusing on belief perseverance (the

tendency to maintain existing beliefs, even in the face of evidence that suggests revising them), the investigator initiated an accuracy goal by telling participants they would be held accountable for their impressions. Those without the goal exhibited belief perseverance, their impressions of the target emphasized information presented early. Those with the goal (but only if the goal was presented before receiving information about the target) were immune to such primacy effects. Borgida and Howard-Pitney (1983) examined the delimiting effects of goals on salience effects (the tendency for salient stimuli to attract attentional focus and lead to causal power being thrust on them; Taylor, Crocker, Fiske, Sprinzen, & Winkler, 1979). They expected the goal of having a vested interest in the task would lead subjects to abandon top-of-the-head processing (such as salience effects). As expected, low interest led to salient targets being rated most favorably (a salience effect); high involvement led to favorable ratings of targets who agreed with subjects, regardless of salience.

In addition to its focus on higher order goals, research began once again to focus on the impact of cognitive needs in constructing social judgments and this placed additional emphasis on examining the links between needs and higher order goals in impelling information processing. One example is research based on theorizing about the interaction between *social needs* (e.g., the need for dominance) and social situations. Assor, Aronoff, and Messe (1981) had subjects high on the need for dominance observe two persons working together on a series of tasks. The relative status of these target persons was manipulated, and subjects were made to expect to interact with them at a later point. Dominance needs interacted with the status of the target persons and affected the favorability of reported impressions. Subjects high in need for dominance gave more favorable evaluations of the low-status persons than the high-status ones; the reverse was found for low-dominance perceivers. Apparently, to a highly dominant person, the upcoming interaction *affords* a better chance for implementing dominance goals (i.e., dominate the partner) if the presumed interaction partner is of lower status. The general approach reflected in this study focuses on social needs and the interaction goals produced by these needs. It is analyzed in what direction these interaction goals affect the perception of the interaction partner. Again, the question of whether and how these goals are met is not at issue, and the leading research strategy is one of studying the effects of entertaining or not entertaining a certain type of interaction goal (e.g., a dominance goal) on some distinct outcome (i.e., a social judgment) or comparing the effects of different interaction goals (e.g., dominance vs. dependency) on social judgments.

Kruglanski and Freund (1983) focused on epistemic rather than interaction needs. They described people as being placed in a state of need for structure when they are placed in a judgmental situation marked by time-pressure constraints. This need instantiates a goal of reaching closure on a judgmental task as quickly as possible. The impact of such a goal on cognitive outcomes was demonstrated by showing that there was a heightened reliance on judgmental heuristics and cognitive shortcuts

when a need for structure existed (see Kruglanski, 1990). Participants with a high need for structure were shown to utilize stereotypes more readily and exhibit primacy effects. An opposite pattern was exhibited by subjects with a heightened fear of invalidity. Like Tetlock's (1983) accountability manipulation, such a state promotes a goal of forming accurate and valid judgments and avoidance of a hasty conclusion.

Whereas Kruglanski focused on manipulations such as time constraint to initiate goals within a particular situation, other researchers turned toward examining long-standing needs that were not induced by situations—chronic needs that individuals carry between situations. Such an approach sidesteps a potential criticism of the situational strategy, that it is not really a goal that is being initiated by the situational manipulation but some other variable that similarly affects cognitive processing (such as a strain on cognitive capacity in the case of time pressure and need for structure, e.g., Lutz & Chaiken, 1993). Thompson, Naccarato, Parker, and Moskowitz (1992) reconceptualized the need for structure as an individual difference variable and found support for Kruglanski's notion that a heightened need produces a greater reliance on cognitive shortcuts. High need for structure was shown to lead to increased use of categories to label another's behavior (Moskowitz, 1993a) and heightened use of stereotypes (Naccarato, 1988; Neuberg & Newsome, 1993; Schaller, Boyd, Johannes, & O'Brien, 1995). Webster and Kruglanski (1994) similarly reconceptualized Kruglanski's earlier need for structure notion as an individual difference variable with what they describe as a broader construct termed need for closure. They found similar results examining the overattribution effect—heightened closure promoted the correspondence bias. It should be noted that Neuberg (1995) has reported that this need for closure scale is totally redundant with the earlier need for structure scale, so that it is presently less clear as to whether need for closure actually is a broader construct or a noisier measure of the same construct.

Sorrentino and colleagues (e.g., Sorrentino, Bobocel, Gitta, Olson, & Hewitt, 1988; Sorrentino & Short, 1986) introduced a cognitive need called uncertainty orientation based on the belief that individuals differ in their preferences for environmental uncertainty or ambiguity. Uncertainty-oriented persons seek uncertain situations so that they may resolve the uncertainty; certainty-oriented persons avoid uncertainty altogether and thus seek out situations characterized by elements of certainty. Both types of individuals seek clarity and coherence; they differ in whether they produce it for themselves or seek already existing forms. Therefore, certainty-oriented people tend to pursue the goal of attaining coherence by a cognitive strategy of ignoring inconsistent information (Driscoll, Hamilton, & Sorrentino, 1991), whereas uncertainty-oriented individuals prefer attending to new information.

Bargh (1990) lists chronic needs, in addition to the ones previously discussed, that drive cognition across situations: need for achievement, need for cognition, desire for control, authoritarianism, self-consciousness, and so forth. But more than simply presenting a taxonomy of needs,

Bargh suggests that the impact of needs and goals on cognition need not be consciously controlled. Just as there may be "the development of an automatic associative link between situational features and behavioral intentions" (p. 102) that guides action, so, too, may there be an automatic activation of higher order goals and motives in the presence of appropriate environmental stimuli. Such "auto-motives" become routinized so that they exert their effects outside awareness and without attentional monitoring (passively); all through direct environmental activation.

This section on goal content highlights not only that goals determine how information is interpreted, but that goals have a hierarchical nature. People entertain several goals simultaneously, some more proximal than others, and these interact in affecting cognition. A focus only on task goals inadequately represents the conditions under which the processing system operates. We will use two examples (spontaneous trait inference and accessibility effects) to illustrate how examining the interaction of goals in social cognition leads to different conclusions than if either a proximal goal or a distal goal was examined in isolation.

The Interaction of Goals in Spontaneous Trait Inference. As reviewed earlier, person memory research has shown that goals lead to differences in recall because they affect impressions formed at encoding. People do not form impressions of others at encoding "without intervening conscious intent" (explicitly being asked to do so; Bargh, 1990, p. 94). It is only when a conscious goal to form an inference exists that persons and their behaviors, doers and their deeds, become linked by trait inferences. However, Heider (1944) believed that behaviors serve as "data" through which we learn about the source of those behaviors; that a person who commits a bad act is judged to be a bad person. He makes the point that "not the doing only but the doer" is "susceptible to a value judgment" (p. 365). But does the person's process of forming an impression of the "doer" depend on consciously adopting a goal to do so? Or can the inferential leap from deeds to dispositions be made in the absence of explicit goals related to the imputation of responsibility? Just as our intended actions can have unintended consequences (see Wundt's, 1911, notion of *Heterogonie der Zwecke*, p. 766), is it not possible that intended strategies for processing social information, such as memorizing items, can have unintended consequences as well, such as inference formation?

Research on spontaneous trait inference (see Uleman et al., 1996) has addressed this question. As with person memory research, investigators examine recall for sentences to assess whether trait inferences are made at encoding. These inferences are said to be spontaneous because they occur even when subjects are unaware of having formed them and, more importantly for the current discussion, when proximal goals do not lead subjects to *intend* to form inferences. This occurs with a variety of goals (e.g., Uleman & Moskowitz, 1994) including a simple memory set (Winter & Uleman, 1984). Little explanation has been offered for the disparity between this conclusion and that suggested by the person memory research. We

suggest that the reason has to do with the assumptions researchers in the person memory versus the spontaneous inference domain make about goals. As earlier stated, the person memory research often treats goals simply as proximal tasks. This approach perhaps constrains conclusions regarding the ability of memory goals to produce trait inferences. If distal goals that facilitate trait inference are ignored, or perhaps undermined by either a conflicting proximal task or a conflicting stimulus environment, then it might be expected that trait inference formation and the organization of memory structures around person nodes will be impoverished if proximal goals do not explicitly request them.

What distal goals would qualify as directors of inference formation? Heider (1958; see also Anderson & Deuser, 1993; Pittman & Heller, 1987) believed that perceptual processes aid the individual in controlling the environment. Such control gives the person a sense of power over the perceived object in a stimulus array that would otherwise be overly complex and overwhelming. He states: "In Lewin's (1936) terms, an unstructured region, that is, a region whose properties are not known to the person, can be considered a barrier which makes action and therefore control difficult if not impossible. Perception helps to structure the region and to remove this barrier" (p. 71). Thus, the need to derive meaning from the environment is served by the distal goal of controlling and structuring it, which induces the cognitive system to generate inferences about the characteristics of others. White (1959) labeled this *effectance*—the goal of the individual being the maintenance of control over the environment through effective interactions. This goal was seen as so widespread that the tendency to see persons as causes for behaviors (earlier labeled "correspondence bias") was said to be a *fundamental attribution error*—invoked even when dispositional causes are not sufficient to explain the behavior (e.g., Heider, 1958; Jones & Davis, 1965; Ross, 1977).

How does this relate to the divergent conclusions of person memory and spontaneous inference research? Lewin (reviewed earlier) believed a stimulus acquires valence when it speaks to a goal. Thus, it is not simply the individual's goal, but the ability of objects in the environment to speak to that goal that leads to goal-directed interpretation of the social world. If the distal goal driving trait inference is control, then behaviors that suggest traits, or are diagnostic in terms of traits, will be able to acquire valence and entice an inference by speaking to this distal goal—even if a proximal goal does not explicitly ask for an inference. But not all stimuli can acquire this valence because not all behavior is trait implying. Such behaviors would not be expected to be able to satisfy a distal goal of having control through a trait inference—such meaning is not revealed in the stimuli. It is not functional for the individual (unless specifically asked to make an attempt) to draw an inference about disposition based on information that does not imply traits, that is not *trait diagnostic*—this information has no valence.

However, it is precisely these types of nondiagnostic (in terms of traits) stimuli (e.g., "rented an apartment near where he works") that are provided in the person memory experiments discussed. Given an impression set, one could

attempt to generate inferences that satisfy the proximal goal; one can come up with a trait consistent with the actions described in the stimuli. Given a proximal goal that does not force an inference, it makes sense that person inferences are not drawn from such stimuli. But this does not mean people never draw person inferences in the absence of specific instructions to form impressions, or that such proximal goals are required to produce elaborative organization of information that includes the storage of behaviors, trait inferences, and persons (c.f. Bargh, 1990; Srull & Wyer, 1989). A simple memory set should entice inferences about the target persons when the stimuli have valence (see also McArthur & Baron, 1983). Thus, how a proximal goal such as a memory set interacts with a distal goal depends on the stimuli in the situation. By considering both the situation (diagnostic stimuli) and the interacting goals of the perceiver, we see that people do not need conscious intent to form inferences. Distal goals promote trait inference, and proximal goals (or other distal goals) can either undermine or facilitate this process (Uleman & Moskowitz, 1994).

Moskowitz (1993a) provided evidence for this interaction of distal and proximal goals by identifying subjects who were chronically high and low on the goal of structuring their social environment (as measured by the personal need for structure scale, Thompson et al., 1992). These subjects were then given the proximal goal of memorizing a set of trait-implicating sentences. Subjects for whom the two goals were complementary (high structurers) were more likely to form trait inferences during encoding and were more likely to form unified memory structures that represented the person, their actions, and the inferred traits. Subjects for whom the two goals were not complementary (low structurers) still formed trait inferences; they simply were less likely to do so, less likely to take the inferential leap from deeds to disposition.

The Interaction of Goals in Accessibility Effects. While Bruner (1957) focused his discussion of perceptual readiness on need and expectancy-related factors within the person that made a category accessible, later accessibility research treated construct activation in two ways. One resembles Bruner's model in terms of focusing on chronic sources, but concentrates on chronically accessible cognitive structures, not needs (e.g., Bargh, Lombardi, & Higgins, 1988; Bargh & Pratto, 1986; Bargh & Thein, 1985; Higgins, King, & Mavin, 1982). A second placed the control over what cognitive construct achieves a higher state of activation within the control of environmental stimuli that "primed," or increased the "readiness" of, stored knowledge (e.g., Bargh & Pietromonaco, 1982; Higgins, Rholes, & Jones, 1977; Srull & Wyer, 1979, 1980). As reviewed earlier, such cognitive theories involve an implicit motivational assumption regarding why people use primed constructs and other explanations that "wait at the top of the head." The individual is assumed to have a distal goal of forming a coherent impression through the least effortful method. Thus, faced with an ambiguous behavior (that is applicable to the activated construct) perceivers use primed constructs to capture the stimulus, or to assimilate their

judgment to be consistent with the primed construct (see Higgins, Chapter 5, this volume, for a review).

However, judgments are sometimes contrasted to a prime (e.g., judging a target to be conceited, when confidence had been the primed trait; see Skurnik & Moskowitz, 1996a, 1996b, for a discussion of the processing mechanisms that underlie contrast effects and the role of goals, context, and type of prime in determining the manner in which contrasted judgments are produced). Martin (1986; see also Herr, 1986) suggested that whether assimilation or contrast effects will be found may be determined by whether the individual is aware of the accessible construct. A blatant prime, clearly conscious to the subjects at the time they are asked to make a judgment, led to contrast rather than assimilation. The impact of consciousness for primes on judgment was initially assessed by correlating recall for primes and assimilation (e.g., Lombardi, Higgins, & Bargh, 1987; Newman & Uleman, 1990). Moskowitz and Roman (1992) manipulated the conscious awareness of a prime through a perceiver's goals to determine the extent to which awareness of the prime led to assimilation or contrast. Utilizing the fact that people spontaneously draw inferences when asked to memorize trait-implicating sentences, they had subjects read stimulus sentences with a memory goal so that they would spontaneously infer traits outside of awareness. These inferred traits activated the trait constructs implied in the sentences, but because the inference was spontaneous, the subjects were unaware of this activation. Subjects with an impression goal inferred the same traits, but the inferences and the prime were conscious to them. These proximal goals directed the outcome of processing that served the distal goal of inferring traits. When the proximal goal promoted passive inference (so that the potential influence on judgment could not be detected) assimilation occurred. When it promoted conscious inference (so that the potential influence could be detected), contrast occurred.

Martin, Seta, and Crelia (1990) demonstrated that goals determine whether people assimilate or contrast their judgments to primes by creating goals that either did or did not conflict with the distal goal of preserving cognitive resources. After being primed and asked to form an impression of a target person, some of their subjects were then informed that the experimenter was concerned with their personal responses and they were asked to put their names on their responses. The rest of the subjects in the group were told to keep their responses anonymous. They predicted that subjects in the group who were not responsible for their judgments would engage in "social loafing" and in their effortless evaluation of the target person be guided by the primes. However, subjects who were responsible faced a conflict between the goals of preserving resources and being accurate. Resolving this conflict led them to be more effortful and careful in their judgments; they could not afford to loaf and simply rely on the most accessible explanation provided by the primes.

Both Moskowitz and Roman (1992) and Martin et al. (1990) show assimilation being defeated by a goal (e.g., an impression set) that makes subjects aware of the prime and its potential influence. Recently, researchers have also pursued the general question of whether goals can eliminate

assimilation to primes even when people are *unaware* of the primes' influence on their judgment. Sedikides (1990) examined the impact of communication goals on whether judgments were assimilated. Subjects were not aware of the impact of accessible constructs on their judgments, nor did they consciously seek to correct or utilize a different standard in making their judgments (as with contrast effects). They simply adopted a goal of communicating a particular type of impression and this goal was able to overpower the influence of an accessible construct. When subjects had the goal of tailoring a message to suit an audience they were not shown to be influenced by primes (relative to control subjects who had no communication goal).

Finally, Thompson, Roman, Moskowitz, Chaiken, and Bargh (1994) examined how accuracy goals affect assimilation to activated constructs, even when the activation is not aware to the person (passive priming) and when they are not explicitly attempting to adopt a particular interpretation. Complementary to the finding of Martin et al. (1990) that goals emphasizing accuracy led subjects to attempt to correct for the influence of blatant primes, subjects with accuracy goals in Thompson et al.'s experiments did not assimilate their judgments to the primed constructs. Accountability led to an effortful correction, or debiasing of the primes' influence, even though subjects were unaware of the influence. Instantiating a goal of being accurate in one's judgments led to more elaborative and systematic processing, rather than relying simply on distal goals that promote using the first readily accessible interpretation that lay waiting at "the top of the head."

We began this section by illustrating the active and constructive nature of person perception. Goals of a particular content shaped the encoding of social information across many goals, and a variety of information-processing domains. Through examining goal influences on spontaneous trait inference and accessibility effects in social judgment, we have illustrated how proximal goals and distal goals may interact in the active construction of social judgments. We turn next to examining *how* goals exert effects on information processing and the *regulatory processes* involved in person perception.

Regulation Theories of Goal Striving

The striving for coherent knowledge through the processing of social information was earlier labeled the principle of regulated coherence. The manner in which uncertainty, doubt, inconsistency, and a sense of having "insufficient" or "invalid" judgments is reconciled (to produce coherence) is the focus of recent social-cognitive models that reflect many of the ideas presented in our historical review. Cutting across these models is an assumption that "sufficient warrant," or the feeling of having valid judgments, can be attained through either effortful or effortless processing. In each case, knowledge is actively built, the perceiver simply remains unaware of his or her own active contribution to the process when the construction is effortless. This passive influence is seen, for example, in the effects of schemas, heuristics, mindlessness, chronic goals, and accessible constructs that exert their impact without the individual devoting much, if any, conscious

attention (e.g., Eagly & Chaiken's, 1993, least effort principle; Gilbert & Hixon's, 1991, "trouble of thinking"; Sedikides & Skowronski's, 1991, law of cognitive structure activation). The regulation of epistemic processes then is said to involve a struggle between preserving processing resources and having adequate judgments—a balance struck between least effort and selective interests that promote deeper processing (Bohner, Moskowitz, & Chaiken, 1995).

Several goal-directed models of cognitive processing have developed that describe this trade-off (e.g., Brewer, 1988; Chaiken, Giner-Sorolla, & Chen, 1996; Fiske & Neberg, 1990; Kruglanski, 1990; Kunda, 1990; Lichtenstein & Srull, 1987; Martin & Achee, 1992; Smith, 1994; Tetlock, 1992). In these models (see Smith, 1994, for a review), goals are described as directing the cognitive processes of a flexible perceiver, flexible because these processes can lead to information being processed in a manner that is either individuating and systematic or categorical, schematic, and heuristic (Fiske, 1993b). Goals (one's potential motivation), and the stage of cognitive processing at which goals are introduced, determine how cognitive processing proceeds. We will briefly review two models (see Chaiken, Eagly, & Wood, Chapter 23, and Kruglanski, Chapter 17, this volume) to illustrate how the struggle between goals, such as least effort and accuracy, may affect the process through which information processing proceeds.

According to the theory of lay epistemics (Kruglanski, 1990), the person's process of generating and evaluating social knowledge is instigated when current judgments and opinions are deemed to be invalid (when valid, the system is at rest, or what Lewin called "frozen"). Invalidity motivates (unfreezes) the epistemic process. Two broad classes of needs—conclusional needs and closure needs—determine the type of processing required to restore the system to rest; they determine whether the epistemic process is frozen early (less effort exerted) or thawed over a longer period through systematic examination of relevant evidence. Closure needs encompass goals that promote either seeking or avoiding closure, such as the orthogonal needs labeled "need for closure" and "need to avoid closure." Closure seeking is similar to Dewey's (1929) "Quest for Certainty" and Frenkel-Brunswik's (1949) "Intolerance of Perceptual Ambiguity" (*gestaltmehrdedeutigkeit*), marked by "perceptual rigidity, inability to change set, and tendencies to primitive and rigid structuring" (p. 122). It is also linked to the gestalt notion of *prägnanz*, a clear-cut and closed structure in which new experiences are viewed and classified from the standpoint of an old set (Block & Block, 1951). Conclusional needs include any goals that require reaching a conclusion, and occur along a continuum ranging from specific conclusions (a particular answer) to nonspecific conclusions (any sufficient answer).

According to the heuristic-systematic model (HSM; Bohner et al., 1995; Chaiken et al., 1989, 1996; Eagly & Chaiken, 1993) social knowledge is constructed through two broadly defined information-processing strategies. *Heuristic processing* is an effortless, theory-driven, top-down type of processing. *Systematic processing* is an effortful, data-driven, bottom-up type of processing. The

HSM assumes the default processing strategy will be one that requires the least effort—the heuristic route. How do economy-minded processors become motivated to be systematic? The answer is said to involve a trade-off between the HSM's sufficiency and least effort principles. While people desire least effort, they also desire a certain degree of confidence in their judgments. In the HSM, this point of sufficient confidence is conceived as a threshold, with people motivated to exert enough effort to allow them to reach the threshold. If their level of actual confidence falls short of the threshold (their desired confidence level), they will effortfully process until they achieve a feeling of sufficiency and either reach or surpass the threshold. Goals (such as those instigated by being personally vested or held accountable) serve to raise the desired level of confidence (e.g., Maheswaran & Chaiken, 1991).

Both models make links between information processing and goals, with goals serving to initiate and then direct the quantity and quality of cognitive processing. Both models explicitly predict that a discrepancy between a desired goal state and an actual state produces insufficient confidence in social knowledge, which instantiates goal striving toward coherence and confidently held knowledge. Both assume that the goal of having accurate and valid judgments leads perceivers to exert greater processing effort, while without such a goal more categorical and effortless types of processing can be expected. Both assume that the tendency to rely on simple structures can be enhanced by goals that promote a reliance on schemas, stereotypes, and heuristics. Finally, both reflect ideas presented in our historical review that people prefer least effort, that doubt can promote people moving toward exerting effort, that goals can promote experiencing such doubt, that these doubts are allayed through a search for coherence and the pursuit of knowledge belief, and that this search is halted when sufficient "reason" (Jones & Davis, 1965) or "warrant" (Allport, 1954) is experienced. From this view, perceivers are flexible, capable of exerting as much processing effort as their goals dictate. In the remainder of this section, we review the processes that regulate this flexibility as they have been examined in research on stereotyping and impression formation.

Goals and Stereotype Use. Stereotypes are sets of beliefs about a group of people. They are a mental list or picture of the traits, characteristics, and behaviors a particular social group is likely to possess. While such beliefs exist in people's minds, they originate in the culture of those individuals. Lippman (1922) called stereotyping "a form of perception" that "imposes a certain character on the data" because the environment is far too complex to attain meaning without such classifications (see also Macrae, Milne, & Bodenhausen, 1994). Stereotypes, however, need room to impose character on the data—the behavior being observed must be ambiguous enough to be open to interpretation (Duncan, 1976), but given the ambiguity inherent in interpersonal behavior, not much room is needed. Research from this cognitive perspective initially addressed the ability of stereotypes to develop simply as a function of cognitive processes such as categorization (Tajfel, 1969; Tajfel & Turner, 1986) and illusory

correlation (a tendency to see *distinct* events or people as being *related* because they appear to stand out together; for stereotyping this is a perceived relationship between group membership and some trait; Hamilton & Gifford, 1976).

More prototypical, however, is research demonstrating that stereotypes are rigid (even in the face of contradictory evidence), and this resistance to change is not always consciously enforced through reflecting on societal norms with each judgment made. Rather, these norms become internalized and create passively operating standards that are used to guide judgments. New information is seen as consistent with internalized standards—stereotypes. In this way, stereotypes are maintained, even strengthened, because the search for coherence (Tajfel, 1969) leads us to ignore stereotype-inconsistent aspects to stimuli that would make categorization effortful (e.g., Darley & Gross, 1983; Hamilton & Rose, 1980). Such maintenance of stereotypes through stereotype-guided categorization (the search for coherence) is reflected in research on salience (Taylor, Fiske, Etcoff, & Ruderman, 1978), attribution (e.g., Jackson, Sullivan, & Hodge, 1993; Pettigrew, 1979; Taylor & Jaggi, 1974), decision making (e.g., Bodenhausen & Wyer, 1985; Kruglanski & Freund, 1983), social judgments (e.g., Banaji, Hardin, & Rothman, 1993; Manis, Paskewitz, & Cotler, 1986; Pratto & Bargh, 1991), and outgroup homogeneity (e.g., Linville, Salovey, & Fischer, 1986; see Allport's, 1954, "narcissism of small differences").

This research assumes that people typically pursue coherence through strategies that simplify the social world (Rosch, 1978). This is most likely to occur when situations are ambiguous or when behavioral information is complex, allowing people to force interpretations on it. However, several studies suggest that when inconsistent behavior is highly diagnostic and too salient to ignore, it forces abandonment of stereotype-maintaining interpretations. Thus, stereotype inconsistent information is sometimes utilized in impressions (e.g., Deaux & Lewis, 1984; Hamilton & Rose, study 3, 1980; Locksley, Borgida, Brekke, & Hepburn, 1980; Manis, Nelson, & Shedler, 1988) and this is most likely to occur when the data are unambiguous—when there is no room for interpretation. Diagnostic information can overpower what waits at the top of the head by "hitting us over the head" with its clarity. This research addresses the point that stereotype use can be defeated by requiring the target of the stereotypes, the victim of one's perceptual biases, to act in a manner that is somehow diagnostic enough, consistent enough, and salient enough to hit the stereotyped person over the head and awaken the ability to individuate. If strengthening the data is one method to delimit stereotype use, then perhaps even in the presence of weak data (i.e., ambiguous and nondiagnostic information) a challenge to stereotype use can come from strengthening another factor in active perception—the goals of the perceiver (e.g., Moskowitz, 1996).

This approach was adopted by Fiske and her colleagues (e.g., Erber & Fiske, 1984; Fiske & Von Hendy, 1992; Neuberg, 1989; Ruscher & Fiske, 1990). Fiske and Neuberg (1990) developed a continuum model of impression formation that linked goals to information-processing strategies ranging from category-based (stereotypical) to

individuating. They state that perceivers initially categorize others rapidly and seek to confirm that categorization. This default strategy is not ideal in that it can produce what Bruner (1957) called nonveridical perception, but it generally produces impressions that are sufficient, or good enough. When the impression is not satisfactory, if there is doubt in its validity, further attention is directed toward the impression formation process. Such feelings of insufficiency are said to be triggered by goals such as those arising from self-relevant impression formation tasks. Thus, the social perceiver is described as a *motivated tactician*, whose goals direct processing options by determining the cost of judgments.

For example, Erber and Fiske (1984) used outcome dependency (making subjects dependent on one another for successful completion of their task) to manipulate accuracy goals and raise the cost of judgment. Such interdependence was believed to increase the need for prediction and control because people need to know how their partner can help them accomplish the codependent task. In particular, people are likely to attend to characteristics inconsistent with prior stereotypes when involved with such a task, but focus on characteristics consistent with stereotypes when no goal exists. Presumably this occurs because inconsistent information is more diagnostic and informative and can help satisfy the goal of forming accurate impressions.

Outcome dependency as a means to overcoming stereotyping bears similarity to the classic Sherif (1966) research on *superordinate goals* as a means to resolve intergroup tensions. In Sherif's work, mutual, codependent striving toward a desired goal led to the breakdown of prejudice, a prediction not so different from the effects Erber and Fiske showed to be due to interdependence. What Fiske's research adds, however, is an explicit link between interdependence and information-processing strategies, suggesting that the beneficial effects of codependence arise from subjects being more individuating and effortful in the types of judgments they form about stereotyped outgroup members. Further, Ruscher and Fiske (1990) point out that in addition to cooperating with another for a joint success, people are outcome dependent on competitors because success of a competitor will indicate personal failure. Thus, it is not cooperation that leads to the cognitive effects of seeking better information, but the goal of attaining accurate information that arises from a state of interdependence. Competing individuals attend to stereotype and expectancy inconsistent information about their opponents much as cooperating individuals do.

Neuberg and Fiske (1987) add that outcome dependency does not always lead to increased attention to target information nor to individuating, more comprehensive impression formation. These effects depend on what types of goals are generated by outcome dependency that then serve to moderate information processing. In stereotyping studies (as with many judgment tasks in the natural environment), the relationship with the outcome-dependent partner is short term and task oriented. These outcome-dependent relationships are said to promote accuracy-driven, individuating impression formation. However, we also enter into long-term, outcome-dependent relationships that may foster different, distal goals (forming positive

impressions, as in a friendship, or forming negative impressions, as in a forced commitment to a group one does not wish to associate with), with drastically different effects on information processing. This allows for the possibility that goals such as control, structure, and long-term dependency can be in conflict with other goals such as accuracy and short-term dependency and that the manner in which this goal conflict is resolved determines information-processing strategies.

Darley, Fleming, Hilton, and Swann (1988) suggest that interaction goals (see also Jones & Thibaut, 1958), such as interacting with a person you must evaluate, or with a person who will subsequently be a partner on a task, arise from situations where people are outcome dependent on one another. Such goals not only guide the processing of information, but also the gathering of information. Whereas Neuberg and Fiske (1987) show that people *attend* to inconsistent information that is presented to them, Darley et al. (1988) showed that subjects with such interaction goals actually *seek out* inconsistent information to verify and evaluate their negative expectancies of others—they ask more diagnostic questions.

Thus, stereotype use can not only be overcome by being inundated by counterstereotypic information, but by the perceiver adopting goals that will defeat strategies borne of cognitive economy. Such goals exert their effect by influencing the information-processing strategies of the perceiver, leading them to deliberately assess a wide range of information, including information that is inconsistent with the stereotype and information that is discovered later in the interaction. In the cases reviewed so far, however, these goals are always suggested to the individual by an experimenter, not freely adopted. Can self-selected goals also attenuate stereotyping effects in judgment? Fiske and Von Hendy (1992) provide one answer to this question by suggesting that telling people that they are "skilled individuating" leads them to have an enhanced sense of self and to subsequently adopt goals that are consistent with this salient and egalitarian sense of self. Thus, the experimental context was used to make accessible one of the many, context-dependent aspects of self (e.g., Markus & Kunda, 1986). Subjects given the sense of "self-as-individual" paid greater attention to the inconsistent information (but only when they were low self monitors and thus likely to use dispositional information as a guide to behavior).

Thus, a consistent pattern of results from Fiske and her colleagues suggests that goals are able to promote individuation. Recently, Fiske (1993a) has turned attention to power goals that might serve to push perceivers in the opposite direction, toward making categorical judgments. Fiske suggests that power encourages stereotyping because stereotypes help maintain power. Even when stereotypes are generally positive, such labels are limiting and serve to "fence in" the stereotyped group—"power is control and stereotypes are one way to exert control" (p. 623). Those with power are prone to stereotype also because they lack a specific goal that encourages them to do otherwise. To excel and advance, the subordinate needs to know what qualities are valued by the outcome-controlling supervisor (as suggested by Jones & Thibaut's, 1958, interaction goals);

subordinates depend on the powerful for outcomes and evaluation. As discussed earlier, such outcome dependency often leads to increased effort and deliberation in processing. The powerful have no such goal; in fact, they have demands on their time that render such individuation toward subordinates near impossible. However, Fiske's suggestion that the powerful have more demands on their attention raises the possibility that power promotes stereotyping not because of the goal of maintaining power and using stereotypes to fence others in, but because the powerful have strained cognitive capacity.

Other goals that promote a reliance on cognitive structures and prior experience, such as need for structure (e.g., Kruglanski & Freund, 1983; Naccarato, 1988), raise what Bruner (1957) suggests are the costs of deliberating and make stereotype use more likely. As suggested by Hilton and Darley (1991), many goals that arise from social interaction place cognitive demands on perceivers who are already prone to relying on impressions formed in a relatively effortless fashion. Such demands should only increase the robustness of stereotype use. However, with most research that attempts to demonstrate how goals increase stereotype use, it is difficult to determine whether the manipulations used lead to a goal being adopted or capacity being strained. This makes discussion of goal effects on promoting stereotype use less clear. Although few would doubt that goals can enhance the extent to which people rely on stereotypes, research must disentangle such effects from limits on cognitive capacity. Individual differences in chronic goals is one such approach (e.g., Neuberg & Newsome, 1993). Another approach is to induce goals that do not simultaneously limit capacity, such as ego-protection and self completion (e.g., Crocker & Luhtanen, 1990; Crocker, Thompson, McGraw, & Ingerman, 1987).

Goals and Stereotype Activation. In discussing goal effects on stereotype use, the operational assumption has been that stereotype use can be *controlled*—goals lead to effortful strategies that allow one to fight against the otherwise biasing effects of activated stereotypes. However, this literature does not say that goals can stop people from activating stereotypes, from primes being made accessible, or from initial judgments being determined by passive forces. What it says is that if a stereotype has already been inferred or activated, stereotype use may be controlled by these inferences being adjusted and corrected through conscious elaboration strategies. However, stereotype use and stereotype activation are separate issues. Whereas attenuating stereotype effects on judgment has been widely demonstrated by getting subjects to adopt goals that allow for either an on-line correction to prevent stereotype use or correction at recall to prevent stereotype use, the even more fundamental strategy of fighting stereotype effects on judgment by *preventing their activation* has not been pursued. A stereotype cannot bias if it is not activated. Correction for already activated stereotypes requires effort and thus can be limited in its success (dependent on capacity and ability to engage in such corrections—see Thompson et al., 1994), but such limits are nonproblematic if the stereotype is never activated.

Bruner (1957), in his discussion of “the constant close look,” hints at this shortcoming of a strategy of relying on effortful correction as an antidote to nonveridical perception. He states that while some stimuli can be assessed so that their best fit to a category can be discovered, other stimuli are equivocal and cannot result in veridical categorization. Such stimuli are “mostly in the sphere of so-called interpersonal perception; perceiving the states of other people . . . it is doubtful whether a therapeutic regimen of close looking will aid the misperceiver much in dealing with more complex cue patterns” (p. 142). We echo this concern—when stereotypes, expectancies, and other biases exist, even systematic processing can produce nonveridical judgments when the object being judged is something subjectively determined (such as attitudes toward and impressions of others; see Eagly & Chaiken's, 1993, discussion of biased systematic processing).

Additionally, even when goals get perceivers to be unbiased in their systematic processing, such processing requires the ability and capacity to be carried out, which may not be afforded by everyday social interactions: “The cost of close looks is generally too high under the conditions of speed, risk, and limited capacity imposed upon organisms by their environment” (Bruner, p. 142). Neuberg (1989, pp. 384–385) expressed this same concern in stating, “Motivating perceivers to form accurate impressions clearly will not always reduce behavioral biases against stigmatized targets . . . accuracy goals may be less effective when competing with other goals and tasks for limited cognitive and behavioral resources.” Finally, consciously deciding to pursue the goal of eliminating stereotypes from one's impressions, either through choosing to do so to alleviate an emotional state of compunction (e.g., Allport, 1954; Devine, Montieth, Zuwerink, & Elliot, 1991) or to satisfy a motive to be egalitarian and fair (what Fiske, 1989, called making the “hard choice” to intend to be non-biased), can have paradoxical effects. Conscious attempts to suppress stereotypes, as a means to correct one's judgments and make them bias-free, can lead to those stereotypes “rebounding” and being used to an even greater extent in subsequent judgments (Macrae, Bodenhausen, Milne, & Jetten, 1994).

There appear to be compelling reasons to believe that a strategy of using systematic information processing to correct for biased initial inferences may often fall short. This is not intended to suggest abandoning such strategies. To the contrary, the point is explicitly to suggest that inclusion of a goal orientation reveals other strategies in addition to, not instead of, the “constant close look.” One such strategy is preventing stereotype activation in the first place.

One reason such an approach has not been considered lies in the language that has been used to describe stereotype effects. Because they are effortless and often unconsciously applied, there has been an assumption that stereotype activation is automatic; that the mere presence of a member of an outgroup triggers the stereotype for that group, as seeing blue ink automatically triggers the construct for the color blue. Despite the ample evidence that stereotypes are effortless and pervasive, do they meet all the features that make a process automatic (Bargh, 1984, 1994)? This is not simply a semantic issue. If

stereotypes are unconditionally automatic, then by definition, their activation cannot be controlled. The only available strategy to combat their use would be to prevent their application, a strategy the field has aggressively pursued in the past 10 years. If not automatic, however, then a second route to delimiting stereotype effects in judgment is revealed, one focused on preventing stereotype activation (e.g., Moskowitz, Wasel, Gollwitzer, & Schaal, 1996).

Empirical support for the position that stereotypes are "automatically activated" provides a second reason why researchers may have ignored goal effects on stereotype activation; Devine's (1989) intriguing model suggests such inhibition would be impossible. By illustrating the automatic nature of stereotype activation, Devine concluded that stereotypes can only be defeated by later correction, through adopting the conscious goal of debiasing one's judgments. Devine's interpretation of her findings was optimistic in that they supported the fact that there is one strategy that can prevent stereotype use. Specifically, subjects with goals to establish or maintain a nonprejudiced identity, while equally likely to have their stereotypes activated, can intentionally inhibit the effects of those activated stereotypes on judgments. However, an even more optimistic interpretation (particularly given the potential limits to the "constant close look") exists if we can challenge Devine's conclusion regarding the inevitability of stereotype activation; Gilbert and Hixon (1991) presented such a challenge.

Gilbert and Hixon (1991) began with the assumption that judgments occur in stages. The first stage, in which categorization processes lead to an initial inference, is effortless. Later stages are consciously controlled, and it is here where the inference from the first stage is weighed against situational factors and adjusted (corrected) to arrive at a more complete judgment. The more effortful stages can be disrupted by simultaneous processing tasks that place a cognitive load on the perceiver. The earlier stage, if automatic, cannot. Stereotype use, therefore, should be dependent on the processing stage in which a cognitive load is introduced. When introduced *after* an initial inference had been formed, these strains on capacity increased stereotype use—subjects didn't have the capacity to correct their initial stereotypic inference. However, when "cognitive busyness" came *before* a stereotype had been activated, load had the opposite effect. Subjects were less likely to use stereotypes in judging others. It prevented the initial stereotypic inference from ever being formed, suggesting that such inferences are not automatic. If stereotype activation is dependent on capacity, then it is not automatic; and if not automatic, activation may also be goal-dependent (Bargh, 1989) as well as capacity dependent—volition may also lead to decreased stereotype activation and a decreased likelihood of subsequently using a stereotype. This discrepancy between Devine (1989) and Gilbert and Hixon (1991) is an empirical issue that is yet to be resolved. Gollwitzer and Moskowitz (1994) suggest two ways of using goals to attempt to do so.

The first is by examining whether subjects with chronic egalitarian/fairness goals are less likely to have stereotypes activated. Although Devine's (1989) subjects did not differ in stereotype activation as a function of egalitarianism,

several aspects to this experiment leave this issue still open to investigation (see Locke, Macleod, & Walker, 1994, for a review of these concerns). For example, Devine's research establishes that pieces of stereotypic knowledge are stored together, and if one aspect of the knowledge structure is primed, then activation can spread to other aspects of the stereotype (similar to Cantor & Mischel's, 1977, demonstration with schemas). However, this does not mean, as Devine posits, that the mere presentation of a member of a stereotyped group will be enough to activate the stereotype, or that priming part of a stereotype will always activate that stereotype. Stereotype activation may be controllable so that either (1) one's goals inhibit stereotype activation or (2) some other construct besides the stereotype may be activated instead, what Allport (1954, p. 20) called a more dominant category being activated (see also Macrae, Bodenhausen, & Milne, 1995).

For example, Bargh and Pietromonaco (1982) primed the trait of hostility, but varied the prime frequency from 0% to 20% to 80% between subjects. Their data suggest that they only found the priming effect for the 80% condition; the category was not activated when only 20% of the stimuli were prime words. Showing that constructs are not always activated by the mere presence of the prime raises the possibility that the "mere presence" of a stigmatized group member or of a stereotype-relevant trait does not inevitably lead to stereotype activation. Moreover, if people's goals to judge a certain stereotyped group in a fair manner can become chronically held, through recent and frequent application of the goal, there is reason to expect an automatic inhibition of stereotyped responses (see Bargh & Barndollar, 1995). In fact, Moskowitz et al. (1996) found that people who had internalized the goal of being egalitarian, so that it was chronically held, failed to have stereotypes activated. They demonstrated that while non-chronics had stereotypes activated by simply seeing pictures of members of stigmatized groups, people with chronic goals to be non-biased inhibited stereotype activation.

Gollwitzer and Moskowitz (1994) suggest a second way of demonstrating that stereotype activation may not be automatic; it revolves around manipulating the types of intentions subjects form. Implementation intentions are described as a linkage between goal-directed behavior and situational context, laying down a specific plan that promotes the initiation and execution of goal-directed behavior (Bargh & Gollwitzer, 1994; Gollwitzer, 1993). When people form implementation intentions, they are said to surrender initiation of their goal-directed action to environmental stimuli so that the presence of the stimuli can activate goal striving. Such processing is similarly described as occurring in an automatic fashion. Thus, Gollwitzer and Moskowitz suggest that having an implementation intention that works toward the goal of being nonprejudiced would establish a competition, or race, to capture the stimulus input. If the implementation intention wins the race, then the goal of being nonprejudiced can prevent stereotype activation. If it loses the race, then activation of the stereotype will occur.

In conclusion, it is suggested that goals can affect stereotype use through their impact on information processing at several stages. Although stereotypes are fast,

effortless, and easily applied, they also can be controlled. The question we raise here is whether they can be controlled not by correcting for them, but by exerting an influence over stereotype activation as well. Stereotypes may be similar to spontaneous trait inferences in this regard. Just as such inferences were initially claimed to be automatic, subsequent research (see Newman & Uleman, 1989) revealed them to be restricted (and enhanced) by goals not merely in their expression, but in their occurrence as well (Uleman & Moskowitz, 1994). Just because stereotypes are often effortlessly and passively applied (i.e., without awareness) does not mean that they are beyond control. There are several ways goals can regulate the processes that determine stereotype use, one of them being the passive inhibition of stereotype activation.

Goals and the Formation of Trait Inferences. Earlier we reviewed Heider's (1944) belief that people tend to attribute causes for events to other people, not to the context the person is in. Acts are taken to be indicative of personality so that doer and deed are equated in a "natural, fundamental Gestalt" (Jones, 1979). Jones and Davis (1965; Jones & Harris, 1967) extended this logic by suggesting that people form *correspondent inferences*—believing that behavior corresponds with the disposition of the person producing it—and that behavior will be taken at face value "when it does not generate multiple highly expected effects" (Jones, 1979, p. 108).

Gilbert and his colleagues (e.g., Gilbert, 1989; Gilbert & Hixon, 1991; Gilbert, Krull, & Malone, 1990; Gilbert & Osborne, 1989; Gilbert, Pelham, & Krull, 1988; Gilbert, Taforadi, & Malone, 1993) proposed that their model in which inferences are said to be formed in stages (reviewed earlier) can give rise to the correspondence bias. The inferences formed in the initial stage are "automatic." These beliefs then need to be "unbelieved" in later stages where adjustments to these inferences occur (Gilbert et al., 1990), but this correction process requires exerting cognitive effort, which requires having cognitive capacity. Thus, similar to research on stereotyping, there is an assumption that trait inference from observed behavior is automatic (Gilbert, 1989), a position that Krull (1993) referred to as a "fixed model." The implication of this assumption, as it was with stereotype research, is that the way to control overattributing to disposition is to prevent the application of a passive trait inference, rather than preventing its occurrence (somewhat paradoxical, given Gilbert and Hixon's suggestion that stereotypic inference is not automatic).

This fixed model violates the view of the "fundamental attribution error" (Ross, 1977) as a bias or tendency. The ease with which traits are drawn and used was not suggested by Jones (1979) to be a fixed process, but merely an easy, rather effortless, default *strategy*. In asserting that impression formation may not be automatic, it is not our intent to suggest that it is, therefore, consciously regulated. To the contrary, as reviewed earlier, inference processes frequently occur without awareness or intent and are ubiquitous in the processing of social information. It is precisely because of their passive occurrence that it is essential to make the subtle distinction between "purely automatic" and "passive but controllable" inference processes. If

initial inferences are not "automatic," but are instead simply fast, unintended, and unaware, then the explanation for the correspondence bias (Gilbert, 1989) remains unchanged. However, an additional way to control it opens up—through preventing trait inference.

For example, Quattrone (1982) demonstrated, by changing what subjects were led to see as salient information, that sometimes the initial inferences people form are not dispositional, but situational, dependent on their expectancies at the time they perceive the stimulus information. The task was borrowed from the correspondence bias paradigm, in which subjects view a speech on a topic that a target was either assigned to write or chose to write, but additionally subjects were asked to ascertain subtle influences of experimenters on subjects in experiments. Thus, when watching the target person, subjects were now focused on the impact of the experimenter. Krull (1993) demonstrated a similar effect of inferential goals in determining whether an initial inference is dispositionally or situationally based. Given the appropriate goal, correspondent inferences not only disappeared, the effect reversed and people overattributed to the situation. As Krull concludes, "the grist change(s) the mill" (p. 340). This is consistent with Lupfer, Clark, and Hutcherson's (1990) belief that situational inferences may be formed spontaneously when background information that promotes situational attributions is present. The conclusion that goals control dispositional inference is also reached by Uleman and Moskowitz (1994) who found that spontaneous trait inference could be inhibited by a subject's proximal goal. They concluded that such inferences are not completely automatic, but are goal dependent.

Detailing the impact of goals on trait inference is not meant to diminish the importance of such inferences in everyday psychological functioning. Just because trait inferences are not inevitable and can be controlled does not mean that they do not usually occur. We do not wish to imply that controlling dispositional attribution by preventing initial trait inferences is the default. In fact, the opposite is suggested; trait inferences typically occur, and there are distal goals in place that make them functional and likely. Thus, the more typical role for volitional control is to get people to correct an initial dispositional inference (which we turn to next) rather than to prevent dispositional inferences from ever occurring. But this does not mean that goals cannot override the tendency to attribute to traits in the early stages of social judgment.

Goals and the Correction of Dispositional Attributions. Just as stereotype activation has been depicted as passively occurring but open to goal-driven correction, so too are the initial impressions of personality we form. We have just seen that goals can serve to determine whether people passively form initial trait inferences. A second issue of volitional control revolves around how and when people correct their initial, effortless judgments (if formed) through somewhat more deliberate and controlled attributional reasoning. This issue of understanding how and when goals initiate and regulate the processes through which attributions are reached is separate from the well established literature on how goals direct the content of

one's attribution, as demonstrated in research on attributional biases (see Ross & Fletcher, 1985, for a review).

Gilbert et al. (1988) demonstrate that correcting an inference requires cognitive capacity. They followed a procedure used by Snyder and Frankel (1976) in which subjects watch a tape of a nervous, anxiety-ridden person. Some subjects were told that the reason for this anxiety was the discussion topic the person was speaking about—sexual fantasies. These subjects formed an initial inference that the person was anxious but corrected this inference by taking into account the topic. Other subjects were told the topic was bland (e.g., world travel). These subjects did not correct their initial inference by subtracting out the input from the context—the person was seen as dispositionally anxious. However, an interesting twist appeared when subjects in the same circumstances were made cognitively busy. Busy subjects who were told the topic was anxiety producing now failed to take this information into account. They proceeded to judge the person as dispositionally anxious, forming a correspondent inference that failed to be corrected despite the anxiety-provoking nature of the situation. When cognitive capacity is not available, perceivers do not take into account contextual factors that can correct an initial inference.

However, even having the available capacity for effortful correction is often not enough. People may freeze at the early inferential stage, failing to consider context, even when no capacity constraints are placed on them. This is precisely what is shown in the basic demonstration of the correspondence bias (Jones & Harris, 1967). Earlier, it was suggested in the principle of least effort that people prefer not to expend cognitive capacity; processes such as categorizing others in terms of coarse overgeneralizations and dispositional inferences grow out of seeking cognitive economy. Thus, correcting for correspondent inferences through cognitive effort may require more than just the availability of *capacity* to exert that effort, but a *goal* that makes the individual want to exert greater effort, that undermines the confidence with which people rely on effortless, passively formed judgments.

Working within the framework of the lay epistemic model (e.g., Kruglanski, Chapter 17, this volume), Webster focused on closure seeking and closure avoiding to illustrate that goals determine whether the correspondence bias is augmented or attenuated. Closure seeking leads individuals to “freeze” their judgments and produce what is experienced as confident and unambiguous knowledge. As described by Bruner (1957), this sort of freezing (promoted by schemas and prior expectancies) allows predictive veridicality, or what Webster calls “predictability and a base for action” (p. 262). Jones (1979) similarly stated, “We supposedly make dispositional attributions to facilitate our control over the social environment and to enhance predictability. But the existence of a fundamental attribution error suggests that this subjective feeling of control is purchased at the high cost of premature closure” (p. 107).

Taking Jones's logic that control is bought by costly early closure, Webster set out to test that if closure could be put on sale, then people should be more likely to purchase it in to attain control. However, if the already high

cost of premature closure is raised even further, closure may become too expensive, and control will be forfeited along with overattribution to disposition. The price of closure is said to be determined by goals that make closure either desired or avoided. Thus, if the overattribution effect is caused by a tendency to attribute causes to dispositional factors because such categorical inferences are easiest, while adjusting those inferences to take the situation into account is effortful, then goals that promote closure (in this case, working on an unattractive task) should augment the likelihood of forming correspondent inferences. However, goals that promote the avoidance of closure and highlight the costs associated with early or premature freezing (in this case, working on an attractive task) should be likely to instigate extended processing (e.g., Kruglanski & Mayseless, 1987). If correction of initial correspondent inferences is indeed effortful, goals that promote the exertion of the required effort should eliminate the tendency to overattribute to disposition.

Converging evidence for this role of goals as instigators of more deliberate processing in which initial, more effortless inferences are corrected and adjusted is provided in the work of Tetlock (1983, 1985, 1992; Tetlock & Kim, 1987). Tetlock (1985b) examined the impact of a goal of forming accurate and justifiable judgments on the overattribution effect. Some subjects were led to expect that they would have to justify their impressions as part of the experimental procedure, thus being held accountable for their attributions. Others simply performed the judgment task with no goal provided for them. Accountable subjects were less likely to attribute an essay that a person was forced to write to their personal beliefs on the topic, whereas nonaccountable subjects showed the classic overattribution effect (subjects attributed a speech writer's position to the true beliefs of the writer, even when knowing the writer was forced to write the speech). This occurs because the goal created a more discriminating subject, instigating what Tetlock, Skitka, and Boettger (1989) called integrative complexity. High choice signals a dispositional cause to the careful attributor, whereas forced choice suggests a situational cause. But only accountable subjects were discriminating enough to make use of these cues. As Tetlock and Kim (1987) state, accountable subjects “adopt a more self-conscious, controlled approach to how they will analyze the social information available to them.”

Summary

In our section on goal influences on information processing, we have attempted to distil from the literature several goal-related principles of psychological functioning and relate those principles to information processing. This discussion has begged several questions, particularly concerning what the role of goals has been during the “social cognition era,” how that role has changed, and whether the field truly was “strictly cognitive” during this period. Although a cogent case may be made that the field has always been cognitive (Higgins, 1992), can this case be made for motivation, particularly in the past 20 years? Our review suggests that goals have played an integral

part in demonstrating, qualifying, and explaining social-cognitive models. Goals initially remained implicit, defined simply as instructional tasks, but even when goals were being explicitly ignored, or treated as simple, proximal instructional sets, there remained an implicit adherence to the traditional position that people are motivated to seek meaning and attain a coherent view of the social stimuli that confront them. As Tetlock and Levi (1982, p. 83) concluded "there is a latent motivational dimension to the cognitive research program." However, explicit roles for distal goals have also emerged and goals have been examined in both conflict and harmony; as competing with each other or facilitating each other in guiding information processing.

In reviewing goal influences on cognitive processing, distal goals were suggested to make trait inferences and stereotype use fairly ubiquitous processes; the default processing strategy, in the absence of explicit proximal goals, is to use what is easiest or most accessible (e.g., the stereotype and the trait inference). But these processes are not automatic, they are strategies, and despite their noted ubiquity and unaware-unintended nature, conflicts between distal goals or between distal and proximal goals can instigate processing that can ultimately control passively applied strategies. Correcting for them by preventing them from occurring is often difficult, and correcting for these influences after they have occurred is the more typical mode through which goals can exert an impact on judgment. It is also important to note that often such goal conflicts do not exist, or that when conflicts do exist with a distal goal (such as through introducing proximal goals or by activating a conflicting distal goal), we are prevented from correcting for their influence by contextual factors that limit either capacity or ability. Finally, goals can have both unintended effects and intended effects on processes that occur either with or without our awareness. Thus, the potential to correct for influences on judgment does not depend on one being aware that (1) such influences exist or that (2) goals influence such processes.

Current research has relatively little to say (in relation to the literature on goals and behavior) on conflict between goals, and how competition between goals affects cognitive processing. Kruglanski and Freund (1983) placed need for structure and fear of invalidity in conflict with one another, and showed that when faced with a need for structure (fast judgments being required because of a deadline) the tendency to categorize and stereotype, to seek fast and effortless solutions, predominated. But how much confidence will the person who desires accuracy have when forced to make quick judgments? Will the inability to consider numerous alternatives due to time pressure be perceived as the lack of existence of alternatives, thus yielding sufficient knowledge and confidence, or will the inability to process in a detailed fashion and consider alternatives leave the individual unable to experience a sense of goal attainment? The social-cognitive literature offers few answers to such questions. However, research on goals and action suggests one answer. If one is left feeling that a goal state has not been satisfied, the individual perseverates on the task if possible and demonstrates resumption of the activity when given the

appropriate chance (Ovsiankina, 1928; Zeigarnik, 1927). Thus, we might expect the time-pressured individual who desires accuracy to feel that their judgments are insufficient. Such individuals should desire to postpone making judgments until further processing effort can be exerted, but because they are forced to make a judgment, they may experience a lack of confidence (doubt). This would be reflected in attempts to either rationalize their judgments (by attributing them to the time constraints, a type of forced compliance) or to resume cognitive activity when the opportunity next presents itself.

A second shortcoming of current models is the broad strokes with which they speak of information processing. While the intent was to use terms such as heuristic and systematic, categorical and individuating, or top-down and bottom-up as metaphorical endpoints to an information-processing continuum, the vast range of processing strategies that lies in between remains underarticulated. Instead, the specific *features* of information processing need to be spelled out. Bargh (1989) outlines a model for discussing the features of information processing in describing the differences between automatic and controlled processing. While easily construed as endpoints on a processing continuum, specific features associated with information processing are additionally detailed, and varieties of automaticity discussed. Thus, a process is not merely construed as automatic or controlled, but as meeting a certain number of features that characterize the manner in which information is processed—controllability, intentionality, awareness, and attention (James, 1890, broke attention down further to varieties of attention). Such an approach focused on the features of processing allows for better specification of the links between goals and information processing.

A third shortcoming is centered around the focus the literature has placed on goals related to coherence, prediction, and control, what Tetlock and Levi (1982) called the need for effective control, at the expense of other goals. Jones and Thibaut (1958) similarly referred to the goal of gaining cognitive clarity, but they proposed other classes of interaction goals that have received far less attention in the literature. For example, Jones and Thibaut's goal of securing motivational and value support (p. 161) is similar to what Smith and Mackie (1995) labeled "valuing me and mine," what Tetlock and Levi (1982) called need for self esteem, and what Eagly and Chaiken (1993) called defense motivation. But a quick glance at the Smith and Mackie chart that opens their text reveals relatively little work has been done exploring this goal and its effects on person perception. A similar situation is found for the goal Smith and Mackie label as "seeking connectedness," a goal that Baumeister (1995; making a similar point about the dearth of research) called "belongingness" (see also Stevens & Fiske, 1995), that Tetlock and Levi (1982) called need for social approval, and Eagly and Chaiken called impression motivation (in that people seek to project an image that will gain them acceptability). Jones and Thibaut referred to this goal as maximizing beneficent social response (p. 162), and although it is linked to the control motive in that a person's knowledge that others like him or her gives that person power over the others, it was predicted to have

other effects based on the value it provides for boosting the individual's sense of self-worth and virtue. This could have perceptual implications, such as a perceiver favorably biasing the impressions of those who give indications of liking the perceiver. For example, the correspondence bias may be facilitated by belongingness goals that prevent a person from seeing constraints on a desired other's behavior. To date, the literature on goal effects on person perception has retained a narrow focus, giving far less emphasis to interaction goals other than seeking coherence, control, and cognitive mastery/clarity.

Finally, this review highlights that goals have been examined almost exclusively as independent variables in order to understand their impact on cognitive processes servicing the pursuit of coherence. Relatively little has been said about how goals may serve as dependent variables, with the focus on how cognitive processes may determine the types of goals that we adopt. Whereas the literature on goals and action has focused on goal setting, how people's cognitive processes affect the goal-setting process remains virtually unexplored. What has been demonstrated, however, by the literature on goals and cognition, is not simply the active nature of social cognition, but the flexible processes involved in the construction of social knowledge, and the role of goals in regulating these processes.

NOTES

1. This assumption is perhaps not adopted by Langer (1989), who asserts that there is no limit to processing capacity. However, one interpretation of Langer's assertion is that there is some upper limit, but the costs of being mindful (as opposed to mindless), or the effort one must exert to be noncategorical and nonschematic in one's processing, do not come close to approaching that limit. Thus, the essence of her statement may be that, at an experiential level, people are capable of being mindful without coming close to reaching the limits or boundaries of the processing system. They are trained to be mindless, but if mindfulness was the adopted default, then it too would be experienced as effortless. This is believed by Langer to be possible since mindfulness does not tax capacity, the limits of which are so high as to be, for practical purposes, boundless.
2. The person-centered factors that shape perception will vary within the same person across time and situations (dependent on the situational press and one's fluctuating needs and goals) and across persons (e.g., liberals and conservatives) within the same situation (dependent on individual differences in needs, goals, expectancies, beliefs, values, and accessible constructs).
3. Lay epistemic theory (Kruglanski, 1990) seems to equate closure with quick cessation/early freezing and avoiding closure with increased deliberation. Goals such as being accurate (fearing being invalid) promote deliberation and avoiding closure, whereas goals such as needing structure promote fast closure. In the antithetic tone of the philosophical debate between inquiry and truth, this would mean that information processing is anchored by polar opposites—frozen and unfrozen thought, closure and avoiding closure. Unfrozen thought (avoiding closure) would be the path to truth, frozen thought (seeking closure) the road to the end of inquiry. However, although they are the opposing points in a philosophical debate, closure and accuracy (inquiry and truth) are not theoretically polar opposites. As defined, closure is a desire for knowledge, an end to indeterminate states. It is a general goal that can be realized in several ways. Quick cessation and reliance on heuristics is one way to achieve closure, but so, too, is closure's philosophical nemesis—accuracy. For example, Trope and Bassok (1982) found that people seek accurate, diagnostic information rather than belief-consistent information (cf. Snyder & Swann, 1978). There is no need to equate closure with structured and schematic solutions arrived at quickly. People can either desire to approach or avoid closure as general motives, and each of these motives can be achieved through processing ranging from structured and categorical thought to complex and individuated thought (thus, perhaps the earlier language of need for structure and fear of invalidity more accurately captures this possibility). In more recent revisions to his model, Kruglanski (1996) explicitly discusses the possibility that closure and accuracy are not incompatible.
4. But it can be traced at least as far back to James's (1890, p. 451) belief: "The stream of our thought is like a river. On the whole, easy simple flowing predominates in it, the drift of things is with the pull of gravity, and effortless attention is the rule. But at intervals a log-jam occurs, stops the current, creates an eddy, and makes things temporarily move the other way. If a real river could feel, it would feel these eddies and set-backs as places of effort."

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