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CHAPTER 3

Auto-Motives

Preconscious Determinants of Social Interaction

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Habit covers a very large part of life, and one engaged in studying the objective manifestations of mind is bound at the very outset to define clearly just what its limits are.—*James (1890, p. 104)*

I can control something that is self-controlled—if I can control the states of the world that cause it, in controlling itself, to act.—*Dennett (1984, p. 56)*

THE QUESTION OF CONTROL OVER SOCIAL THOUGHT AND BEHAVIOR

How much control does one exercise over one's own thought and behavior in social situations? This important and intriguing question has guided a considerable amount of research since it was posed by Langer (1978; see Uleman & Bargh, 1989). To ask whether we as individuals control our own thought and behavior supposes that other agents of control are possible. Thus, one approach to the question is to consider what other agents of control may exist, and the extent of their influence.

One possibility is that to some extent social behavior and cognition are under the direct control of the environment (Bargh, 1984). That is, information present in the social environment may activate internal memory representations that then influence the interpretation of that information, or perhaps even act upon it, such as to make and store judgments or impressions, or make and carry out behavioral decisions. Because these operations on the environmental input occur without active, intentional conscious involvement, or awareness of the extensive processing taking place, they are called "preconscious" processes (see Bargh, 1989, for a review).

Automatic Influences in Social Perception and Judgment

How long is the reach of these environmentally driven influences? Are they limited to social perception, or can they guide actual social behavior? Stimulated

by Langer's (1978) position that one's behavior in complex social interactions is often under the control of environmental cues, such that behavioral responses do not require active conscious involvement, my colleagues and I embarked on research testing the existence and then the limits of the social environment's direct control over thought and behavior. This research has shown that social information activates internal memory representations without the person's awareness of the presence of the information in the environment (Bargh, 1982), and that these activated representations subsequently influence the interpretation of behavioral information and the outcome of social judgment processes (Bargh, Bond, Lombardi, & Tota, 1986; Bargh & Pietromonaco, 1982). Moreover, these preconscious activation effects occur even under conditions of information overload (Bargh & Thein, 1985; Bargh & Tota, 1988), and when the subject is actively attempting to prevent them from occurring (Bargh & Pratto, 1986).

Other lines of research have documented the unintentional, preconscious activation of social stereotypes by salient, differentiating environmental features such as age, race, and gender (e.g., Brewer, 1988; Devine, 1989; McArthur & Friedman, 1980; Mills & Tyrrell, 1983; Pratto & Bargh, in press). There is also a growing body of evidence that social stimuli are evaluated preconsciously; that is, they are classified as "good" or "bad," and this evaluation then remains active in memory to influence responses to the stimulus (Bargh, Chaiken, Govender, & Pratto, 1990; Bargh, Litt, Pratto, & Spielman, 1989; Fazio, Sanbonmatsu, Powell, & Kardes, 1986). Still other studies have shown that social behaviors are preconsciously classified in terms of the traits they exemplify (e.g., Winter & Uleman, 1984), and that these activated trait-related representations are likely then to be used in a default manner in ascribing causality for the behavior (i.e., in making dispositional attributions when attentional resources are not sufficient to accomplish the more effortful task of making a situational attribution; see Gilbert, 1989; Gilbert, Pelham, & Krull, 1988).

Responses to the Environment Require an Intention

But there are indications that there is a limit to the extent of preconscious determination of social cognition and behavior, and that this is at the stage of *responding* to the environment, be it in the form of judgments or decisions, or in terms of behavior (verbal and nonverbal) itself. That is, preconscious processing of environmental information appears to be bounded, the restriction being that although responses may be strongly or even exclusively influenced by preconscious analyses, the making of the response itself requires an intervening intention (see Bargh, 1989). For instance, it has been argued that social judgments and causal attributions (Smith, 1984, p. 403; Smith & Miller, 1983; Winter, Uleman, & Cunniff, 1985) and behavior (Langer, 1978) are produced directly by environmental stimuli without the need of an intervening conscious intent, and the evidence is that these effects do not occur without an intention that they do (see Bargh, 1984, 1989; Higgins & Bargh, 1987, pp. 376-378). Also, although subjects

in complex social interactions is such that behavioral responses do not occur. In a series of experiments, colleagues and I embarked on research of the social environment's direct effect. Research has shown that social information processing occurs without the person's awareness of it (Bargh, 1982), and that these processes are the interpretation of behavioral information (Bargh, 1982). Moreover, these preconscious processes of information overload (Bargh & Chartrand, 1999) if the subject is actively attempting to control his or her behavior (Bargh, 1986).

In the unintentional, preconscious processing of environmental features (Bargh, 1988; Devine, 1989; McArthur & Chartrand, in press). There is also a preconscious evaluation of the environment; that is, evaluation then remains active in the environment (Bargh, Chartrand, Gollwitzer, & Trötschel, 1996; Fazio, Sanbonmatsu, Powell, & Markus, 1986). That social behaviors are preconscious (e.g., Winter & Uleman, 1984; Chartrand & O'Connell, 1987; Chartrand & Huberman, 1992; Chartrand & Huberman, 1993; Chartrand & Huberman, 1994; Chartrand & Huberman, 1995; Chartrand & Huberman, 1996; Chartrand & Huberman, 1997; Chartrand & Huberman, 1998; Chartrand & Huberman, 1999; Chartrand & Huberman, 2000; Chartrand & Huberman, 2001; Chartrand & Huberman, 2002; Chartrand & Huberman, 2003; Chartrand & Huberman, 2004; Chartrand & Huberman, 2005; Chartrand & Huberman, 2006; Chartrand & Huberman, 2007; Chartrand & Huberman, 2008; Chartrand & Huberman, 2009; Chartrand & Huberman, 2010; Chartrand & Huberman, 2011; Chartrand & Huberman, 2012; Chartrand & Huberman, 2013; Chartrand & Huberman, 2014; Chartrand & Huberman, 2015; Chartrand & Huberman, 2016; Chartrand & Huberman, 2017; Chartrand & Huberman, 2018; Chartrand & Huberman, 2019; Chartrand & Huberman, 2020; Chartrand & Huberman, 2021; Chartrand & Huberman, 2022; Chartrand & Huberman, 2023; Chartrand & Huberman, 2024; Chartrand & Huberman, 2025). For the behavior (i.e., in making judgments or decisions, or in making attributions; see Gilbert, 1989; Chartrand & Huberman, 1992; Chartrand & Huberman, 1993; Chartrand & Huberman, 1994; Chartrand & Huberman, 1995; Chartrand & Huberman, 1996; Chartrand & Huberman, 1997; Chartrand & Huberman, 1998; Chartrand & Huberman, 1999; Chartrand & Huberman, 2000; Chartrand & Huberman, 2001; Chartrand & Huberman, 2002; Chartrand & Huberman, 2003; Chartrand & Huberman, 2004; Chartrand & Huberman, 2005; Chartrand & Huberman, 2006; Chartrand & Huberman, 2007; Chartrand & Huberman, 2008; Chartrand & Huberman, 2009; Chartrand & Huberman, 2010; Chartrand & Huberman, 2011; Chartrand & Huberman, 2012; Chartrand & Huberman, 2013; Chartrand & Huberman, 2014; Chartrand & Huberman, 2015; Chartrand & Huberman, 2016; Chartrand & Huberman, 2017; Chartrand & Huberman, 2018; Chartrand & Huberman, 2019; Chartrand & Huberman, 2020; Chartrand & Huberman, 2021; Chartrand & Huberman, 2022; Chartrand & Huberman, 2023; Chartrand & Huberman, 2024; Chartrand & Huberman, 2025).

Intention

It is to the extent of preconscious processing, and that this is at the stage of information processing or judgments or decisions, or in making attributions. That is, preconscious processing is not intended, the restriction being that it is exclusively influenced by preconscious processes. It requires an intervening intention, argued that social judgments and attributions (Bargh & Chartrand, 1999; Chartrand & Huberman, 1992; Chartrand & Huberman, 1993; Chartrand & Huberman, 1994; Chartrand & Huberman, 1995; Chartrand & Huberman, 1996; Chartrand & Huberman, 1997; Chartrand & Huberman, 1998; Chartrand & Huberman, 1999; Chartrand & Huberman, 2000; Chartrand & Huberman, 2001; Chartrand & Huberman, 2002; Chartrand & Huberman, 2003; Chartrand & Huberman, 2004; Chartrand & Huberman, 2005; Chartrand & Huberman, 2006; Chartrand & Huberman, 2007; Chartrand & Huberman, 2008; Chartrand & Huberman, 2009; Chartrand & Huberman, 2010; Chartrand & Huberman, 2011; Chartrand & Huberman, 2012; Chartrand & Huberman, 2013; Chartrand & Huberman, 2014; Chartrand & Huberman, 2015; Chartrand & Huberman, 2016; Chartrand & Huberman, 2017; Chartrand & Huberman, 2018; Chartrand & Huberman, 2019; Chartrand & Huberman, 2020; Chartrand & Huberman, 2021; Chartrand & Huberman, 2022; Chartrand & Huberman, 2023; Chartrand & Huberman, 2024; Chartrand & Huberman, 2025). Also, although subjects

who were chronically sensitive to certain dimensions on social behavior were more likely to notice them and use them in judgments (Bargh et al., 1986; Bargh & Chartrand, 1985; Higgins, King, & Mavin, 1982), and those subjects whose attitude toward an activity had been made more accessible were more or less likely (depending on the valence of their attitude) to engage in that activity (Fazio, Powell, & Herr, 1983), those judgments and behavior were always *intended* by the subjects in those studies.

There are several lines of evidence supporting the existence of the apparent asymptote for preconscious control at the point of responding to the environment. First, the forms of preconscious social information processing documented thus far—stereotype and trait construct activation, for example—can be *prevented* from influencing responses, given sufficient motivation and effort (Bargh, 1989; Devine, 1989; Fiske, 1989). It has been well documented that current conscious purposes are capable of overriding automatically suggested responses if the two are in conflict (Bargh, 1984; Logan, 1980; Neely, 1977; Posner & Snyder, 1975). For example, in the Bargh (1982) dichotic listening study, the presence in the unattended channel of stimuli relevant to a subject's self-concept did activate the corresponding mental constructs (as indicated by measures of spare processing capacity), demonstrating preconscious, unintended activation of the self-concept by relevant information in the environment. However, this activation did *not* interfere with the subject's conscious and intended task of shadowing the attended channel.

Moreover, the tendency to spontaneously encode verbally presented behaviors in terms of trait concepts (e.g., Winter & Uleman, 1984) disappears when the subject's processing goal does not require comprehension of the meaning of the behavior (Moskowitz & Uleman, 1987; Uleman, 1987). Thus, when pursuing a goal for which spontaneous trait influences are not useful (as they are useful in comprehending a behavior), subjects do not make them. In addition, although there is converging evidence as to the ability of one's chronically accessible, frequently applied social trait constructs to become activated automatically in the mere presence of relevant information, in all studies showing an influence of these automatically activated structures on actual *responses* (judgments, attention allocation, memory; Bargh et al., 1986; Bargh & Chartrand, 1985; Higgins et al., 1982), subjects had the intentional goal of forming an impression of the target person.

Studies utilizing the Stroop paradigm (e.g., Bargh & Pratto, 1986; Pratto & John, 1989) also demonstrate uncontrollable activation effects by obtaining longer color-naming latencies for stimuli predicted to automatically attract processing resources, such as those corresponding to negative personality traits or to the subjects' chronically accessible social constructs. Yet at the same time, subjects rarely make mistakes in their intended task of correctly naming the colors of the stimulus words. Such studies show that even preconscious processes that do strongly suggest a behavioral response appropriate for the current task (e.g., the word "GREEN" in blue ink in the Stroop task) can be and are typically inhibited from determining the response if they conflict with the response called for by a subject's current goal. This

holds true even when the automatic response is the usual and habitual one for that situation and the goal response is novel (Logan & Zbrodoff, 1979; Neely, 1977; on the general point that automatic processes can be overridden by acts of control, see Logan, 1989; Posner & Snyder, 1975; Uleman, 1989).

Finally, many social-cognitive processes that have been claimed to occur automatically have been shown instead to require the existence of a specific intention or goal state. We (Bargh & Tota, 1988) found, in fact, that even in the case of the initial automatic activation of chronic constructs, different constructs may become active for depressed individuals, depending on whether the subject is actively thinking about the self or about the average other person. Similarly, Paulhus and Levitt (1987) showed that the trait concepts subjects endorsed as self-descriptive became increasingly positive as attentional load was increased; thus, when the ability to engage in deliberate, strategic responding was precluded, the default set of constructs automatically ready under the goal of self-presentation were considerably more positive (see also Paulhus, Graf, & Van Selst, 1989). Such findings of *goal-dependent* automaticity (Bargh, 1989), especially in the case of responses (as opposed to measures of cognitive activity alone), underscore the importance of the current processing goal in the making of responses to the environment.

Social Cognition and Interaction Are Goal-Directed

As to whether the social environment directly controls behavior, there exists no evidence in favor of—but compelling logical arguments against—the notion that social-interactive behavior can occur without an interposed intent or goal that it occur (see Bargh, 1989; Fiske, 1989). Behavioral responses in routine social interactions are highly dependent on consciously made choices and decisions during the course of the interaction (Abelson, 1980; Fiske, 1989; Gollwitzer, Chapter 2, this volume; Miller, Galanter, & Pribram, 1960; Norman & Shallice, 1986; Shallice, 1972). Automatic, preconscious influences on behavioral decisions certainly exist, and because of their implicit nature great confidence and weight may be placed on them (Bargh, 1989; Jacoby & Kelley, 1987), but the decisions themselves are made intentionally and in the service of the current goal.

Ever since the work of Kulpe, Ach, and Watt of the Würzburg school at the turn of the century, it has been known that the goal in place makes a tremendous difference in determining what information is attended to, how it is interpreted, and how it is acted upon. The Würzburg researchers observed that the subject's task goal, or *Aufgabe*, created a "determining tendency" that then automatically resulted in the desired response with no intervening conscious intent necessary (see Boring, 1950, pp. 402–406; see also Gollwitzer, Chapter 2, this volume; Zajonc, 1960). Neisser (1967) concluded that the current intent or goal was a primary determinant of cognition and behavior:

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will think of next [requires] a detailed understanding of what he is trying to do,
and why. (pp. 304–305)

Social psychologists have long recognized the power of the current goal state to determine what situational stimuli will be attended and what meaning they will have for the individual. Lewin (1935) argued that "a strongly accented goal so transforms the situation that practically all objects acquire a reference to this goal" (p. 102). The influence of goals and motives on perception was, of course, a major theme of the New Look research (see reviews by Allport, 1955; Bruner, 1957). The perceiver's current goals and physiological needs were considered a primary determinant of the accessibility of perceptual categories, and hence of perceptual selectivity and categorization of inputs. Jones and Thibaut (1958), in their pioneering paper on the consequences of interaction goals for social perception, put the point most directly:

If we can successfully identify the goals for which an actor is striving in the interaction situation, we can begin to say something about the cues to which he will attend, and the meaning he is most likely to assign them. (p. 152)

The last decade has seen a resurgence of research on the influences of information-processing goals (see Srull & Wyer, 1986, for a review). Briefly, these studies have shown that what is attended to among the different behaviors of a target person, the organization of that information in memory, and the amount of that information accessible to recall are all quite different for subjects trying to form an impression of the target than for those trying to remember the information for a subsequent memory test (Cohen & Ebbesen, 1979; Hamilton, Katz, & Leirer, 1980; Srull & Brand, 1983; Wyer & Gordon, 1982). Subjects encountering information (e.g., about a house) with different purposes (e.g., mentally assuming the role of a burglar vs. a home buyer) notice and remember different features (Anderson & Pichert, 1978; Wyer, Srull, Gordon, & Hartwick, 1982). One's mental organization of person information is altered by the nature of the audience to which one communicates that information—namely, whether one believes the audience's opinion of the target to be favorable or unfavorable (Higgins & McCann, 1984; Higgins & Rholes, 1978).

Motivational influences have received increased research attention as well. Persuasion researchers have documented that the particular features of a persuasive appeal that are attended to and have an influence on attitude change vary as a function of the processing strategy adopted by the subject, which in turn is a function of the personal importance of the message topic (Chaiken, 1980; Petty, Cacioppo, & Goldman, 1981; see review by Chaiken, Liberman, & Eagly, 1989). Moreover, the self-concept itself appears to be malleable in the face of motivational influences such as self-presentation (Jones, Rhodewalt, Berglas, & Skelton, 1981; Kunda & Sanitoso, 1989; Rhodewalt & Agustsdottir, 1986).

Motivation to be accurate in perceiving other people has been found to overcome some very strong automatic tendencies, such as stereotyping, the funda-

mental attribution error, and the influence of prior expectancies. Impression formation processes are different, depending on whether one's own important outcomes depend on the other person; such outcome dependency has been shown to lead to increased effort expended in the judgmental process and to greater accuracy as well (e.g., Erber & Fiske, 1984; Neuberg & Fiske, 1987). If a subject anticipates interacting with the target person he or she is judging, more information about the person is stored in memory, and it is also better organized (Devine, Sedikides, & Fuhrman, 1989); the motivating effect of anticipated interaction is quite pronounced in younger children, resulting in a considerable increase in their use of psychological concepts in thinking about other children (Feldman & Ruble, 1988). The powerful and difficult-to-overcome influence of salient information on social judgments (such as when a target person's features differ from those of the majority of the group being perceived; see Taylor & Fiske, 1978) can be overcome to an extent if it matters to the self-interest of the subject (Borgida & Howard-Pitney, 1983). Knowing that one is *accountable* for one's judgment about the attitudes and beliefs of another person has been found to overcome the "fundamental" attribution error of not taking situational constraints into account (Tetlock, 1985), and encouragement to form accurate impressions overcomes the influence of negative initial expectancies in impression formation (Neuberg, 1989). Finally, racial and other stereotypes can be overruled in the judgment process if the subject's values motivate him or her to counteract the stereotypic influence (Devine, 1989; Fiske, 1989).

Where Do Goals Come From?

Recently, detailed models of social cognition and personality have been developed that recognize this accumulation of evidence by including the current processing goal as a major determining factor of the course of thought and judgment (e.g., Cantor & Kihlstrom, 1987; Smith, 1984; Wyer & Srull, 1986). However, in recognizing the influence of goals, these models leave open the question of where the goal itself comes from on a moment-to-moment basis. A similar difficulty exists with previous cognitive models, as well as with most current artificial intelligence models that include a goal state as a determining factor (e.g., Miller et al., 1960; Newell & Simon, 1972; see critical review by Wilensky, 1983). The goal in these models is a given entity, a starting point for the model, which takes things from there. (The treatments of plans and goals by Miller et al., 1960, and by Schank & Abelson, 1977, do contain considerable attention to the matter of the original source of goals for the individual—in values, roles, and aspirations—but no specification of what determines which particular goal will be in place at any particular point in time.) This is not to suggest that these models are compromised by this lack of specification—only that their predictive ability, as Neisser (1967, p. 305) anticipated, is limited, as is the extent to which they capture the essence of naturalistic social cognition. As Wilensky (1982) put it,

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ty have been developed the current processing ht and judgment (e.g., l, 1986). However, in the question of where is. A similar difficulty most current artificial ing factor (e.g., Miller by Wilensky, 1983). t for the model, which s by Miller et al., 1960, attention to the matter ues, roles, and aspira- particular goal will be to suggest that these ly that their predictive l, as is the extent to gnition. As Wilensky

Conventional [artificial intelligence] models by and large do not deal with this issue of where goals come from. . . . In the real world, at least as much work is involved in determining what one wants to do as in determining how to do it. (p. 13)

By including the "goal box" or "executive process" only as an exogenous variable in models of cognition and action, and by leaving the question open as to where the goals themselves come from, one quickly runs into the classical "problem of volition" (see historical review by Kimble & Perlmutter, 1970), or what Neisser (1967, p. 292) called the "problem of the executive." That is, by not specifying why and when we have the goals we do, explanatory appeals must be made to nonobservable concepts, such as "consciousness," the "will," or "intention." Typically, the "executive process" selects the current goal and chooses among available alternative actions. But who *is* this executive making the choices and selecting the goals? "Is there a little man in the head, a *homunculus*? . . . Such explanations seem to lead only to an infinite regress" (Neisser, 1967, p. 295).

The "soul" or "homunculus" problem in accounting for voluntary, intended thought and behavior has, of course, been around for a long time; Sechenov (1935), James (1890), and Miller et al. (1960), among others, have wrestled with it. In their review, Kimble and Perlmutter (1970) point out that "the central problem in accounting for voluntary behavior is finding a cause for it" (p. 364).

The Incredible Shrinking Little Person in the Head

Needless to say, the reader will not find a solution to this age-old problem in this chapter. But he or she will find a proposal for one way to reduce the contents of the "black box" that currently contains the executive processes supplying individuals with processing goals and action plans—a proposal codified from many related but partial previous proposals. The general strategy is to shrink the domain of the unknown in the "black box" and bring ever more of its workings out into the specified open (see the cogent and entertaining discussions of this solution to the homunculus problem by Dennett, 1978, and Uleman, 1989).

At the opening of the 1957 science fiction film *The Incredible Shrinking Man*, the protagonist finds himself trapped in a radioactive mist. This, of course, results in a syndrome previously unheard of in the annals of medicine or science: Our hero gradually but inexorably shrinks until he eventually disappears and becomes one with the universe. Just such a fate is to be desired for the homunculus or "little person in the head" who, in the guise of "executive" or "control" processes, directs the rest of a model that *is* specified (see Dennett, 1978; Kimble & Perlmutter, 1970; Neisser, 1967). I argue here for one approach to shrinking the domain of the homunculus: To wit, much goal-setting activity may not be under "executive" control after all, but instead may be initiated by patterns of environmental features.

AUTOMATIC ACTIVATION OF MOTIVES AND GOALS

The evidence reviewed earlier indicated that responses to the environment—be they behaviors, decisions, or judgments—are goal-directed. Thus, if there does exist any control of responses by the social environment, it follows that it must be via an automatic pathway through the particular goal or intention representation that will produce that behavior. In other words, if one grants that responses to the environment require an intervening goal and intent, the only way it is possible for direct environmental control over responses to occur is for the environment itself to activate that goal or intent. This formulation supposes that goals and intents are represented in the mind in the same fashion as are social constructs, stereotypes, and schemas. The probability that such social representations become activated directly by environmental information is a joint function of their applicability to the information and their accessibility in memory (Higgins, 1989; Higgins & Bargh, 1987). Just as other chronically accessible social representations do, then, chronic goals and intents, and the procedures (Smith, 1984) and plans (Miller et al., 1960; Wilensky, 1983) associated with them, may become directly and automatically linked in memory with representations of environmental features to which they are frequently and consistently associated (see Bargh, 1984; Posner, 1978). As a consequence, these chronic goals and intents may become active automatically upon the activation of the relevant feature representations.

Therefore, the mechanism proposed here by which the social environment may control judgments, decisions, and behavior is the formation of direct and automatic mental links between representations of motives and goals in memory (and consequently the goals and plans associated with them) and the representations of the social situations in which those motives have been frequently pursued in the past. The result of this automatic associative link is that the motive-goal-plan structure becomes activated whenever the relevant triggering situational features are present in the environment. The activated goals and plans then presumably guide the social cognition and interaction of the individual, without the person's intention or awareness of the motive's guiding role.¹

There are two fundamental components to the proposed process. First, there is an automatic, preconscious activation of situational motives and goals by the patterns of environmental stimuli to which they have become associated. Second, these activated goal structures guide social perception, judgment, and behavior in response to subsequent features of the situation, without the person knowing of this influence. In the next section, I marshal support for the existence and operation of these two component processes. Following that is a discussion of how this "auto-motive" model may account for observed phenomena in social perception and interaction.

Situations Directly Activate Intentions

There are three basic routes by which situational features may automatically activate motives and goals (see Figure 3.1). First, a motive or goal frequently and

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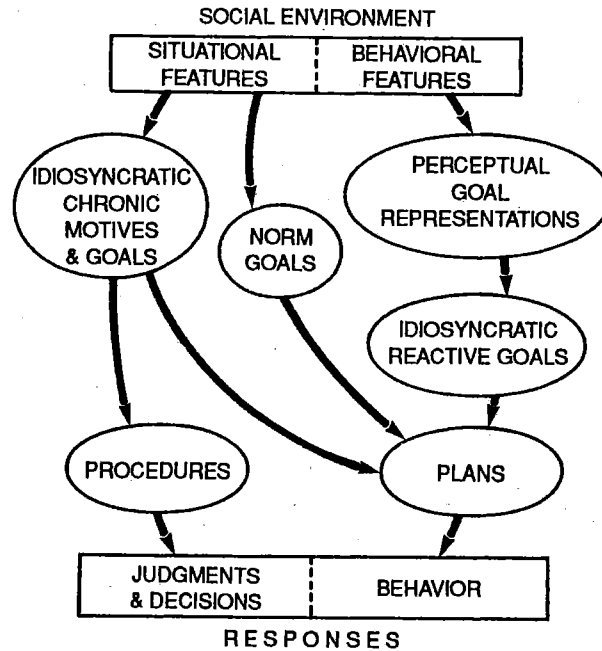


FIGURE 3.1 The auto-motive model of automatic responses to the environment.

consistently activated in that general type of situation (e.g., a self-presentational goal at a party) may be activated by the generic features of that situation (see Schank & Abelson, 1977). Second, the societal or cultural norms for appropriate behavior in that type of situation may be directly activated by situational features, and these norms in turn may directly activate intentions and goals to behave in normative ways. Finally, the third possible route to behavioral intention representations is not triggered by global features of the situational setting, but by the perceived goals and intents of the people one is interacting with within the situation. These *reactive* goals are thus linked with the goal representation relevant for the other's behavior, and not to the representation of the situation (i.e., a pan-situational automatic route to interaction goal setting).

The strength or diagnosticity of the environmental information needed to automatically activate a goal representation is likely to differ among the three routes shown in Figure 3.1. It is assumed that features associated with frequently encountered situations (e.g., work settings, dates, home, shopping) will most usually be unambiguous and clearly relevant to a single situational representation, so that the accessibility of the situational representation will not play much of a role in whether the features will activate the representation directly. There also should be minimal individual differences in whether the situational representation will be activated directly by the features of the setting, as the representations of such frequently encountered situations should be highly chronically accessible.

for most people. Because the pathway from the environmental features to the situational representation (for common situations) is assumed to be automatic for most people, the situational representation is not included as a variable in the diagram of Figure 3.1.

The interplay of applicability and accessibility is much more critical for the remaining pathway to automatic goal activation, that from behavioral features through perceptual goal categories to one's own response goals (see Figure 3.1). Behavioral information is likely to be potentially relevant to several different underlying goals for the actor, and so what one perceives the goal of the actor to be will be highly dependent on the relative accessibilities of the various goal representations applicable to the behavioral features. Once the behavior of the actor is categorized in terms of a goal, the activation of the "reactive goal" is assumed to follow directly and immediately. Thus, the goal that the perceiver adopts automatically in response to the perceived goal of the target will largely be a function of the relative accessibility of the various perceptual goal representations applicable to the behavior. Considerable individual differences in the accessibility of perceptual goal constructs are expected, as have been obtained in the case of trait construct accessibility (Higgins et al., 1982).

Automatic Activation of Situation-Specific Motives and Goals

Several theories of intentional behavior have, in fact, posited an automatization of behavior through the development of an automatic associative link between situational features and behavioral intentions. Lewin's (e.g., 1935) field theory considered behavior to be "steered" by the valences, or learned functional possibilities, of the objects in the environment by activating behavioral goals associated with them (pp. 49-50). Valences of environmental objects were described as deriving "from the fact that the object is a means to the satisfaction of a need" (p. 78). Thus environmental features had their effect as "field forces" on an individual's behavior in Lewin's theory by their continual activation of goal and need representations. Ach (1935; see also Heckhausen & Beckmann, 1990) referred to a process of *volitionale Objektion* by which intentions repeatedly carried out in a given situation come to be activated upon the mere perception of the situational features. It can be said that the early German will psychology embraced the principle of the close connection between the perception of an environmental object and the activation of motives and goals previously associated with it (see also Gollwitzer, Chapter 2, this volume).

Later treatments of intentional behavior in the information-processing tradition have been quite explicit in postulating a direct link between environmental features and behavioral goals. Miller et al. (1960), in proposing their cybernetic "test-operate-test-exit" (TOTE) model of plan-driven behavior, drew a parallel between innate animal instincts and habitual, overlearned plans:

Ethologists have much to say about the stimulus control of behavior, about the recognition by the animal of the conditions appropriate for executing a Plan.

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Habits and skills [in humans] are Plans that were originally voluntary but that have become relatively inflexible, involuntary, automatic. . . . The description of the conditions under which various skilled components will be triggered, or released, is much the same in both cases. (pp. 75, 82)

Norman and Shallice (1986; see also Shallice, 1972) have developed a detailed model of the interplay between goal or action schemas, and the environmental conditions to which they respond. Their model provides an account of how well-learned action sequences—for example, those involved in driving a car—can be accomplished without the need for much attentional or intentional involvement, once the initial "source" goal (e.g., to drive home from work) has been set. Component "subschemas" of the larger action structure (e.g., those involved in turning, stopping, and steering) operate autonomously in response to relevant environmental input. Neisser (1967, p. 92) and Kahneman (1973, p. 70) have also argued that well-learned actions can be controlled directly by preconscious mechanisms.

Hence, in Norman and Shallice's (1986) model, environmental stimuli can control behavior, but only given that the overarching source goal has been activated (e.g., the intention to drive home). The activation for the source goal itself is said to come either from a "supervisory attentional system" (SAS; Norman & Shallice, 1986, p. 6), clearly the source of intentional and conscious control, or from "motivational factors" (p. 7) that are said to bias the SAS "toward the long-term goals of the organism by activating source schemas" (p. 7).

Although there is no explicit link between environmental stimuli and the activation of a source goal schema in their model, Norman and Shallice (1986) claim that it accounts for a certain type of "action slip" or unintended behavior called a "capture error" (Norman, 1981). Such unintended acts occur when the environmental cues relevant for a habitual action "capture" an individual's behavior, even though his or her intention is currently otherwise this particular time (e.g., when a bus driver pulls over at a bus stop while driving the family car). These capture errors occur only when insufficient attention is being paid to the intended action, allowing the behavioral goal to be usurped by a highly accessible, automatically suggested behavioral response associated with those environmental conditions. The fact that greater concentration on the unintended act would prevent these usurpations is consistent with the evidence cited earlier that consciously held goals are able to override and inhibit automatically suggested, even habitual, responses.

An important difference between these positions and the present argument is that all of them are concerned with the production of specific actions without the need for attentional monitoring. In contrast, I am suggesting that the higher-order goals and motives themselves can be activated automatically and then guide behavior. This is accomplished through the same mechanism advocated by Miller et al. (1960) and Norman and Shallice (1986)—the automatic activation of a goal intention—but I am arguing that higher-order, more abstract goals and plans

than those discussed by Miller et al. and Norman and Shallice (i.e., those involved in social interactions) can become automatically activated as well.

Wilensky (1983), in his information-processing approach to planning, has provided a detailed model of how the environment directly sets goals within the individual. In his model, the "planner's" control structure contains a "goal detector" that is sensitive to the presence of information relevant to a stored goal. This information may concern an internal state, such as hunger or fatigue, or an external state that is relevant to a strongly held value or a currently operating goal or plan. The component of the goal detector specifically in charge of monitoring the environment, termed the "noticer," contains descriptions of situations relevant to goals in its knowledge base. It is continually vigilant for the occurrence of these situations, and reports them as they occur to the goal detector. Wilensky (1983) explicitly calls for direct links between environmental features and the behavioral plans associated with them:

If a standard plan is associated with a goal that occurs in a particular situation, it would be more efficient to associate this plan directly with that situation and select the plan at the same time the goal is detected. This would permit the planner to "short-circuit" part of the planning algorithm and suggest a plan immediately upon noticing a significant situation. (pp. 24-25)

In other words, the situational features will activate the goal; the person will "notice" this significant situation and be aware of the goal to be attained; and a plan will be automatically (given the activation of the goal) ready for use.

Reactive Goals

There is a second possible route from the social environment to goals, and that is as a consequence of the direct activation of goals in the course of understanding the behavior of others in the situation. There may be motives and goals automatically set in motion by the perceived goals of another, in reaction to the other's intentions and the potential consequences of those for oneself. Simon (1967) recognized the need for quick goal setting in response to others' behavior in social interactions:

The most active part of the environment of man, and the part most consequential to him, consists of living organisms, particularly other men. Hence, a large part of the complexity of goals arises from the need, while accomplishing tasks, to attend to the responses of other human beings and to do this in real time. (p. 37)

There are two steps to the process proposed here by which such reactive goals are set: (1) the activation of the goal representation relevant to the other's behavior in the course of understanding it, and (2) the consequent automatic activation of one's own goal in reaction to the perceived intent of other.

Schank and Abelson (1977) developed a model of the comprehension and understanding of stories in terms of the scripts, plans, and goals of the actor. Thus, people were said to understand others' and their own behavior in terms of

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approach to planning, has actually sets goals within the environment contains a "goal detector" that is sensitive to a stored goal. This detector is triggered by hunger or fatigue, or an action that is currently operating goal. The person in charge of monitoring the environment for situations relevant to the occurrence of the goal detector. Wilensky (1983) discusses environmental features and the

persons in a particular situation, it is directly related to that situation and is affected. This would permit the algorithm to suggest a plan (pp. 24-25)

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what usually occurs within given situations, and the intentions and goals for which the behavior is enacted.

Brewer and his colleagues (Brewer & Dupree, 1983; Lichtenstein & Brewer, 1980) have obtained evidence suggesting that people naturally understand social behavior in terms of the intentions and goals of the actor. When action descriptions were presented to subjects in an "in-order-to" relation to each other, they were recalled much better than the same actions not organized explicitly in terms of plans. Moreover, over time those actions not important to the overall plan were more likely to be forgotten, and what subjects retained best in memory was abstract information about the target person's overall intentions.

Trzebinski (e.g., 1989) has also stressed the importance of "action-oriented" representations in one's understanding of the social environment. In fact, he argues that "categories of actors, their goals, and conditions and means for the goal realizations" (p. 364) are the chief principles by which one's social knowledge is organized. Similarly, Read and Miller (1989) contend that "our knowledge of goals and the plans needed to achieve them is used both to plan our behavior and to understand and explain other's behavior" (p. 436). Like Schank and Abelson (1977) and Wilensky (1983), Trzebinski and Read and Miller consider goal and intention concepts to be the usual means by which an individual categorizes his or her social reality.

Thus, there seems to be general agreement that familiar situational features automatically activate representations of behavioral goals, plans, and intentions that have been repeatedly active within those situations, in the service of comprehending the situation and of suggesting behavioral responses to it. Of course, that goal and motive structures are used in understanding the behavior of others has been recognized by achievement motivation researchers for some time, as shown by their use of projective techniques in which the subject's stories about the motives of others in an ambiguous scenario are assumed to reflect the subject's own chronic motives (McClelland, Atkinson, Clark, & Lowell, 1953; Sorrentino & Higgins, 1986).

Once activated, the perceived goal of the other may then activate a reactive goal of one's own that has been frequently and consistently operative in response to such goals. For example, the perception that one is being ignored by another person in a small group may trigger a reactive goal of publicly ignoring that person in return (a "tit-for-tat" reactive goal). Importantly, this type of automatic goal activation cuts across situations, as it is linked to behavior patterns (perceived goals) of others that may occur in many different situations. Research by Buss, Gomes, Higgins, and Lauterbach (1987) has documented such reactive goals in response to the manipulative behavior of a relationship partner. Couples tended to respond in consistent ways to each other's manipulative tactics (e.g., charm, or the dreaded "silent treatment"); for example, the use of a given tactic tended to produce the same tactic in response, and nonreciprocal response tendencies (e.g., reacting to coercion with whining or a similar "regression" tactic) were also found. Importantly, stable individual differences in preferred tactics in responding to perceived manipulateness were found to be associated with personality traits

such as arrogance and agreeability. I return in a later section to the types of reactive goals that are likely candidates to be automatically activated by social-behavioral information.

Situational Norms ("Settings")

Situational features may also automatically activate behavioral goals that correspond to the appropriate or normative behaviors within the situation. The natural course of comprehending a situation involves the activation of a representation of the situation stored in memory, and this representation includes the normative features of that situation (see Cantor, Mischel, & Schwartz, 1982; Fiske & Taylor, 1984; Higgins & Bargh, 1987). Situational features activate situational frames (Goffman, 1974; Minsky, 1975) that provide the implicit knowledge necessary for guiding one's own situationally appropriate behavior.

The chronic, implicit application of situational knowledge is demonstrated by the greater attention immediately allocated to a feature or event that is inconsistent with that knowledge, whether it be a tricycle in the kitchen sink (Friedman, 1979), counternormative social behavior (Fiske, 1980), or unusual physical appearance (McArthur, 1981); it is also demonstrated by the different causal reasoning processes triggered as a function of the perceived normality of the conditions that produced the event (Hilton & Slugoski, 1986). That situational norms are well-learned behavioral guides that we apply effortlessly and automatically, both in understanding and in producing behavior, is noncontroversial (see Barker & Wright, 1955; Schank & Abelson, 1977).

Goals May Operate Outside of Awareness

A goal can play an essential role in the psychological situation without being clearly present in consciousness.—*Lewin (1936, p. 19)*

The next part of the present argument is that motives and goals activated automatically by situational features will then operate outside of awareness to guide behavior. Consequently, although the person is certainly aware of his or her behavior and the specific plan of which it is a part (as well as other aspects of the situation), he or she is not aware of the guiding motive, so that control over the influence of the environment over behavior via the motive or goal is not possible (see Bargh, 1989, especially pp. 39–40; Dennett, 1984; Uleman, 1989). This postulate is consistent with recent research utilizing Lewin's concept of the psychological situation (Higgins, Bond, Klein, & Strauman, 1986; Strauman & Higgins, 1987); this research has demonstrated motivational and emotional consequences of the current situational context, the influence of which the person is unaware.

The auto-motive model hypothesizes that chronically accessible goals and motives become active automatically upon the mere presence of relevant environmental information, in the same fashion as chronically accessible social constructs have been found to become automatically activated (see Bargh, 1984; 1989; Higgins, 1989). Furthermore, just as a person is not aware of the influence of his or her accessible social constructs on the interpretation of relevant information input

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(Bargh, 1984; Higgins & King, 1981), so too the person may not be aware of the subsequent influence of the activated goal on perception, judgment, and behavior.

One's lack of awareness of the influence of the activated goal or motive that causes the activation of the specific plan or action schema guiding the behavior or judgment process is analogous to a situation in which a light reflects off many surfaces prior to the one at which a person looks. The person is phenomenally aware of the light "coming from" that final surface, but not at all of the actual origin and course of that light source. The full moon is also an apparent origin of light, because the sun (the actual origin) is not observable in the sky. To put it another way, an individual is often aware of only the endpoint of a causal chain, not of all the necessary steps along the chain (see, e.g., James, 1890, pp. 116-117). Similarly, people appear to be unaware of the sources of their arousal or excitation levels (Zillman, 1978) or knowledge accessibility levels (Higgins, 1990), and phenomenally experience only the final outcome level.

In a related line of research, Marcel (1983) has argued that one is first conscious of a stimulus in terms of the most abstract representation automatically activated in perceiving it. For example, one is immediately aware of one's father *as* father; only then can strategic processing consider him in terms of other representations (male, about 60, Republican, chess player, etc.). The auto-motive model varies slightly from Marcel's (1983) position: Here an individual is said to be aware of the final representation activated in the automatic pathway from pattern detectors to action systems, which are not necessarily the most abstract representation relevant to the stimulus, as called for in Marcel's theory. The lack of awareness postulated here of the processing influence of an automatically activated goal or motive can also be considered as another instance of one's more general lack of awareness of the operation of a cognitive process, and general awareness of the output of those processes (see Ericsson & Simon, 1984; Nisbett & Wilson, 1977).

This state of awareness of action but not of the motivational basis for it is also consistent with the Norman and Shallice (1986) model, which is concerned principally with the roles of awareness and attention in the control of action. In that model, a person is aware of the overarching motive or intent behind a behavior plan if conscious control processes (i.e., those comprising the SAS) themselves activate the source schema for the goal-directed behavior. If the SAS is not the cause of the activation of the source schema, but instead the cause is the triggering environmental feature, then one "does experience the response as proceeding with 'an awareness of determination', even if it is not immediately preceded by any experience of intention to act" (p. 2).

Automatically Activated Goals and Plans

Miller et al. (1960, p. 82) likened habitual, automatically triggered plans to the instincts of lower animals, but instincts that "man wires in deliberately to serve his own purposes" (p. 89). They were referring to the development of complex, desired skills (see also Newell & Rosenbloom, 1981) that, at a higher level of inclusion, are nonetheless under intentional control. The automatically

activated goals and motives proposed here are similar to Miller et al.'s (1960) "acquired instincts," except that they are hypothesized to be wired in *unintentionally* by the person.

From the case of well-learned, complex skills, such as the hackneyed example of driving a car (or the equally valid but more interesting case of *selling* one; Simon, 1976), it is clear that goal-directed behavior sequences can operate autonomously and without the need for conscious involvement (Norman & Shallice, 1986): Until one learns to drive (or sell) cars well, the separate component operations all require conscious control individually. This function of frequent experience to eventually reduce the attentional demands of a given process to (near) zero has long been known as the "law of habit" (e.g., Boring, 1950, p. 310; James, 1890, pp. 104-127). A complex behavioral sequence formerly thought of by the individual as a combination of several different actions becomes, with sufficient experience, subjectively experienced as a whole—and no longer as an activity itself (e.g., driving the car), but in terms of the intent or purpose involved (e.g., going to work; Wegner & Vallacher, 1986). So it is certainly the case that a frequently enacted behavioral plan becomes capable of operating autonomously and outside of awareness (Miller et al., 1960).

Can Goals and Intentions Operate Outside of Awareness?

These examples of behavior without conscious guidance nonetheless require an overarching intention or goal that the behavior be produced. In the case of the automatized subgoals involved in driving, their operation in controlling perceptual-motor activity requires the conscious higher-order intent of "going to work" or "visiting Aunt Martha." Once that intentional goal has been set and committed to (see Gollwitzer, Chapter 2, this volume), the process can run off automatically (i.e., intended goal-dependent automaticity; Bargh, 1989). But is there any evidence suggesting that the instigating intentions or goals *themselves* may operate outside of awareness?

Libet (1985) has argued provocatively from electroencephalographic (EEG) evidence that the readiness potential associated with a spontaneous, voluntary motor movement *precedes* the conscious awareness of the intention to move. His data were consistent in showing that the readiness potential shifted about a half-second *before* the subject's initial awareness of wanting to move. Libet (1985) concluded that the "cerebral initiation of a spontaneous voluntary act begins unconsciously" (p. 529). This conclusion echoes William James's (1890, p. 109) analysis of the origin of voluntary acts: that the *first* occurrence of each and every action must be impulsive or reflexive, and only after it has occurred for the first time for the individual can it then be brought under voluntary control. Interestingly, Libet (1985) also obtained evidence that the ultimate decision to act could be (consciously) controlled prior to the actual movement (see also Logan & Cowan, 1984), so that, in summary, "the role of conscious will would be not to initiate a specific voluntary act but rather to select and control volitional outcome" (Libet, 1985, p. 529).

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uch as the hackneyed example of a interesting case of *selling* one; sequences can operate autonomously (Norman & Shallice, 1986). Well, the separate component function of frequent demands of a given process to "do it" (e.g., Boring, 1950, p. 310; a sequence formerly thought of as separate actions becomes, with the whole—and no longer as an isolated intent or purpose involved)—it is certainly the case that a goal of operating autonomously

Goal of Awareness?

Guidance nonetheless requires to be produced. In the case of the operation in controlling perceptual order intent of "going to work" a goal has been set and committed to a process can run off automatically (Norman, 1989). But is there any evidence that goals *themselves* may operate

Electroencephalographic (EEG) studies with a spontaneous, voluntary act of the intention to move. His potential shifted about a half-volt wanting to move. Libet (1985) found that a spontaneous voluntary act begins with William James's (1890, p. 109) "first occurrence of each and every time it has occurred for the first time under voluntary control. Interestingly, the ultimate decision to act could be movement (see also Logan & Boring, 1950) and conscious will would be not to act and control volitional outcome"

A second (and less controversial) line of support involves the well-known "tip-of-the-tongue" phenomenon (Brown & McNeill, 1986; Norman & Bobrow, 1976; Yaniv & Meyer, 1987). One tries hard to remember something, feels as though the information is there somewhere in memory, and eventually gives up and moves on to other purposes. Later, in the middle of an unrelated activity, the sought-for information "pops" into awareness. The unfulfilled goal has continued to operate outside of awareness.

This tendency of unsatisfied goals to continue operating in the quest for their desired end state, even when the goal is no longer the current conscious purpose, has been noted by many theorists and incorporated into their models (see Anderson, 1983, p. 156; Klinger, 1975; Lewin, 1928; Mandler, 1975; Martin & Tesser, 1989; Norman & Shallice, 1986; Shallice, 1972). Just as with the development of skill and habit, what appears to be necessary for the "postconscious" operation of a goal (see Bargh, 1989) is extended frequent or recent residence in consciousness, both of which work to increase the goal's state of activation to a level sufficient for operation without attentional support (Higgins, 1989; Higgins, Bargh, & Lombardi, 1985). Examples of the frequency factor are a mother's sensitivity to the sounds of her infant in another room (Klinger, 1975) and the appearance of solutions to difficult problems in dreams and at moments when one is not thinking about the problem (see Ghiselin, 1952, for many anecdotes from the memoirs of famous creative figures in history). The tip-of-the-tongue phenomenon is an example of the recency factor, as is the reappearance in awareness of the original thread of a conversation after an interesting digression. Moreover, thoughts related to unresolved difficulties (e.g., Martin & Tesser, 1989; Tait & Silver, 1989) or "current concerns" (Klinger, 1975) tend to appear in consciousness unbidden, in the same way as does stored knowledge that was on the tip of one's tongue.

In this tendency to remain active for long periods of time outside of awareness, motive and goal representations appear to be fundamentally different from other memory nodes and cognitive structures, which rapidly decay once activated (Anderson, 1983; Kuhl, 1986). In Anderson's (1983, pp. 156–170) ACT* associative network model of memory, for example, goal nodes are considered to be constant and strong sources of spreading activation while active, and not to stop being sources until deliberately changed. Kuhl (1986) has argued cogently that this difference in persistence has consequences for other basic operational differences between cognitive and motivational mental processes—for example, in the buildup of a cumulative, increasingly strong motivational tendency across situations in which the goal or motive has not been expressed (Kuhl & Blankenship, 1979). The point to be stressed here is that there is ample support from motivational as well as cognitive theory and research for the proposition that motives and goals are capable of operating outside of awareness. The dynamic properties (persistence, cumulation) just described are also relevant for the question of where goals come from when *not* triggered by environmental stimuli; this question is discussed later.

Automatically Activated Goals Guide Thought and Behavior

Lewin (1935) opposed purely associative, stimulus-response approaches to behavior on the grounds that associative connections between the representation of the stimulus and the effector units controlling behavior were not sufficient to generate behavior:

The experimental investigation of habits (association) has shown that the couplings created by habit are never, as such, the motor of a psychical event. . . . Rather, in order that the bound or coupled complex move . . . energy capable of doing work must be set free. (pp. 44-45)

Thus, what was needed over and above associative connections was the *energy* to drive the action system. In the auto-motive model, the motive or intention is hypothesized to correspond to a memory representation that is a persistent and strong *source* of activation (as in Anderson's [1983] ACT* model), resulting in perseveration effects and activation durations longer than those for nongoal memory nodes (see also Kuhl, 1986).

Motives and intentions have associated with them stored plans and response production systems that guide and produce actual judgment and behavior (Miller et al., 1960; Norman & Shallice, 1986; Schank & Abelson, 1977; Wilensky, 1983). For frequently used behavioral plans, these action systems become compiled or proceduralized (see Smith, 1984), such that once the overarching goal or implemental intention representation is activated, the thought process or behavioral response is produced. Buss et al. (1987), for example, have found specific manipulation tactics to be used consistently with specific interaction goals; when a subject's goal was to get the relationship partner to do something, the charm tactic was employed, and when the goal was to get the partner to *stop* doing something, coercion or the silent treatment was more frequently used.

Gollwitzer (Chapter 2, this volume; see also Heckhausen, 1987) presents a detailed model of the steps involved from having the goal of achieving a certain outcome, to producing a specific behavior in the service of that goal. His work has shown that manipulations designed to induce subjects to form a specific behavioral ("implemental") intention resulted in considerably higher rates of subsequently engaging in that behavior, even if the subjects had no previous wish or need to perform that behavior.

Goals and Plans Operate on Current Environmental Input

A final point is that once the compiled plan is set into motion by the activated motive-intention representation, it operates interactively with the environment (Norman & Shallice, 1986; Schank & Abelson, 1977). That is, once set in motion, judgment processes or interactive behaviors are not conducted without any regard to feedback or cues from the environment. Rather, the plan is conceptualized as a cybernetic system that sensitizes the individual to expected occurrences in the environment (e.g., likely reaction to his or her own behavior), preconsciously interprets the meaning of those environmental events, and readies

Thought and Behavior

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appropriate responses so long as the feedback fits the goal-plan structure for that situation. Such feedback systems have long been a staple of proposed planning and action system mechanisms (Carver & Scheier, 1981; Miller et al., 1960; Norman & Shallice, 1986; Schank & Abelson, 1977; Wilensky, 1983).

Thus far, I have proposed four steps involved in the preconscious activation of motives and intents by situational features: (1) that patterns of environmental features automatically activate mental representations of those motives and goals chronically associated with them; (2) that these motives and goals are not available to awareness, even though active (just as preconsciously activated chronically accessible constructs are not available to awareness); (3) that the activation of these motives and goals activates in turn their corresponding specific behavioral plans and implemental intentions; (4) and that these plans and intentions then interact with environmental information to be expressed in behavior, given the appropriate opportunity (i.e., relevant environmental information; Gollwitzer, Chapter 2, this volume; Norman & Shallice, 1986). These postulates have previously been proposed singly and in slightly different versions in many motivational and cognitive models, and are supported by a considerable array of evidence.

CHRONICALLY ACCESSIBLE MOTIVES AND SOCIAL INTERACTION GOALS

Not all goals and motives a person may have are capable of direct environmental activation. In the same way that a person's chronically accessible trait constructs are preconsciously activated by relevant environmental input, whereas his or her inaccessible constructs are not (Bargh & Pratto, 1986; Bargh & Thein, 1985), so too only an individual's chronically accessible goals and motives should be capable of being preconsciously activated.

The notion that individuals possess chronic goals that they pursue in social interactions is not new, and recently these chronic goals have been proposed to be a major source of personality differences (e.g., Cantor & Kihlstrom, 1987; Emmons, 1989; Higgins, 1990; Miller & Read, 1987). What the auto-motive concept adds to this idea is that these chronic goals behave like any other chronic social concept and become directly activated by the environment (Bargh, 1984), through the activation of the environmental representations to which they are linked.

This proposal also has implications for how chronic motivations may *develop*. As a consequence of the motive's or goal's being paired repeatedly with certain social situations, the representation of that situation and that of the motive or goal become ever more strongly linked in memory (see Bargh, 1984; Fazio, 1986; Higgins, 1987). The increasing accessibility, or ease of activation, that results from the frequent associative pairing (Higgins & King, 1981) should make that particular goal increasingly likely to become activated relative to other potentially relevant goals for that situation, just as an accessible category is more likely to capture information relevant to several categories (Bruner, 1957). Just as

accessible attitudes have been argued to be more likely to influence behavior than less accessible attitudes (Fazio, 1986), so too accessible motives and goals should be more likely to influence behavior. In this cyclic, snowballing manner, accessible motives may become even more accessible (given continued exposure to the relevant environmental features), until the link between them and the situational features is automated (Bargh, 1984).

Chronic Motivations

What kinds of social motives would be likely to become automated in this way? The first likely candidates are, of course, the chronic motivations and orientations postulated to drive cognition and behavior across a variety of situations, such as need for achievement (Atkinson & Feather, 1966), authoritarianism (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950), chronic self-consciousness (Fenigstein, Scheier, & Buss, 1975), need for structure and fear of invalidity (Kruglanski & Freund, 1983), need for cognition (Cacioppo & Petty, 1982), and control motivation (Pittman & D'Agostino, 1985). In addition, Cantor and Langston (1989, p. 132) have suggested that some strategies (not all of them adaptive) that individuals chronically employ in accomplishing important "life tasks" are conducted without awareness or intention (e.g., self-handicapping, defensive pessimism). Emmons (1989) has proposed that people continually strive toward three basic needs—safety and control, social belongingness, and self-esteem and competence—and that an individual possesses implicit, preconsciously activated beliefs about how to satisfy these needs (e.g., "To be competent, I must become independent from my parents").

Chronic Goals

There has been surprisingly little research to date on the role of chronically accessible or situationally activated social goals in perception and behavior (Pervin, 1989; for an exception involving both chronic and situational goals, see Higgins & McCann, 1984). Srull and Wyer (1986), in their review of research into the roles of both chronic and temporary goals in social information processing, devoted the vast majority of the review to the influence of temporary goals. The only direct support presented for the hypothesis that chronically held goals are preconsciously activated (as opposed to studies demonstrating preconscious processing of emotional material; see Kuhl, 1986, on the distinction) came from the classic studies by Bruner (1951) and Postman, Bruner, and McGinnies (1948). Both studies showed powerful effects of the subject's predetermined value orientations on perception; the Postman et al. (1948) study demonstrated greater sensitivity by subjects to stimuli congruent with their important values, in much the same way that one is more sensitive to the presence of stimuli relevant to one's chronically accessible social constructs (Bargh & Pratto, 1986).

It would seem to be a highly promising bridge between motivation and cognition to develop the notion of chronically accessible social interaction goals

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to become automated in this way? Chronic motivations and orientations across a variety of situations, such as (1966), authoritarianism (Adorno, 1950), chronic self-consciousness (Fenigstein and fear of invalidity (Kruglanski, 1964; Oppo & Petty, 1982), and control (In addition, Cantor and Langston (1982) suggest that important "life tasks" are controlling self-handicapping, defensive pessimism, and self-esteem and competence, preconsciously activated beliefs about competence, I must become inde-

to date on the role of chronically accessible goals in perception and behavior (Perugini, 1986), in their review of research into goals in social information processing, the influence of temporary goals. The thesis that chronically held goals are responsible for demonstrating preconscious processing, on the distinction) came from the work of Bruner, and McGinnies (1948). The subject's predetermined value orientation (1948) study demonstrated greater consistency with their important values, in much the presence of stimuli relevant to (Bargh & Pratto, 1986). The long bridge between motivation and chronically accessible social interaction goals

more completely. Although temporary goal states have received by far the most research attention to date, it is important for the study of personality in particular to focus on stable, enduring determinants of behavior (Emmons, 1989). Similarly, the well-documented importance of temporary processing goals on the outcome of social memory and judgment (Srull & Wyer, 1986) underscores the importance of studying chronic links between situations and those processing goals. Differences in the accessibilities of different goals should result in differences in the likelihood of their activation and application in relevant situations, and so one obvious avenue of research would be to extend the study of chronically accessible social trait constructs (see Bargh, 1989, and Higgins, 1989, for reviews) to the case of cognitive and behavioral goals. Paradigms utilized in that research could be applied to study what goals and motives are chronically accessible to an individual with specific social situations (e.g., Bargh & Pratto, 1986; Higgins et al., 1982; Sorrentino & Higgins, 1986).

A fruitful starting point for this research would be the existing literature on social interaction goals (see review by McCann & Higgins, 1988). There is certainly no shortage of ideas concerning the variety of goals one can have in a social situation. As Schank and Abelson (1977) noted, many goal taxonomies have been proposed in the past (e.g., Allport, Vernon, & Lindzey, 1951; Murray, 1938; for more contemporary proposals see Emmons, 1989; Read & Miller, 1989), and "if one were to set out to list all the different kinds of things that could be desired, there would be no end to it" (Schank & Abelson, 1977, p. 112). Still, as the question of automatic social goal activation is an empirical one, consideration of the types of goals and motives hypothesized to exist in these models and theories is a useful beginning.

Jones and Thibaut (1958) listed many kinds of possible interaction goals and described how they would result in attention to and use of different informational features within that situation. Entirely different "inferential sets" were hypothesized to become activated by these different interaction goals. For example, a goal of "determining what the other person [is] like" should focus the perceiver on the target's personality as well as attributional processing of the causes behind the target's behavior; a goal of applying social control should lead to a "situation-matching" set in which situational norms are the important processing and evaluation structures (p.177). The type of goals that guide "most of our interactions, and the social inference activities deriving from them" (p. 164) were said to be "value-expressive" sets, in which the actor attempts to gratify a personal need. Four main types of value-expressive goals were hypothesized; these are presented in Table 3.1.

Jones and Thibaut (1958) then carried their analysis a step further, and speculated on the aspects of the other's personality to which the goal-driven actor would be the most sensitive. These are given alongside the four value-expressive goal types in Table 3.1. What is important about the Jones and Thibaut analysis for present purposes is the conceptual linkage of subsystems of social trait constructs as activated by various interaction goals—the notion that one's set of accessible trait constructs can be a function of one's goal within the interaction;

TABLE 3.1 Jones and Thibaut's (1958) Linkages between Value-Expressive Social Interaction Goals and Perceptual Trait Construct Sensitivities

<i>Goal</i>	<i>Traits</i>
I. Gaining information about the shared environment	Reliability, candor, objectivity, expertise
II. Gaining support and validation for one's own beliefs and attitudes from the other	Attitude positions on relevant, important issues
III. Gaining social approval from the other	Friendliness, acceptance, tolerance, supportiveness
IV. Accomplishing some external goal through the interaction	Cooperativeness, dependability, hard work

different sets for different goals, leading potentially to quite different evaluations of the target (e.g., the case of an unfriendly expert; see also Carlston, 1980).² In positing goal specificity in construct accessibility, Jones and Thibaut (1958) anticipated the concept of goal-dependent automaticity (Bargh, 1989; Bargh & Tota, 1988): Depending on the individual's processing goal, different sets of social constructs become automatically activated.

Predicting Goals from Situational Features

Recent work has described a great variety of information-processing and social-interactive goals and motives (e.g., Cantor & Kihlstrom, 1987; Emmons, 1989; Read & Miller, 1989; Srull & Wyer, 1986): information acquisition, impression formation, self-presentation and impression management, ingratiation, entertainment, comprehension, pleasing others, competing, gaining power. The goals so identified vary in their level of abstraction-concreteness (Emmons, 1989; Gollwitzer, Chapter 2, this volume; Martin & Tesser, 1989; Miller et al., 1960; Schank & Abelson, 1977; Wilensky, 1983), with some goals highly situation-specific (e.g., "having to be right" in an argument or a friendly discussion, despite the cost to other relationship goals) and others related to deeply held values more likely to operate across situations (e.g., a concern with equity of treatment in any social exchange situation; see Tyler, 1987).

Thus, an individual's chronically accessible goals may be dependent for their covert activation and operation on environmental features specific to a particular social situation or on features characteristic of a variety of social situations. The influence on behavior will be more pervasive and cross-situational if that goal develops an automatic link to the (perceived) repeatedly recurring features.

It should be possible to test for links between specific social situations and specific motives and goals by first conceptualizing both the situation and the goal in terms of the same underlying variables of feature representations, social constructs, and their relative accessibilities in memory (Bargh, Lombardi, &

Value-Expressive Social ties

indor, objectivity, expertise

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quite different evaluations also Carlston, 1980).² In ies and Thibaut (1958) (Bargh, 1989; Bargh & al, different sets of social

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Higgins, 1988; Higgins, 1990). Next, the nature of the subject's situational representations should be assessed (e.g., Cantor, 1982; Cantor et al., 1982). Finally, the relation of these situational features to identifiable chronic motivational states and possible situational goals should be examined—for example, by using the questionnaire method of Buss et al. (1987) to inquire into the interactional patterns and individual characteristics of partners in established work, social, or intimate relationships. The automaticity of the associations between situational features and goals could then be assessed with any of the variety of standard methods for assessing associative links in memory and their strength and automaticity (e.g., priming, memory load, speeded response; see Bargh, 1988, 1989). For example, after a subject's chronic goal within a situation has been identified, it might be possible to activate that goal by presenting the triggering features outside of the subject's awareness (Bargh & Pietromonaco, 1982; Neuberg, 1988), or when the subject's attentional capacity is fully loaded (Bargh & Thein, 1985), and then to test for goal-related behavior in a goal-relevant setting.

Reactive Goals in Social Interaction

To pursue this logic a bit further, one might ask *which* features will be the most likely to recur repeatedly across many different situations. Of course, in a shared culture, there are norms of behavior that may apply in most social settings; as already discussed, these normative guidelines will serve both as implicit expectancies for others' behavior and as scripts for one's own (Higgins, 1990; Schank & Abelson, 1977; Wilensky, 1983). Moreover, a person's role and status in a situation induce both constraints on his or her behavior and also appropriate goals to pursue within the situation (e.g., subordinates should be deferential to their superordinates; see Schank & Abelson, 1977, pp. 132–138). But what about individual variability around these cultural and sociostructural main effects?

One's set of chronically accessible social constructs is presumed to reflect regularities in features of social behavior that one idiosyncratically encounters across situations (Bargh, 1984; Higgins & King, 1981). That is, chronic constructs develop to represent those patterns of behavior one has frequently and consistently perceived in one's environment. Such constructs have been found to become automatically activated in the presence of relevant stimuli even when attention is in short supply or focused elsewhere (Bargh & Pietromonaco, 1982; Bargh & Thein, 1985), and their activation is uncontrollable, even when it conflicts with the current processing goal (Bargh & Pratto, 1986). Thus the activation of chronically accessible constructs is entirely preconscious and not dependent on the particular processing goal in place.

In other words, the types of social behavior one perceives across many different social situations are likely to be those corresponding to one's chronic constructs; this information is perceived automatically, no matter what. And because an individual acts on a perceived and not an objective world (e.g., Kelly, 1955; Lewin, 1935), the individual will be *reacting* to these particular types of behavior frequently and across situations. Consistent with this reasoning, Fiske,

Neuberg, Beattie, and Milberg (1987) showed that social perceivers' evaluations and impressions of a target person were dependent on the fit between the target's characteristics and the content of the perceivers' social categories (e.g., for occupations): When the feature-category fit was good (as compared to when it was not), subjects' evaluations and impressions were more of a function of the category features and less of the target's individuating attributes. That is, subjects' reactions to the target person were triggered in the high-fit case by the target's category-relevant features, and not by other relevant information.

Given the frequency with which an individual is presumed to perceive these types of social behavior, it would make functional sense for him or her to possess plans for responding to them. It would be inefficient and antagonistic to the usual need for quick action (Rothbart, 1981) to have to come up repeatedly with a behavioral plan in response to recurring features of the environment. These reactive plans are especially needed and therefore likely to exist in connection with negatively evaluated forms of behavior—for example, when the other's behavior threatens a valued state, possession, or goal of one's own. "Reactance" behavior (Brehm, 1966) can be seen as an example of this; the individual quickly reacts against a perceived loss of freedom. The notion of the "control motive," as developed by Pittman and his colleagues (e.g., Pittman & D'Agostino, 1985; Pittman & Pittman, 1980), is another good example: Unexpected events within situations are hypothesized to trigger a motive to regain (predictive) control through increased cognitive analysis of the situation. One may also have reactive goals triggered by perceived manipulateness on the part of another, in response to nontrivial favors (Langer, Blank, & Chanowitz, 1978), perceived competitiveness or hostility, and so on. All of these goals would fall under Schank and Abelson's (1977) heading of "preservation goals," designed to protect valued aspects of the status quo; to the extent that reactive goals seek specifically to thwart the goals of the other person, they constitute what Schank and Abelson (1977) referred to as "anti-plans" (pp. 115-116).

Not all reactive goals are anti-plans, just as not all chronically accessible constructs are negatively valenced (see norms in Higgins et al., 1982). One may be chronically sensitive to kindness or honesty, and react (for example) with a stored goal and plan of attempting to establish a friendship—or, perhaps less ambitiously, to have a pleasant social encounter. (Our figmentary "one" need not always be such a saint, however; one may instead react to another's kindness or cooperation with a selfish, greedy, or competitive "taking advantage" plan.)

An empirical illustration of possibly automated reactive goals is provided in a study by Neuberg (1988). In the experimental situation, subjects were subliminally primed with competition-related or neutral words, and then played a Prisoner's Dilemma game on a computer with a (fictitious) partner. Subjects were classified as to whether they had competitive or cooperative behavioral predispositions, based on their initial move in the game, which was made prior to their partner's. The effect of priming on subjects' behavior in the Prisoner's Dilemma game (in which one can respond to one's partner's first move in either a competitive or a cooperative manner) depended on their behavioral predisposi-

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tion: For the dispositionally competitive but not the dispositionally cooperative subjects, the competitive primes increased the incidence of competitive behavior in reaction to the partner's first move; moreover, competitive subjects primed with competition-related stimuli behaved more competitively than did the competition-primed cooperative subjects. To put these results in terms of the present discussion, the environmental information (competition primes) activated reactive interactional goals (to behave competitively) only for subjects who chronically had such goals (the dispositionally competitive subjects).

Neuberg's (1988) findings illustrate how accessible social constructs may be activated outside of awareness by relevant environmental information and a reactive goal set in place by this automatically made interpretation. Reactive goals tied to an individual's chronically accessible constructs would appear to be a promising avenue in the search for those individual differences in goals and resultant behavior that are stable and consistent across situations.

Automatic versus Conscious Sources of Situational Goals

Which Motives and Goals Will Become Automated?

The varieties of social interaction goals and motives postulated by Jones and Thibaut (1958), Read and Miller (1989), and others can be sorted as to which of two possible ways they are likely to become activated to direct decisions and behavior: either automatically by the presence of relevant environmental features, or deliberately and consciously in the course of a controlled planning process. In general, from the work already reviewed here, it would seem that the more abstract and less concrete the goal—that is, the broader the array of behaviors that will satisfy it—the less likely it will be for that goal to become capable of direct activation by the environment. This is because the "longer" a cognitive pathway is (i.e., the more links it contains), the less likely it is to become automated; the more abstract a representation, the greater the number of analytic steps both between it and the relevant environmental feature detectors on the one hand, and the action effector units on the other (see Bargh, 1984).

A second and related point is that the broader the range of situations relevant to a motive or goal, the more likely it will be that other goals and motives will be active instead in those situations at other times. Because the development of automatic pathways requires a high degree of consistency of pathway activation between the two representations in question, as well as sufficient frequency of activation (Posner, 1978; Schneider & Fisk, 1982; Schneider & Shiffrin, 1977), there is a greater likelihood of inconsistency or unreliability in the association between any one of those situations and that particular motive or goal. For example, it may be that Jack always has an impression management goal (e.g., Schlenker, 1980) operative when being introduced to someone for the first time. Thus we would expect that an automatic pathway would develop between the particular features of social introduction situations and the goal of impression management, and perhaps also to particular action plans within that goal (e.g., to make witty remarks). It is also likely that Jack has the goal of impression

management within many other social situations, such as when interacting with colleagues at work or being at home with his family, but that other goals can also exist within those situations (e.g., getting the job done at work, exerting sometimes unpopular authority over his children). So it is unlikely (and it makes no functional sense) for the impression management goal to be *automatically* activated in response to situational features unless those features have reliably resulted in that goal—and no other goal—in the past. In Jack's case, it may be that impression management is cued by two reliable features of situations: the presence of others with whom he is not yet acquainted, and the presence of others who are of higher status than himself. For Jill, on the other hand, it may be that the only reliable feature cue is the presence of others whom she respects.

In the case of chronic motivations, however, such as need for achievement (Atkinson & Feather, 1966), or chronic values, such as truth (Allport et al., 1951) or justice (Tyler, 1987), it may be that automatic connections exist because such a wide variety of situations can directly activate the motive or goal. My point here is simply that for any given individual, there will be a greater number of automatic pathways between environmental features and specific, behavioral goals than between environmental features and abstract motives and values; at the same time, however, such direct links certainly may exist at all levels of abstraction.

Proactive ("Conscious") Goals

Our little person in the head, while perhaps somewhat diminished if the present analysis is valid, is hardly in danger of extinction just yet. Relatively novel situations abound in which some flexible and quick thinking and planning are needed (Schank & Abelson, 1977, p. 97). Moreover, people's goals are not always reactive to the situation, but may instead be *proactive* attempts to achieve a desired outcome. We can seek out and enter situations in the service of these proactive goals (Miller et al., 1960, p. 90). Goals and plans are very frequently deliberate, conscious constructions for the purpose of satisfying a consciously known value or need; these "value-expressive" goals were argued by Jones and Thibaut (1958) to be the most frequent type a person has in social interactions (see also Emmons, 1989, p. 119; Weiner, 1986). Other sources of deliberate goal setting are those required for the pursuit of "life tasks" (Cantor & Kihlstrom, 1987) and for coping with an unresolved problem (e.g., Martin & Tesser, 1989).

But we *can* shrink the little person even further than the auto-motive concept accomplishes by itself. Motives and goals that have been persistently pursued, but not satisfied, tend to persevere as tendencies outside of awareness (e.g., Kuhl, 1986; Lewin, 1935, p. 60; Shallice, 1972; Wilensky, 1983); they enter into consciousness when there is no current focal goal, or there is one but not that much effort is being expended on it (Atkinson & Birch, 1970; Martin & Tesser, 1989; Norman & Shallice, 1986). That is, these motives and goals capture awareness and the current goal state, depending on their strength and the strength of the current goal. Strengths of goals are functions both of the amount of tendency that has accumulated over time (Atkinson & Birch, 1970; Kuhl, 1986) and of the priority or precedence relations among the goals (Schank & Abelson,

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1977; Wilensky, 1983). For example, biological needs generally take precedence over achievement-related goals, which in turn dominate entertainment goals, but the satisfaction of a given goal reduces its strength so that lower-priority goals may take command (see the lucid discussion of major goal types and their precedence relations in Schank & Abelson, 1977, pp. 111-119). Martin and Tesser (1989) hypothesize that this tendency of unsatisfied goal states to capture the stream of consciousness at relatively unguarded moments is the cause of uncontrollable ruminations about negative life events (see also Klinger, 1975; Tait & Silver, 1989).

Therefore, direct control over the setting of the current goal, with all of its ramifications for behavior and the outcome of cognitive processing, can be due either to frequently appearing situational features, or to predictable qualities of goal strengths and their interactions (see Atkinson & Birch, 1970; Kuhl & Atkinson, 1984; Schank & Abelson, 1977; Wilensky, 1983).

CONCLUSIONS: "BUT IS IT INTENTIONAL?"

The question of the degree of control one has over one's thought and behavior in social interactions has been stimulating research for the past decade. Direct environmental control (i.e., preconscious effects) has been demonstrated to occur principally for social perception, and in two main forms: interpretation/categorization of social information (including stereotype activation) and evaluation of it (see Bargh, 1989, pp. 11-14, for a review). There is a firm basis for the conclusion that social judgment and behavior can be influenced by these automatic perceptual processes; however, other evidence suggests that ultimate control over judgment and behavior is invested in the current intention and goal (see Fiske, 1989; Logan & Cowan, 1984). Preconscious influences over social perception have been likened to the "power behind the throne" of intentionally made decisions; automatically made interpretations and evaluations may heavily influence the decision, but the throne of intent has the ultimate say (Bargh, 1989, pp. 38-40).

But there is an implicit assumption behind this contrast between preconscious and automatic processes on the one hand, and goal-directed processes on the other; this is that goals are always placed there by deliberate and controlled means. However, why cannot the goal *itself* be preconsciously and directly activated by environmental features? Motives, goals, and plans are all mental representations; there is no theoretical reason why the mechanisms of automatic pathway development (Newell & Rosenbloom, 1981; Posner, 1978) should not apply to them as well as to any other representation. It has been the purpose of this chapter to marshal the evidential as well as the theoretical support for the hypothesis that features of the social environment may automatically activate those goal representations frequently and consistently paired with them, and that these goals may then operate without the individual's awareness of their operation.

The question of the extent to which a person is in control in social interactions is one for which an actuarial answer, in terms of the proportion of social

interactions or of the number of waking hours during which the person is actively and consciously guiding thought and behavior, may or may not be possible (Bargh, 1984; Fiske, 1989). The present approach—to hypothesize automatic pathways—linking representations of the environment to motive and goal representations—takes a different tack. This hypothesis is certainly testable, and it transforms the issues of whether the activation of influential goals is under a person's direct and deliberate control or is under the direct control of the environment, and how typical these two sources of goal activation are in social interaction settings, into empirical ones. If there turns out to be no support for direct environmental activation, this would suggest that goals are largely generated internally in the service of higher-order needs, motives, and values. Either way, research on the possible existence of such "auto-motives" would bear directly on the important question that has opened this chapter.

Automaticity and Free Will

As I write, it is the 200th anniversary of the storming of the Bastille and the start of the French Revolution. Naturally, what come to mind (other than cake) are the concepts of freedom and liberty, and in the present context the concept of free will. If a goal is activated unintentionally and then guides behavior, is the resultant behavior intentional or unintentional? Speaking of cake, can we have our automaticity and our free will too?

The behavior that occurs as a consequence of an automatically activated goal is certainly *purposive* as it is directed toward a goal, though the goal itself is in this case not accessible to the individual. Libet (1985) has argued that to be goal-directed and to be intentional are two different things. Pervin (1989, p. 476) has pointed out that Piaget (1952) had earlier made a similar distinction. Children were said to be capable of goal-directed behavior in response to the immediate environment before they develop the capacity for intentional behavior, which involves the creation of goals in the absence of goal-relevant external events. This distinction fits the present arguments quite well; the label of "intentional" should be reserved for the case in which the guiding goal itself is intentionally activated (see also Norman & Shallice, 1986; Uleman, 1989).

Control as Achieving Desired Change

To argue that automatic goal activation results in unintended thought and behavior may raise in many readers' minds the specter of determinism—of human beings as ant-like automata controlled by the environment. As Dennett (1984) shows, the problem we have with the concept of determinism is largely due to a confusion of control with causation. "Control" typically refers to the ability of agent A to drive agent B into a state that A *wants* B to be in (Dennett, 1984, p. 52). Similarly, Uleman (1989) argues that the concept of control "requires a standard or goal in terms of which something is regulated or guided . . . and a controlling process operates to reduce the discrepancy" (p. 430), meaning that

the person is actively not be possible (Bargh, the automatic pathways goal representations—and it transforms the person's direct and environment, and how interaction settings, into direct environmental rated internally in the way, research on the effect on the important

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the controlling agent is pursuing a goal of its own. To say that the environment does the controlling is therefore disturbing to us because "it hints subliminally at the dark idea that the environment *wants* us to do this and that, and acting on the desire, *makes* us do what it wants" (Dennett, 1984, p. 57; emphasis in original). Dennett (1984, p. 59; emphasis in original) concludes that the environment does not "control" us because "the environment is not designed to *tell* us what to do; we are designed to *figure out* from the indifferent environment what to do."

But is the *social* environment "indifferent" to what we do? The idea of the environment's having "desires" and "wishes" for our behavior does not sound as silly when we are discussing a social environment filled with people and institutions that *do* have desires and wants, that *are* constantly attempting to get us to behave in ways advantageous to them (and maybe or maybe not advantageous to us as well).

Yet, for direct environmental control over one's decisions and behavior to occur, the environmental agent (e.g., a person, an advertisement) must intend to activate one's chronically accessible motives and goals; this means that the agent *must know what those are*. Knowledge is power, and "foreknowledge is what permits control" (Dennett, 1984, p. 54). And in some cases perhaps this foreknowledge does exist—most likely in intimate (or parent-child) relationships, when, for example, one partner knows that making the other feel guilty results in the desired behavior (e.g., acquiescence). Cases in which the environmental agent does not know the individual's chronic goals but makes a good guess based on general cultural tendencies include U.S. state lottery advertisements that appeal directly to greed as a motivation that will override any rational estimation of probable return on the bet amount, and the actions of skilled salespeople who know well the motivating effect on public behavioral commitment, such as in the "foot-in-the-door" technique (Freedman & Fraser, 1966). And as Dennett (1984) has argued in one of the quotes opening this chapter, one can control someone else if one can control the causes of the other's behavior.

For the most part, however, we are aware in such situations that an attempt to manipulate or persuade us is being or probably will be made; we can be on our guard when in the automobile showroom and skeptical when encountering ads. It is only when we are unaware of the activation of a motive or goal that we cannot counter its influence (Bargh, 1989); in obvious persuasion situations, we may not *know* that certain of our motives have been activated, but we can assume they have been and can take this into account when making decisions. Dennett (1984) notes that attempts by others to control us

are precisely the sort of activities we human beings dislike, resent, and seek to avoid. We don't like being controlled by others in this sort of way, so apparently we do feel that we are controlled (to some extent) by such activities. (p. 57)

In other words, people know they can be controlled without being aware of how; this is known as "being manipulated."

It is the cases such as intimate relationships in which direct control by the environment is likeliest, because here the agent *has* the particular knowledge

(from experience) of the chronic motivations of the partner, and also the power of the activated motive (e.g., to avoid guilt feelings) or goal (e.g., to stay in the relationship—a power device more likely to be employed by men against women than vice versa; see Hatfield, Traupmann, Sprecher, Utne, & Hay, 1984). These cases of intended activation of one's chronic motivations and goals by an environmental agent, with foreknowledge of what those chronic goals are, are probably limited to the case of intimate relationships, and as such would constitute an important feature distinguishing intimate from other social-interactive behavior (see, e.g., Derlega, 1984; Kelley et al., 1983).

Aside from these cases of extensive foreknowledge, however, the social environment does not know what one's chronic goals are, and so does not "wish" to activate them. Hence, although the environmental features may *cause* the goal-directed behavior, they do not generally *control* it in the sense of intended, desired causation. And if the frightening part of the concept of environmental control over one's behavior lies in the implication that one's behavior conforms to the desires of an agent other than oneself, then seeing the environment as generally an indifferent cause in cases of automatic motive activation defuses the issue. For if the desire for the automated behavior to occur is not outside the person, it is surely *within*—for there is no other player left on the field. Who else put that goal or motive in place in that situation so frequently and intentionally in the past, so that it eventually became automated?

Therefore, automatic goal structures are not operating to satisfy the desires of the social environment, but are active *in the service of the individual*. Ultimate "control" in the sense of desired causation is back in the hands of the person whose motives they are; they are not anyone else's. Even though chronically accessible goals and motives result in unintentional (albeit goal-directed) decisions and behavior, in the final analysis they are acting in the individual's own interest and values. This would be demonstrated by the very fact of the automation itself: The motive or goal would have had to be frequently and consistently *chosen* by the individual in response to that situation in the past, to the point where the choice was so regular and reliable that there was no longer any need to make it through an act of will.

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Notes

1. Although there are superficial similarities between this proposal and the concepts of "mindlessness" and of "ecological perception" or "direct perception," there are fundamental differences as

partner, and also the power or goal (e.g., to stay in the bed by men against women Utne, & Hay, 1984). These means and goals by an environmental goal are, are probably such would constitute an environmental social-interactive behavior

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well. "Mindless" social-interactive behavior is hypothesized to be driven by situational cues with minimal conscious involvement (e.g., Langer, 1978; Langer, Blank, & Chanowitz, 1978). The "automatic" model presented here proposes that motives and goals are preconsciously activated and then guide behavior. The social-interactive behavior that results is thus very much goal-directed and purposive, whereas "mindlessness" refers to a mental state of low effort, low involvement, and disengagement from the present environment (Langer, 1978). Actually, the automatically motivated behavior described here fits better with the opposite concept of "mindfulness," because whereas one is not aware of the guiding intent or goal, one's behavior is goal-directed and responsive to the contingencies of the environment.

The ecological perception view (e.g., McArthur & Baron, 1983) argues that social stimuli directly suggest behavioral responses to the perceiver. However, it also contends that these behavioral possibilities are intrinsic to the stimuli themselves, following Gibson's (e.g., 1966) notion of "affordances." The present position, on the other hand, is closer to Lewin's (e.g., 1936) conception of the determining influence of the entire *field* of situational and personal influences over goal setting and behavior. Another clear difference is that the ecological approach to social perception and behavior asserts that social judgments and causal attributions are made directly upon perception of a behavioral event, whereas the present view is that these cognitive activities are entirely goal-dependent and are not driven solely by the stimulus, outside of its situational context.

2. It should be noted that no claim is being made here as to the validity of Jones and Thibaut's (1958) analysis of the particular trait dimensions associated with the particular goals they describe; the point being made here is that the authors associated different sets of perceptual constructs with different interaction goals. Also, it should be noted that Jones and Thibaut (1958) did not explicitly take a stand as to whether these sets of constructs are reflexively or automatically activated as a direct consequence of the interaction goal, but the tenor of their discussion is that the use of the goal-associated constructs is reflexive, given the goal.

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