BEHAVIOR, COGNITION, AND SOCIETY

The conflict between the behavioral and cognitive positions (see previous discussion on the nature of language and thought), has permeated a good deal of psychological theory. Over the years the various emphases placed on the influence of the environment or the operation of the central nervous system on various aspects of human activity go in and out of favor in the psychological community. The core problems, however, remain the same. Progress, when it is made, occurs in predictable ways. Within the cognitive emphasis the technique of analysis usually consists of description of existing states. The more imaginative and penetrating the observations, the more convincing are the descriptions that presumably indicate that the way an organism acts is a question of its given genetic proclivities. The next step is to understand more about the actual physiological condition of the neural structure of the brain and central nervous system. The behavioral emphasis continues to focus upon the external environment and attempts are made to construct experiments that systematically analyze the effects of these various external conditions on behavior.

The tendency is for a cognitivist to bracket consideration of environmental influence and for a behaviorist to bracket consideration of the nature of central nervous system organization and function. A problem arises when a theorist severely limits her theory to the unbracketed portion of the dichotomy and ignores the other portion rendering it, for all intents and purposes, non existent. Bracketing is, of course, absolutely necessary to build theory. Theories must be specific and that requires that one ignore other information relative to the larger context in which the phenomena in question are enmeshed. However, the bracketed portion will become relevant as the theory encompasses more and more predictions.

I suspect this to be a primary reason why explanations go in and out of favor with psychologists. A seemingly successful behavioral or cognitive interpretation of some human phenomenon begins to show its limits because it cannot handle data which are more easily explained by a theory from the alternative orientation. Furthermore, an adjustment to the tenets of the theory to meet this new explanatory demand cannot be made without introducing an ad hoc explanation. We have seen this in the past when instinct and drive theorists, unable to explain some new behavior with their existing list of instincts or drives, simply added a new one. The implication is that we will never eliminate conceptual, that is, explanatory dichotomies. They are necessary to allow for the specificity and precision that are reasonably demanded of scientific theories. We need to realize that, to borrow from deconstructionist concepts (of which more later), that which is unsaid, or bracketed, or crossed out in a theory nevertheless influences the theory's usefulness, its validity and its limitations. The assault on Skinner's theory of verbal behavior came from cognitivists and the assault on Chomsky's theory came from connectionists. The connectionist position, in part, comes from Skinner's behavioral analysis. Increasingly, theorists are aware of this tension as we have seen with the connectionists who took pains not to isolate either the innate or the behavioral end of the explanatory continuum.

Thus a theorist's bracketing of all assumptions and conceptions competing with his own is absolutely necessary if there is to be progress in the building of explanation.[4] The unfortunate, but understandably human tendency is to persist with one's explanation in the face of an increasing number of contradictory instances. However, even if a conception should eventually be abandoned, it may return in somewhat altered form. It is sufficient to note the cyclical acceptance and dismissal of Freudian concepts by some psychologists and psychiatrists. Noted also in the last chapter was the tentative return of consideration of Skinner's theory of verbal behavior by at least one cognitivist (Andresen, 1992). Regarding theory construction, two points can be made in conclusion. Some theorists will probably continue not only to bracket explanations from the other side of the dichotomy as they develop their explanations, but to dismiss them as well. Fortunately, many psychologists have come to understand that only temporary dichotomous thinking in the development of theory is necessary to understanding and they appreciate the integrated quality of the lived life of a human being which requires explanations that lie outside of their own conceptual realms.

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[4]A dialectically oriented theory such as Rychlak's (1984) logical learning theory and Lana and Georgoudi's (1983) interpretation of certain aspects of attribution theory are exceptions to this proposition, but few such theories have arisen.

Social Processes

The social phenomena that have been of interest to social psychologists over the past fifty years or so are, as one might expect, quite diverse. Attitude, beliefs, opinions, decision making, altruism, aggression, social perception, leadership, and a host of other topics have occupied social psychologists for years. The opposing emphases of the behavior–cognition dichotomy have appeared as theoretical options within these empirical contexts. Fifty years ago David Krech and Richard S. Crutchfield (1948) published a widely cited book on how these processes might work. Their thesis was presented as a series of propositions which, although not of the formal hypothetico-deductive sort, were intended to be linked by observation of relevant phenomena such that a somewhat loose logical consistency was revealed. They presented three sets of propositions regarding (1) the dynamics of behavior, (2) perceiving the world, and (3) reorganizing those perceptions. The first set of six closely paraphrased propositions are presented below (Krech and Crutchfield, 1948).

Propositions

> I. The proper unit of motivational analysis is molar behavior, which involves needs and goals.

Krech and Crutchfield's use of the terms "needs" and "goals" either requires eventual reference to physiological conditions, which they were uninterested in providing, or may be conceived to be summary terms for various behaviors.

> II. The dynamics of molar behavior result from properties of the immediate psychological field.

The focus is on immediately displayed behavior, not on its long-term acquisition. The emphasis is upon, for example, a person swimming now, not on how she acquired the behaviors necessary for propelling herself through water.

> III. Instabilities in the psychological field produce "tensions" whose effects on perception, cognition, and action are such as to tend to change the field in the direction of a more stable structure.

Notice that Krech and Crutchfield place "tensions" in quotation marks. This indicates that they are not certain as to the nature of these tensions. Their point, however, is that people tend to order their world.

IV. The frustration of goal achievement and the failure of tension reduction may lead to a variety of adaptive or maladaptive behaviors.

This proposition introduces the idea of tension reduction as an apparently desirable condition for the organism where the failure to achieve it predicts either adaptive or maladaptive behavior. All possibilities are covered and, consequently, the proposition is of limited use.

V. Characteristic modes of goal achievement and tension reduction may be learned and fixated by the individual.

This is a straight-forward proposition and needs no comment.

VI. The trend of behavior often involves progressively "higher" levels of stable organization of the psychological field.

Proposition VI recognizes the development of complex cognitive arrangements that people use both to organize and to predict events in their lives. Attributions of causality, and the building of group and personal myths are of this nature.

As dated as these propositions now seem with the hindsight of half a century, they do indicate what was then the developing focus of social psychologists on the construction of both individual and group perceptions and cognitions, that is, on the content of the social world. Krech and Crutchfield's arrangement of their insights in propositional form was meant to present them in a way that was comfortable for scientists. What these propositions represent, however, is the beginning of the recognition that the nature of the socius cannot be captured solely by the application of experiment, but must be subjected as well to analysis and interpretation based on the peculiar history of the group and the immediate context of the single individual. Context is primary and acquisition of relevant responses becomes secondary as in the general cognitive emphasis.

Leon Festinger was one of the last theorists to take a quasi-formal approach to social data, some eleven years after the publication of Hull's *Principles of Behavior*. Festinger, his colleagues and others, conducted experiments in social comparison which he defined as the study of the processes of opinion influence in social groups. The results of those experiments, and the hypotheses developed by Festinger (1954) to explain them, were absorbed into the greater social psychological context, but some of his conclusions proved inadequate in handling other data. However, the structure of Festinger's explanation is of interest with regard to the axiomatic process.

Festinger began by stating a number of hypotheses all based on already noted empirically gathered information. His first statement (Festinger, 1954, p. 117 ff) is in the form of what I have called a postulate, but which he calls

an hypothesis (statements are paraphrased from the original):

> H:I. There exists in the human organism a drive to evaluate its opinions and abilities.

It can be immediately seen that the only way to demonstrate the validity of this postulate is to be able to affirm that there is empirical evidence of physiological mechanisms that constitute the process implied by the term drive, or that drive is a summary term referring to behavioral data. Festinger does neither, nor, as we have seen, did Hull. Consequently, it is possible to say that the statement is not an hypothesis because there was no intent to test it empirically. However, it can stand as a postulate if the two above provisos are accepted.

> H:II. To the extent that objective, non-social means are not available, people evaluate their opinions and abilities by comparison, respectively, with the opinion and abilities of others.

This statement can stand as an empirically testable hypothesis and, if confirmed, as a postulate related to H:I. Of course, the testability of H:II depends upon having established definitions for all empirically manipulable terms such as "non-social means," the process of "comparison," etc.

> Corollary IIA. In the absence of both a physical and a social comparison, subjective evaluation of opinions and abilities are unstable.

As with H:II, Corollary IIA, if all its terms are operationally defined, has the possibility of being confirmed by empirical test.

> H:III. The tendency to compare oneself with some other specific person decreases as the difference between his opinion or ability and one's own increases.

Again, H:III has the same theoretical possibilities as H:I and H:II.

The hypothetico–deductive aspect of Festinger's theory is made vivid by his Derivation A which is made from H:I, H:II, and H:III.

> Derivation A (from H:I, II, and III). Subjective evaluation of opinions or abilities are stable when comparison is available with others who are judged to be close to one's opinions and abilities.

If we follow Festinger's steps (author's interpretation) we see:

H:I. Humans (Hu) will evaluate their own opinions (O) and abilities (A).

Therefore: If no objective means of evaluation are available, Hu will evaluate their O and A in comparison with other people.

Corollary IA (given from H:I). If no objective means are available, Hu will evaluate her O and A in comparison with other people.

Therefore: If neither objective nor social means are available for O and A comparison, evaluations of Hu O and A are unstable.

H:II (given from H:I and C:IA). If no comparisons are possible, Hu's O and A are unstable.

Derivation A (given from H:I, H:II, and C:IA). The tendency to compare one's O and A with another's decreases as difference between Hu and other increases.

Therefore: The tendency to compare one's O and A with another's increases as difference between Hu and other decreases.

As elegant as such an approach is for arranging psychological data, Festinger, in his later work (1957), largely abandoned this semi-formal approach. Hull's somewhat more formal approach was abandoned at about the same time. The result of this abandonment was that the hypothetico–deductive method was no longer of concern to most psychological theorists. Certainly every theorist proceeds inductively and deductively with attention to *modus ponens*, *modus tollens*, etc. However, there is little attention given to the writing of formal postulates, axioms, corollaries or propositions. This is understandable given all the difficulties in theory building as discussed in this and preceding chapters.

The Focus on Social Behavior

Elliott McGinnies (1970) wrote one of the early texts which attempted to explain various social phenomena from a behavior analytic perspective. In the opening to his book McGinnies discusses the concept of causality by saying that all events serve to initiate other events and that searching for a cause becomes a search for the events that have been the necessary precursors of those we choose to examine. This is a reasonable, rough-and-ready conception of the way causes operate. He offers as examples of causal sequences, one's foot kicking out when the patellar tendon is struck with a mallet or, one's foot kick-

ing out because the subject was asked to do it. McGinnies concludes that either stimulus can be said to have caused the response. One stimulus elicited a reflex while the other was the occasion for a learned reaction to verbal instruction. In assigning a causal function to the appropriate antecedent events in the examples given, differences between caused events and potentially intentional events are obscured. Although this distinction is not one which occupied many behavior analysts in the early 1970's, it has arisen since then, however (e.g., Day, 1976; Lana, 1995). The issue is crucial because, as we have seen, it forms part of the conceptual separation between behavioral and cognitive approaches to understanding social activity.

Briefly, causation and intention are related, but somewhat different behavioral sequences.[5] A causal statement ("I am going to get a cold") is different from an intentional statement ("I am going to go to the movies"). The latter statement is the expression of an intention, while the former is an estimate of what will occur in the future. If I do not do what I said I would do in the expression of an intention, it cannot be said that I have made an error, as I have if my causal statement is incorrect. It also cannot be said that I lied. That is, one can say "I am going to go to the movies," and not having gone, not be said to be necessarily lying. A lie is a statement contrary to one's thought. The truth of a statement of intention is not a matter of doing what one said. The truth of an expression of intention is only to believe the intention when stating it. An intention involves someone knowing what he is doing and knowing how to verbally express this felt intention. Intentional actions are those about which we can ask the question "Why?" This question is not applicable where evidence of a causal sequence of events can be given. "I slapped my forehead because it was being bitten by a mosquito." The act of slapping one's forehead might have looked intentional, but can be seen to be the result of a causal sequence where the response was reflexive and, therefore, caused. Had I slapped my forehead to indicate forgetfulness, it can be said the act was intentional. It can be seen that, in this situation, there needs to be a delineation of the caused behavior sequence from that of the intentional sequence. Listing the elements of the caused sequence is straightforward. The elements of the intentional sequence are more difficult to assess. However, intentional actions undoubtedly involve caused sequences of environment and behavior usually from the extended past history of the individual. I may have intentionally slapped my forehead to illustrate my forgetfulness because I have been reinforced to do so, that is, it is the caused behavior resulting from an identifiable, but now forgotten series of events that occurred periodically in my childhood. Assuming this to be the actual reason

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[5]A fuller presentation of the nature of intention within the context of modern social psychology is discussed in Lana (1991).

why I intentionally slap my forehead when I have been forgetful, it is still necessary to maintain the distinction between caused and intentional behaviors at the time they occur because, as we have seen, they involve different behavioral processes. All too often, this distinction is either reduced to causal explanation only, or intention is seen to be totally separate from caused behavior. Rather, intention and cause refer to different aspects of what is usually meant by intention, the causal elements being present in the past history of the individual. That being said, it is clear that an individual can always choose (intentionally) to do exactly opposite of what she has habitually done in the past simply by so deciding. Human beings are capable of making decisions that override even reflexive causal sequences, as when one deliberately holds one's hand in a flame. Saying that another casual sequence is now operating in that situation is tautological. One needs to distinguish the caused from the intentional because they refer to different aspects of human behavior. It is a distinction that mirrors the cognitive–behavior dichotomy and one that is crucial to social psychological inquiry.

The Process of Socialization from a Behavior Analytic Standpoint

Understanding this distinction between causal and intentional analyses allows us to examine the parallel processes of explaining social activities in terms of behavioral and cognitive orientation. McGinnies (1970), although stressing the behavioral sequences of social activity, speaks of conscious or volitional factors mediating the effects of reinforcement on response selection. He then proceeds to cast explanation of a variety of social behaviors in the terms and orientation of behavioral analysis. Language is considered central in this enterprise and thus we are carried back to the discussions in early chapters of this book and this point need not here detain us.

The fundamental point of behavior analytic social theorists is, of course, that one becomes a person by a series of reinforcements either deliberately or accidentally imposed by the social environment. The major providers of that reinforcement, at least through the first several years of life, are usually one's parents. The observation that a young child is just beginning that socialization process is obvious to virtually every observer. For a behavior analyst, social behavior occurs ". . . whenever two or more organisms, either directly or indirectly, serve both to prompt and to reinforce one another's performance" (McGinnies, 1970, p. 1). Given this definition, the task of the social analytic behaviorist is to discover the nature and conditions of occurrence of these processes of reinforcement.

McGinnies suggests that internal stimuli arise, for example, when a child has not eaten for some time, and when food is supplied by the parent he or she becomes a discriminative stimulus for anticipatory feeding responses in

the child. Similarly, manipulation of the genitalia by the child may be met by punishment from the parents usually in the form of reprimand, the result of which is to decrease the likelihood of the child engaging in the same behavior in the future, at least in the presence of a parent. This interpretation emphasizes physiologically-given origins to account for the behavior in the first place. In the language of the behavior analysts, these behaviors are part of the behavioral repertoire. When another person instead of, or in addition to, the physical environment is part of the consequences of behavior, that behavior is said to be social. One person acting as part of the environment for another almost always means that communication of some sort occurs.

Although language has a central function in the behavior analytic approach to accounting for social events, the more general focus is on the enumeration of behaviors and consequences provided by people to one another while functioning within the physical environment. The importance of individual and group history has recently become established in behavior analytic thought (Guerin, 1994; Hineline, 1992). Contingencies related to social behaviors are established throughout the life span. Those established early in life can affect behaviors that occur later in life. This point is similar to the one taken by behavior analysis with regard to intention. One's apparent uncaused or whimsical responses may be the product of a series of reinforced contingencies which occurred years earlier. The individual's behavior with regard to another person may be the product of both recent and distant contingencies. In addition, the group in which the individual functions will have a history of social reinforcements regarding specified behaviors which also can be said to influence individual behavior. An analysis of current contingencies leading to a response over a relatively short period of time can never be adequate in providing a satisfying explanation of an individual's social activity. The problem arises as to how to assess these individual and historical factors that influence social behavior. This assessment must necessarily be interpretative rather than experimental.

For Guerin (1994), the reality of language is found in its social referents. Guerin states that saying that I can walk through walls does not refer so much to the physical act of walking, the nature of walls, or my strength, so much as it does to the effects these words have on listeners. How do they react? What do they say? His point is that the reality of language exists in the arena of people reacting to the words that they hear, and not to the physical objects and activities to which they presumably refer. Context is crucial. However, a problem arises because the listeners hearing such a statement will almost certainly be concerned with actual walls and actual walking. We can check the validity of the statement if we all can agree on (point to) the nature of walls and walking. Probabilities are involved. If the wall in question is made of balsa wood perhaps I can walk through it. This means that

language, in addition to having the social referents which Guerin indicates, is also useful for establishing a connection to the physical world. This point is often referred to as the correspondence theory of truth which behavior analysts generally oppose. The danger of not considering that there can be a correspondence between language and the physical world is that science becomes relegated to just another word arrangement no different from any alternative view, however fanciful, of the way the physical world works, and that is a self-evident danger. If we consider that no scientific statements are ever proven to be conclusively true with regard to the entities to which they refer, but are, rather, only statements of expectancies with certain probabilities attached, then Guerin's neglect of the physical world with regard to language is not necessary and even misleading. When I say "I am holding an apple in my hand," it is predictable that I can be prodded to say "I believe there is actually an apple in my hand," and this is independent of my words directed toward a listener. One set of verbal behavior predicts another, which is Guerin's point, but the second sentence also predicts the perceptual process of visual stimulation of the retina as well as a touch sensation of the apple which always accompanies the words "I believe an apple is present in my hand." Without the physical sensations the words will not be spoken; hence they are a function both of the social context and of the presence of an apple which accompanies these sensations. However, Guerin's point that the primary function of language is to provide a contingency for another language response from another person is well taken. We mainly speak to other people. The linking of this mutually reinforcing verbal behavior with events and objects that are not linguistic generates its own consequences as when someone both nods and picks up a ball that I have asked her to throw back to me. In such an instance we have influenced one another's behavior and have made a probably true statement about an aspect of the external, physical, non-linguistic world.

Guerin's (1994) explanation of social behavior is that it is possible to account for the responses people make with regard to one another, or responses they make to symbols for other people, by assessing their environmental context for the various contingencies which reinforce these responses. People act as discriminative stimuli for one another which results in predictable behavior. Consequently, the acquisition and use of language, as well as other forms of communication, are central factors in understanding social discriminations. Guerin stresses the necessity of expanding one's time perspective from the more-or-less present to the distant past with regard to the formation of socially determined responses. That is, a currently displayed social response may be, in part, a function of environmental contingencies of reinforcement which established the response years before as when a man, without being aware of the response, removes his hat in the presence of a

woman. The process of biological evolution and the survival of a species is seen as parallel to this process. The giraffe with the longer neck survived because the reinforcement contingencies in its environment supported eating the leaves higher on the tree when few leaves were available to eat.

Having set the time frame for the consideration of the development of social responses, Guerin turns to the actual social discriminations and how they are made. He prefers the term "social discrimination" to "social signal" or "social meaning" to indicate the process involved in the acquisition of social responses. "Signal" and "meaning" usually imply that the particular signal or meaning given lies in the object itself. For example, modern nations salute a colorful piece of cloth called a flag to which is attached any number of expected behaviors, while a carved wooden pole would do just as well: the significance is in the behavior of people toward an object, not the object itself which is interchangeable with other objects. In addition, terms such as "signal" or "meaning" tend to focus attention away from the motivational component of the discriminative stimulus which is understood by noting the differential consequences of a particular behavior made to the discriminative stimulus. That is, one salutes the flag because this behavior, in the appropriate setting, has been reinforced in the past and its absence has been punished. We do not know what can or cannot be a discriminative stimulus until it enters a behavior–consequence sequence. This sets Guerin in contradistinction to the conclusion drawn, for example, by Karmiloff–Smith (1995) who, based on experimentation by Johnson and Morton (1991), concluded that infants ". . . possess some innately specified structural information about human faces" (p. 119). Johnson and Morton showed that newborn humans visually tracked stimuli that included the features of a face more readily than control figures with the features stylized or changed altogether. Since this behavior apparently appears at birth there was no opportunity to reinforce this visual tracking behavior. Presumably, Guerin's response to this phenomenon would be that the visual face tracking by the newborn was reinforced in the evolutionary history of the species because it has survival value. That is, our attention needs to shift from the reinforcement sequence of the particular organism to that involving the species. Hineline (1992) has indicated the extended time dimension that is emphasized in behavior analytic interpretations.

Generalized discriminative stimuli are, of course, more interesting than those specific to a particular individual, in the study of social behavior. From our previous example, the reinforcements and punishments associated with saluting the national flag are more important than the peculiarities associated with one person. These generalized behaviors associated with particular discriminative stimuli are presumed to have accumulated over a relatively long period of time. Indeed, a social community can be described as a group

of people who, more or less, share the same discriminative social stimuli and social behavior. A Jehovah's witness who refuses to salute the national flag in any fashion whatsoever, by that fact alone, has his or her membership in the larger social group called into question by many group members.

Guerin then suggests that a number of well known social behaviors, demonstrated by, for example, Solomon Asch's (1956) social compliance studies, can be explained by the observation that people are much more compliant in the presence of others probably because the presence of other people in childhood is likely discriminative of social approval and discriminative of disapproval if behavior is non-compliant. Being compliant or non-compliant when no one is present has no immediate consequence. Perhaps Guerin's most telling point is that many social psychological studies and conclusions are actually about the consequences of behavior, but that this is not usually acknowledged. In the examination of attitudes in the next chapter this point will be made explicit.

For Guerin one can write the rules of grammar and establish other abstract linguistic principles, but these principles will not tell us how language is actually used. Clearly, Guerin parts company with the positions held by Chomsky, Fodor, and perhaps also the connectionists. Guerin's position suggests a truism since words are universally accepted as symbols for something else. The something else always resides outside of the actual sound of the words, and the words, as Guerin has indicated, can only have an effect on other people rather than on the environment. At another level the writing of the rules of grammar, although seeming to assign intrinsic meaning to the arrangement of words and sentences, can be seen as an effort to capture the frequently used arrangements by which people affect their environment through the use of verbal behavior directed toward other people. In this case to speak of the "meaning" of a grammatical rule is not necessarily contradictory to Guerin's view of verbal or social behavior. However, as discussed above, the origins of these grammatical arrangements either in environmental contingencies or in the innate structures and operations of the central nervous system are in contention.

There is no denying that words refer people to things and events, but there is a danger in stopping the analysis at this point. Words also refer to things and events through people. That is, even though words are clearly only effective when used with people, they are used, both correctly and incorrectly, in a manner that indicates that people believe that they are useful (true?) in manipulating the things and events to which people believe they refer. "Believe" is the key word here. When I say that the ball will move downward rather than upward when I release my fingers from it, I expect, as does Professor Guerin, that my observation will exactly confirm that expectation. This expectation will occur in addition to my understanding of the funda-

mental notion that "words refer people to things and objects." In short, there is a real, concrete sense in which my verbally announced expectant behavior directly refers to things and events as well as to other people. The alternative is to consider all verbal prescriptions of equal use or validity in assessing the physical world because they are verbal and refer to people. Since science is more useful than most other forms of verbal behavior in explaining many of the experiences of human beings, we must account for this success. I anticipate that Guerin's response to this point would be that scientific verbal behavior refers to things and events in a way that reinforces its use because it produces more consistent rewards than other forms of verbal behavior. This is true — however, it does not distinguish between verbal behavior which is reinforced and that behavior which we customarily call belief in the nature of reality. Another way of putting this, and using Guerin's and other's (e.g., Hineline, 1983) expressions, *knowing that* (something is done) always implies *knowing how* (to do something), but not vice versa. Science is the verbal arrangement for the ultimate *knowing that* because it provides the most useful connection between language and our perception of the world. But more of this in Chapter 7.

As one might expect, Guerin's treatment of social cognition seeks to redefine or translate the active terms in any cognitive explanation into those of behavior and its consequences. Guerin does not deny the existence of the phenomena which cognitive interpretations seek to explain. The emphasis in all cognitive viewpoints is on the storage or origination of the behavior in question in the central nervous system. However, except very recently (see Chapter 4), the actual workings of the central nervous system have been honored more in the breech than in the observance by cognitivists. Instead, cognitivists posit theoretical entities such as memory, retrieval systems, linguistic rules, schemas, and attitudes which they conceive to be, ultimately, brain states. This way of thinking tends to transform the object or event associated with it, such as a memory or attitude, into something that needs to be stored in the organism for later use. Guerin's point is that a behavioral experience changes the organism at the time it occurs. When the environmental context is again similar, the organism behaves differently than it would have without the initial experience. This eliminates the need to think of memory as a storing of something which a retrieval system then makes available in an appropriate future situation. It is, however, possible to use the term memory as a kind of summary term in referring to what both a behavior analyst and a cognitivist are interested in without committing oneself to either position. As we shall see when attitudes are examined, many social psychological concepts are used as summary terms for activities which lend themselves to description of behavior and consequence, although there is sometimes confusion as to what social psychological terms refer.

One of Guerin's most interesting analyses is directed toward linking some of the major tenets of Zen Buddhism with those of behavior analysis. The issue, as Guerin sees it, is the separation of verbal from contingency-shaped behavior that mirrors the distinction between controlled and automatic processing in cognitive psychology, or between consciousness and unconsciousness in Freudian psychoanalysis. Guerin observes that verbal behavior sometimes prevents appropriate action instead of reinforcing it as when people, to use Freudian terms, rationalize or project instead of directly behaving to solve their problems. Most generally, the problem is the inappropriate control of behavior by verbal discriminative stimuli. The mostly benign rejection of extended verbal behavior directed toward understanding the important aspects of Zen Buddhist existence, Guerin indicates, is an attempt to focus on contingency-based (nonverbal) behavior to as great an extent as possible. Zen attends to behavior that is reinforced by contingencies that are other than verbal, that is, social. Zen masters often speak of "emptying the mind" which, to a Western sensibility means not thinking, therefore, not using language that often accompanies images. In short, for Zen as for Guerin, language, although a natural response of human beings, often confuses us with regard to the actual origins of our behavior which may be environmentally, that is, contingency based.

Guerin, along with most contemporary behavior analysts, recognizes that social contingencies of reinforcement, although structurally similar to environmental contingencies, require separate analyses and pose special problems involving the historical development of a society. Since, as we have seen, verbal behavior develops as a result of mutual reinforcement among people, Guerin holds that the evolution of verbal communities is more important than the evolution of language. This relegates the study of the structure of language and its presumed origins in the innate qualities of brain structure to a minor, or at least bracketed, position. Given that Guerin has rejected the correspondence interpretation of causality (see Guerin, 1992; Lana, 1991, 1995) and has accepted the notion that causality is a verbal arrangement whose main effect is to change people's behavior, it is not surprising that he favors a study of the evolution of the verbal community over the study of the evolution of language itself. It follows that he will emphasize the social construction of knowledge. This is a point with which, I believe, virtually all social psychologists would concur.

However, differences in this social construction of knowledge exist between the lay public and the scientific community. For example, the public labeling of certain social groups is often at odds with the scientific labeling of the same groups. For example, the tendency of some lay people to identify ethnic and religious groups as separate races is indicated in phrases such as "the French race" or "the Muslim race." Even what we ordinarily think of as the

facts of physical nature have been interpreted differently by entire verbal communities as when most people believed that the sun orbited the earth. The idea that social reality is constructed plays directly into the hands of behavior analysis since its very definition requires the building of behavioral repertoires by reinforcement from environmental contingencies and those associated with the reinforcement of verbal behavior. In the next chapter, a behavior analytic interpretation of attitude formation and change will serve as an illustration of how social construction is to be accomplished.

The Process of Socialization from a Cognitive Point of View

The most recent emphasis on social cognition parallels the approach of the cognitively oriented linguists already discussed in Chapter 3. Since about the middle of the 1960's, social psychologists have focused their research on the organization of relatively permanent arrangements, sometimes called "structures," of the way people think about other people. That is, the older focus on the process of forming characteristic modes of response to social stimuli has given way to the study of the content of people's general and relatively stable organization of thought about other people. Unlike modern connectionist or innatist language theorists, cognitively oriented social psychologists do not concern themselves with the nature of brain or change mechanisms that underlie cognitive social content. How this cognitive social content developed is usually bracketed, that is, the process of development is not denied, but is epistemologically excluded from consideration. Since social cognitions can only be understood through language, social theory is similar to theory regarding language development and use. Unfortunately, it is often the case that the same label used to describe a particular cognitive process refers to significantly different processes when used by different theorists. This is to be expected since the entire exercise of explanation depends upon the correspondence of the subject's verbal descriptions to behavioral realities that may or may not be similar to the experimenter's. There is not the usual conceptual anchoring of terms in directly observable behaviors that can sometimes assure a similarity of meaning among different people and different theorists. This problem notwithstanding, the program of the social cognitivists to examine the subject's verbal arrangements of her or his social world and its match with the physical world is a reasonable ambition. Of course, who is to be arbiter of the true nature of the physical world, as we have already seen, is another issue and one that will occupy us later when the post-modernists are discussed. Since the focus of cognitive social theorists is on the individual's interpretation of the world around her, external contingencies are minimized compared to the emphasis placed upon them by the behavior analysts. The behavior analytic interpretation of the nature of social

reality is frequently rejected by social cognitivists (e.g., Markus and Zajonc, 1985) largely because they do not separate it from older, quite different forms of analyzing behavior such as those of Hull and his colleagues.

Since the mid-1960's, cognitive social theory has attempted to describe various internal human cognitive states directed toward the social environment. One of the problems that arose from this attempt was how to determine the exact nature of the appropriate internal state. Frequently, the experimenter simply asked the subject what he or she was thinking and assumed that this response would correspond with either the individual's external behavior that followed from the words or would correspond with the physical reality described by the words. As most psychologists know, this can be a risky assumption. Since behavior analysis holds that language has an effect on other people and not on the physical environment, words actually corresponding to objects and processes are suspect. Cognitive social theorists make the (usually) tacit assumption that the words spoken by a subject reflect a true aspect of a subject's past, present, or future behavior and reflect a true aspect of the external social world. This can be a reasonable assumption to make at one level since asking people what they believe often results in successful predictions. If I ask anyone for the time of day, the answer I receive will most likely be the same from a number of people, thus assuring a consensus which will most likely match the actual, observed solar time. However, we also know that certain kinds of questions are answered quite differently by different people, particularly when they include reference to the activity of other human beings such as the assessment of a political candidate's qualifications for office. People may lie or they may simply disguise their true beliefs because they do not wish to share them, or most importantly, they do not fully understand how to interpret the phenomenon in question so that it either matches that of a consensus of others or matches that of a presumed objective authority such as a scientist. Many people still believe that the essential randomness of winning lottery numbers can be predicted by using one system or another.

That there is a difference between a cognition which is a direct representation of an object (reading a clock) and a higher-order cognition (judging the qualifications of a political candidate) is reflective of the analysis of thought made by a number of British empiricists from the eighteenth to the twentieth century (Locke, Hume, and Bain among others). Sensory input, which empiricists called an impression, required the presence of an object subtending the retina. The visual picture present when the object was removed, that is, the object in memory, was called a simple idea. Therefore, because simple ideas were produced by objects in space, there could be no simple ideas that did not arise directly from experience. Hence the need for the British empiricists to postulate the idea of a *tabula rasa*. Observation in the first instance

was crucial, hence the label "empiricist" for those accepting this position. Complex ideas were formed by the combination of simple ideas. This lead to an attempt to determine the means of combination of simple ideas to form complex ones. Those interested in this problem were called "associationists" (as well as empiricists). In turn, the principles of association (see Lana, 1991, for details) became part of the epistemological foundation of behaviorism. Interestingly, although the cognitive–social distinction between direct and higher-order cognitions is derivable from the old association and behavioral positions, the interest in the reasons for the distinction are now dropped, and there is, instead, a concentration on the content of the higher-order cognitions. This concentration, however, usually leads to a somewhat hazy interpretation of the operating principles of how ideas and behavior are linked. Separate structures are assumed which guide the expression of social cognitions. A number of these structures have been used by cognitive social theorists to account for various aspects of social cognition.

Markus and Zajonc (1985) list inferential sets (Jones and Thibault, 1958), hypotheses (Bruner, 1951), theories (Epstein, 1973), scripts (Abelson, 1976), themes (Lingle and Ostrom, 1979), frames (Minsky, 1975), categories (Rosch, 1973; Smith and Medin, 1981), prototypes (Cantor, 1979; Cantor and Mischel, 1977), attitudes (Tesser and Cowan, 1975, 1977), and schemas (Neisser, 1976; Stotland and Canon, 1972) as examples of cognitive social structures. All of these constructs are empty categories or hypothetical constructs (MacCorquodale and Meehl, 1948). They refer not to processes that are defined by the empirical referents of the theories, but rather to processes presumably explained by some other system. If we consider, for example, schema, which is variously defined, but can be considered to be a presumed standard in the person's social judgment system, we find that the acquisition process by which the standard was obtained is left out of consideration. Bracketing the acquisition process then allows a schema theorist to concentrate on the content of certain cognitions. How this content constitutes a structure and exactly what that means will be discussed in the next chapter on attitudes. All cognitive structures refer to a constant way of classifying and reacting to certain classes of social stimuli. They are all systems of generalization in one way or the other. That is, they attempt to predict similar responses to similar stimuli. Concepts such as schema, set, or attitude etc. have always been part of the social psychologist's armementarium. They indicate processes contributed by the subject which, presumably, are not reducible to the terms used to describe the immediate environmental context. What is missing is both the biological and reinforcement history of the species over evolutionary time and the social evolutionary history of the group or groups to which an individual belongs. The Bem–Festinger controversy over the actual nature of cognitive dissonance illustrates this point.

Bem (1967) rejected Festinger's postulation of the existence of an aversive motivational state called "cognitive dissonance." He substituted the idea that the observed functional relations between current stimuli and responses and the individual's past training history could explain so-called cognitive dissonance without having to refer to this new motivational state. When cognitive social psychology focuses on content it is less conflictual with behavior analysis, particularly if "cognitive structures" are contextually defined, with their "empty" portion filled with direct reference to physiological and or behavioral acquisition processes.

Attribution Theory

The clash of explanations offered to explain how people attribute causes to crucial aspects of their social life can serve as a prime example of the confluence of the behavior analytic and cognitive interpretations of the same phenomenon. Attribution theory is designed to describe how people structure their social world regardless of whether or not these structures coincide with those of scientists or whether or not they are even rational. The fundamental attribution error (Ross, 1977) is defined as a tendency to assign the causes of certain social events to the person rather than to the context in which events occur. The assumption is that people need to explain the world around them in a manner that ensures a relatively stable future. Attributions of causality to various social events, however, present a complex situation regarding what standard of correctness is appropriate for judging the validity of an attribution. The attribution error of assuming that the person's actions and characteristics are the casual factors accounting for social events, rather than the environmental situation, poses a number of problems.

It has been argued (Kelley, 1973; Wortman, 1976) that people make causal attributions in an attempt to maintain a feeling of control in the world. If an accident is attributed to specific situational factors or to the dispositional factors of the victim, it is less likely that we will perceive ourselves as future candidates for a similar mishap. If the accident is attributed to chance, then there is nothing we can do to prevent ourselves from being the victim in an uncontrollable situation, that is, we cannot avoid our own victimization. This interpretation is related to Lerner's (1975) and Walster's (1966) "just world hypothesis" where it is believed that people get what they deserve and deserve what they get. Walster has found that a person's desire to avoid victimization influences not only the causal attributions he or she makes, but the tendency to punish those who "cause" accidents. Thus, if the results of an accident are positive, either the recipient is seen as meritorious, or the event is attributed to chance, thus allowing the attributer to believe that he or she may be a candidate for a similar positive accident in the future. If,

however, the results are negative, then not only the recipient's characteristics, but the outcome is attributed to specific situational or dispositional factors to make certain that we exclude ourselves from being the recipients of such outcomes in the future. However, in life, outcomes are rarely clearly due to chance or caused by easily identifiable characteristics of the situation or the individual. No one, whether trained in science and logic or not, can easily separate the various events associated with an accident into chance or causal components. If someone crosses a street against the traffic signal and is struck by an automobile, a causative explanation of the event is possible, and the cause can be attributed to the action of the individual. However, it is also true that people who cross the street against the traffic signal are not invariably or even frequently struck by automobiles. Regardless of whether people make causal or chance attributions on a logically and empirically secure basis, the fact that they make them at all is of importance. The crucial problem is not under what conditions an individual makes an attribution, although that is of interest, but rather how attributions in a number of important social categories develop and change, and how this development characterizes the decisionary process in the social situation.

The sense of time and of personal and group history relevant to the attribution process has been addressed by Hineline (1992) from a behavior analytic perspective. He places the "fundamental attribution error" within the larger context of the vernacular, and often the theoretical, linguistic practice of incorporating spatio-temporal contiguous, localized causes into explanations of behavior. This often takes the form of assigning a causal role to some characteristic or disposition of the behaving organism when there is apparently no intermediate determinant. In short, the very idea of a "social structure" of the sort listed above is a dispositional concept. Hineline (1992) lists personality characteristics, such as moods, desires, *inner states*, abilities, *attitudes*, *memories*, *thoughts*, ideas, wants, needs, drives, associations, *representations*, connections, values, *inner qualities*, and opinions as examples of "dispositioning." The italicized terms (mine) are those already discussed in this and previous chapters and form part of the general cognitive nomenclature which is central to several interpretations of language, thinking and other social activities. Hineline holds that this form of dispositioning is expressed in two ways. The first occurs when the role of the dispositional term is to bridge gaps in time — as when a concept such as drive is used as a summary term which indicates a recognition of the past reinforcement history of an individual who is said to "be driven" or who has a "strong drive" to succeed in business. The second sense of dispositioning occurs when a term is used to indicate a "temporally extended psychological process and infers an implicitly autonomous aspect of the person." This is the sense in which, for example, Chomsky uses the term "representation" as an innate, long-term characteristic of human

language *ability*. Regarding the fundamental attribution error, Hineline makes the valid observation that attribution theorists are as guilty of it as are the people they study when they attribute the cause of the error to be the "tendency" within people to assign greater responsibility to the person rather than to the situation. That is, the explanatory focus shifts from the environment involved with the action to the characteristics of the attributer.

The question arises as to how the postulation of social constructs such as those listed in the beginning of the chapter and those listed by Hineline are useful to the social psychologist in aiding explanation. Conversely, we can ask how these constructs may serve to mislead us rather than to aid us in understanding social phenomena. It has already been demonstrated that most social constructs are "empty," that is not to say "useless," categories in that they refer to processes not accounted for by the system in which they appear. I can say that an "attitude" is the result of a lengthy change in neural connections which, when activated by an appropriate external stimulus, results in a particular response. I measure all this by asking people what they think about a certain topic and predict how they will respond when that topic is raised in the future. Thus, when I discover that a person dislikes Republicans in a number of ways that he or she tells me about, I predict, probably successfully, that he or she will not vote for a particular Republican candidate in the next election. None of this allows me to confirm or disconfirm the conditions in the central nervous system that I have postulated to stand in a causal relationship to attitude. Therefore, attitude can only be a summary term referring to the procedures of measuring certain more or less permanent, usually verbal, behaviors which are then so labeled. Most cognitive social psychologists do not postulate accompanying brain states because they are usually uninterested in them and have no evidence about them in any case. Yet some social psychologists use social constructs as if they are more than simply summary terms.

Process and Content

The distinction that can be made between the process of the acquisition of a social construct and the actual content of the construct, as observed in the person at any given time, is crucial to understanding cognitive social explanation. As suggested above, social constructs do not refer to the process that leads to their formation in the first place. Markus and Zajonc (1985), I believe, take the same position. Despite this not illegitimate lack of concern about the nature of the acquisition of a social construct by many cognitive social theorists, such lack of concern sometimes leads to inadequate conceptualizations regarding the concept itself. A schema, attitude, representation, or any of the other social constructs commonly used by cognitive social theorists is rarely postulated to be innate to the organism. It is accepted that

social constructs are acquired. Yet when they are discussed, constructs are often endowed with an agency that they cannot possibly possess. Unless, for example, a schema, as described above, is part of the genetic inheritance of the organism, it cannot be said to be a cause of any behavior since it is defined in behavioral terms. The general definition of schema offered by Markus and Zajonc (1985), a presumed standard of the person's social judgment system, is fully described by taking verbal samples from the person's current behavior. In short, schema is a description of current verbal content thought to have causative agency with regard to future relevant verbal and other behavior. Although tacitly acknowledged by most cognitive theorists, the pertinent experiential history of the person regarding the formation of a schema is bracketed, and the possible causal chain that produces relevant behavior is broken. This renders the current existing schema necessarily non-causal unless a theorist is willing to consider that it is innately given or identifiable within the neural system. Such social constructs, if taken only as description of current organismic states can, however, be quite useful.

Unfortunately, the ascription of causal agency is often assigned to such constructs. For example, Markus and Zajonc suggest that schemas can be externally activated by certain stimulation and other schemas internally activated by information or goals generated by the individual. Once activated the schemas ". . . become information processing units that *allow* the perceiver to provide structure and to *achieve* meaning and understanding" (p. 150, italics mine). The italicized "allow" and "achieve" function as causal references within the conceptualization of the function of schemas. Although the descriptive content of schema is useful, the agency function which it is assigned has not been demonstrated nor is it demonstrable because the content is a result of other, unspecified processes bracketed by schema theory. Other social constructs suffer from similar difficulties. Conversely, social psychologists have generally rejected behavior analysis as a means for dealing with social behavior because behavior analysis has been singularly focused on the process of the acquisition of behavior rather than on the internal referents and structure of an acquired content. Behavior analysts interested in social phenomena always look for the specific context and the reinforcers present when the content was first acquired. They are rarely interested in simply describing a social pattern of behavior (content). If cognitivists and behaviorists divided the study of the socius into the study of its content and the study of the acquisition of that content, they would be epistemologically supplementary to one another. Difficulties arise when cognitivists propose that their constructs possess causal agency, while behavior analysts, as we have seen in the chapters on language, tend to ignore the possibility that specifiable innate processes may determine some verbal behavior. In a sense, they ignore the possibilities contained in their own concept of the behavioral repertoire.

Causal Agency

Albert Bandura (1989) attempted to reconcile these controversies regarding causal agency with his unified conception of the self as agent. He sees human agency as neither mechanistically determined by external factors nor autonomous. Bandura lists three kinds of agency: (1) autonomous agency which refers to the human being as an entirely independent agent of her own actions, which Bandura contends is not possible, but is used by behaviorally oriented theorists as a straw man for criticizing the cognitive position, (2) mechanical agency which maintains that the self is a repository and conduit for environmental forces such that human beings are best described as neuro-computational machines — which cannot account for self-referent factors — and (3) emergent interactive agency which holds that people contribute causes to their various motivations and behaviors within this system of triadic reciprocal causation. This is the position held by most social cognitve theories.

Actually, Bandura constructs his own straw man when he discusses the mechanical form of agency and attributes to environmentally oriented theorists the position that humans are "merely" repositories and conduits for environmental forces. Surely no contemporary environmental position holds to this proposition that the cognitive position sees human beings as totally in control of their own destiny. In short, in contemporary psychology both autonomous and mechanical agencies are straw men so far as being a part of the assumptive base of contemporary cognitive or behavioral theories. The third concept of emergent interactive agency contains the troubling idea that individuals cognitively cause their own motivation and action within a system of triadic reciprocal causation and further that personal agency operates within the interactional causal structure. The idea of making a cause of one's motivation sounds very much like what happens when one intends something. We have seen that an intention is not a cause although it has a causal history. The idea that personal agency operates with the interactional causal structure apparently refers to the process whereby an individual's behavior, or action, in cognitive terms, is determined by relevant occurrences in the present environment and as well as historical ones that increase the probability of particular responses in the current situation. This is a position which is not dissimilar to that taken by the behavior analysts.

Continuing his argument, Bandura introduces the idea of "self-belief of efficacy," that is, people believe in the capacity to exercise control over events that affect their lives and they behave accordingly, that is, they attempt to manipulate their environment in ways that are consistent with their desires. Bandura then describes the role of this self-efficacy in aiding people in solving life's problems, but this neither demonstrates the validity of, nor negates his initial postulations regarding agency, since virtually all contemporary theories

of causal agency are interactive. Because people anticipate their behavior in the future (they have a capacity for "forethought"), ". . .theories that seek to explain human behavior solely as the product of external influences or the remnants of past stimulus inputs present a truncated image of human nature" (1989, p. 1179). We have seen in early chapters that neither behavior analysis, nor, I believe, any other contemporary theory does what Bandura suggests. All psychological theories present a truncated image of human nature because they cannot encompass everything a human being is. All psychological theories, of necessity, focus on certain aspects of human existence and bracket the rest. Bandura's theory is truncated because he does not, understandably, consider the neural underpinnings of what he calls emergent agency, nor does he consider within his concept of agency the process of acquisition of postulated cognitive structures such as, for example, "self-belief of efficacy." Bandura states ". . . people possess self directive capabilities that enable them to exercise some control over their thoughts, feelings, and actions by the *consequences* they produce for themselves. Psycho-social functioning is, therefore, regulated by an interplay of self-produced and external sources of influence" (p. 1179, italics mine). He suggests that the consequence of a person's action is the central factor in determining what that action will be. This emphasis on the consequences of action, and on "self-produced" and external sources of influence, sounds very similar to what a behavior analyst would say about language and other social behavior. In addition, if Bandura means to have "self-directive capabilities" stand alone as being immediately meaningful in reference to what people do, he is in danger of suggesting autonomous agency, a process, the legitimacy of which he has already rejected. By these criticisms I do not mean to say that Bandura is not describing important issues regarding social activity, but rather that some of his terms need considerable clarification if they are to be useful in our understanding of human agency. Such concepts as "agency," "self-directive capabilities," and "self-belief of efficacy," are verbal arrangements that may have little to do with actual causes of people's social action. These presumed cognitive structures indicate a person's linguistic descriptions of relatively long-term patterns of response, the causes of which may have originated in the distant past.

It is clearly important to describe and understand the attributions which a person makes with regard to her social world, but those attributions may be false to the scientifically trained observer. For example, someone may have a "self-belief of efficacy" regarding his ability to predict winning lottery numbers by analyzing the content of his dreams, and this may have resulted in occasional successes. However, the observer who understands the probabilities associated with these events reaches a different conclusion. Someone may say that she has "a negative attitude" (called a cognitive structure) toward an ethnic group because she finds herself responding negatively whenever she

associates a stimulus such as a name, a face, or a food with that group. The causes of this behavior, verbal or otherwise, however, are found in the past history of the individual's experience either with members of the ethnic group or with others who have referred negatively to this group in her presence.

Cognitive structures are language arrangements which presumably summarize the operation of behavioral and environmental conditions. When one agrees that a cognitive structure such as an attitude is usefully applied to a particular human activity, one also agrees that either (1) its meaning is fully given by behavioral and environmental referents or (2) it has excess meaning which must refer to the genetic–physiological components of the organism which are left unstated in the definition of the cognitive structure. There is no third alternative. Bandura's statement, "The ability to envision the likely outcomes of prospective actions is another way in which anticipatory mechanisms regulate human motivation and action" (p. 1180), refers to people predicting future events, an ability we share with other animals. To say that there is such a thing as an "anticipatory mechanism" is not necessary. It is sufficient to indicate that past experience allows a dog to appear at his master's door every morning to be fed and thus the dog successfully predicts or "anticipates" the future. The difference between the dog and a person is that the person is capable of a verbal review of this situation and this sometimes leads her to postulate the existence of something like an "anticipatory mechanism" which adds nothing to the explanation since it has no referents other than the predicted behavior. Cognitive structures are verbal arrangements which can be reasonable devices to summarize organismic conditions that can be indicated by other than verbal means. Observed behavior, physiological and genetic information, and the history of both are the additional, possibly necessary, referents of cognitive structures. Usually, these structures are summary terms at best and never indicate other than the (reasonable) verbal arrangements of the scientific observer. Problems arise when structures are considered to have ontological referents in addition to these verbal arrangements.

Attitude is perhaps the most frequently used cognitive structure in social psychological theorizing. Its use has a relatively long history. Although its popularity as an explanatory concept waxes and wanes, it has never really left the social psychologist's lexicon. Contemporary concepts of attitude are examined in the next chapter in an attempt to provide specific examples of the real and the apparent differences between cognitive and behavioral orientations.