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ATTRIBUTIONAL PROCESSES: AN INTEGRATION OF SOCIAL AND CLINICAL PSYCHOLOGY

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"Why did Dad yell at me?"

"Why did you push your sister?"

"Why did the boss not promote me?"

Understanding causality seems central to human experience (Weiner, 1986). *Why* is there such focus on "why"? Psychologists and philosophers of science (e.g., Hempel, 1966) have long addressed this question and have contended that the interest in causality serves a number of functions for people, lay citizens and scientists alike, including increasing people's mastery and control over the environment and satisfying their desire to understand the world around them. Causal explanations can be generated for virtually any event of interest (e.g., why do the hydrogen and oxygen atoms in a molecule of water bind so strongly?). More specifically, however, attributions refer to causal statements made by "ordinary" individuals (noting that even scientists, in the conduct of their daily lives, can be considered ordinary!) about events involving humans. Although we believe that the same basic psychological processes are involved in all types of explanations, attributions are particularly important in understanding human behavior and a wide range of clinical phenomena. Thus, we focus our examples and discussions on this more limited type of explanation.

Psychologists have taken a keen interest in attributions. In fact, sev-

eral empirically supported theories outline the relationship of people's attributions to their thoughts, feelings, and behavior. Attribution theories (e.g., E. E. Jones & Davis, 1965; Kelley, 1967, 1973; Weiner, 1986) have emphasized the types of causal explanations that people make, the processes by which they make them, and the impact of specific attributions on subsequent cognitive, affective, and behavioral functioning. One goal of this chapter is to summarize the literature on attributional processes. However, an exhaustive review of the literature would be redundant with the many excellent reviews already in existence (see, e.g., Anderson, Krull, & Weiner, 1996; and Kelley & Michela, 1980). Thus, a more central goal is to examine the contributions that both social psychology and clinical psychology have made to attribution research and the implications of this area of research for social and clinical practice. The attribution literature provides a useful illustration of the interface between social and clinical psychology, as attribution processes are relevant to the concerns of both areas; understanding attribution processes allows social psychologists to better understand phenomena such as interpersonal attraction, aggression, and self-handicapping and allows clinical psychologists to explain and intervene more effectively with problems such as depression, shyness, and marital discord.

To meet the goals of this chapter, we first provide a brief overview of basic attribution theory, focusing on the current thinking about the "what" and "how" of attributions. Second, we discuss why attribution theory is important, focusing on the consequences of attributional processes and products that individuals face in their daily lives. These consequences are considered on two levels. *Proximal* (or immediate) *consequences* refer to the momentary, often immediate, and short-term effects that making a specific attribution can have on a person's thoughts, feelings, and behavior. *Distal*, or longer term, *consequences* refer to the ways in which making certain types of attributions repeatedly over time may be related to a person's long-term adjustment. Finally, we discuss implications of the existing research and possible future directions.

THE "WHAT" OF ATTRIBUTIONS

Understanding the structural characteristics of attributions provides the foundation for then understanding the process and the function, or consequences, of making attributions. Thus, we first describe several relevant characteristics of attributions, including the personal and situational characteristics on which attributions may be based and the dimensions on which they can vary.

Defining a Common Mental Process

Attributions can be defined as the causal explanations that people offer about a variety of intrapersonal and interpersonal events in their lives. For example, if Sam learns that Jack has become unemployed, Sam may come up with the explanation that Jack is lazy. On what is this attribution (and other attributions) based? People's personal explanations are based on a set of general personal beliefs or principles, such as "only lazy people are unemployed in a booming economy," as well as an assessment of the specific circumstances (e.g., "the economy is currently booming"). Of note is that the accuracy of these principles is irrelevant to the process of making attributions. Sam's attribution is a logical extension of his principles, and the attribution will guide his attitudes and actions toward Jack, regardless of "truth" or accuracy.

Thus, to make an explanation or attribution, the person must identify the relevant general principles and specific circumstances. This identification is sometimes specified explicitly, to an audience, and sometimes only implicitly, to oneself. In making an attribution statement, some of the principles and circumstances are frequently left implicit, on the assumption that the audience will understand what is meant without explicit reference to it. For example, in explaining why he robbed banks, Willie Sutton reportedly replied "because that is where the money is." This attribution for his bank-robbing behavior implicitly assumes a host of general principles and particular circumstances. It assumes that the audience believes that acquiring money is a basic motive guiding the behavior of many individuals, that Sutton had this goal, and so on.

Another factor to keep in mind is that attributions can range from being highly automatic to being the result of controlled, careful, logical thought. For example, some attributions are generated so rapidly, automatically, and without awareness that some researchers prefer to think of them as being part of the perceptual process rather than the attribution process (e.g., Erickson & Krull, 1994). First impressions often have this automatic character. At the other end of this dimension are attributions that take much time, effort, and explicit gathering and processing of information, such as jury members' attributions in murder trials.

Dimensions of Attributions

Causal attributions can vary on a number of dimensions. Although the exact number of relevant dimensions is still a subject of debate, at least three valid dimensions, and perhaps as many as five, have been identified (Anderson & Weiner, 1992; Weiner, 1985, 1986). Probably the most researched dimension is that of *locus* (e.g., Rotter, 1966). Events can be ascribed to causes that are internal (e.g., "I hit my sister because I was

angry”) or external (e.g., “I hit my sister because she was being mean) to the actor. Attribution locus is tied to several emotional and behavioral adjustment outcomes (Holtzworth-Munroe, 1992; Moore & Schultz, 1983; Silverman & Peterson, 1993). For example, depression and loneliness is associated with making internal attributions for negative events (e.g., failing an examination) but external attributions for positive events (e.g., getting a job). Aggression is associated with making a particular kind of external attribution for a perceived injury (e.g., “He did that on purpose!”). Stability of causes can also vary, ranging from causes that would be expected to fluctuate over time, such as luck (e.g., being in the right place at the right time), to causes that show temporal consistency (e.g., intelligence or ability). Stability of attributions is related to expectations of success and achievement motivation (Weiner, 1986). *Controllability* refers to an individual’s determination of whether the actor could have behaved differently. Controllability encompasses attributions of blame and is associated with emotions such as guilt and shame (Weiner, 1986). In addition to these three dimensions, some researchers have also advanced globality (i.e., how consistent across situations a causal factor is expected to be; Abramson, Seligman, & Teasdale, 1978) and intentionality (i.e., whether the actor’s behavior was purposeful; Weiner, 1986) as meaningful attribution dimensions. These causal dimensions have been used successfully to predict cognitive, emotional, and behavioral functioning in a wide variety of domains. We provide specific examples later in this chapter.

THE “HOW” OF ATTRIBUTIONS: THE ATTRIBUTION PROCESS MODEL

The attribution model we present has been described in more detail by Anderson et al. (1996). This model is based on work by many attribution and social inference scholars, including work by Cheng and Novick (1990), Gilbert (1989), Hilton, Mathes, and Trabasso (1992), Krull and Erickson (1995), Trope (1986), Uleman (1987), and Weiner (1985). The specific details of the various current attribution models differ, of course, but these differences are relatively unimportant to the understanding and treatment of clinical problems that involve maladaptive attributions.

Figure 1 shows our model of the attribution process. As indicated in Figure 1, some event must first occur for this process to be activated. It may be a personal failure of some kind (e.g., a fight with one’s spouse), a brief conversation with a stranger, or an opening statement in a trial.

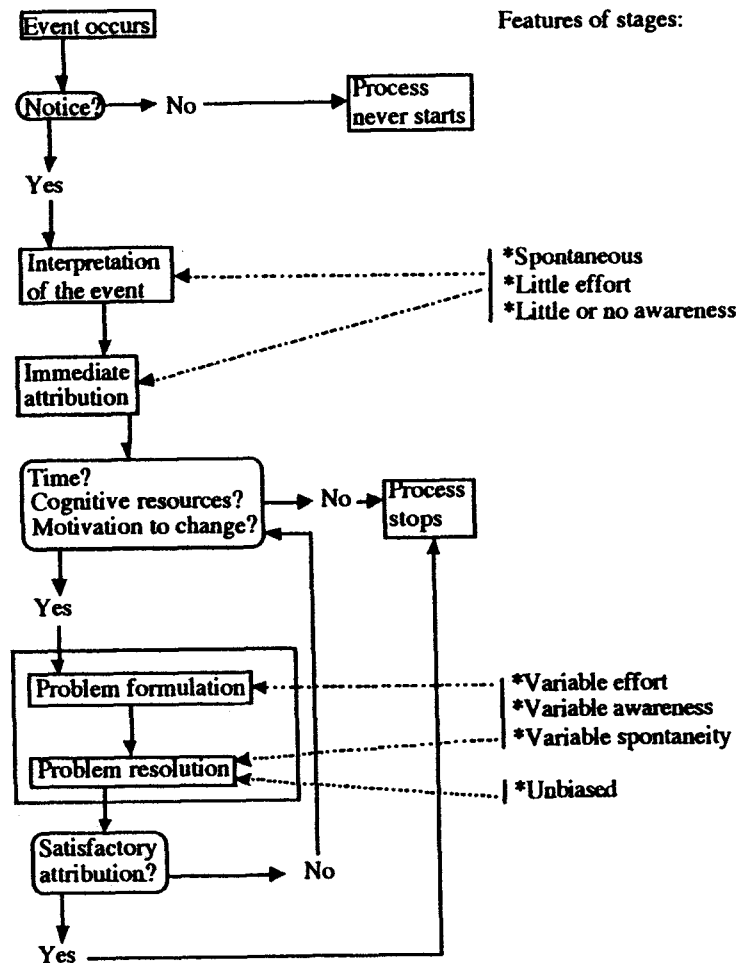


Figure 1. The attribution process. From “Explanations: Processes and Consequences,” by C. A. Anderson, D. S. Krull, and B. Weiner, 1996, in E. T. Higgins and A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles* (p. 274), New York: Guilford Press. Copyright 1996 by Guilford Press. Adapted with permission.

Noticing the Event

The event must be *noticed* for the attribution process to start. Many factors influence the noticeability of an event, such as its loudness or brightness (James, 1890; see also Fiske & Taylor, 1991 [chapter 7]). A silent,

unmarked police car is much less likely to attract attention than a marked police car with a screeching siren and flashing lights. The characteristics of the person also play a role. Arthur Conan Doyle's character Sherlock Holmes trained himself to notice details (or their absence) that other perceivers would overlook. Clinical training similarly includes teaching future therapists to notice certain types of details in clients' lives or interactions.

In addition, the importance of the event to the perceiver will influence its noticeability. For instance, hearing one's name may capture attention when said loudly, but less self-relevant stimuli do not (Moray, 1959). Finally, the temporary or chronic activation of particular cognitive categories may influence the noticeability of an event. For example, perceivers more easily recognize success- or failure-related words, respectively, after learning that they had succeeded or failed (Postman & Brown, 1952). Similarly, a police officer (or the spouse of a police officer) is more likely to notice a distant siren than is the average citizen.

The noticeability of potential causes also influences the likelihood that they will be adopted as attributions of events. Stimuli that are particularly novel, visually dominant, unusual, or relevant to one's goals are more likely to be assigned a causal role than less attention-grabbing stimuli. For instance, perceivers tend to attribute causality to actors who stand out visually against a relatively pallid background (McArthur & Post, 1977), who have red hair or a leg brace (McArthur & Solomon, 1978), or who are visually dominant by virtue of their seating position relative to the perceiver (Taylor & Fiske, 1975).

Interpreting the Event

After perceivers notice an event, they must decide what it is that they have noticed. Perception is not a pure encoding of reality but instead a construction by the perceiver (e.g., Neisser, 1976). People frequently fail to appreciate that others do not perceive events in exactly the same manner that they do. Of course, the perceiver's interpretation of an event is influenced by the event itself, but the perceiver's prior mental state (e.g., expectations) also plays an important role.

People often see what they expect to see, but they do not recognize this influence on their own perceptions. Most importantly, social and personal events have an element of ambiguity and so can be interpreted in more than one way. Ambiguous events are likely to be interpreted in terms of the more accessible cognitive category (e.g., Higgins, 1996). Thus, perceivers may be more likely to interpret a shove as hostile if the actor is Black rather than White (Sagar & Schofield, 1980), a facial expression as fear if it occurs in the presence of a cobra (E. E. Jones, 1990), and a guest lecturer as "warm" if he or she has previously been described as such (Kelley, 1950).

Immediate Attribution

As noted earlier, some attributions are made quickly and automatically. These immediate attributions tend to be spontaneous, requiring little effort and little or no awareness. Some of these immediate attributions appear to be based on three perceptual cues. First, perceivers use temporal order. If a perceiver sees one boxer throw a punch and the other dodge it, the perceiver may automatically infer that the thrown punch was the cause of the dodge. In an extended interpersonal interaction, the sequence of cause and effect is less apparent and is influenced by additional factors such as perspective. For instance, perceivers tend to see their own behavior as responses to others' actions rather than viewing others' behavior as reactions to their own actions (Swann, Pelham, & Roberts, 1987). Second, perceivers use temporal and spatial contiguity cues. For example, people are more likely to explain a friend's elation by a current potential explanation than by one from the distant past (Zebrowitz, 1990). Third, perceivers use similarity cues. Events are frequently attributed to causes that are similar in some way. For instance, people tend to think that "big" events require "big" causes (Taylor, 1982). Thus, a person may be less likely to attribute uncontrollable crying and major depressive feelings to minor daily hassles than to the death of a loved one, even though major events are frequently caused by seemingly small causes. The power of similarity cues can also be seen in various prescientific medical theories in which a remedy resembles an illness (e.g., red stones stop bleeding, yellow substances cure jaundice) and in the psychodynamic practitioners' use of resemblance criteria in inferring associative links among elements in their patients' dream and waking lives (Frazer, 1959; Nisbett & Ross, 1980). However, even Freud is reputed to have warned fellow analysts about the overuse of similarity criteria by noting that "sometimes a cigar is just a cigar."

In addition to perceptual cues, immediate attributions may result from an individual's personal beliefs or *social theories* being applied to the event (e.g., Fiske & Taylor, 1991 [chapter 4]). In the simplest and perhaps most automatic type of social-theory-based explanation, the explanation is simply drawn from prior knowledge about why the target event occurs. Thus, when people learn that a valuable racehorse was found dead, the possibility of foul play may immediately pop into their head because of previous foul-play cases (Abelson & Lalljee, 1988). In a more clinical context, when some depressed individuals with low self-esteem receive failure feedback, they tend to automatically think about their personal shortcomings. It is interesting to note that people from different cultures or subcultures may have different intuitive social theories about the causes of certain types of outcomes and that these knowledge structure differences may produce different immediate attributions for an observed event. For instance, perceivers in independent cultures (e.g., United States, England) may immediately

attribute events to the person rather than to situational forces because their social theories suggest the importance of personal characteristics in explaining behavior (Dill, Erickson, & Krull, 1994). Perceivers from interdependent cultures (e.g., India, China, Africa, Latin America) may immediately make situational (or group) attributions because their social theories emphasize the importance of situational and group context (e.g., Fletcher & Ward, 1988; J. G. Miller, 1984; Shweder & Bourne, 1982; see also the work on implicit theories by Dweck, Hong, & Chiu, 1993).

After the immediate attribution is made, several process constraints come into play, as shown in Figure 1. If there are enough time, cognitive resources, and motivation to further examine the event, then a more effortful explanation process is started; otherwise, the attribution process stops and the perceiver uses the immediate attribution.

Problem-Based Attribution

In many cases people have the time, cognitive resources, and motivation to further examine the event being explained. This leads to a more resource-intensive *problem-based attribution process*. Figure 1 depicts this as consisting of two discrete stages: problem formulation and problem resolution (see also Anderson, 1983).¹ For instance, most people who experience serious marital difficulties spend considerable time and effort trying to understand the causes of those difficulties. The first step in such complex problem-based explanations is to formulate the problem.

Problem Formulation

This step involves gathering information about the to-be-explained event from many different sources. Problem formulation is controlled by a guiding knowledge structure (Anderson, 1983; Anderson & Slusher, 1986; see also Abelson & Lalljee, 1988; Read & Miller, 1993), a type of schema that contains information about the type of event, possible attributions for the event, the type of information needed to assess these possible attributions, and the likely effects or implications of these attributions. The additional information may come from memory, from a directed search in the immediate environment, and from more effortful search procedures such as asking other people or going to the library.

Many guiding knowledge structures might be applied to a given event. Chronic person factors and acute situational factors influence which one is selected. For example, one chronic characteristic of highly aggressive

¹Figure 1 shows a sequential process with the capability of recycling multiple times. An alternative formulation might involve a more complex set of parallel processes. We have no preference for one or the other, and there are presently no data distinguishing between the two. We present the sequential version because of its simplicity.

people is their readiness to perceive more "aggression" in the behavior of others than there really is (Dill, Anderson, Anderson, & Deuser, 1997; Dodge, 1985). Similarly, certain situational cues, such as being punched in the face, demand an aggressive interpretation. The most accessible guiding knowledge structure that meets some criterion of fit is most likely considered first. This is how individual differences in formulation of the same event come about. The goals of the perceiver also influence which guiding knowledge structure is used. Sometimes the goal is accuracy, but other goals are also common. For instance, sometimes people tire of the attribution process and become more interested in reaching an explanation quickly—they want to be free of the attribution task and are not particularly concerned about the accuracy of their explanation. At other times, people may have an impression management goal—certain attributions may create or maintain a desired impression (for self or others) better than other attributions (see Kruglanski's, 1989, discussions of the need for closure and the need for specific closure).

Even though the problem formulation process is complex and resource intensive, much of it takes place at automatic levels that are not conscious to the perceiver. For this reason, it is valuable to have people with different perspectives contribute to the same attribution generation process, be it clinical or judicial. People with different perspectives have disparate biases (i.e., accessible knowledge structures) and thus provide a better reality check than any single individual can accomplish.

Problem Resolution

This step involves integrating the various pieces of information collected during problem formulation into a "best" attribution. A match is sought between the attribution possibilities brought to mind in the problem formulation stage and the relevant information also brought to mind during that stage. The attribution with the best match is tentatively adopted (see L. C. Miller & Read, 1991, and Read & Miller, 1993, for a description of how such a matching process probably operates).

Evaluation of Satisfaction

At least one additional judgment is then made (this judgment could be construed as a part of problem resolution, but for clarity we discuss it separately). The perceiver must decide whether the best attribution is satisfying enough. If the attribution is not satisfactory, either because none of the causal candidates generated in problem resolution sufficiently fits the information or because other goals for the explanation are not met, the perceiver cycles back to the process constraints question and reassesses his or her motivation and ability to consider the event further. If time, resources, and the need to come up with a better explanation are sufficient,

When a new formulation of the problem is attempted. This may result in different causal candidates being considered and new relevant information being recruited from memory or gathered from other sources. Alternatively, the explainer may simply execute the process again with relaxed standards (Abelson & Lalljee, 1988). In either case, the problem resolution process is engaged once again, and the resulting best match undergoes the satisfaction test. Eventually, either the explainer arrives at a satisfactory attribution or constraints stop the process and the event remains unexplained beyond the immediate attribution.

Motivational Influences

Motivational variables obviously influence the attributions that people generate, although not necessarily in the simple ways proposed in the early days of attribution work. We believe that motivational factors are important at each step, except problem resolution. In our view, motivationally relevant variables (e.g., need states, goals) frequently have their impact through purely cognitive processes. For instance, at the noticing step, the ego relevance of impinging stimuli influences the perceptual readiness (i.e., accessibility) to receive these stimuli.

The immediate attribution is strongly influenced by the currently accessible knowledge structures, but what is currently accessible depends on many factors and includes variables traditionally thought of as motivational. Thus, prejudice against a particular racial group will influence which knowledge structures are accessible when a person is in a mixed-race bar; an unintentional bump by a member of a disliked racial group may be interpreted as an intentional personal affront (e.g., Duncan, 1976; Sagar & Schofield, 1980; see also Dodge & Crick, 1990).

Motivational variables can also influence the selection of guiding knowledge structures and relevant information in the problem formulation stage. For instance, ego-involvement manipulations influence what kind of information is seen as relevant (Anderson & Slusher, 1986). Once the information set judged to be relevant by a perceiver is properly specified, then the generated attribution (at problem resolution) reflects that information (see also Eisen, 1979; Novick, Fratianne, & Cheng, 1992; and Rusbul & Medlin, 1982).

At the two choice points (constraints and satisfaction), motivational variables essentially turn the attribution process on or off. At both of these steps, motivational variables influence the decision concerning whether a new attribution is needed. If there is no motivation to change the current state of knowledge about the event, then the process stops (see Kruglanski, 1989).

To summarize, attributions are people's causal explanations for human-relevant events. Although these explanations can range from rel-

atively automatic judgments to carefully considered conclusions, we maintain that individuals go through the same basic multistep process in forming initial attributions and that given the time, resources, and motivation, a more detailed explanation process occurs. At the end of this process, the person has what he or she considers the best possible attribution for an event and is then geared to respond to that event.

THE "SO WHAT" OF ATTRIBUTIONS

It is interesting and informative to understand the process of making attributions: how and under what conditions individuals make certain types of causal judgments. Although for many researchers and practitioners, the ultimate interest in examining attributions stems from their relationship to the subsequent cognitive, affective, or behavioral experience of the attributor. For example, the teacher is interested in how his or her students' attributions for test performance affect motivation to attend class and study; the coach is interested in how the athlete's attribution for winning or losing a game affects his or her confidence and effort in training; and the therapist wants to know how the client's attribution for his wife's behavior affects the subsequent marital interactions. Researchers of the attributional model have examined the relationship of attributions to the immediate thoughts, feelings, and behaviors of the attributor as well as to his or her longer term functioning.

Proximal Consequences: The Attributional Process Model

Proximal consequences can be thought of as a person's immediate, or near immediate, responses to a specific event and his or her attributions of that event. These responses include thoughts, feelings, and behaviors. Although many thought-feeling-behavior associations are multidirectional in nature, theory and evidence support specific directional relationships in the attributional process. Our attributional process model (adapted from Anderson & Weiner, 1992) delineates a process by which a person moves from event to attribution to cognitive, affective, and behavioral response. The initial step from event to attribution has been discussed previously. The remainder of the model is discussed in the next few sections.

Thoughts

The attribution process, involving an explanatory judgment, makes an explicit statement regarding the attributor's thoughts about the current event. For example, when Fred says "I failed the examination because I'm

not smart," he is making explicit his thoughts about the causes of the examination score. Additionally, however, the attribution makes an implicit statement about the attributor's belief about future events. For example, attributing a failed examination to a lack of ability implies Fred's belief that examination failure is likely to occur again in the future. If Sarah makes a characterological attribution for an argument with a coworker (e.g., "I'm very opinionated"), this implies her belief that she may get into similar arguments with others, whereas an external attribution (e.g., "She's narrow minded") may imply that the coworker is likely to get into future arguments. These thoughts about future events have been investigated in success expectancy research.

Success expectancy has been found to relate to two attributional dimensions, locus and stability. Specifically, internal locus is more predictive of success expectancy than external locus. People who make internal attributions for success are likely to show increases in expectations of future success relative to people who make external attributions for success. Likewise, internal attributions for failure are associated with decreases in success expectancy relative to external attributions for failure (Anderson & Weiner, 1992; Rotter, 1966). However, external attributions for success and failure are not consistently related to expectation of future success or failure. Stable attributions also result in more changes in success expectancy than do unstable attributions (Weiner, 1986), with stable attributions for success leading to increases in success expectancy, stable attributions for failure leading to decreases in success expectancy, and unstable attributions for either success or failure not leading to any consistent changes in success expectancy.

The bidirectional nature of these relationships is demonstrated by evidence that success expectancies also influence subsequent attributions (Anderson & Weiner, 1992). For example, in the context of high success expectancy, a person is more likely to make a stable attribution for a success experience and an unstable attribution for failure. However, a person with low success expectancy is likely to make a stable attribution for subsequent failure and an unstable attribution for success. Both failure for a person with high success expectancy and success for a person with low success expectancy are unexpected outcomes. Therefore, an unstable attribution is logical. However, making stable attributions for expected outcomes and unstable ones for unexpected outcomes creates a self-perpetuating cycle, frequently resulting in self-serving or self-defeating biases that are difficult to alter (Anderson & Weiner, 1992; Harvey & Weary, 1981).

The potential implications of success expectancies are obvious, then. The person who expects to succeed, and whose success experiences confirm his expectancy, will likely approach tasks much differently than the person who expects to fail. The relationship of this attribution-expectancy link

to responses such as achievement strivings and learned helplessness is discussed later.

Emotions

According to our model, emotions can result directly from events as well as from people's attributions and success expectancies after those events. Weiner, Russell, and Lerman (1978, 1979) suggested that the direct event-emotion path results in primary emotions, such as happiness or sadness, depending on whether the event was positive or negative. These primary emotions are thus similar to unconditioned responses, resulting directly and automatically from the environmental event, and not dependent on interpretations or attributions about the event. More distinct emotions, however, are associated with specific attributions. For example, locus is associated with self-esteem and pride (Weiner, 1986), with internally attributed success serving an esteem-enhancing function and internally attributed failure damaging self-esteem. External attributions for failure, in the forms of excuse making and rationalization, can protect individuals from decrements in self-esteem (Snyder & Higgins, 1988). Stability, by virtue of its temporal dimension, is related to time-based emotions such as hope and fear (Weiner, 1986; Weiner et al., 1978).

The controllability dimension also is associated with specific emotional responses. For negative events in which the person attributes the outcome to causes he or she could have controlled, guilt has been found to result (Hoffman, 1975; Weiner, Graham, & Chandler, 1982). For negative events that are attributed to uncontrollable causes (e.g., intelligence), shame is the likely affect (Brown & Weiner, 1984). Emotions have also been examined for events attributed to causes perceived to be within another person's control. For example, attributing a negative outcome to causes another person could have controlled are associated with anger toward that person (Averill, 1982, 1983), whereas uncontrollable attributions are related to feelings of pity or sympathy (Anderson & Weiner, 1992; Weiner et al., 1982) and decreased feelings of hostility (Brewin, 1992).

Behaviors

Behavior can be predicted from a variety of sources, including a person's attributions, success expectancy thoughts, and emotions, as well as from his or her motivation or desire to achieve a certain outcome. However, much of the research on behavioral reactions focuses on attribution-emotion-behavior links. For example, anger-invoking attributions (in which the event is attributed to causes within another person's power) typically yield retaliation and neglect. However, people tend to respond to sympathy-inducing events and attributions by offering assistance (Betancourt, 1990; Rohrkemper, 1985; Trivers, 1971; Weiner, Perry, & Magnus-

son, 1988). For guilt-inducing events, in which people see the negative outcomes as being due to internal and controllable causes, apologies and attempts to remediate are the most likely result (Anderson & Weiner, 1992; Niedenthal, Tangney, & Gavanski, 1994). However, uncontrollable shaming attributions are associated with withdrawal (Anderson & Weiner, 1992; Lindsay-Hartz, de Rivera, & Mascolo, 1995; Tangney, 1995). Success expectancies, influenced by locus and stability attributions, influence task persistence. For example, students who attribute school failures to their lack of ability (an internal, stable cause) are more likely than peers to give up easily (Covington & Omelich, 1984; Dweck & Leggett, 1988).

Summary

The attributional process model addresses links among events and the attributions that people make for them, to the subsequent thoughts, feelings, and behaviors that individuals experience and express. Locus and stability of attributions are related to success expectancy thoughts, and locus, stability, and controllability are associated with emotions about a person's own behavior as well as the behaviors of others. Success expectancy can predict behavior, such as an individual's quality of subsequent performance, as well as the likelihood of persisting versus giving up on a task. Emotions can also influence a person's tendency to approach or withdraw from a situation or task; guilt and shame are associated with reparation versus withdrawal, respectively, and pity and anger are associated with helping versus neglecting others.

We may be implying in this section that the human experience fits neatly into models with a finite (and relatively small) set of directional relationships. However, we know that life is not that simple or rigidly organized. In the next section, we acknowledge some of the complexities of people's attributions and their relationships to cognitive, affective, and behavioral adjustment, addressing some of the applications of the attributional model to personal and interpersonal issues of interest to clinical psychology.

Long-Term Functioning: Clinical Applications of the Attributional Process Model

Clinical psychologists are usually faced with issues that make up the latter portions of our attributional process model. People do not come to therapy complaining about their thoughts and attributions; they complain about feeling depressed, anxious, or lonely; about having difficulty with school or job performance; or about dissatisfaction or dysfunction in relationships. However, from our attributional process model, it is possible that these problems in living are associated with, and perhaps stem from or are

exacerbated by, maladaptive attributions. Thus, in the next few sections, we cite several common problems in living with their associated affective and behavioral features and examine whether certain characteristic attributional styles can be identified. Note that we do not even begin to address all the problems in living for which attributional processes may be relevant. For additional coverage of adjustment issues, the other chapters in this book and several other sources (e.g., Anderson et al., 1996; Harvey, Orbus, & Weber, 1992; Weary, Stanley, & Harvey, 1989; Weiner, 1995) provide excellent information. Here, we include a sampling of the possible applications of attributional theory and research.

Academic Achievement

Most parents spend at least part of their parenting years worrying about the adequacy of their children's academic achievement. Adults (especially parents) recognize the importance of working up to one's potential, yet many students seemingly do not understand the importance of this or do not care to achieve academically. Research investigating achievement-related attributions sheds significant light on children's achievement motivation and strivings. In particular, Dweck and colleagues (see Dweck & Leggett, 1988, for a review) have demonstrated that children who view ability as internal and unstable (i.e., ability is changeable because of factors such as effort) tend to maintain positive mood, motivation, and performance after failure. However, children who view ability as stable and unchanging (e.g., due to intelligence) and so attribute failure to internal, stable, and uncontrollable causes are likely to show less effective performance after failure or to give up entirely. Similar effects of attributional stability and controllability have been found for students of all ages (e.g., Covington & Omelich, 1984; Powers, Douglas, Cool, & Gose, 1985; Stipek & Mason, 1987; Wilson & Linville, 1982). Global attributions for failure also are associated with lowered task persistence in the form of increased off-task behavior (Mikulincer & Nizan, 1988).

Researchers of success expectancy have taken the understanding of academic achievement problems one step further, demonstrating that negative attributions are associated with low success expectancy and a learned helpless style of approaching academic tasks (Diener & Dweck, 1978). These children focus on failure, do not consider ways to remediate failure, and avoid future learning situations in which failure is expected to recur. Not surprisingly, the academic attainment of these children is frequently disappointing to the children themselves as well as to other people around them and may be associated with feelings of inadequacy or depression.

Depression

Depression is an affective state that most people experience, at least transiently, at some time. The feeling and, in more severe cases, the dis-

order are associated with sad mood, feelings of guilt or shame, low self-esteem, low motivation, and social withdrawal or ineffective social interactions. Maladaptive thoughts, including attributions, are also characteristic of depression and in fact are considered to be a central feature of depression by some theorists. For example, according to the Abramson et al. (1978) reformulated learned helplessness theory of depression, depression results when an individual experiences a number of negative events and explains them with primarily negative attributions. Specifically, depressive attributions for negative or failure events are likely to be internal, stable, and global, and attributions for positive events are external, unstable, and specific. The subsequent expansion of this theory (Abramson, Metalsky, & Alloy, 1989) implicates the combination of negative experiences and this depressive attributional style in the development of pessimism about the future or "hopelessness" depression. Therefore, according to Abramson et al. (1978, 1989), when answering one of the questions that opened this chapter, "Why did the boss not promote me?," a person who is depressed may respond, "because I am an inadequate employee," reflecting an internal, stable (ability), and global (all employee skills) attribution. Additionally, the hopelessly depressed person will expect this sort of event to recur in the future.

Although not an attributional theory per se, Beck's (Beck & Clark, 1988; Clark, Beck, & Brown, 1989) cognitive theory of depression also implicates negative attributional processes in the development and maintenance of depression. Beck suggested that depressive thinking is characterized by a variety of cognitive errors, including catastrophization, overgeneralization, personalization, and selective attention to negative events. Personalization corresponds to making internal attributions, whereas overgeneralization is similar to stable and global attributions, in which causes are generalized across time and situation. The catastrophization and selective attention cognitive errors refer to the tendency to focus on failure and negative aspects of events, again suggesting the globality of negative events.

Research on attributional style and depression is largely consistent with both basic research on maladaptive processes and the cognitive theories of depression. Several studies indicate that both youths and adults with depressive symptoms showed more internal, stable, and global attributions for negative events and more external, unstable, and specific attributions for positive events than their nondepressed counterparts (Blumberg & Izard, 1985; Quiggle, Garber, Panek, & Dodge, 1992; Seligman et al., 1984), although whether attributions for positive events (e.g., Benfield, Palmer, Pfefferbaum, & Stowe, 1988) versus negative events (e.g., Crocker, Alloy, & Kayne, 1988) are more important in understanding depression is currently unclear. Individuals with depressive disorders have shown the same pattern, differentiating them from individuals with nondepressive psychiatric disorders and individuals with nonpsychiatric medical conditions

(Rapps, Peterson, Reinhard, Abramson, & Seligman, 1982; Silverman & Peterson, 1993).

The controllability dimension proposed by Anderson and Arnoult (1985a) has received less attention than the other dimensions, but it appears to hold promise for understanding depression. Depressed people generally make relatively more uncontrollable attributions for both positive and negative events. In two studies comparing the statistical power of various attributional dimensions to predict problems such as loneliness and depression, controllability attributional style proved to be the most important (Anderson & Arnoult, 1985a; Anderson & Riger, 1991).

Experimental and longitudinal researchers have examined possible causal relationships between attributions and depression. Our model suggests that maladaptive attributions should give rise to depressed affect and responding. However, the reverse (or no direct causal relationship) is also possible. Findings are consistent with our hypotheses, suggesting the development of depression subsequent to negative attributions. The experimental induction of particular attributions has been more successful in leading to mood change than mood induction has been in leading to attribution changes (Anderson, 1983; Golin, Sweeney, & Schaeffer, 1981). Longitudinal research also suggests that maladaptive attributions predate depression (Metalsky, Abramson, Seligman, Semmel, & Peterson, 1982; Panek & Garber, 1992; Seligman et al., 1984).

Anxiety

Anxiety, especially social anxiety, and shyness have also received a great deal of attention from both social and clinical psychologists. Similar to depression, anxiety is a fairly common negative mood state in its mild form and is frequently associated with low self-esteem, low success expectancy and achievement motivation, and an avoidant behavioral style. Similar maladaptive attributions have also been proposed. For example, Beck (1986) suggested that anxious individuals overperceive the likelihood and magnitude of threat and doubt their ability to respond effectively. Although attributions were not specifically proposed by Beck, the overwhelming threat appraisal suggests that attributions of externality, uncontrollability, and globality for negative events play a role in anxiety production and maintenance. Other theorists have included uncontrollable attributions for negative events as an additional causal factor (e.g., Cheek & Melchior, 1990; Hope, Gansler, & Heimberg, 1989). It is interesting to note that Schlenker and Leary (1982) suggested that success events may also result in external and uncontrollable attributions by highly anxious individuals.

As might be expected based on theoretical disagreement about the role of internal attributions, findings regarding internal attributions are somewhat inconsistent. Using nonclinical samples, several researchers have

found shyness and social anxiety to be associated with internal attributions for failure and external attributions for success (Anderson & Arnoult, 1985a, 1985b; Arkin, Appleman, & Burger, 1980; Girodo, Dotzenroth, & Stein, 1981; Teglassi & Hoffman, 1982). Test anxiety and more general trait anxiety are also related to internal attributions for failure in both adults and children (Diener & Dweck, 1978, 1980; Fincham, Hokoda, & Sanders, 1989; Hedl, 1990; Leppin, Schwarzer, Belz, Jerusalem, & Quast, 1987). However, researchers testing participants with clinical anxiety disorders, panic disorder in particular, have often failed to find effects on the internal dimension (Brodbeck & Michelson, 1987; Ganellen, 1988; Heimberg et al., 1989). However, Heimberg et al. found that individuals with social phobia did display maladaptive internal attributions.

Globality and stability have received more consistent support in both clinical and nonclinical samples. Anxiety and shyness is associated with stable attributions for personal failure (Fincham, Hokoda, & Sanders, 1989). Patients with panic disorder, agoraphobia, and social phobia also are more likely than nonanxious individuals to attribute negative events to stable and global causes (Brodbeck & Michelson, 1987; Heimberg et al., 1989).

As with depression, controllability has received less attention than other attribution dimensions. Anderson and Arnoult (1985a, 1985b) found that shy individuals tended to propose internal uncontrollable attributions for interpersonal failure. Indirect evidence for the importance of a controllability dimension, particularly as it interacts with internality, comes from research on anxious children's interpretations of peer provocation. When faced with ambiguous peer provocation, anxious children tended to assign hostile rather than accidental intent to their peers' behavior (Bell-Dolan, 1989; Bell-Dolan & Suarez, 1997). In other words, peers behaving intentionally are presumed to have control over their actions, thus implying that the event was not controllable from the victim's perspective. These findings are consistent with the overperception of threat and uncontrollable attributions theorized to characterize anxiety.

Relationship Satisfaction

Relationship satisfaction encompasses several areas of research, including the loneliness and friendship literature and the marital satisfaction literature. Loneliness resembles both anxiety and depression, involving a negative affective state, frequent dissatisfaction with oneself, and social withdrawal or ineffectiveness. In fact, research demonstrates empirical links of loneliness to both depression and anxiety (W. H. Jones, Rose, & Russell, 1990; Moore & Schultz, 1983; Yang & Chum, 1994). Thus, not surprisingly, the attributions of lonely people are similar to those reported by depressed and anxious individuals. Specifically, loneliness is associated

with internal, stable, and controllable attributions for negative events (Anderson & Arnoult, 1985a, 1985b; Anderson, Miller, Riger, Dill, & Sedikides, 1994; Anderson & Riger, 1991; Renshaw & Brown, 1993). Like anxious individuals, lonely people also attribute hostile intent to others' behavior (Hanley-Dunn, Maxwell, & Santos, 1985).

The marital satisfaction literature examines how attributions for events within the marital relationship relate to happiness in that relationship. Marital dissatisfaction is related to a person's tendency to blame his or her partner for relationship difficulties (Bradbury & Fincham, 1990; Fincham & Bradbury, 1988, 1992; Sabourin, Lussier, & Wright, 1991; Townsley, Beach, Fincham, & O'Leary, 1991), in other words, to attribute difficulty to external and other-controllable causes. The globality and stability of these blaming attributions has also been documented (Fincham & Grych, 1991; Sabourin et al., 1991).

Note that although marital dissatisfaction may be associated with depression, the specific attributional styles associated with depression and marital dissatisfaction are distinct. Whereas depressive attributional style involves self-focused internal, stable, and uncontrollable attributions, relationship dissatisfaction involves other-focused, blaming attributions that serve to highlight the partner's negative qualities and minimize his or her positive qualities (Baucom, Sayers, & Duhe, 1989). Researchers have documented the distinctiveness of these two attribution styles (Fincham, Beach, & Bradbury, 1989; Townsley et al., 1991) and in fact have shown the attributing marital problems to oneself rather than to one's partner predicts depression (Heim & Snyder, 1991).

The shift from self-focused negative attributions, which are associated with internalizing symptoms such as depression, anxiety, and loneliness, to other-focused negative attributions as seen in relationship dissatisfaction is accompanied by a change in the predominant form of behavioral responding. Whereas the self-focused and self-blaming negative attributions are associated with withdrawal and avoidant responses, we discuss in the next section on aggression the frequent results of other-focused negative attributions.

Aggression

Much research focuses on understanding why people behave in aggressive and violent ways. Recently, attribution researchers have suggested that the attributions people make may serve to justify and perpetuate their aggression. Because aggression is relatively common and overt in youngsters, much of the understanding comes from research on childhood aggression. Dodge and colleagues have found that children who are aggressive are more likely than their nonaggressive peers to overinterpret hostility, attributing even nonhostile provocation from a playmate (i.e., an acciden-

tal shove) to hostile intent (Dodge, 1985; Lochman & Dodge, 1994). This finding extends beyond traditionally defined, overly aggressive children to include children who are relationally aggressive (i.e., those who use social exclusion, gossip, etc. to harm another's relationships) and whose aggression is primarily reactive (Crick, 1995; Crick & Dodge, 1996). Delinquent adolescents have also been found to show maladaptive attributions, with their level of physical aggression being associated with a tendency to attribute social failure (e.g., a peer blocking goal attainment) to controllable causes (Guerra, Huesmann, & Zelli, 1990, 1993). Guerra et al. (1993) also found a relationship between aggression and external attributions for social failure.

Among aggressive adults, similar external and controllable attributions have been found. For example, violent husbands tend to make external and controllable attributions, blaming their wife's intentionally negative behavior for the marital violence (Holtzworth-Munroe, 1992; Shields & Hanneke, 1983). When internal attributions are made, they tend to refer to unstable causes, such as alcohol intoxication (Holtzworth-Munroe, 1992; Senchak & Leonard, 1994). It is interesting to note, however, that Dutton (1986) found that violent husbands who self-referred for therapy tended to offer internal attributions for their violence, highlighting the relevance of attributions for an individual's openness to change in therapy.

IMPLICATIONS FOR INTERVENTION

Ultimately, psychologists care about attributions and their associated affective and behavioral responses because of the implications for enhancing people's functioning and adjustment. If the models are accurate, then modifying an individual's attributions should lead to changes in his or her momentary affect (e.g., guilt, shame, anger), predominant mood (e.g., irritability, depression), success expectancy, and behavioral responding (e.g., aggression, withdrawal, helping). Of course, clinicians could change attributions in many directions, but most treatment and research programs have focused on changing the attributions associated with problematic mood and behavior. Thus, for depressed individuals who tend to view negative events as being primarily internal, stable, and uncontrollable, treatment would focus on helping them to see external and unstable causes for particular negative events (e.g., social rejection from a peer would be attributed to the peer having a bad day rather than to the unlikability of the depressed person) and to see controllability in the events around them (e.g., the same social rejection could perhaps be modified or avoided through some proactive pleasant behavior on the part of the depressed person). For angry and aggressive individuals who tend to blame negative events on the intentionally (controllable) negative behavior of others, treatment would help them to see the unintentional nature of some of the behavior of others

(e.g., the person who cut them off on the freeway was not being a jerk but was trying to avoid a tire in the road) and to share some responsibility for negative interactions (e.g., a marital argument resulted from both partners' lack of patience with the other). In fact, this attribution therapy approach has served as the basis for several cognitive therapies for depression (e.g., Beck, Rush, Shaw, & Emory, 1979), anxiety (e.g., Freeman & Simon, 1989; Kendall, Chansky, Kane, & Kim, 1992), and marital problems (e.g., Epstein & Baucom, 1989) as well as numerous other intrapersonal and interpersonal problems.

On the whole, such attribution retraining programs have shown promising results. Evaluation of attribution-oriented therapies demonstrates their effectiveness in reducing dysfunctional attributions and behavior in areas such as depression (e.g., Beck, Hollon, Young, Bedrosian, & Budenz, 1985; Kammer, 1983) and academic functioning (Carr & Borkowski, 1989; Dweck, 1975; Reid & Borkowski, 1987; Reiher & Dembo, 1984). Cognitive-behavioral therapies, which frequently incorporate attribution retraining as a component of their treatment, have been shown to provide superior treatment outcomes to other forms of therapy (e.g., Weisz, Weiss, Alicke, & Klotz, 1987). Note, however, that few of these treatment programs offer attribution retraining in isolation but instead include it in a multicomponent treatment involving direct attention to thoughts, behavior, and emotional and physical responding. Nonetheless, we believe that attending to maladaptive thought patterns is a crucial component of successful intervention and change.

SUMMARY AND CONCLUSION

Attributional processes have captured the attention of social and clinical psychologists alike because of their relationship to people's personal adjustment, interpersonal relationships, occupational effectiveness, and social responsibility. The potential utility of attribution theory is indeed far reaching, being relevant to the trial lawyer or jury consultant who attempts to predict how a group of 12 men and women will respond to various possible defense arguments, to the schoolteacher who is attempting to motivate a group of underachieving students, to the therapist who is working to alleviate a client's depression, and to the public fundraiser who wants to plan the most effective campaign for soliciting donations from the community. The appeal of attribution theory for understanding, changing, and motivating adaptive behavior is also compelling. The fact that attributions are internal to the attributors, carried with them wherever they go, suggests that changing attributions is more promising and potentially more cost effective than controlling external factors, such as the environment. People move from one environment or context to the next, and with these moves

the demands and supports of the environment shift. It is not always possible to keep children in supportive environments, for example, where their efforts are rewarded with success. However, if parents can maximize children's tendency to make internal, effort attributions for success, then their ability to withstand and persevere in the face of failure will likewise be maximized. Similarly, employees will not always have understanding and competent bosses, but if employees can attribute the praise they get from bosses to their own competent performance, and attribute the outbursts to the bosses' poor interaction skills, then the ability to go to work every day and derive some job satisfaction will be enhanced. Thus, helping people to develop their "portable" arsenal of adaptive attributions arms them for a multitude of challenges in daily life.

Despite the promise of contemporary attribution theory, the work of attribution researchers is not complete. Further refinement of attribution models, particularly with respect to cleanly identifying the most relevant attribution dimensions (which may be different for different situations) and clarifying directionality, is still needed. The relation between attributional accuracy and adaptiveness is another issue needing future research attention. Although wildly inaccurate attributions (and attributional styles) are certainly maladaptive in the long run, it is less clear that this positive relation between accuracy and adaptiveness holds true in all situations or at less extreme levels of inaccuracy. Attribution therapies also merit continued refinement and testing, especially in terms of their unique contributions in multicomponent treatment packages. Central to these advances will be the continued cross-fertilization of the area by diverse fields within psychology as well as from other disciplines. It is easy for social psychologists to talk to other social psychologists and for clinical psychologists to talk to others of "their kind." True advancement of attribution theory, research, and treatment will come from talking to each other and building on the complementary bodies of knowledge.

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