Attribution Bias: On the Inconclusiveness of the Cognition–Motivation Debate

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Received October 15, 1980

Social psychologists have given considerable theoretical and research attention to whether motivational variables bias the attributions people make for behavior. Some theorists maintain that motivational constructs must be invoked to explain certain attributional phenomena; other theorists maintain that information-processing variables can adequately explain these phenomena. The present article critically examines existing cognitive and motivational approaches to attribution and analyzes the assumptions underlying the cognition–motivation debate. We argue that cognitive and motivational theories are currently empirically indistinguishable. In particular, it is possible to construct information-processing explanations for virtually all evidence for motivated bias. We conclude by examining the implications of this indeterminacy of cognitive and motivational explanations. Future research in the area can most profitably be addressed to improving the specificity of cognitive and motivational theories rather than to resolving the between-theory confrontation.

Broadly construed, attribution theory deals with the processes that underlie the attempts of ordinary people to explain and draw inferences from behavior. Most attribution theorists work from the premise that people are active information processors—“intuitive scientists”—whose primary goal in explaining behavior is “to attain cognitive mastery of the causal structure of the environment” (Kelley, 1967; p. 193; see also Heider, 1958; Jones & Davis, 1965; Nisbett & Ross, 1980; Ross, 1977). People make attributions for the purpose of developing an organized and meaningful view of the world in which they live. A natural focus for empirical inquiry is the research methodology of intuitive scientists. Information-processing strategies do people use to infer the causes of behavior? To what extent do these strategies resemble formal procedures of statistical inference or informal judgmental heuristics? In short, what kind of intuitive scientist is the average person (cf. Kelley, 1967; Nisbett & Ross, 1980; Ross, 1977; Taylor & Fiske, 1978)?

The intuitive-scientist framework is not, however, the only possible way of thinking about attribution processes. Numerous writers have suggested that attributions serve important psychological and social functions in addition to establishing cognitive mastery of the environment. The range of motives hypothesized to affect attributions includes the need to protect or enhance one’s self-esteem (e.g., Miller, 1976; Zuckerman, 1979), to create a favorable impression on others (e.g., Bradley, 1978; Orvis, Kelley, & Butler, 1976) and to believe in a “just world” (e.g., Lerner & Miller, 1978). The list could easily be extended by adding numerous other learned or social motives (see the motive taxonomy of Murray, 1938). We shall often use the term functionalists to refer to those who maintain that attributions, like attitudes (cf. Katz, 1960), serve multiple, interrelated functions for perceivers.

Does the functionalist approach add to our understanding of attribution processes? Or, can cognitive models adequately account for how people explain behavior without recourse to additional motivational assumptions (as some appear to believe, e.g., Nisbett & Ross, 1980; Ross, 1977)? Much recent discussion in attribution theory has been concerned with these questions. Moreover, researchers have shown increasing interest in developing crucial tests of cognitive and motivational explanations of experimental findings. The basic assumptions underlying the search for crucial tests are that: (1) there is a clear conceptual distinction between cognitive and motivational determinants of attributions; (2) it is possible, by careful experimental work, to choose unequivocally between the cognitive and motivational positions. In Greenwald’s (1975) terms, the cognitive and motivational interpretations are conceptually disconfirmable.

These assumptions are apparently held by both researchers and those who have critically reviewed the relevant literature (Miller & Ross, 1975; Bradley, 1978; Zuckerman, 1979). Miller and Ross, for example, implied that it is possible to distinguish between cognitive and motivational determinants of the explanations individuals advance for behavior, urging future researchers to “assess the relative explanatory values of the motivational and nonmotivational interpretations of asymmetrical causal attribution” (p. 224). More recently, Bradley (1978) stated that the literature “provides more conclusive evidence regarding the influence of motivational biases in the causal inference process” (p. 57); however, the existence of motivational biases in attributions “still has not been unequivocally demonstrated.” Bradley suggested that additional research is needed “to determine the actual explanatory power and validity of Miller and Ross’s alternative interpretations and of other possible informational analyses of data relevant to self-serving attributional phe-
nomina” (pp. 68–69). These reviewers clearly assume that cognitive and motivational explanations are empirically distinguishable.

This paper attempts to place the dispute between the cognitive and motivational positions in broader theoretical perspective. We argue that: (1) current cognitive and motivational explanations are not distinguishable on the basis of attributional data (i.e., lack conceptual disconfirmability), and (2) advocates of cognitive and motivational explanations should devote more effort to clarifying ambiguities in their own theoretical positions than to seeking a crucial experiment that gives a decisive advantage to either a cognitive or motivational analysis.

This paper is divided into three parts. The first section sketches the major theoretical positions that constitute what we refer to as the “cognitive research program.” The purpose of this section is not to provide an exhaustive review and analysis of the relevant literature, but rather to portray the general character of the cognitive approach to attribution. The second section sketches the functionalist approach to attribution. We describe the major motivational positions and attempt to determine whether findings, cited as evidence for motivated bias, are open to alternative, information-processing explanations. We maintain that the cognitive research program is sufficiently flexible to mimic the predictions of virtually any motivational theory. The third section explores the implications of this lack of conceptual disconfirmability for future theoretical and empirical work.

OVERVIEW OF COGNITIVE APPROACHES

The Concept of Research Program

The concept of research program—proposed by the philosopher of science Imre Lakatos (1970)—provides a useful framework for organizing our discussion of cognitive approaches to attribution. Lakatos argues that the appropriate unit for describing scientific progress is not the isolated hypothesis or even theory, but rather the research program. To understand the concept of research program, it is necessary to define some key terms: “hard core,” “negative heuristic,” and “positive heuristic.”

According to Lakatos, all scientific research programs possess a hard core of basic, unmodifiable assumptions about their subject matter (cf. also Kuhn, 1970). These assumptions give impetus and direction to the research program, but are themselves protected from refutation by the negative heuristic of the program. This negative heuristic directs investigators to articulate and develop “auxiliary hypotheses” to account for results that cast doubt on elements of the hard core. In this way, investigators develop a “protective belt” of auxiliary hypotheses which bears the brunt of empirical scrutiny and may be adjusted and readjusted or even totally replaced in defending the hard core.

To illustrate how the negative heuristic of a research program functions, consider the following example (based on Lakatos, 1970). A physicist of the 19th century uses the concepts of Newtonian theory to predict the orbit of a newly discovered planet, p. But the planet deviates from the predicted path. The physicist’s reaction is not, however, to conclude that Newtonian theory is incorrect. Instead, he proposes that a hitherto undiscovered planet, p’, influences the orbit of p. This proposal can be viewed as an auxiliary hypothesis designed to protect the hard core of the Newtonian research program. If the auxiliary hypothesis is refuted (if the proposed planet cannot be discovered after an exhaustive search), then another auxiliary hypothesis will be advanced (e.g., a cloud of cosmic dust is obscuring planet p’). Ultimately, of course, a number of serious empirical anomalies may lead to the abandonment of a research program (Kuhn, 1970; Lakatos, 1970). However, the history of science indicates that advocates of research programs display great ingenuity in developing auxiliary hypotheses. Moreover, as Nisbett and Ross (1980) note, such scientific conservatism is not necessarily “irrational.” Resistance to abandon a well-developed theory in response to disconfirming evidence may under some conditions be justifiable.

Whereas the negative heuristic is defensive, the positive heuristic is progressive. The positive heuristic consists of suggestions on how to modify and develop the testable aspects of the research program. The positive heuristic points to ways in which investigators can develop a series of more complicated models capable of explaining an ever broader range of findings while remaining true to the hard core. For example, Newton first developed a model of the solar system that consisted of merely a fixed-point-like sun and one fixed-point-like planet. This model evolved gradually into one in which both the sun and all the known planets were included as entities with mass and in which both solar and interplanetary sources of gravity were taken into account.

The Hard Core and Positive Heuristic of the Cognitive Research Program

The hard core of the cognitive research program is the image of the perceiver as an “intuitive scientist” who seeks to identify the underlying causes of behavior (cf. Heider, 1958; Kelley, 1967; Nisbett & Ross, 1980; Ross, 1977). Implicit in this image is the positive heuristic of the program. The positive heuristic directs us to ask: “What type of intuitive scientist is the average person?” “How well does the intuitive scientist perform the information-processing tasks associated with making causal inferences (e.g., detecting relationships among events, recalling evidence, explaining why events occur, adjusting prior beliefs in response to new evidence)?”

An enormous body of theory and research has addressed these chal-
memories a great deal of knowledge about the physical and social world. People do not approach each event as though it were unique, one of a kind. The quantity and variety of stimulation is too great to render such a strategy feasible. To make sense of the world, people need organizing principles that classify objects or events as instances of broader categories (cf. Neisser, 1967). As Kelley and Michela (1980, p. 468) note:

"The attributor approaches most attributional problems with beliefs about the causes and effects involved. Given a certain effect, there are suppositions about its causes; given a certain cause, there are expectations about its effects."

Kelley and Michela (1980) have distinguished four broad types of social knowledge structures or schemata that guide attributional inferences: prior beliefs and expectations about oneself (self-schemata), other persons or groups (person-schemata), probable behavior in various social settings (situation-schemata or scripts), and probable causes of failure and success (outcome-schemata). The evidence indicates that schemata strongly influence the attributions people make for behavior and that, once formed, schemata are slow to change in response to new evidence (see also Nisbett & Ross, 1980). Schemata may influence attributions in various ways: by affecting the information which people initially heed, the inferences they draw, or the information they later recall (Taylor & Crocker, 1980).

However, even the strongest advocates of the schema construct concede that there is currently no internally consistent schema theory. Key issues remain unanswered (cf. Taylor & Crocker, 1980). For instance, there is a need to specify the conditions under which people will assimilate inconsistent information into a schema versus accommodate the schema to the evidence. It is also important to specify the conditions under which various schemata are activated or "primed" to guide information processing (Sull & Wyer, 1979; Wyer & Carlston, 1979). These weaknesses do not, though, necessarily represent fatal flaws. They can be viewed as ambiguities that a steadily expanding cognitive research program will eventually clarify.

**The Negative Heuristic of the Cognitive Research Program**

We noted that the negative heuristic of a research program protects the assumptions of the hard core from refutation. At present, we believe the cognitive research program cannot be forced to abandon the central assumption that people are best thought of as intuitive scientists (although there is much room for argument on whether people are "good" or "bad" intuitive scientists). There are essentially two reasons for this state of affairs.

First, beyond the fundamental "intuitive scientist" assumption, the program has enormous flexibility in accounting for empirical findings.

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1 This breakdown parallels Anderson's (1976) distinction between procedural and declarative knowledge. The distinction is not, however, airtight. For example, Reeder and Brewer (1979) show that applications of attributional rules such as discounting depend on the perceivers' assumptions about the behavior being explained. Similarly, Bower, Black, and Turner (1979) note that one's prior knowledge of events (in the form of scripts) influence what one attends to as well as how one retrieves information from memory.
There is no comprehensive, falsifiable cognitive theory—a theory that specifies when people will use particular rules of causal inference or the extent to which prior beliefs will influence the interpretation of incoming evidence. This lack of theoretical structure means that there are few constraints on the negative heuristic in developing counterinterpretations for findings that challenge the hard core (e.g., findings that suggest attributions serve a variety of perceiver needs and goals). The power of the negative heuristic is additionally enhanced by the demonstrated capacity of the positive heuristic to stimulate theory and research, thereby creating a large and diverse pool of ideas and findings upon which one can draw in defending the hard core. As it now stands, the research program requires no more than that people offer what seem to be the most plausible explanations for behavior, where plausibility is a function of some unspecified combination of formal and informal rules of judgment and “relevant” schemata. For this reason, the cognitive research program is most appropriately viewed not as a theory but as a conceptual framework within which one can ask and seek answers to questions about the processes of human judgment and inference (cf. Taylor, 1980).

Second, it seems likely that without well-articulated theoretical constraints, the negative heuristic will always be able to mimic the predictions of “motivated bias” theories. Our argument here rests on a simple observation. In order to arouse a need or motivational state in perceivers—be it a need to maintain a certain level of self-esteem, social approval, a belief in a just world, or perceptions of effective control—researchers must experimentally vary the information available to perceivers (see next section on “The Functionalist Approach”). Common methods of arousing needs include informing subjects that they failed or succeeded on a task, that other people are or are not observing them, that a person has or has not unnecessarily suffered, or that they will or will not interact with a “target” person whom they must judge. Motivational theorists argue that such manipulations have additional significance or special properties beyond the information conveyed. The manipulations induce an aversive drive and/or arousal state that motivates people to make attributional inferences designed to restore equilibrium. However, since manipulations of motivational states always involve distinctive stimulus antecedents, cognitive theorists can always argue that attributions are affected, not by some hypothetical need, but by some combination of the stimulus encoding, analysis, and decoding rules employed by the perceiver. From this standpoint, there is virtually no limit to the ability of cognitive theories to assimilate findings of motivated bias in attributions.

In the next section, we examine the negative heuristic of the cognitive research program in action.

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THE FUNCTIONALIST APPROACH TO ATTRIBUTION

This section is organized around four theoretical positions, each of which identifies a distinct source of motivational influence on attributions. These positions focus on the need for self-esteem, the need for social approval, the need to believe in a “just world,” and the need for effective control. We examine the strongest evidence in favor of each type of motivated bias. We also point to alternative information-processing explanations that do not require modifying the intuitive scientist assumption at the core of the cognitive research program.

The Self-Esteem Position

This position assumes that people need to protect, confirm, and perhaps even enhance their feelings of personal worth and effectiveness (see Allport, 1937; Smith, 1968; Snyder, Stephan, & Rosenfield, 1976). The need is highly general, although at any one time the need may manifest itself with respect to particular aspects of one’s self-concept, such as one’s moral worth or intellectual ability. Judging from the literature, the magnitude of the need varies as a function of both chronic personality characteristics and the degree of satisfaction or frustration experienced in concrete situations.

The most popular approach to testing the self-esteem position has been to compare self-attributions for failure and success. Investigators have designed studies in which subjects have been led to believe that they are poor or excellent teachers (e.g., Beckman, 1970), competent or incompetent in administering therapy for minor phobias (e.g., Arkin, Gleason, & Johnston, 1976; Federoff & Harvey, 1976), socially sensitive or insensitive (e.g., Miller, 1976; Sicoly & Ross, 1977; Weary, 1980), persuasive or unpersuasive (e.g., Cialdini, Braver, & Lewis, 1974), skillful or inept problem solvers (e.g., Feather & Simon, 1971), and winners or losers in various competitive games (e.g., Wolosin, Sherman, & Till, 1973). Self-esteem theory predicts that, to the extent feedback in these diverse situations is important to subjects’ self-evaluations, subjects will make external attributions for failure and internal attributions for success.

Superficially, there is overwhelming support for the self-esteem hypothesis. In a wide variety of experiments, people give seemingly “self-serv ing” attributions. Most of these studies, however, are clearly open to information-processing explanations. For instance, Miller and Ross (1975) argued that, singly or in various combinations, three cognitive variables can explain the tendency in many studies to accept greater responsibility for success than failure: (1) people expect success more.

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2 Space limitations prevent us from reinterpreting all the evidence relevant to each of these forms of motivated bias. We have therefore focused on findings that appear to pose the most difficult challenges to the hard core of the cognitive research program.
than they expect failure and are more likely to make self-attributions for expected than for unexpected outcomes; (2) the perceived covariation between one's responses and outcomes may be stronger for individuals experiencing a pattern of increasing success than constant failure; (3) people incorrectly judge the contingency between responses and outcomes in terms of the occurrence of the positive outcome (success) rather than the actual degree of contingency.

The Miller and Ross argument prompted attempts to find stronger evidence for self-esteem biases. In their reviews of the literature, for example, Bradley (1978) and Zuckerman (1979) pointed to studies that tried to control for the rival hypotheses identified by Miller and Ross. Although some ingenious studies have controlled for these rival hypotheses (e.g., Miller, 1976; Sicoly & Ross, 1977), such findings still do not decisively establish self-esteem-motivated bias. The three counter-interpretations put forward by Miller and Ross by no means exhaust the range of alternative cognitive explanations. For instance, the concept of self-schema (cf. Markus, 1977) provides a powerful tool for the negative heuristic of the cognitive research program. One can argue that most people perceive themselves moderately favorably and that these cognitive generalizations about self guide attributional interpretations of performance on ability-demanding tasks.

To illustrate this point, consider the research of Miller (1976). Subjects in this study took a social perceptiveness test, after which they learned that either the test was highly related to many positive personality traits (creating "high ego involvement") or the test's validity was unknown (creating "low ego involvement"). The experimenter then told subjects that they had done well or poorly. The results indicated that subjects attributed their good performance mainly to internal factors and their poor performance to external factors. In addition (and most important), this trend was significantly greater in the high-ego-involvement condition. Since the ego-involvement manipulation followed the test, the cognitive hypotheses of greater success expectancy, differential perceived covariation, and misconstrual of contingency are unable to explain the effects of involvement.

However, in varying ego involvement, Miller linked performance on the social perceptiveness test to personality traits on which many subjects may have had self-schemata. Subjects in the "failure/high-ego-involvement condition" faced a serious inconsistency between the test results and highly central cognitions about themselves. The "principle of least effort" predicts that subjects will resolve the inconsistency by changing less central and less well-established cognitions (cf. McGuire, 1968), in this case, their beliefs about the diagnostic validity of their performance. Such a reaction may indeed be "rational" (one would expect it from a Bayesian information processor). Self-schemata, after all, are built up over years of social experience and feedback. It seems rash to revise radically one's self-concept on the basis of one isolated bit of test feedback. Similar reinterpretations can be advanced for the results of such studies as Stevens and Jones (1976), Sicoly and Ross (1977), and Weary (1980).

At this point, the key distinction between the cognitive and motivational positions apparently becomes the types of defensive functions that attributions are claimed to serve: the maintenance of self-esteem or self-schemata. The reader is well justified in asking: Is this distinction merely a semantic one?

One major area of empirical differentiation would seem to exist: predictions concerning the attributional styles of low- and high-self-esteem individuals. The promise of a decisive empirical confrontation is, however, largely illusory. The cognitive position leads us to expect that individuals with high opinions of their competence will offer defensive attributions, whereas individuals with low opinions of their competence will accept causal responsibility for failure and deny it for success. Unfortunately, self-esteem theory is unclear on whether people are motivated only to maintain their existing levels of self-regard or are motivated to maintain and enhance their self-regard. The former ("weak") version of self-esteem theory leads to the same prediction as the cognitive position; the latter ("strong") version of self-esteem theory leads to an apparently different prediction: both low- and high-self-esteem individuals should offer defensive attributions. This strong version of self-esteem theory does, however, leave many questions unanswered. Does the theory assert that people will explain their performances outcomes defensively even if such explanations are highly implausible when assessed against prior beliefs about oneself and features of the task environment? Presumably, as Heider (1958, pp. 120, 121) noted, there are plausibility constraints on the degree to which "needs and wishes" influence our interpretations of events. Once the strong version of self-esteem theory acknowledges the need for plausibility constraints (as the evidence indicates it must), it becomes increasingly difficult to disentangle from the cognitive position. If the two positions are to clash empirically, both sides must advance more explicit, theoretical statements which specify: (1) where the range of explanatory power of the cognitive position ends (how implausibly self-serving must attributions be to fall outside a purely information processing account?); (2) what types of plausibility constraints there are on the influence of self-enhancement motives.

The Self-Presentation Position

This position rejects the notion that attributions are purely "intrapсhycic" phenomena (a view shared by cognitive and other motivational models). Attributions are also an important aspect of what people com-
municate about themselves to others. According to the self-presentation position, people often communicate attributions designed, consciously or unconsciously, to gain public approval and to avoid embarrassment (cf. Arkin, Appelman, & Burger, 1980; Bradley, 1978; Orvis et al., 1976; Scott & Lyman, 1968; Tetlock, 1980).

The self-presentational analysis leads to interesting predictions. For example, concern for social approval should be a more potent determinant of public than of private attributions (cf. Bradley, 1978). Unfortunately, it is difficult to specify in advance how the need for social approval affects attributions. On the one hand, the need for approval could lead subjects to make the most positive, plausible self-presentation to others (e.g., make internal attributions for success and external attributions for failure). On the other hand, the same need could also lead subjects to make counterdefensive attributions in which they assume responsibility for failure and deny credit for success (Bradley, 1978; Tetlock, 1980).

Whether subjects explain their behavior defensively or counterdefensively depends on a variety of factors (for a more detailed review, see Weary & Arkin, in press). For instance, subjects explain their performance more defensively to high-status than to peer audiences (Hendricks & Brickman, 1974). Subjects also explain their performance more counterdefensively to audiences that are in a position to observe their future performance (Schlenker, 1975; Wortman, Costanzo, & Witt, 1973). A study by Arkin et al. (1980) represents one of the most sophisticated attempts to explore both situational and personality determinants of attributional self-presentation. Individuals who scored high or low on a measure of social anxiety (Buss, 1980) were led to believe that they failed or succeeded on a task (administering therapy to a patient/confederate). Subjects also believed that their performance would be evaluated by a prestigious expert panel either immediately or in the distant future with the subject absent. Results indicated that high-, but not low-, social-anxiety subjects were more counterdefensive when they thought that a prestigious panel would evaluate their behavior immediately. According to Arkin et al., the findings suggest that high-social-anxiety subjects adopted a more cautious self-presentation strategy than did low-anxiety subjects. In a follow-up experiment, this effect was replicated. Moreover, high-social-anxiety subjects seemed to internalize their counterdefensive attributions (i.e., they were counterdefensive even when they believed the experimenter could detect deception on an "infallible" lie detector).

Once again, it is necessary to note that the advocate of an exclusively cognitive position has a variety of counterinterpretations. For instance, research suggests that expecting one's performance and attributions to be public creates a state of "objective self-awareness" (Wicklund, 1975) in which people tend to view their behavior as observers do (see also Mead, 1934). This alteration in perspective may affect the salience and hence availability of causal candidates. Moreover, one can argue that different audiences make different causal candidates more salient. In the terminology of Srull and Wyer (1979), knowledge of the audience's beliefs or values may activate or "prime" particular self-schemata which then influence attributions (e.g., a high-status audience may lead most individuals to think of their positive qualities; knowing that one's future performance will be evaluated by an audience may make the possibility of failure more salient).

The Arkin et al. (1980) study also merits comment. Here a personality variable (social anxiety) was useful in predicting whether people offered defensive or counterdefensive attributions. Personality variables do not, however, exist in isolation from each other; they are intercorrelated. Social anxiety, for example, is apparently negatively related to self-esteem (Buss, 1980). In addition, given the self-report nature of the measure of social anxiety, it may be appropriate to view the measure as one of whether people perceive themselves as the type of individual who reacts anxiously in social situations (cf. Fiske, 1971). A cognitive theorist could argue that the greater public counterdefensiveness of high-social-anxiety subjects derives from their lower feelings of self-efficacy and worth (feelings that were made especially salient by the prospect of being evaluated by an expert panel).

Finally, many theorists suspect that the presence of an audience merely affects attributional reports, not actual perceptions (e.g., Miller, 1978). Although this distinction between actual and reported perceptions is important to all research on motivated bias, it is particularly problematic for researchers in the self-presentation area. If self-esteem motivated attributions are to be effective in preserving people's self-images, people must believe the attributions. However, people need not believe the attributions they offer in order for those attributions to be effective in impressing others.

The Just-World Position

Just-world theory asserts that people need to believe that they live in a just and orderly environment in which there is a close congruence between an individual's outcomes and his or her personal worth (cf. Lerner, Miller, & Holmes, 1976; Lerner & Miller, 1978). This need is rooted in strong motivational forces acquired early in socialization. Indications that someone has been a victim of arbitrary events cast doubt on the meaningfulness of one's commitments to long-range goals that require delay of gratification. Such doubts are so threatening that people are very reluctant to acknowledge that the world (especially the world closest to them) is not really just.
This position predicts that individuals confronted with an injustice will be motivated to restore justice—either by assisting the victim or by convincing themselves that the victim deserved his or her fate (as a result of acting improperly or having a “bad” character). Considerable research is consistent with just world theory (for a more detailed review, see Lerner & Miller, 1978). Lerner and his collaborators have conducted the best known studies on this topic. Their research paradigm involves exposing observers to the suffering of a subject who is being shocked and then measuring observer’s evaluations of the subject. The greater the suffering, the more negatively observers evaluate the subject. This effect holds up, however, only when observers are unable to rescue or compensate the victim (Lerner & Simmons, 1966; Simons & Piliavin, 1972). In addition, individuals who believe most strongly in a just world appear most susceptible to the victim derogation effect (Lerner & Miller, 1978).

The theory also helps to explain a variety of other findings. These include: (1) the tendency for victims of real-life catastrophes such as cancer, airplane crashes, atomic bomb explosions, and rape to blame themselves for these events, rather than attribute them to uncontrollable factors (see Wortman, 1976); (2) the (sometimes difficult to replicate) tendency for observers to assign more responsibility to actors for actions with severe consequences (e.g., Mitchell & Wood, 1980; Phares & Wilson, 1972; Rosen & Jerdee, 1974; Walster, 1966).

Although people may frequently believe that individuals get what they deserve and deserve what they get, there is no necessity to posit a special need to believe in a just world. Just-world theory focuses on the judgmental consequences of perceiving events which challenge the central schema that “the world in which I live is just.” Blaming the victim can be viewed as an attempt to assimilate inconsistent information into a prior, well-established schema. Blaming victims can also be viewed as a joint product of people’s inability to understand random processes (cf. Langer, 1975; Tversky & Kahneman, 1974) and the representativeness heuristic. People probably find it implausible, as well as undesirable, that seemingly insignificant events can cause great suffering (e.g., the decision to take a different route home leads to a disastrous car accident). Relying on causal theories that have not incorporated the world view of modern science, people may seek representational causes that render events at least morally comprehensible (e.g., bad things happen to bad persons).

Finally, the effects of accident severity on attributions of responsibility may stem from the greater salience and vividness of severe consequences. Anything that increases the salience of an outcome may increase the perceived probability, and hence the foreseeability, of the outcome (cf. Fischhoff, 1975, or the “certainty-of-hindsight” bias). The foreseeability of an outcome is both a practically and legally justifiable criterion for assigning responsibility to actors.

**The Effective Control Position**

As noted earlier, the key assumption underlying the cognitive research program is that perceivers seek to understand the causes of behavior. Kelley (1971a, pp. 22–23) has argued that such understanding greatly facilitates coping with the uncertainties and complexities of the social world. Recently, however, researchers have proposed that the need for “effective control” biases causal attributions. Specifically, it has been hypothesized that perceivers—in their desire to feel that events are predictable and controllable—“distort the meaning and completeness of the available behavioral information in order to increase their attributional confidence” (Miller, Norman, & Wright, 1978, p. 599).

One approach to testing this hypothesis is to compare the attributions that people make to a stimulus person when they expect or do not expect to interact with the person. (Presumably, subjects’ need to feel in effective control is greater when they expect subsequent interaction.) Using this paradigm, Berscheid, Graziano, Monson, and Dermer (1976) and Miller and Norman (1975) found that subjects expecting to interact with a stimulus person drew more inferences about the personality (traits, attitudes, habits) of that person, even though they had the same behavioral evidence as subjects expecting no interaction. Miller et al. (1978) obtained a similar effect, which occurred regardless of whether subjects expected to meet the stimulus person before viewing his behavior or expected to meet him only after viewing his behavior. This finding eliminated an “attentional set” explanation which maintained that subjects expecting interaction simply attended more closely to personality-relevant cues than did subjects expecting no interaction. In a second study, Miller et al. showed that people scoring high on a scale designed to measure “need for effective control” drew more dispositional attributions about a person whom they anticipated meeting.

The Miller et al. research poses no serious difficulties for a general cognitive analysis. Although their first study indicated the insufficiency of the attentional set hypothesis, other cognitive mediators are possible. For example, expecting to meet someone probably leads people to think more about the person. Considerable evidence indicates that the more people think about a stimulus object, the more likely they are to evaluate the object extremely in the direction consistent with their initial (positive or negative) attitude (Tesser, 1978). This attitude-polarization phenomenon “seems to be predicated on cognitive changes such as the addition of consistent cognitions and the reinterpretation of existing inconsistent cognitions” (Tesser, 1978, p. 55). The second study reported by Miller et al. is also open to reinterpretation. It is highly debatable whether the ad hoc personality scale used in that study “really measures” need for effective control rather than differences in beliefs or information-processing styles (e.g., belief in the predictability of other people, tolerance.
processing theories. There is a latent motivational dimension to the cognitive research program: people are viewed as intuitive scientists seeking cognitive mastery (Kelley, 1967, 1971a). Moreover, there is considerable precedent for positing the existence of such a cognitive motive. Consistency theorists have often—although not always—treated inconsistency reduction as a drivelike motive, rooted in a need to achieve a stable, predictable view of one’s environment (cf. Tannenbaum, 1968). Berlyne’s (1965) concept of epistemic curiosity depicts uncertainty reduction as a motivational construct. Certain models of attention equate arousal with information-processing effort (Kahneman, 1973). One may legitimately ask such questions as: Is the reluctance to modify existing schemata in response to new evidence the result of motivational pressures such as intolerance for inconsistency or uncertainty? Do people rely upon different rules of causal inference as a function of the motivational significance of the situation? (see Einhorn & Hogarth, 1981; Janis & Mann, 1977, for similar arguments in the decision-making literature). Detailed development of this line of argument is, however, beyond the scope of this paper.

Within-Theory Refinement

We have argued that neither side is likely to “win” the cognition–motivation debate as currently formulated. In Ostrom’s (1977) terms, “between-theory” confrontation is premature. A more profitable strategy is to focus on identifying and clarifying conceptual ambiguities in the cognitive and motivational positions. Issues that now seem irresolvable may become much more tractable once key parameters of the cognitive and motivational theories have been specified.

Thus far, we have emphasized the vagueness of the cognitive position and the resultant power of the negative heuristic of the research program. One can invoke a variety of judgmental heuristics or information-processing functions of schemata to explain a pattern of results. With so many theoretical degrees of freedom, one can explain almost anything. At a minimum, cognitive theorists should specify what types of evidence (if any) fall outside the explanatory range of a purely information-processing analysis.

Unfortunately, motivational theories are even less precise and integrated than their cognitive counterparts. They represent little more than isolated clusters of hypotheses centering around vaguely conceptualized need variables. The following issues badly need clarification:

3 For these reasons, we are skeptical that research on the arousal-inducing properties of experimental manipulations can play a decisive role in distinguishing the cognitive and motivational positions (see Kiesler & Pallak, 1976; Cooper, Zanna, & Taves, 1978, for approaches to assessing such arousal-inducing properties). Experimental manipulations may be arousing by virtue of their complex informational properties (Berlyne, 1965; Kahne- man, 1973) or their discrepancies from subjects’ expectations (Tannenbaum, 1968).
(1) How many distinct types of motivated bias are there? We identified four types, but other reviewers could easily justify a different number.

(2) What are the necessary and sufficient conditions for the arousal of specific motives? For example, will the need for public approval always dominate the need for self-esteem when there is an “audience”?

(3) What are the empirical manifestations of the arousal of a motive? Are they phenomenal (self-reports of affect), physiological, or behavioral?

(4) How do motives influence the attribution process? At what stages in the information-processing continuum spanning stimulus and response does motivated selectivity occur? Do motives affect what people attend to, the types of information that pass through the iconic and echoic storage buffers to short-term memory, the availability of information to retrieval, or the weights given to information at the integration stage? Or, do motives only affect people’s willingness to verbalize particular responses? As Erdelyi (1974) notes, motives may affect judgment at any of these points.

We suspect that the dichotomy between cognitive and motivational explanations will become increasingly blurred and difficult to discern as the two theoretical positions are refined. On the one hand, theorists who tackle the murky issue of how motives influence judgment may find it useful to borrow from cybernetic control theory (Carver, 1979). For instance, people confronted with an ego-threatening event may search for an explanation that meets the minimum requirements of being plausible and emotionally acceptable. Each member of the set of available explanations would be assessed in terms of whether it meets some standard of plausibility and acceptability. The search would terminate only when a satisfactory explanation is located.

On the other hand, cognitive theorists may find it useful to follow the precedent of signal detection theory (Green & Swets, 1966) and take into account the incentives and costs for making particular types of attributions. A cognitive theory of this form might subsume existing motivational theories as “special cases.”

Finally, it is worth drawing back to perceive the forest as well as the trees. The fundamental issue underlying the cognition–motivation debate concerns how people reconcile their desires with their beliefs about the world. The intuitive-scientist metaphor depicts an individual who collects and analyzes information, but does not allow emotional preferences to influence these cognitive processes. Affective reactions, when discussed at all (e.g., Weiner, Russell, & Lerman, 1979) are effects, not causes, of our interpretations of events. In contrast, Zajonc (1980) draws on considerable evidence to paint a very different picture of human judgment. He has proposed that affective reactions typically precede the cognitive operations often assumed to be the basis of these reactions.

He argues that affect and cognition are controlled by separate and partially independent systems that influence each other in numerous ways (although, following Freud, he assigns “dominance and primacy” to the affective system). Any comprehensive theoretical analysis will ultimately have to take a position with respect to these two divergent viewpoints. Perhaps some form of compromise position will eventually emerge. As McGuire (1960) has suggested, people may function as “honest brokers” seeking a “least-squares fit” that represents a compromise between conflicting cognitive and motivational pressures. More rigorous theorizing is, however, necessary if we are to develop a deeper understanding of how people cope with this difficult trade-off.

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