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The Correspondence Bias

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The correspondence bias is the tendency to draw inferences about a person's unique and enduring dispositions from behaviors that can be entirely explained by the situations in which they occur. Although this tendency is one of the most fundamental phenomena in social psychology, its causes and consequences remain poorly understood. This article sketches an intellectual history of the correspondence bias as an evolving problem in social psychology, describes 4 mechanisms (lack of awareness, unrealistic expectations, inflated categorizations, and incomplete corrections) that produce distinct forms of correspondence bias, and discusses how the consequences of correspondence-biased inferences may perpetuate such inferences.

> One will seldom go wrong if one attributes extreme actions to vanity, average ones to habit, and petty ones to fear. (Friedrich Nietzsche, 1886/1984, p. 59)

Despite the homilies of philosophers, no one has yet found a simple formula for understanding others. The problem, of course, is that a person's inner self is hidden from view. Character, motive, belief, desire, and intention play leading roles in people's construal of others, and yet none of these constructs can actually be observed. As such, people are forced into the difficult business of inferring these intangibles from that which is, in fact, observable: other people's words and deeds. When one infers the invisible from the visible, one risks making a mistake. Three decades of research in social psychology have shown that many of the mistakes people make are of a kind: When people observe behavior, they often conclude that the person who performed the behavior was predisposed to do so—that the person's behavior corresponds to the person's unique dispositions—and they draw such conclusions even when a logical analysis suggests they should not.

In this article, we describe the causes and consequences of this particular mistake, which we call *the correspondence bias.* We do not attempt a complete review of the voluminous literature on this topic. Rather, we first define the correspondence bias in terms of the person–situation distinction that is fundamental to attribution theory. Second, we offer a brief and selective history of the study of the correspondence bias. Third, we describe the sequence of events that unfolds when attributions are made and then use this description to taxonomize and explicate the mechanisms that cause correspondence bias. Finally, we describe some of the consequences that may explain why this bias persists.

Attribution Theory's Rational Canon

People care less about what others do than about why they do it. Two equally rambunctious nephews may break two equally expensive crystal vases at Aunt Sofia's house, but the one who did so by accident gets the reprimand and the one who did so by design gets the thumbscrews. Aunts are in the business of understanding what makes nephews act as they do, and social psychologists are in the business of explaining how aunts achieve those understandings. The theories that provide these explanations are known as attribution theories.

There is no shortage of attribution theories (e.g., Ajzen & Fishbein, 1975; Bem, 1972; Hilton & Slugoski, 1986; Jones & Davis, 1965; Kelley, 1967; Medcof, 1990; Reeder & Brewer, 1979; Trope, 1986; Weiner et al., 1972). Although these theories differ in both focus and detail, each is grounded in a common metaphor that construes the human skin as a special boundary that separates one set of "causal forces" from another. On the sunny side of the epidermis are the external or situational forces that press inward on the person, and on the meaty side are the internal or personal forces that exert pressure outward. Sometimes these forces press in conjunction, sometimes in opposition, and their dynamic interplay manifests itself as observable behavior. As such, aunts can determine the causes of behavior in much the same way that they determine the causes of physical movement: By observing the motion of an object ("The balloon rose rapidly in the morning sky") and then subtracting out the contribution of external forces ("A light wind nudged the balloon ever upward"), an observer can estimate the magnitude and direction of the internal forces ("The balloon must have contained helium that contributed to the speed of its ascent"). According to attribution theories, aunts think of nephews as

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they think of balloons: objects whose behavioral motions are partially determined by the prevailing winds and partially determined by the rare and noble gasses with which genes and experience have inflated them.

Attribution theories suggest that the psychological world is a mirror of the physical world and that the two are therefore penetrated by the same logic. Ordinary people seem to believe that others behave as they do because of the kinds of others they are and because of the kinds of situations in which their behaviors unfold; thus, when a person makes an attribution about another, she or he attempts to determine which of these factors—the other person or the other person's situation—played the more significant role in shaping the other person's behavior. Is the basketball player a graceless shooter, or did poor lighting cause him to miss the free throw? Did the senator speak in favor of abortion rights because she truly believes in freedom of choice, or was she merely pandering to the desires of her liberal audience? Did the student appear sad because he is chronically depressed, or had he just received word of a failing grade? Each of these is a question about the relative contributions to behavior of situational and dispositional factors, and this distinction is, perhaps, the defining feature of attribution theory.

Attribution theory's fundamental distinction leads quite naturally to its fundamental rule: When a behavior occurs in the presence of a sufficiently strong, facilitative force, an observer should not infer that the actor is predisposed to perform that behavior. Just as one should not conclude that a balloon that rises on a windy day is filled with helium, one cannot make unequivocal inferences about the abilities of an athlete, the convictions of a politician, or the mental health of a student when poor lighting, a roomful of opinionated voters, or sudden bad news may have induced their behaviors. In other words, one should not explain with dispositions that which has already been explained by the situation. This logical rule was first formalized by Jones and Davis (1965) as the *law of noncommon effects* and later extended and codified by Kelley (1967) as the *discounting principle,* which warns observers not to attribute an effect to any one causal agent (e.g., a disposition) when another plausible causal agent (e.g., a situational force) is simultaneously present. In other words, when people do precisely what the physical environment or the social situation demands, dispositional inferences are logically unwarranted.

This simple rule is eminently reasonable, but, as with the interstate speed limit, someone seems to have neglected to tell the drivers. Although ordinary people may acknowledge the logical validity of the discounting principle when it is stated in the abstract, they are sometimes willing to abandon it in practice. People may make inferences about the dispositions of others even when situational forces explain the behavior quite nicely. In scores of experiments, subjects have violated attribution theory's logical canon by concluding that an actor was predisposed to certain behaviors when, in fact, those behaviors were demanded by the situations in which they occurred. Basketball players who are randomly assigned to shoot free throws in badly lighted gyms may, on average, be judged as less capable than players who are randomly assigned to shoot free throws on a well-lighted court (e.g., Ross, Amabile, & Steinmetz, 1977). Politicians who are randomly assigned to read prochoice speeches may, on average, be judged as more prochoice than politicians who are randomly assigned to read prolife speeches (e.g., Jones & Harris, 1967). Students who are randomly assigned to receive bad news may, on average, be judged as more chronically depressed than students who are randomly assigned to receive good news (e.g., Gilbert, Pelham, & Krull, 1988). And so on. Although this logical error has been called "as robust and reliable a phenomenon as any in the literature on person perception" (Quattrone, 1982a, p. 376), after nearly 30 years of research there is still no single, widely accepted explanation for its occurrence.

One might wonder how such a perdurable puzzle could have failed to yield a solution. We argue here that, in fact, the correspondence bias is a puzzle that has yielded too many solutions and that theoretical progress on this problem has been impeded by a failure to recognize that the correspondence bias comprises a number of distinct phenomena that only pose as one. Indeed, one reason why theorists disagree about *the* cause of the correspondence bias is that they are often studying different phenomena. Our goals in the remainder of this article are to place the correspondence bias in its historical perspective, sketch a generic model of attributional processes that describes four distinct causes of correspondence bias, and, finally, explore the inferential and interpersonal consequences of the bias.[1]

Brief History of the Correspondence Bias

People tend to think that others are as they act, and the intellectual roots of this tendency are so deep in Western thought that any attempt to describe them without discussing Durkheim, Weber, Marx, and Freud cannot help but fall short. Fortunately, we have set a less ambitious task for ourselves in this section, namely, to describe the genesis and development of this idea within that small pocket of Western thought known as experimental social psychology. The correspondence bias has been a problem in social psychology since its inception and has been described by some as the central problem of the field. How has the study of this phenomenon progressed? We see four events as intellectual watersheds, and these are the publication of landmark essays by Lewin (1931), Ichheiser (1949), Jones and Harris (1967), and Ross (1977).

Aristotelian Thinking in the 1930s

In 1931, Kurt Lewin published an unusual essay in which he analyzed the philosophical revolution that Galileo had brought to 17th-century physics. Lewin was not interested in the history of physics per se; rather, he believed that the transition in phys-

[1] Some psychologists (e.g., Funder, 1987; Kruglanski, 1989; Swann, 1984) have questioned the status of logical errors, and they have argued that inferential departures from rational baseline models are not necessarily damaging to the organism and, furthermore, that experimental procedures that claim to document these so-called "errors" do not always give subjects an adequate opportunity to avoid them. We do not assume that errors of judgment necessarily lead to negative consequences (indeed, we argue later that quite the opposite is sometimes the case), nor do we assume that such errors are necessarily the "fault" of the experimental subject. However, we do continue the tradition of referring to departures from rational baselines as errors, regardless of their causes or consequences.

ics from an Aristotelian to a Galilean view was a transition common to the evolution of all scientific thinking. In Aristotle's physics, the behavior of objects was ascribed to the individuating properties of those objects: Heavy things, for example, had gravity, whereas light things had levity, and these properties "explained" why the heavy and light things fell and rose. Indeed, this mode of explanation dominated physical science for centuries. According to Lewin, Galileo's insight was that the behavior of objects can be understood only in reference to the situation in which that behavior occurs. As Lewin (1931) noted:

> For Aristotelian concepts . . . the vectors which determine an object's movements are completely determined by the object. . . . The tendency of light bodies to go up resided in the bodies themselves; the downward tendency of heavy objects was seated in those objects. In modern physics, on the contrary, not only is the upward tendency of a lighter body derived from the relation of this body to its environment, but the weight itself of a body depends on such a relation. . . . The properties and structure of the object involved remain important also for the Galilean theory of dynamics. But the situation assumes as much importance as the object. (p. 29)

Lewin (1931) argued that psychology was stuck in an Aristotelian mode, and he challenged psychologists to become Galileans. Until psychology stopped thinking of behavior as the expression of dispositional properties of the person and began to think of it as an interaction between the person and the environment, Lewin argued, it would be doomed to remain in its already-prolonged infancy. In this essay, as in all his work, Lewin did more perhaps than any other social psychologist to show how an understanding of situations was critical to an understanding of human behavior. His, then, was the first important contribution to the study of correspondence bias, because only when social psychology had itself recognized the significance of situational forces would it be prepared to ask whether ordinary people recognized the same.

Social Blindness in the 1940s and 1950s

By the end of World War II, the sentiment that Lewin (1931) expressed had emerged independently among intellectuals of all stripe. Literary works, political essays, and psychological reports played on the common theme that human affairs are governed more often by accident than by intention and that people are more often the prisoners of their times than the captains of their destinies. This realization was not, of course, new, nor was it any one person's doing. But to the extent that one person served as its focus, that person was probably not Kurt Lewin but Adolph Hitler. Although some psychologists offered Aristotelian explanations for the Nazi phenomenon (e.g., the authoritarian personality), others took a different lesson from the Third Reich, which demonstrated that social situations can be fantastically powerful determinants of action. Choreographed legions of citizen-soldiers goose stepping to the chorus of "Sieg heil!" provided a more powerful testament to the malleability of human behavior than Lewin's essays or Skinner's pigeons ever could. In addition, the horrors of the Nazi eugenics program created something of an intellectual backlash among American scholars, who became wary of explanations that appealed to the "nature of man." Thus, as Keller (1992, p. 261) noted, "it was perhaps inevitable that, in the aftermath of the war, it would be to nurture that the development of human behaviour would be attributed."

What made this insight interesting was the fact that it ran directly counter to the individualist tradition of Western culture (a tradition initiated by the Greeks, especially Aristotle, but not much in vogue before 800 BC). Americans of the industrial age were weaned on a pabulum that was one part Ayn Rand and one part Horatio Alger: Anyone could be rich, anyone could be famous, anyone could be president. In a land of boundless opportunity, the only constraints on one's achievements were one's own talents and persistence. Thus, although the culture taught that people were the screenwriters, directors, and stars of their own lives, careful observation seemed to teach otherwise. Many careful observers remarked on the incongruity between the standard doctrine and the hard reality, but none provided a more thoughtful, clearheaded, and detailed psychological analysis than did Gustav Ichheiser. Almost a decade before Heider (1958) planted the seeds of attribution theory, Ichheiser (1949) discussed the problem of unwarranted dispositional inference in plain and eloquent terms:

> We all have in everyday life the tendency to interpret and evaluate the behavior of other people in terms of specific personality characteristics rather than in terms of specific social situations in which those people are placed. . . . It is hardly possible to exaggerate the importance of this type of social blindness in the crisis of our age. . . . Many things which happened between the two world wars would not have happened if social blindness had not prevented the privileged from understanding the predicament of those who were living in an invisible jail. (p. 47)

Ichheiser (1949) wrote about this particular form of social blindness in all its various guises, described several concrete psychological mechanisms that could cause it, and even prescribed remedies. No one was listening. Even when Heider (1958) made the same point 9 years later, it was dwarfed by the magnitude of his book's other contributions. In fact, no one seemed particularly interested in studying the phenomenon whose importance was "hardly possible to exaggerate" until 1967. In that year, Ned Jones and Victor Harris performed an experiment that, fortunately enough, did not turn out as they had planned.

Observer Bias in the 1960s

No decade of American history has been more overcharacterized than the 1960s. But surely this was a decade of change, a decade in which television brought war and assassination into the living rooms of ordinary people, who began to wonder whether they could truly shape their own destinies in the face of the powerful social forces that were apparently sweeping the nation. In a world that seemed to be spinning out of control, it was difficult to remain a faithful subscriber to the traditional verities of self-determination and hard work. In considering other mass phenomena, such as the Great Society (which sought to undo the "mere accidents of situation" that distinguished the poor from the middle class) and the Black Power and feminist movements (which argued that inhibitory situational forces could hobble entire classes of capable people), one can see how the situationist insights of Lewin and Ichheiser continued to penetrate the ordinary American experience.

It was in these times that Ned Jones and Keith Davis (1965) published the first systematic model of dispositional inference. Two years later, Jones and Harris set out to test one of the theory's less subtle predictions: When an actor is unconstrained by the social situation, observers will infer dispositions from the actor's behavior; when an actor is entirely constrained, however, observers will make no such inference. In a now-classic experiment, subjects were shown essays that supported or opposed Cuba's president, Fidel Castro, and were told either that the essayist was free to determine which side of that issue he would espouse or that the essayist had been instructed by his debate coach to defend a particular point of view. As expected, observers inferred strong pro- and anti-Castro attitudes when the essayist had freely chosen to defend those respective positions. But contrary to expectation, observers made similar (albeit much weaker) inferences when the essayist had been ordered by a debate coach to defend his stated position (Jones & Harris, 1967).

The result was too puzzling to leave alone. Here were perfectly intelligent college students who, when exposed to the coerced political statement of another student, seemed to be saying, "Well, yes, I know he was merely completing the assignment given him by his debate coach, but to some degree I think he personally believes what he wrote." This observer bias, as Jones and Harris (1967) called it, was replicated under a variety of circumstances that ruled out some of the more obvious artifactual explanations (e.g., that subjects had misunderstood the instructions, that the essays were unrealistic; see Jones, 1979, 1990; but see also Fein, Hilton, & Miller, 1990; A. G. Miller, Ashton, & Mishal, 1990). Over the next 10 years, Jones and Harris's "attitude attribution paradigm" fueled an active cottage industry that produced dozens of careful replications and extensions. Despite the considerable research activity and its cumulative results, two things failed to happen. First, no one offered a convincing psychological explanation of the observer bias, which proved both robust and enigmatic—something of a stray puppy that no one could quite get rid of but whose owner no one could seem to track down. Jones and Harris popularized Heider's (1958, p. 54) maxim that behavior "tends to engulf the total field" but correctly noted that "this describes the results without really explaining them" (Jones & Harris, 1967, p. 22). Second, experiments concentrated on the attribution of attitudes and remained somewhat paradigm bound. As a result, the observer bias piqued the interest of only a few dozen social psychologists who did research on attribution and social perception, and much of that research activity centered on local aspects of the attitude attribution paradigm itself rather than on the general phenomenon of observer bias.

The first of these problems has defied simple remedy: There is not today a single, commonly accepted explanation of the correspondence bias. We argue later that this is because the bias is actually a constellation of separate phenomena that require separate explanations. But even if the dog's owner could not be located, social psychologists would soon realize that what looked like a wayward puppy was, in fact, a champion canine.

The Fundamental Attribution Error in the 1970s and 1980s

Social psychology is, in the broadest sense, the science of environmental influence, and a considerable number of its experiments seek to demonstrate what Lewin, Ichheiser, Heider, and Hitler all knew: A person's behavior can be predicted, in large part, from knowledge of the social circumstances in which it occurs. In 1977, Lee Ross offered social psychologists a pair of insights. First, he argued that without the observer bias, the business of social psychology would be a dreadful bore. If social psychologists intuitively recognized the true strength of situational influences, then their demonstrations would be mere platitudes. Indeed, what made the experiments of Festinger and Aronson and Schachter and Milgram so interesting was that consumers of the research could be relied on to underestimate the strength of the social situations that the experimenters had engineered and, therefore, to be surprised by the experimental results.

Ross's (1977) second insight was much more important. He realized that the social psychologist's tendency to underestimate the power of situations (which he called the fundamental attribution error) was shared by social psychology's subjects and that this was the key to understanding their behavior in a wide range of seemingly unrelated experiments. Jones and Harris's (1967) subjects, for example, had failed to realize how motivating a debate coach could be when he ordered a debater to defend an unpopular position. Similarly, subjects in Festinger and Carlsmith's (1959) classic dissonance study had failed to realize how much pressure an experimenter could exert by politely asking them to tell a little white lie. Bierbrauer's (1979) subjects failed to realize how intimidating Milgram's experimenter could be when he donned a white lab coat and commanded one person to electrocute another. And so on. In each of these cases, subjects had mistaken a strong situation for a relatively weak one. They had mistaken highly constrained actors for lightly constrained actors and, as such, made the kinds of inferences about the former that one usually reserves for the latter. Ross was able to use a single principle to explain why subjects acted as they did and why social psychologists found it so interesting. Subjects and psychologists, he argued, were not the sorts of creatures they thought themselves to be: The determinants of their behavior were at odds with their theories about the determinants of their behavior, and thus they were capable of surprising themselves.

Ross's (1977) thesis had many lasting effects. But most important among these was that it showed that the tendency to make unwarranted dispositional inferences was not just some backwater curiosity but, rather, that it constituted the very heart of the social psychological enterprise. In so doing, Ross unbound the phenomenon and demonstrated the richness of its implications.

Causes of Correspondence Bias

The correspondence bias has been evolving as an intellectual problem in social psychology for some six decades. As we have already noted, we consider *the* correspondence bias to be something of a misnomer inasmuch as several different psychological mechanisms can give rise to the same general effect (i.e., the inference of dispositions from situationally induced behaviors). Although these mechanisms are often confused and rarely distinguished in the literature, we suggest that there are, in fact, four distinct causes of correspondence bias: (a) lack of aware-

ness, (b) unrealistic expectations, (c) inflated categorizations, and (d) incomplete corrections.

We begin our discussion of these causes by sketching the sequence of events that occurs when an attribution is made (see Figure 1). If an observer is to have any hope of performing a "proper" attributional analysis that takes into account the role of situational forces, she or he must first recognize the situation in which the actor is functioning ("The terrorist is threatening the hostage"). Of course, observers bring to this recognition a general set of beliefs about how people typically behave in such situations ("Most people will say anything to avoid being murdered"), and these beliefs constitute expectations (although not necessarily conscious expectations) for the behavior of the particular actor ("I expect the hostage to make anti-American remarks"). Next, the observer must perceive and categorize the particular actor's behavior ("The hostage is making anti-American remarks"). Finally, the observer must determine whether the actor's behavior violates the expectations that the observer's knowledge of the situation has engendered. If so ("Those anti-American remarks are stronger than I expected them to be"), the observer will draw a dispositional inference about the actor ("I think the hostage is somewhat sympathetic to the terrorists' cause"). If not, the observer will refrain from drawing such inferences ("The hostage is only doing what anyone would do in such a situation and thus is not necessarily sympathetic to the terrorists' cause"). In short, only when people observe behavior that is more extreme than the situation leads them to expect do they make dispositional inferences about the actor. Although attribution theories do differ in their essential details and may suggest slightly different sequences and combinations of these steps, most theorists would probably agree that these represent the major events in an attributional analysis. We suggest that errors at any one of these four stages can produce the correspondence bias.

Lack of Awareness of Situational Constraints

To avoid the correspondence bias, an observer must realize that a situation is playing a causal role in an actor's behavior. But one can implicate situational forces as causes only when one is aware that such forces exist in the first place. If one does not know that a hostage is being threatened, a senator cajoled, or a basketball player hindered, then one cannot even begin to do the inferential work that accurate attribution requires. Two problems—the invisibility problem and the construal problem—may make it particularly difficult for observers to attain the basic information they need to complete their attributional tasks.

The invisibility problem. Actors can be weighed and behaviors can be filmed, but when one tries to point to a situation, one often stabs empty air. Indeed, the constructs to which the word *situation* refers often have little or no physical manifestation: One cannot see, smell, taste, or hear "audience pressure," which exists only in the mind of the public speaker. When Skinner (1971) tried to explain why ordinary people attribute behaviors to the internal traits of actors rather than to the environmental stimuli that he considered the true causes of those behaviors, he implicated situational invisibility as the primary culprit:

> We recognize a person's dignity and worth when we give him credit for what he has done. The amount we give is inversely proportional to the conspicuousness of the [situational] causes of his behavior. If we do not know why a person acts as he does, we attribute his behavior to him. (p. 55)

Indeed, subjects in experiments must be specifically informed that the reader of an anti-American speech was being coerced by terrorists, an anti-American audience, or a debate coach because there is nothing in the behavior itself that relays this information (cf. Baron, 1988; McArthur & Baron, 1983). If the observer cannot see the actor's situation (i.e., the gun to the head, the cheering crowd, or the coach's instructions), then the observer may not know about the actor's situation and thus will surely fail to take that situation into account when making an attribution. This is precisely what happened in a well-known experiment conducted by Ross, Amabile, and Steinmetz (1977) in which subjects were arbitrarily assigned to play the role of contestant or quizmaster in a mock game show. Quizmasters were allowed to generate a list of questions from their private store of arcane knowledge, and, as expected, contestants typically failed to answer those questions. Surely contestants were faced with a much more difficult task than were quizmasters, and surely task difficulty was a powerful determinant of their performances. Nonetheless, observers of the game show concluded that the quizmasters were genuinely brighter than the contestants. Because observers could not actually see the "invisible jail" in which contestants were imprisoned, their impoverished understanding of the situation led them to have inappropriate expectations for the contestants' behavior—expectations that could not help but be dashed by reality.

We suspect that such awareness is often difficult to achieve in everyday life because many situational forces are temporally or spatially removed from the behavioral episodes they constrain. Social norms and parental threats are potent forces that physically exist only in the brains of the people whose behaviors they are constraining, and nothing in the behavioral episode itself may bring these forces to the observer's attention. Even when situational constraints are physically present in the behavioral episode, they may often escape notice because the cues that evoke behavior are often both subtle and powerful. For example, the power of a smile to induce a smile is just short of reflexive (Hinsz & Tomhave, 1991), as is the power of a gaze to direct a gaze (Milgram, Bickman, & Berkowitz, 1969; Walden & Ogan, 1988). In short, it can be difficult to attain awareness of the forces that are compelling an actor's behavior, and when observers lack such awareness they are predictably prone to correspondence bias.

The construal problem. Attributionists often talk about sit-

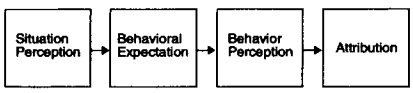


Figure 1. The sequence of events that occurs when an attribution is made.

uational forces or environmental constraints as though these terms described a clearly bounded class of virtually interchangeable phenomena. In fact, there are at least two very different kinds of situational constraints that pose very different attributional problems for the ordinary observer of behavior. *Behavioral constraints* alter an actor's behavioral options by altering the actor's capacity to enact those options or by altering the capacity of the environment to sustain them. Such constraints are entirely independent of the actor's understanding of them. For example, the contestant-subjects in Ross, Amabile, and Steinmetz's (1977) experiment had no choice but to provide incorrect answers on many trials. Regardless of what they may have felt, wanted, thought, or believed, the objective difficulty of the quizmasters' esoteric questions necessitated that contestants would perform poorly. In a sense, the range of behavioral options available to the contestants was narrowed by a vagary of the situation that was entirely independent of their understanding of the situation. Task difficulty (a constraint commonly used in attribution experiments) always affects performances by directly constraining the actor's behavior.

But not all constraints affect behavior directly. *Psychological constraints* do not change an actor's behavioral options so much as they change her or his understanding of those options. For example, some essayists in the Jones and Harris (1967) experiment were ostensibly instructed to write pro-Castro essays. However, the constraint imposed by a debate coach's instructions is quite different from the constraint imposed by a role-conferred advantage. Unlike a role-conferred advantage, instructions neither force the essayist's hand nor make an anti-Castro speech difficult to write. Rather, the debate coach's instructions merely alter the payoffs associated with the two behavioral options. When a debate coach assigns a debater to defend Castro, the option of writing a pro-Castro speech is suddenly infused with rich rewards (e.g., the goodwill of the debate coach) and the option of writing an anti-Castro speech is suddenly fraught with risks (e.g., public humiliation). The disparity between these payoffs may be sharp, but the essayist is still technically free to reap either. The essayist's behavioral options are not altered by the debate coach's instructions; rather, the essayist's motivation to enact each of the behavioral options is altered. Social pressure (a constraint commonly used in attribution experiments) always affects expressive behavior by changing the actor's beliefs and desires, which then guide the actor's behavior.

Attributionists typically treat these two classes of constraints as though they were identical, and this is a real mistake. Behavioral and psychological constraints not only are conceptually distinct but present very different attributional problems to the observer. When constraints are psychological, the unbiased observer need not be aware of the actor's situation as it is objectively constituted (i.e., the stuff of the external world); rather, the observer must be aware of the situation as it is subjectively construed by the actor (i.e., the actor's understanding of that stuff). Even if an observer can see the cheering crowd in all its clamorous and colorful glory, the critical question in this case is whether the politician can see the crowd and, if so, whether she sees it the same way the observer does. The senator who gives a prochoice speech to a local chapter of the National Organization of Women is behaving as any politically astute observer would expect, and thus her behavior may not call for a dispositional explanation. But if the senator mistakenly believes that she is addressing a convention of Roman Catholic priests, then a dispositional explanation is surely warranted. When constraints are psychological rather than behavioral, it is not the situation as it is but the situation as the actor sees it that matters.

If observers have trouble recognizing the situation as it is (the invisibility problem), then they may have even greater trouble recognizing the situation as the actor sees it (the construal problem). People seem quite willing to act on the "egocentric assumption" that the situation they perceive is the situation that the actor perceives as well (Dunning, Griffin, Milojkovic, & Ross, 1990; Griffin, Dunning, & Ross, 1990; Griffin & Ross, 1991; Ross & Nisbett, 1991, pp. 82–89). This egocentric assumption seems itself to have two origins. First, people generally have a difficult time using their imaginations to put themselves in someone else's epistemic shoes. To appreciate a situation from another's perspective, one must be able to imagine what that situation would have looked like if one had precisely the knowledge that the other person had. If a homeowner shoots Santa Claus after mistaking him for an armed intruder, then the juror who is considering the homeowner's claim of self-defense must ask himself or herself, "Would I have felt in mortal danger had I not known that the fat guy with the toy gun was Saint Nick?" Keysar (1994) has shown that people have considerable difficulty trying to partial out the effects of their idiosyncratic knowledge when attempting to take the perspectives of others. For example, subjects who knew that Linda disliked the restaurant that Ely had recommended perceived sarcasm when Linda left a note for Ely that read, "The restaurant you recommended was marvelous, *just* marvelous." Fair enough. But subjects also thought that Ely would perceive sarcasm in Linda's note, even though Ely did not know about Linda's culinary disappointment. Apparently, subjects could not quite imagine how the note would have appeared to someone who lacked their special knowledge of Linda's dining experience (see also Gilbert, 1991; Keysar, 1993; Schul & Burnstein, 1985; Wilson & Brekke, 1994; Wyer & Unverzagt, 1985). Similarly, once people know the solution to a problem, they are instantly unable to appreciate how difficult the problem would be for someone who did not know the solution (Fischoff, 1975; Jacoby, Kelley, & Dywan, 1989).

The second reason why observers may adopt the egocentric assumption is that people tend philosophically toward naive realism; that is, they consider their perceptions of the world to be the products of lower order, sensory processes that are informationally encapsulated (Fodor, 1983) and that operate in about the same manner for everyone who shares their biology (Griffin & Ross, 1991; Jacoby, Toth, Lindsay, & Debner, 1992; Jones & Nisbett, 1972). They do not seem to believe (as most psychologists and philosophers do) that perceptions are achieved by higher order, cognitive processes and are thus influenced by one's idiosyncratic beliefs, attitudes, and expectations. Ordinary people seem to have an "old look" view of their eyes as video cameras and their perceptions as captured images that are projected on some sort of cinema screen in the theater of the mind. As such, they expect anyone who possesses the same basic video equipment to experience the same perceptions they do. Because percepts are actually interpretations rather than re-

flections of the objective world, the philosophy of naive realism may lead observers to mistakenly assume that the actor shares their idiosyncratic view of the actor's situation.

It is painfully obvious that observers must be aware of situational constraints if they are to consider the role that such constraints may have played in producing an actor's behavior. The correspondence bias is occasionally defined as the tendency to overlook or ignore situational forces; as the foregoing analysis suggests, however, the failure to recognize the presence of a situational force is a cause of correspondence bias. It may even be the primary cause. But it is by no means the only cause.

Unrealistic Expectations for Behavior

The observer may see the cheering crowd and may even understand the actor's idiosyncratic view of that crowd. Nonetheless, if the observer is to make an accurate attribution about a particular speaker's beliefs, he or she must also have a reasonably good idea of how a crowd typically affects a speaker's performance. Are most speakers so cowed by the mob that they pander to their audience's hopes and fears, or do most speakers ignore the preferences of their listeners and stand their ground? As we have noted, dispositional inferences occur when the observer's expectations are dashed by the actor's behavior, but surely such inferences are only as good as the expectations on whose dashing they depend. Clearly, observers who are completely aware of the actor's situation may still have unrealistic expectations about how that situation should affect the actor's behaviors (e.g., "A true liberal would never make a conservative speech"). How accurate are the ordinary person's estimates of the power of particular situations to evoke particular behaviors?

The real-world survey research that might answer that question has not been done, but a consideration of the processes by which estimates of situational power are made may prove informative. One way to estimate the "power" of a situation is to estimate the typicality of the actor's response to that situation; indeed, the languages of power and typicality are virtually interchangeable inasmuch as a strong situation may be defined as one in which "anyone would have done the same thing." Yet, without the behavioral equivalent of a world almanac, each observer is left to his or her own devices when trying to determine what anyone would have done. One useful device is the availability heuristic (Tversky & Kahneman, 1973), which leads observers to judge behaviors that are easily imagined or remembered as especially common. This means that a behavior that just happens to be common in the observer's corner of the world, recent in the observer's experience, or part of the observer's own behavioral repertoire may be seen as enjoying greater consensus than in fact it does. Ross, Greene, and House (1977) asked subjects to make behavioral decisions (e.g., to choose or refuse to wear a signboard that read *Eat at Joe's*) and found that both choosers and refusers considered their own easily imagined choices to be typical of the population. As such, they drew dispositional inferences about those who made different choices. Using one's own imagined response to a situation as a basis for estimating the typical response (and hence the power of the situation) is risky business, not only because others may behave differently, but also because one does not always behave as one thinks one would. For example, decades of research on cognitive dissonance and attitude attribution have shown that when experimenters ask subjects to write counterattitudinal essays, compliance rates are exceptionally high. Yet, when Sherman (1980) asked college students to predict whether they would accede to an experimenter's request to write such an essay, nearly three quarters predicted they would not.

To the extent that easily imaginable actions (such as one's own) are thought to be typical actions, use of the availability heuristic can lead observers to have unrealistic expectations for the behavior of others (e.g., "I would never make anti-American remarks under those circumstances, and I bet most other people wouldn't either"). When such expectations are violated, unwarranted dispositional inferences may result. The second obstacle to accurate attribution, then, is that even when the observer is perfectly well aware of the actor's situation, her or his expectations for behavior in that situation may be unrealistic (see Reeder, Fletcher, & Furman, 1989). In short, people may incorrectly estimate the power of certain situations to induce certain behaviors.

Once again, the correspondence bias is sometimes defined as the tendency to underestimate the power of situations, but, as the foregoing analysis suggests, this is merely one of several causes of the bias. Nonetheless, social psychologists have made much of the ordinary person's tendency to underestimate the power of situations, and thus it is instructive to consider two caveats. First, when people underestimate the power of situations, they will be prone to make unwarranted dispositional inferences about actors who violate the erroneous expectations that such underestimates create. However, these underestimates should also cause observers to fail to make dispositional inferences when such inferences are, in fact, warranted. For example, observers typically underestimate the proportion of subjects who will deliver intense shock in the Milgram obedience situation (see Bierbrauer, 1979). That is, they unrealistically expect defiance and thus make unwarranted dispositional inferences about those who obey. But consider the inferences that such observers should make about the small but significant group of subjects who do refuse to deliver the shock. From the psychologist's point of view, such disobedience is rather unusual, and dispositional inferences are probably warranted. The observer, however, will be misled by his or her erroneous expectations and will conclude that these disobedient subjects were only "doing what anyone would do." Such observers will miss the opportunity to make the dispositional inferences that the data rationally require. The first caveat, then, is that when observers underestimate the power of the situation, they will indeed make logically incorrect inferences, but those incorrect inferences need not be dispositional.

The second caveat is also important. Although observers may err by underestimating the power of situational forces, there are also instances in which they err by overestimating the power of these forces. Lepper, Greene, and Nisbett (1973), for example, showed that children may overestimate the influence of a reward on their decision to play with particular toys and that this overestimation of situational power can lead the children to underestimate their dispositional interest in the toy. Likewise, Strickland's (1958) subjects overestimated the extent to which a watchful supervisor was responsible for an employee's honest performance and thus mistakenly underestimated the employ-

ee's dispositional honesty. Such laboratory demonstrations are paralleled by everyday experience. Many people are surprised, for instance, when they read in their daily paper about identical twins who were separated at birth and yet grew to have common habits, preferences, beliefs, and aptitudes as adults. Such remarkable "coincidences" are surprising only when one overestimates the power of environmental factors to shape personality and behavior.

Together, these two caveats suggest that erroneous estimates of situational strength need not be underestimates, and that even if they are, underestimates need not lead to correspondence bias. Some theorists claim that people routinely underestimate the power of situations. This is undoubtedly true of subjects in social psychology experiments, but what does this say about the behavior of people in general? It says that underestimation can occur, but it does not say how often underestimation does occur (Mook, 1983). After all, social psychology experiments are purposefully constructed to contain situational influences whose power will be underestimated because these are precisely the kinds of situational influences that intrigue the social psychologist. But such experiments are among the poorest vehicles for obtaining actuarial information about attributions. Because no effort is made to select representative situations or subjects, such experiments cannot reveal the kinds of attributions people usually, normally, routinely, generally, or typically make. This is not a condemnation of the experimental method but a recognition of its purpose, its capacities, and its limitations. As the Japanese say of fools, *Ki ni yotte uo o motomu* ("You ask an elm tree for pears").

Inflated Categorizations of Behavior

If lack of awareness and unrealistic expectations were the sole causes of correspondence bias, then one would expect the bias to disappear when observers were completely aware of the actor's situation (whether actual or psychological) and had realistic expectations for behavior in that situation. But this is not the case. In fact, rather than providing a prophylactic against correspondence bias, awareness of situational constraints may actually cause it.

One way to interpret Figure 1 is that attribution requires observers to perform something of a "matching test" in which they compare the actor's behavior with their expectations for that behavior and determine whether the behavior meets these expectations. But, of course, observers compare their expectations not with the actor's actual behavior but with their perceptions of the actor's behavior. Why should this make a difference? Although some behaviors are easily perceived or categorized (it is the rare observer who confuses a punch in the mouth with a peck on the cheek), others admit to multiple identities, and the categorization of such ambiguous behaviors may be profoundly affected by knowledge of the context in which they occurred. Just as a political slogan may seem more radical when uttered by Vladimir Lenin than by Thomas Jefferson (Lorge, 1936), so a mother's tears may appear more passionate when shed at her daughter's funeral than at her daughter's birthday party. This Kantian notion—variously called schema-driven processing, top-down processing, or perceptual assimilation—is among psychology's most venerable and robust (see Fiske & Taylor, 1991, pp. 96–177).

Trope (1986; Trope, Cohen, & Maoz, 1988) has shown that an observer's awareness of a situation can give rise to expectations for an actor's behavior that, in turn, may induce the perceptual assimilation of that behavior. Interestingly, this phenomenon can have rather paradoxical effects. For example, if a situational force (e.g., a terrorist's threat) actually induces a certain kind of behavior (e.g., an anti-American speech), then the observer who is aware of the situation and who has a realistic estimate of its power should expect precisely that sort of behavior. However, the very awareness that enables the observer to have a realistic expectation for behavior may also cause the observer to have an unrealistic perception of that behavior; in this case, the behavior may be seen as conforming more to situational demands than it actually does. The observer who properly estimates the power of a terrorist's threat should be prepared to hear an anti-American speech, but that very expectation may cause the observer to believe that she has heard a very anti-American speech. As the generic attributional model predicts, such an observer should then be struck by the mismatch between her expectations and her perception of "reality" and should draw a dispositional inference about the speech maker. The irony, of course, is that the observer's excellent knowledge of the situation has "inflated" her categorization of the actor's behavior, which in turn has led her to make an unwarranted dispositional inference about an actor whose situation she understands perfectly.

This inflated categorization effect (first suggested by Trope) has been demonstrated several times. Snyder and Frankel (1976) asked subjects to watch a silent film of a young woman being interviewed. Some subjects were told that the woman was being asked to discuss politics, and others were told that she was being asked to discuss sex. Some of the subjects were given this information about the interview topic before seeing the film, and some were given the information only after seeing the film. Snyder and Frankel found that when subjects learned about the interview topic only after seeing the filmed behavior (in which case perceptual assimilation of the behavior was unlikely to have occurred), they took into account the anxiety-provokingness of the woman's situation and concluded that she was less dispositionally anxious in the "sex interview" than in the "politics interview" condition. That is, subjects used the discounting principle (i.e., "Don't attribute x units of anxious behavior to dispositional anxiety when the person is in a situation that provokes precisely x units of anxious behavior"). But subjects who learned about the interview topic before seeing the film drew precisely the opposite conclusion. Apparently, subjects who expected the woman to be talking about sex saw a great deal of anxiety ($x + n$) in her somewhat ambiguous behavior. Although these subjects also used the discounting principle, they used it to discount a behavior that had already been overinflated during categorization ($[x + n] - x > 0$). Similar effects have been shown by Trope and Cohen (1989) and Trope et al. (1988).

The third type of correspondence bias, then, is caused by inflated categorizations of the actor's behavior. But just as the power of situations can be overestimated as well as underestimated, Trope's (1986) model makes it quite clear that an ob-

server's expectations will not necessarily induce perceptual assimilation of the actor's behavior. Indeed, there are a variety of well-documented circumstances under which expectations can cause people to perceive a stimulus as especially different than they expect it to be. For example, a member of a Baptist church who expects to hear a sermon on Christian morals and is instead surprised by a lecture on the health benefits of bisexuality may perceive that speech as somewhat more liberal (and not somewhat more conservative) than it actually is. Similarly, there are circumstances under which expectations have little or no effect on one's perceptions: Expecting to see an apple may cause one to misidentify a pear at the far end of a dark room, but probably not an airplane from 10 paces on a sunny day. The conditions that promote assimilation, contrast, or neither are well explicated (e.g., Lombardi, Higgins, & Bargh, 1987; Martin, Seta, & Crelia, 1990), and our only point here is that awareness of the situations that constrain an actor's behavior may, but need not, engender inflated categorizations of that behavior and, ultimately, correspondence bias.

Incomplete Corrections of Dispositional Inferences

We have argued that dispositional inferences are the products of a mismatch between the observer's expectations for and perceptions of the actor's behavior. If the observer improperly calculates the value of either of these elements, a "false mismatch" will result, and correspondence bias may follow. Does this mean that when a match (rather than a mismatch) is detected, the observer will refrain from drawing a dispositional inference? The logical answer is yes, but the psychological answer is no.

Recent research suggests that observers may draw dispositional inferences about an actor even when the actor's behavior matches their expectations and that they must subsequently undo or correct such inferences when they finally notice the match (Quattrone, 1982b). Fine-grained analyses of attributional process suggest that, under many conditions, observers spontaneously draw trait inferences from behavior (Lupfer, Clark, & Hutcherson, 1988; Uleman, 1987; Winter & Uleman, 1984; Winter, Uleman & Cunniff, 1985; cf. Bassili & Smith, 1986; Whitney, Waring, & Zingmark, 1992) and that they draw such inferences with remarkable efficiency (D'Agostino & Fincher-Kiefer, 1992; Newman, 1991). Gilbert, Pelham, and Krull (1988) combined these insights into a model that suggests that when people attempt to understand others, they begin by inferring the presence of a corresponding disposition. Only after having done so do they check to see whether the actor's behavior actually matched their own expectations (i.e., whether the behavior was precisely what the situation required). In essence, observers seem to take one step forward (they draw dispositional inferences) and then one step backward when they must (they correct those inferences when the actor's behavior matches their expectations).

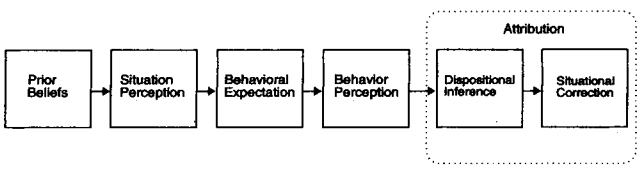


Figure 2. An expanded version of the sequence of events that occurs when an attribution is made.

Figure 2 is an expanded version of Figure 1 that includes these ideas. Frankly, such microanalyses of attributional process would be an esoteric concern were it not for one thing: The model suggests that the initial dispositional inference is relatively resource efficient (i.e., it does not require considerable effort or conscious attention) and that the subsequent correction is less so. Because the two processes differ in the amount of thoughtful deliberation they require, they are differentially susceptible to impairment by competing cognitive demands. Specifically, the initial dispositional inference is relatively unaffected by the other tasks in which the observer may be concurrently engaged, whereas the fragile correction of that inference becomes difficult or impossible. Observers who are not able to devote their attention to attributional work draw dispositional inferences about the actor but are unable to correct such inferences even when they notice that they are unwarranted.

Such an effect has been demonstrated by Gilbert, Pelham, and Krull (1988), who asked observers to watch a videotape of a woman who appeared quite nervous while engaging in a conversation with a stranger. Subjects were not allowed to hear the conversation, but subtitles on the screen told them what sorts of topics the woman and her partner had been assigned to discuss. Sometimes the subtitles depicted an anxiety-provoking situation (the woman was discussing her sexual fantasies) and sometimes a mundane situation (the woman was discussing her hobbies). Control subjects used the discounting principle and took account of the woman's situation when they made inferences about her (i.e., they rated the woman as less dispositionally anxious when she was discussing anxiety-provoking rather than mundane topics). But observers who were asked to rehearse a set of word strings did not (i.e., they rated the woman as dispositionally anxious regardless of the topic she was discussing). In other words, observers who rehearsed word strings seemed to draw dispositional inferences about the actor and then failed to correct those inferences with information about the topics the actor was discussing.

One might wonder whether observers were simply too busy rehearsing the word strings even to read the topics. If observers did not have the situational constraint information, then they could hardly be expected to use it, and their tendency toward correspondence bias could be understood as a result of lack of awareness resulting from situational invisibility. To eliminate this possibility, Gilbert, Pelham, and Krull (1988) had observers rehearse a very special set of word strings: the discussion topics themselves. In effect, observers were asked to memorize the situational constraint information, and the model predicted that those observers who were asked to memorize this information would be the least likely to use it. This is just what happened. Subsequent research has shown that observers who engage in any one of a variety of demanding activities (e.g., visual search tasks, digit rehearsal, gaze fixation, or strategic self-presentation) will draw dispositional inferences about an actor but will fail to take the second step and correct those inferences, even when the actor's behavior conforms perfectly to their expectations (Gilbert, Krull, & Pelham, 1988; Gilbert, McNulty, Giuliano, & Benson, 1992; Gilbert & Osborne, 1989; Osborne & Gilbert, 1992). The fourth type of correspondence bias oc-

curs, then, when observers are unable or unwilling to correct the dispositional inferences that they seem to draw with relative spontaneity and ease.[2]

Just as there are limits on the other mechanisms that cause correspondence bias, so too are there limits on the incomplete correction mechanism. For example, Krull (1993) has suggested that initial dispositional inferences are not fully automatic inasmuch as they require that the observer have the goal of understanding the actor (see Bargh, 1989). Krull showed that observers who want to understand a situation rather than an actor do not initially draw dispositional inferences about the actor. Rather, they draw inferences about the situation ("That must be a very anxiety-provoking topic she's discussing") and then correct those inferences with information about the actor's dispositions ("Of course, that woman could just be a nut case, so maybe the topic isn't so anxiety provoking after all"). According to Krull, observers are capable of executing either of two information-processing sequences: dispositional inference followed by situational correction (the D sequence) and situational inference followed by dispositional correction (the S sequence). The observer's epistemic goals determine which of these sequences is executed. Gilbert, Pelham, and Krull (1988) showed that when cognitively loaded observers execute the D sequence, their ability to correct their dispositional inferences is impaired, and they display correspondence bias. Krull (1993) showed that when observers execute the S sequence, cognitive load brings about a conceptually opposite effect. In such cases, the loaded observer draws situational inferences with ease, but her or his dispositional correction of those inferences is impaired. In short, incomplete corrections need not necessarily lead to correspondence bias because they are not necessarily situational corrections of dispositional inferences.

The Salience Bugaboo: A Fifth Cause?

The preceding sections have described four distinct causes of correspondence bias. Observers may draw unwarranted dispositional inferences because (a) they lack awareness of the actor's situation as it is objectively constituted or subjectively construed, (b) they have inappropriate expectations for how a person will behave in such a situation, (c) their awareness of the actor's situation has led to an inaccurate perception of the actor's behavior, or (d) they lack either the motivation or the capacity to correct the trait inferences they may have spontaneously and effortlessly made. But even readers who have only a passing familiarity with the literature on correspondence bias will have noted a conspicuous lapse in our discussion: We have said nothing so far about the well-known salience effect that is so often invoked as an explanation of correspondence bias. This lapse was intended. We believe that, depending on what one means by the term *salience,* the explanation is either redundant with other explanations or lacking in empirical support.

Let us review Heider's (1958) famous maxim in its entirety: "Behavior . . . has such salient properties that it tends to engulf the field rather than be confined to its proper position as a local stimulus whose interpretation requires the additional data of a surrounding field—the situation in social perception" (p. 54). Can the language of gestalt psychology be peeled back to determine just what Heider was trying to say here? One interpretation is that Heider was merely pointing out what Ichheiser (1949) pointed out, what Skinner (1971) pointed out, and what many thinkers have pointed out: Behavior is easy to see, but situations often are not. The relative pallidness of situational constraints may sometimes prevent observers from attaining information about situational constraints (lack of awareness) or prevent them from using that knowledge when making attributions (incomplete corrections). In either case, it may give rise to correspondence bias. If salience simply refers to the general pallidness of situational information, then salience may exert its effects through either of two mechanisms that we have already discussed.

Indeed, were this all that theorists meant when they invoked "the salience explanation," we would have no argument. But this is not all they mean. Rather, some take Heider's (1958) statement to mean that there is something almost magical about salient behaviors that causes observers to draw dispositional inferences about the actors who perform them. At first blush, this suggestion has the ring of reason: "Behavior is more salient than the situation in which it occurs, and this is why people attribute the behavior to the actor who is performing it." But a moment of thought reveals that the notion is a non sequitur. In classical attributional terms, behavior is an effect to be explained, and dispositions and situations are two possible causes of that effect. Why, then, should the salience of the effect facilitate attribution to one of those causes? It is not, after all, the person's dispositions that are salient, but the person's behavior. Indeed, in no other case would reasonable people argue that the salience of an effect "explains" its attribution: If a physical symptom such as vomiting were particularly salient, this would not explain why physicians attribute that symptom to a virus rather than to a bacterium.

It would seem that there is no compelling reason why the salience of behavior should facilitate dispositional inference, except to the extent that salient behavior obscures situational influences. Nonetheless, theorists argue that "what you *attend* to is what you *attribute* to" and insist that "there is no generalization coming from the Heider-inspired attribution literature of the 1970's that is better supported than this" (Nisbett, 1987, p. 109; Ross & Nisbett, 1991, p. 140). What is the basis of this ostensible support? Four studies are widely cited as demonstrating that the salience of an actor facilitates dispositional inferences by an observer; in our view, however, these studies provide precious little support for such a conclusion.

There are two problems with these studies. First, each used what is now recognized as a notoriously flawed measure of attribution (see especially F. D. Miller, Smith, & Uleman, 1981). Throughout the 1970s, attribution theorists commonly asked subjects to make attributions on a scale whose endpoints were *situational* and *personal* (or sometimes *dispositional*). Some investigators used a single scale, and some used separate scales and then analyzed difference scores, but all asked subjects to estimate the extent to which a given behavior was caused by "something about the person" or by "something about the situ-

[2] Just as the results of this study were not due to lack of awareness, subsequent studies have shown that they were also not due to inflated categorizations (see Gilbert, McNulty, Giuliano, & Benson, 1992; Gilbert & Osborne, 1989).

ation." Unfortunately, all behaviors are capable of revealing something about the person or something about the situation. Students of S-O-R psychology know that any action (R) can be described in terms of the environmental factors that enabled it (S) or in terms of the psychological constructs that mediated it (O). The American hostage who denounces his country on Iranian television and the student-activist who denounces her country on a college campus seem on the face of it to provide clear examples of situationally and dispositionally caused behaviors. But the student-activist has parents, peers, teachers, and audience members (situational factors) who are potent sources of influence on her behavior, and the political hostage has thoughts, feelings, and goals (dispositional factors) that led him to recite his captors' dogma. Asking whether such behaviors were caused by situations or caused by persons is in some senses akin to asking whether a golf ball moved across a green because it was round or because someone tapped it with a putter. Both the ball's shape and the force of the stroke are reasonable ways to describe the origin of its motion. As such, an observer's preference for one description over the other may reflect little more than linguistic convention (one does not usually implicate the invariant roundness of a golf ball when explaining its movement), point of view (the golfer and the golf ball manufacturer will surely supply different answers to the question "Why did that ball roll so nicely?"), or even intellectual orientation (psychoanalysts may stress the role of roundness, and behaviorists may stress the power of putters; see Hilton & Slugoski, 1986; Kahneman & Miller, 1986; McGill, 1989; Nisbett & Ross, 1980). The person–situation scale is a theoretical jambalaya that has time and again been shown to comprise a psychometrically unsound dimension (e.g., see Buss, 1978; Kruglanski, 1975; F. D. Miller et al., 1981; Solomon, 1978; White, 1991); thus, even if the studies that provide the empirical foundation for the salience explanation had found the predicted differences on this scale, the interpretation of those findings would be unclear. From our point of view, however, the more damning problem is the second one: For the most part, these studies did not find the predicted differences.[3]

Taylor and Fiske. In the best known of the four studies, Taylor and Fiske (1975) positioned observers so that one participant in a conversation was more salient than the other, and they then asked observers to complete two kinds of measures. Observers reported their perceptions of each of the participants on the person–situation scale, and they also reported their perceptions of the interaction itself (e.g., how much a participant set the tone of the interaction, caused his or her partner's responses, and so on). The investigators predicted differences on both measures. Instead, they found that subjects' perceptions of the interaction were indeed influenced by their seating positions; however, when

> subjects indicated how dispositionally caused and how situationally caused each behavior was for each confederate . . . none of the predictions were borne out; in fact, there were no significant effects or trends in any of the analyses. . . . [The salient participant's] behavior was not seen as indicative of his dispositions, nor was his partner's behavior seen as situationally based. (Taylor & Fiske, 1975, p. 442)

Taylor and Fiske (1975) wondered whether the reason for this unexpected result might have been that subjects had been asked to attend to the conversation rather than to one of the participants. In a second experiment, they explicitly instructed some subjects to attend to one participant, and, "contrary to the hypothesis, subjects who were told to observe one participant in particular were no more likely to see his behaviors as dispositionally based than were subjects who were not told to attend to any participant in particular" (Taylor & Fiske, 1975, p. 443). In an extension of this study, Ellis and Holmes (1982) found that directing a participant's (rather than an observer's) attention to an interaction partner had absolutely no effect on the participant's tendency to draw dispositional inferences about the partner. In short, the study that is most often cited in support of the salience effect found no evidence whatsoever for the contention that salient behavior facilitates dispositional inference.

McArthur and Post. McArthur and Post (1977) reported the results of five studies in which the salience of an actor was manipulated in a variety of innovative ways (e.g., shirt color, motion, and brightness). Observers rated the actors on the person–situation scale, and McArthur and Post presented a mixed bag of results: Some of their experiments showed an increase in the relative contribution of personal (as opposed to situational) causes, but most showed unexpected reversals of this effect. Separate analyses of the dispositional and situational measures revealed that all of the "action" involved the latter measure. The investigators appropriately concluded that "being physically conspicuous . . . does not seem sufficient to have a significant influence on attributions of behavior to dispositional causes" (p. 534). In short, McArthur and Post found no reliable evidence for the contention that salient behavior facilitates dispositional inference.

Arkin and Duval. Arkin and Duval (1975) manipulated the self-focus of an actor (either by videotaping or not videotaping the actor as he or she chose the most appealing of several pieces of artwork) and also the salience of the actor's environment (by allowing the actor to peruse stationary photographs of the artwork or by showing the actor a dynamic video presentation of the artwork). Observers made attributions about actors on the person–situation scale. Of course, neither of the independent variables was a manipulation of the actor's physical salience for the observer, and thus this well-cited experiment is not directly relevant to the salience explanation. Nonetheless, the latter manipulation (it could be argued) manipulated the relative salience of the actor by manipulating the salience of his or her environment. When Arkin and Duval (1975) analyzed observers' dispositional attributions for the actor's behavior, they found "no significant main effects or interactions" (p. 434). Most important, when the actor's environment was made salient, observers showed no attenuation of their tendency to draw dispositional inferences about the actor.

Storms. Storms (1973) asked subjects to engage in a conversation with another subject, and he then asked both of these actors and a matched set of observers to make attributions for

[3] The person–situation measure was state of the art when these investigators used it, and each of these studies makes an extremely important contribution to the attribution literature. We have used direct quotes from these studies to emphasize the fact that none of the investigators misstated or misinterpreted their own results. All were extremely clear about what they did and did not find.

the actors' behavior on the person–situation scale. Storms explained to subjects that personal causes included "personality, traits, character, personal style, attitudes, mood" (p. 168). Subjects displayed the well-known actor–observer effect (Jones & Nisbett, 1972); that is, actors were less likely than were their matched observers to attribute their own behavior to dispositional causes. Some actors and observers were then shown a videotape of the interaction that was shot from the visual perspective of the other actor and were asked to make attributions anew. Unlike most other investigators, Storms did indeed find that this change of visual perspective reversed the actor–observer effect; that is, the reoriented actors were, in fact, more likely than the reoriented observers to attribute their behaviors to dispositional causes.

But Storms (1973) was prescient in his concern that the person–situation scale might not adequately measure dispositional inference, and he therefore included a much better measure. Storms asked subjects to rate how friendly, talkative, nervous, and dominant the actors had been during the conversation and then to rate how the actors generally behaved on each of these dimensions. Storms correctly reasoned that "if a subject had perceived that the actor's behavior in the conversation was due to a stable personal disposition, then the observer would likely have predicted that the actor behaved the same way in general" (p. 168). This measure is superior to the person–situation scale inasmuch as it requires subjects to predict future behavior, a task that Ross (1977) later suggested is the sine qua non of dispositional inference. What did Storms find when he analyzed this superior measure? "Although the direction of differences . . . was as expected, none of the individual comparisons between cells reached significance" (p. 171). In fact, ratings on the problematic person–situation scale explained only 13% of the variance in predictions of behavior.

Unengulfing the field. The findings of Arkin and Duval (1975), McArthur and Post (1977), and Taylor and Fiske (1975) are particularly troubling for the hypothesis that the salience of behavior facilitates dispositional attribution. All three studies used the person–situation scale (or two separate scales) and found that salience did not increase the likelihood that observers would implicate "something about the person" as the cause of an actor's behavior. Ellis and Holmes (1982) found the same thing for participants in an interaction. Storms (1973) was the only one of these investigators to find differences on the difficult-to-interpret person–situation scale, and he found only marginal (and weakly correlated) differences on a clearly superior measure. Taken together, what does all of this mean? It does not mean that salience has no effects on human judgment (see Taylor & Fiske, 1978). Indeed, every one of the aforementioned investigators found that salience did something interesting to subjects' responses (e.g., to their perceptions of the interactions or to their ratings of situational causality). But they did not find that salience increased their subjects' willingness to infer dispositions from behavior. Our reading of the literature leads to a simple conclusion: The relative salience of behaviors and situations facilitates dispositional inference only to the extent that it prevents subjects from possessing or using information about the actor's situation. Above and beyond the effects that salience exerts through the mechanisms of lack of awareness and incomplete corrections, we have found little evidence to suggest that it exerts an independent effect. From our perspective, the salience of behavior does not qualify as a fifth, independent cause of correspondence bias.

Consequences of Correspondence Bias

We have described four mechanisms that can produce the correspondence bias. Such mechanisms are proximal causes; that is, they explain how the bias is produced, but they do not explain why. What are the ultimate causes of correspondence bias? Most modern psychologists are functionalists in that they define the ultimate cause of a behavior in terms of its beneficial consequences for the organism. It is said that a particular phenomenon occurs because it (or the more basic process in which it is grounded) fills a need of the individual and is thus selected (or, at least, not selected against) at the ontogenetic or phylogenetic level. What do mechanisms that produce correspondence bias do that some other mechanisms might not? Are there benefits to having—or being—the sort of machinery that makes logically unwarranted dispositional inferences? We believe that there are fewer negative and more positive consequences than an unreflecting analysis might at first suggest and that this relative immunity to the consequences of correspondence bias may partially explain its persistence.

Negative Consequences

No one doubts that inferential errors can have suboptimal, maladaptive, and even tragic consequences. An unwarranted dispositional inference may constitute a "dangerous epistemological stance" that places one in "dire peril" (Nisbett, 1987, pp. 103–104). Nonetheless, it is worth reminding oneself that, like the incorrect solution to a mathematical puzzle, the correspondence bias is a logical error—an inference about the existence of an attribute whose existence logic places in doubt—and that errors on the plane of pure reason do not always count as disasters on earth. As H. G. Wells (1932, p. 76) wryly noted, "No appreciable effect has been produced upon the teaching of machine drawing by the possibility that space is curved and expanding." Indeed, it would not be terribly cost-effective for an architect to worry about the curvature of space and use Riemannian geometry when designing a split-level ranch house because the strictly incorrect (but elegantly simple) assumptions of Euclidian geometry serve quite nicely those who measure spaces shy of parsecs. Similarly, if an inferential process produces an occasional logical error but also a significant savings of time and energy, it may provide a net benefit to the mental system that uses it (Hogarth, 1981; Nisbett & Ross, 1980). It is strictly incorrect, for example, to assume that all people with low voices and beards are male and that all people with high voices and enlarged breasts are female. Nonetheless, this assumption is so close to being perfectly true that it would hardly behoove the bachelor to abandon it and insist that his dates undergo genetic testing. The time and energy that one saves by using such heuristics is probably worth the cost of their rare failures.

Is there any reason to believe that the inference of corresponding dispositions is a similarly useful heuristic? No one can say how often people are as they act; once again, social psychol-

ogy experiments are particularly incapable of determining whether dispositional inferences are warranted on most occasions, some occasions, or any occasions. But it is worth noting that there are three easily imaginable circumstances under which an observer's tendency to ignore the situational constraints on another's behavior will—like the architect's tendency to ignore the curvature of space—cause no structural damage. These are the cases of self-induced constraint, omnipresent constraint, and superfluous constraint.

Self-induced constraint. Subjects in social psychology experiments are usually assigned randomly to the situations in which they behave; subjects in real life may or may not be. At birth, one inherits a national identity, a cultural and racial heritage, and a socioeconomic circumstance. Surely these assignments are "random" inasmuch as one does not choose them, but many of the important situations that shape one's life are situations that one does, in fact, enter by choice or is drawn into by proclivity. In their comprehensive discussion of situational choice, Snyder and Ickes (1985, p. 918) concluded that "individuals appear to gravitate actively toward social situations that will foster and encourage the behavioral expression of their own characteristic dispositions and interpersonal orientations." In other words, people seek situations that will "push" them in the same direction as do their own dispositions.

To the extent that the constraints on a person's behavior are freely chosen or otherwise self-induced, it may do the observer little harm—and even much good—to ignore the effects of these constraints when making attributions. For example, the role of banker demands conservative dress, a preoccupation with finances, and a somewhat formal demeanor. If a person were randomly assigned to that occupation, then the correspondence-biased observer would attribute dispositional conservatism to the banker at his or her own inferential peril. Despite what the savings and loan crisis might suggest, bankers are not randomly assigned to their professions. In fact, it is probably the dispositionally conservative, formal, and economically minded person who is most likely to be drawn to a career in banking. In this case, the situational forces do not elicit the actor's behavior so much as the actor's dispositions elicit the situational forces.

An observer's failure to discount behaviors performed under self-induced constraints will not necessarily lead to correspondence bias. In fact, when situational forces are entirely self-induced, the use (and not the ignorance) of the discounting principle may actually lead to serious inferential error. For example, if one assumes that the role of professor demands intellectual curiosity and that professors are therefore not more dispositionally curious than grocery clerks and undertakers, one will be wrong on several days of the week. One will have ignored not a situational cause of the actor's behavior (i.e., role demands) but a behavioral effect of the actor's dispositions (i.e., occupational choice). As Wachtel (1973) suggested:

> The understanding of any one person's behavior in an interpersonal situation solely in terms of the stimuli *presented to* him gives only a partial and misleading picture. For to a very large extent, these stimuli are *created by* him. They are responses to his own behavior, events he has played a role in bringing about, rather than occurrences independent of who he is and over which he has no control. . . . [Situations are] largely of one's own making and [are] themselves describable as a characteristic of one's own personality. (p. 330)

Attributionists prize the discounting principle. And it is indeed a handsome logical tool. But one must not forget that the discounting principle is valid only when situations and dispositions are independent causes of behavior that do not affect each other. This is usually the case in psychology experiments, in which subjects are randomly assigned to experience short-lived situational constraints. But to assume that the effects of situational forces must always be subtracted out of the behavior when one diagnoses an actor's dispositions is to overlook the fact that, outside the psychology experiment, such forces may be telltale effects of the very dispositions one hopes to diagnose. They may, in fact, constitute useful information. Of course, no one knows if the situational forces of everyday life are "largely of one's own making." But certainly they are sometimes of one's own making, and, when they are, the observer who ignores the discounting principle will save time, save energy, and make the right call to boot.

Omnipresent constraints. Just as one may ignore self-induced situational constraints and end up with an accurate inference nonetheless, so may one ignore omnipresent constraints and end up with an adequate inference. As Swann (1984) noted, many of one's interactions with others take place in a restricted set of situations: One sees one's students in the classroom but not in the bathtub, one's loan officer at the bank but not at the ballpark, and so on. As such, the situational forces that shape an actor's behavior in one instance may continue to shape that behavior in every instance in which one observes it; thus, one may neither wish nor need to subtract out the effects of these forces on behavior (this is especially true when one actually constitutes the situational force that constrains another; see Gilbert & Jones, 1986). Perhaps working as a night manager at an inner-city 7-Eleven is enough to make even the most trusting soul behave like the warden of a maximum security prison. If one ignores the role that such a distrust-inducing situation plays and concludes that the night manager is, in fact, dispositionally distrustful, then that correspondence-biased inference (which is technically incorrect) will still allow one to predict the night manager's behavior with enviable accuracy. Indeed, if one were to spend the extra time and energy necessary to conduct a full-scale attributional analysis, it is not clear that one would reap any additional inferential reward. After all, when will one ever need to predict the night manager's behavior except in the fluorescent landscape of that particular convenience store?

When the person and situation are perfectly confounded and the observer is willing to settle for "circumscribed accuracy" rather than "global accuracy" (Swann, 1984), it may not matter whether the situation or the actor's disposition is the true cause of the actor's behavior. In such cases, a dispositional inference delivers a lot of bang for the buck. It is interesting to note that during most of human history, situations and roles have been rather well confounded with the individuals who have occupied them (Stavrianos, 1989). Members of hunter–gatherer and early agrarian societies probably had little need to predict the behavior of individuals outside of their well-known social roles because individuals rarely existed outside of these roles. Only in a modern, mobile, multicultural society can people move easily from one role or situation to another; therefore, only in such a society will correspondence-biased inferences have potentially troublesome consequences. Until recently, the omnipresence of

situational constraints may have rendered the correspondence bias little more than a logical faux pas.

There is a second reason why observers may ignore omnipresent constraints with relative impunity. As Higgins and Winter (1993) argued, it makes good attributional sense for an observer to subtract out a situation's effects on an actor's behavior when that situation is a fleeting force that may be working in opposition to the actor's enduring personal characteristics. But some situations do not fleet as quickly as others. In fact, when situations are enduring, they may shape behavior not by facilitating or opposing the actor's dispositions but by creating them. Drinking beer with a group of longshoremen may induce a timid young man to offer a few uncharacteristically bawdy stories, but being raised by the same group of longshoremen may cause the young man to relish such stories. In other words, when situations are temporary, they encourage temporary fluctuations in overt behavior, and one says that the behavior has been changed by the situation. But when situations are enduring, they may foster enduring behavioral tendencies, and one says that the actor has been changed by the situation. At what point does acting end and being begin? The answer to this philosophical riddle is one that attributionists have yet to find (probably because it is one they have yet to seek). But clearly, to the extent that omnipresent constraints can create dispositions, observers who ignore those constraints will not suffer. In fact, observers who attempt to use the discounting principle to subtract out the effects of disposition-generating situations (e.g., "The battered child isn't dispositionally fearful, she's just been in a scary situation for 10 years") will end up with an erroneous inference. Once again, when situations and dispositions are causally related, the discounting principle is not a valid logical tool, and those who ignore it will reap inferential rewards for doing so.

Superfluous constraints. When observers take into account the influence of a situational constraint on an actor's behavior, they can, of course, take into account only the influence that they believe the constraint has exerted. Sometimes these beliefs are wrong because sometimes situational constraints are superfluous; that is, they coerce an actor to do what she or he would have done anyway. For example, children in the Lepper et al. (1973) study were given an award for playing with toys that they would have played with even if the award had not been offered. Likewise, subjects in a study conducted by Gilbert and Silvera (1993) were given help with an anagram test even though they would have attained perfect scores without that help. In both of these cases, actors were laboring under constraints that were, for them, mere window dressing, and when observers behaved like logical attributers (i.e., when they used the discounting principle), they mistakenly concluded that the actors lacked a predisposition to engage in their respective toy-playing and test-passing behaviors. Because the constraints in these instances were superfluous, observers would have done well to ignore them. Indeed, when Gilbert and Silvera put some observers under cognitive load and thereby impaired their ability to correct their dispositional inferences, the loaded observers made judgments that were logically superior to those of their unimpaired counterparts. In short, observers who ignore constraints that are not actually controlling an actor's behavior will not suffer for that ignorance; in fact, that ignorance will increase the accuracy of their attributions.[4]

Positive Consequences

People make attributions because doing so enables them to achieve certain ends, for instance, to predict others and thereby control the extent to which others' behavior can affect them. Heider (1958) was adamant in his contention that dispositional inferences are a way of gaining power over one's world: "Man grasps reality, and can predict and control it, by referring transient and variable behavior and events to relatively unchanging underlying conditions, the so-called dispositional properties of his world" (p. 79). Also, "a personality characteristic enables one to grasp an unlimited variety of behavioral manifestations by a single concept . . . [and] insofar as personal dispositions are connected in lawful ways with other features, predictions about behavior of the other person become possible" (p. 30).

According to Heider (1958), dispositional inference is like a naive factor analysis, a data-reduction technique that enables a large array of behaviors to be understood in terms of a few underlying commonalities that he called dispositions. Because dispositional inferences are so economical, observers want to make them, and, as every thinker from Plato to Freud has acknowledged, when people want to believe that something is the case they often find ways to do so. In this sense, correspondence bias is a sort of "wishful thinking" that gratifies the individual who wishes to predict the behavior of others. In support of this contention, a number of studies do suggest that, when the individual's need for control is piqued (e.g., by making the observer's outcomes dependent on the actor), the tendency toward dispositional inference may be exacerbated (e.g., Berscheid, Graziano, Monson, & Dermer, 1979; D. T. Miller, Norman, & Wright, 1978; but see Pittman & D'Agostino, 1985, for the opposite effect).

As interesting as this account may be, it is not quite complete. Specifically, it is not clear why the "unchanging underlying conditions, the so-called dispositional properties of his world" must refer to characteristics of persons rather than to the characteristics of situations (see Nisbett, 1987, p. 109). One can surely imagine an extraterrestrial who tends to attribute the behavior of human beings to the enduring and unique characteristics of their situations and thereby gains the ability to predict and control people through an expert understanding of situational influence. (Note that the extraterrestrial would be in very much the same business as the social psychologist.) In other words, factor analysis is a powerful technique because it extracts a few factors from large amounts of data, not because it extracts factors of a particular kind. Why, then, do observers satisfy their need for control by reducing behavioral observations to personal dispositions rather than to situational characteristics?

As with so many things, Western culture may be the culprit

[4] It is interesting to note that when omnipresent constraints create dispositions, they may eventually become superfluous constraints. If a small child is coerced into brushing her teeth before bed, the habit may become so well ingrained by middle childhood that it does not require the threat of punishment that still happens to persist. The correspondence-biased observer who ignores that superfluous threat and concludes that the older child is dispositionally compelled to brush her teeth will, in fact, be right. Ironically, a situational constraint will have endured long enough to warrant being ignored.

inasmuch as it encourages people to use one control-enhancing strategy (attribution of behavior to dispositions) rather than the other (attribution of behavior to situational characteristics). As Nisbett (1987, p. 110) has argued, "Much of Western culture, from the Judeo-Christian insistence on individual moral responsibility to the intellectual underpinnings of capitalism and democracy, emphasize the causal role of the actor." Some writers have argued that capitalist societies maintain an illusion of fairness by teaching their members that they are both the proximal and ultimate causes of their own behavior; as such, both the "haves" and the "have nots" are socialized to believe that they are responsible for their respective successes or failures (e.g., Lukes, 1973; Weber, 1930). Presumably, if capitalist societies embraced the Marxist view that behaviors (and their consequences) are essentially the products of the sociopolitical contexts in which they occur, then dissatisfaction among the lower classes would invite revolutionary upheaval. If one finds this particular claim a shade too sinister, there is surely a very long list of other, less cynical reasons why Western cultures promote a dispositionist view of human behavior (e.g., Markus & Kitayama, 1991; Ross & Nisbett, 1991, pp. 169–203; Spence, 1985). We need not review them here. The point is simply this: Drawing dispositional inferences may be only one way of satisfying the need for control, but it seems to be the one way prescribed by Western culture (see J. G. Miller, 1984; Newman, 1993; Schweder & Bourne, 1982). When dispositional inferences are unwarranted, this sense of control may be illusory, but even illusory control can have sanguine effects (Alloy & Abramson, 1979; Langer, 1975; Taylor & Brown, 1988), and thus the mechanisms that produce it may have an advantage.

Let us return to the question that opened this section: Why the correspondence bias? A few answers have emerged. First, dispositional inferences are easy to make and are undoubtedly correct on some occasions. Second, even when they are incorrect in the strictly logical sense, they may have few unfavorable and many favorable consequences for the observer as long as the situation that she or he has ignored is an effect of the actor's dispositions, a cause of the actor's dispositions, or simply the same situation within which he or she wishes to predict the actor's behavior. Finally, dispositional inferences afford the observer a culturally acceptable way of gaining a sense of control over her or his environment, and feelings of control, however illusory, may ultimately yield greater psychological benefits than would logically impeccable inferences. The goodness of the answer to any question about ultimate causes depends, of course, on what satisfies the person who posed it. To the extent that a surfeit of positive and a lack of negative consequences can be said to explain why a psychological phenomenon exists, the ultimate causes of correspondence bias seem tractable.

Coda

We may strive to see others as they really are, but all too often the charlatan wins our praise and the altruist our scorn. Juries misjudge defendants, voters misjudge candidates, lovers misjudge each other, and, as a consequence, the innocent are executed, the incompetent are elected, and the ignoble are embraced. In this article, we have examined one of the errors to which human beings are prone: the correspondence bias. We have argued that this tendency to draw logically unwarranted inferences about the dispositions of others can be caused by four distinct mechanisms, all of which fall out of a basic model of attributional process. We have tried to say what the correspondence bias is and how it comes to be. But the question we cannot answer is a pressing one: How prevalent is this bias in everyday life? Unfortunately, social psychology experiments are especially poor tools for answering questions about prevalence. This is unfortunate because it tends to make such matters the constant target of intuitive appeals. These appeals often take the form of suggesting that inferential errors cannot be pervasive or problematic because one need only "look around" to see that people navigate their social worlds with ease and aplomb. Every day, people meet people, make judgments, make friends, and conduct the other dull business of ordinary life, all without any obvious impairment. Can the correspondence bias be more than a hothouse phenomenon if people in the real world do just fine?

As with most intuitive appeals, this one rests on a tenuous assumption, namely, that people do just fine. In the past year, 1,000 people who thought they knew their acquaintances have been raped by them, 10,000 people who thought they knew their mates have divorced them, and 100,000 people who thought they knew their sovereigns have died as pawns in their wars. Just how capably do we navigate our social worlds? Just how accurate are our understandings of those around us? We do not know. Nobody does. But before we accept the stale contention that people do just fine when psychologists are not manipulating and measuring them, we should probably look around.

References

Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin, 82,* 261–277.

Alloy, L. B., & Abramson, L. Y. (1979). Judgments of contingency in depressed and nondepressed students: Sadder but wiser? *Journal of Experimental Psychology: General, 108,* 441–485.

Arkin, R. M., & Duval, S. (1975). Focus of attention and causal attributions of actors and observers. *Journal of Experimental Social Psychology, 11,* 427–438.

Bargh, J. A. (1989). Conditional automaticity: Varieties of automatic influence in social perception and cognition. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 3–51). New York: Guilford Press.

Baron, R. M. (1988). An ecological framework for establishing a dual-mode theory of social knowing. In D. Bar-Tal & A. W. Kruglanski (Eds.), *The social psychology of knowledge* (pp. 48–82). Cambridge, England: Cambridge University Press.

Bassili, J. N., & Smith, M. C. (1986). On the spontaneity of trait attribution: Converging evidence for the role of cognitive strategy. *Journal of Personality and Social Psychology, 50,* 239–245.

Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1–61). San Diego, CA: Academic Press.

Berscheid, E., Graziano, W., Monson, T., & Dermer, M. (1979). Outcome dependency: Attention, attribution, and attraction. *Journal of Personality and Social Psychology, 34,* 978–989.

Bierbrauer, G. (1979). Why did he do it? Attribution of obedience and the phenomenon of dispositional bias. *European Journal of Social Psychology, 9,* 67–84.

Buss, A. R. (1978). Causes and reasons in attribution theory: A concep-

tual critique. *Journal of Personality and Social Psychology, 11,* 1311–1321.

D'Agostino, P. R., & Fincher-Kiefer, R. (1992). Need for cognition and correspondence bias. *Social Cognition, 10,* 151–163.

Dunning, D., Griffin, D. W., Milojkovic, J., & Ross, L. (1990). The overconfidence effect in social prediction. *Journal of Personality and Social Psychology, 58,* 568–581.

Ellis, R. J., & Holmes, J. G. (1982). Focus of attention and self-evaluation in social interaction. *Journal of Personality and Social Psychology, 43,* 67–77.

Fein, S., Hilton, J. L., & Miller, D. T. (1990). Suspicion of ulterior motivation and the correspondence bias. *Journal of Personality and Social Psychology, 58,* 753–764.

Festinger, L., & Carlsmith, J. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology, 58,* 203–210.

Fischoff, B. (1975). Hindsight ≠ foresight: The effects of outcome knowledge on judgments under uncertainty. *Journal of Experimental Psychology: Human Perception and Performance, 1,* 288–299.

Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). Reading, MA: Addison-Wesley.

Fodor, J. A. (1983). *The modularity of mind.* Cambridge, MA: MIT Press.

Funder, D. C. (1987). Errors and mistakes: Evaluating the accuracy of social judgment. *Psychological Bulletin, 101,* 75–90.

Gilbert, D. T. (1991). How mental systems believe. *American Psychologist, 46,* 107–119.

Gilbert, D. T., & Jones, E. E. (1986). Perceiver-induced constraint: Interpretations of self-generated reality. *Journal of Personality and Social Psychology, 50,* 269–280.

Gilbert, D. T., Krull, D. S., & Pelham, B. W. (1988). Of thoughts unspoken: Social inference and the self-regulation of behavior. *Journal of Personality and Social Psychology, 55,* 685–694.

Gilbert, D. T., McNulty, S. E., Giuliano, T. A., & Benson, J. E. (1992). Blurry words and fuzzy deeds: The attribution of obscure behavior. *Journal of Personality and Social Psychology, 62,* 18–25.

Gilbert, D. T., & Osborne, R. E. (1989). Thinking backward: Some curable and incurable consequences of cognitive busyness. *Journal of Personality and Social Psychology, 57,* 940–949.

Gilbert, D. T., Pelham, B. W., & Krull, D. S. (1988). On cognitive busyness: When person perceivers meet persons perceived. *Journal of Personality and Social Psychology, 54,* 733–740.

Gilbert, D. T., & Silvera, D. H. (1993). *How to help people ruin their reputations.* Unpublished manuscript, University of Texas at Austin.

Griffin, D. W., Dunning, D., & Ross, L. (1990). The role of construal processes in overconfident predictions about the self and others. *Journal of Personality and Social Psychology, 59,* 1128–1139.

Griffin, D. W., & Ross, L. (1991). Subjective construal, social inference, and human misunderstanding. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 319–356). San Diego, CA: Academic Press.

Heider, F. (1958). *The psychology of interpersonal relations.* New York: Wiley.

Higgins, E. T., & Winter, L. (1993). The "acquisition principle": How beliefs about a behavior's prolonged circumstances influence correspondent inference. *Personality and Social Psychology Bulletin, 19,* 605–619.

Hilton, D. J., & Slugoski, B. R. (1986). Knowledge-based causal attribution: The abnormal conditions focus model. *Psychological Review, 93,* 75–88.

Hinsz, V. B., & Tomhave, J. A. (1991). Smile and (half) the world smiles with you, frown and you frown alone. *Personality and Social Psychology Bulletin, 17,* 586–592.

Hogarth, R. M. (1981). Beyond discrete biases: Functional and dysfunctional aspects of judgmental heuristics. *Psychological Bulletin, 90,* 197–217.

Ichheiser, G. (1949). Misunderstandings in human relations: A study in false social perception. *American Journal of Sociology, 55.*

Jacoby, L. L., Kelley, C. M., & Dywan, J. (1989). Memory attributions. In H. L. Roediger & F. I. M. Craik (Eds.), *Varieties of memory and consciousness: Essays in honor of Endel Tulving* (pp. 391–422). Hillsdale, NJ: Erlbaum.

Jacoby, L. L., Toth, J. P., Lindsay, S. D., & Debner, J. A. (1992). Lectures for a layperson: Methods for revealing unconscious processes. In R. Bornestein & T. Pittman (Eds.), *Perception without awareness* (pp. 81–120). New York: Guilford Press.

Jones, E. E. (1979). The rocky road from acts to dispositions. *American Psychologist, 34,* 107–117.

Jones, E. E. (1990). *Interpersonal perception.* New York: Macmillan.

Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 219–266). San Diego, CA: Academic Press.

Jones, E. E., & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology, 3,* 1–24.

Jones, E. E., & Nisbett, R. E. (1972). The actor and the observer: Divergent perceptions of the causes of behavior. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 79–94). Morristown, NJ: General Learning Press.

Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review, 93,* 136–153.

Keller, E. (1992). Nature, nurture, and the human genome project. In L. Hood & D. J. Kevles (Eds.), *The code of codes* (pp. 253–288). Cambridge, MA: Harvard University Press.

Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska Symposium on Motivation* (Vol. 15, pp. 192–238). Lincoln: University of Nebraska Press.

Keysar, B. (1993). *A process model of linguistic perspective-taking: Toward a theory of language use.* Unpublished manuscript, University of Chicago.

Keysar, B. (1994). The illusory transparency of intention: Perspective taking in text. *Cognitive Psychology, 26,* 165–208.

Kruglanski, A. W. (1975). The endogenous-exogenous partition in attribution theory. *Psychological Review, 82,* 387–406.

Kruglanski, A. W. (1989). The psychology of being "right:" The problem of accuracy in social perception and cognition. *Psychological Bulletin, 106,* 395–409.

Krull, D. S. (1993). Does the grist change the mill? The effect of the perceiver's inferential goal on the process of social inference. *Personality and Social Psychology Bulletin, 19,* 340–348.

Langer, E. J. (1975). The illusion of control. *Journal of Personality and Social Psychology, 32,* 311–328.

Lepper, M. R., Greene, D., & Nisbett, R. E. (1973). Undermining children's intrinsic interest with extrinsic rewards: A test of the "overjustification" hypothesis. *Journal of Personality and Social Psychology, 28,* 129–137.

Lewin, K. (1931). The conflict between Artistotelian and Galileian modes of thought in contemporary psychology. *Journal of General Psychology, 5,* 141–177.

Lombardi, W. J., Higgins, E. T., & Bargh, J. A. (1987). The role of consciousness in priming effects on categorization: Assimilation versus contrast as a function of awareness of the priming task. *Personality and Social Psychology Bulletin, 13,* 411–429.

Lorge, I. (1936). Prestige, suggestion, and attitudes. *Journal of Social Psychology, 7,* 386–402.

Lukes, S. (1973). *Individualism.* Oxford, England: Basil Blackwell.

Lupfer, M. B., Clark, L. F., & Hutcherson, H. W. (1988). Impact of

context on spontaneous trait and situational attributions. *Journal of Personality and Social Psychology, 58,* 239–249.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224–253.

Martin, L. L., Seta, J. J., & Crelia, R. A. (1990). Assimilation and contrast as a function of people's willingness and ability to expend effort in forming an impression. *Journal of Personality and Social Psychology, 59,* 27–37.

McArthur, L. Z., & Baron, R. M. (1983). Toward an ecological theory of social perception. *Psychological Review, 90,* 215–238.

McArthur, L. Z., & Post, D. L. (1977). Figural emphasis and person perception. *Journal of Experimental Social Psychology, 13,* 520–535.

McGill, A. L. (1989). Context effects in judgments of causation. *Journal of Personality and Social Psychology, 57,* 189–200.

Medcof, J. W. (1990). PEAT: An integrative model of attribution processes. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 23, pp. 111–209). New York: Academic Press/Harcourt Brace Jovanovich Publishers.

Milgram, S., Bickman, L., & Berkowitz, O. (1969). Note on the drawing power of crowds of different size. *Journal of Personality and Social Psychology, 13,* 79–82.

Miller, A. G., Ashton, W., & Mishal, M. (1990). Beliefs concerning the features of constrained behavior: A basis for the fundamental attribution error. *Journal of Personality and Social Psychology, 59,* 635–650.

Miller, D. T., Norman, S. A., & Wright, E. (1978). Distortion in person perception as a consequence of the need for effective control. *Journal of Personality and Social Psychology, 36,* 598–607.

Miller, F. D., Smith, E. R., & Uleman, J. (1981). Measurement and interpretation of situational and dispositional attributions. *Journal of Experimental Social Psychology, 17,* 80–95.

Miller, J. G. (1984). Culture and the development of everyday social explanation. *Journal of Personality and Social Psychology, 46,* 961–978.

Mook, D. G. (1983). In defense of external invalidity. *American Psychologist, 38,* 379–387.

Newman, L. S. (1991). Why are traits inferred spontaneously? A developmental approach. *Social Cognition, 9,* 221–253.

Newman, L. S. (1993). How individualists interpret behavior: Idiocentrism and spontaneous trait inference. *Social Cognition, 11,* 243–269.

Nietzche, F. (1984). *Human all too human* (M. Faber & S. Lehmann, Trans.). Lincoln: University of Nebraska Press. (Original work published 1886)

Nisbett, R. E. (1987). Lay personality theory: Its nature, origin, and utility. In N. E. Grunberg, R. E. Nisbett, J. Rodin, & J. E. Singer (Eds.), *A distinctive approach to psychological research: The influence of Stanley Schachter* (pp. 87–117). Hillsdale, NJ: Erlbaum.

Nisbett, R. E., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment.* Englewood Cliffs, NJ: Prentice Hall.

Osborne, R. E., & Gilbert, D. T. (1992). The preoccupational hazards of social life. *Journal of Personality and Social Psychology, 62,* 219–228.

Pittman, T. S., & D'Agostino, P. R. (1985). Motivation and attribution: The effects of control deprivation on subsequent information-processing. In J. Harvey & G. Weary (Eds.), *Attribution: Basic issues and applications* (pp. 117–141). San Diego, CA: Academic Press.

Quattrone, G. A. (1982a). Behavioral consequences of attributional bias. *Social Cognition, 1,* 358–378.

Quattrone, G. A. (1982b). Overattribution and unit formation: When behavior engulfs the person. *Journal of Personality and Social Psychology, 42,* 593–607.

Reeder, G. D., & Brewer, M. B. (1979). A schematic model of dispositional attribution in interpersonal perception. *Psychological Review, 86,* 61–79.

Reeder, G. D., Fletcher, G. J. O., & Furman, K. (1989). The role of observers' expectations in attitude attribution. *Journal of Experimental Social Psychology, 25,* 168–188.

Ross, L. (1977). The intuitive psychologist and his shortcomings. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 173–220). San Diego, CA: Academic Press.

Ross, L., Amabile, T. M., & Steinmetz, J. L. (1977). Social roles, social control, and biases in social-perception processes. *Journal of Personality and Social Psychology, 35,* 485–494.

Ross, L., Greene, D., & House, P. (1977). The "false consensus effect": An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology, 13,* 279–301.

Ross, L., & Nisbett, R. (1991). *The person and the situation: Perspectives of social psychology.* New York: McGraw-Hill.

Schul, Y., & Burnstein, E. (1985). When discounting fails: Conditions under which individuals use discredited information in making a judgment. *Journal of Personality and Social Psychology, 49,* 894–903.

Schweder, R. A., & Bourne, E. (1982). Does the concept of the person vary cross-culturally? In A. J. Marsella & G. White (Eds.), *Cultural conceptions of mental health and therapy* (pp. 97–137). Boston: Reidel.

Sherman, S. J. (1980). On the self-erasing nature of errors of prediction. *Journal of Personality and Social Psychology, 39,* 211–221.

Skinner, B. F. (1971). *Beyond freedom and dignity.* New York: Knopf.

Snyder, M. L., & Frankel, A. (1976). Observer bias: A stringent test of behavior engulfing the field. *Journal of Personality and Social Psychology, 34,* 857–864.

Snyder, M., & Ickes, W. (1985). Personality and social behavior. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed., Vol. 2, pp. 883–947). Hillsdale, NJ: Erlbaum.

Solomon, S. (1978). Measuring dispositional and situational attributions. *Personality and Social Psychology Bulletin, 4,* 589–594.

Spence, J. T. (1985). Achievement American style: The rewards and costs of individualism. *American Psychologist, 40,* 1285–1295.

Stavrianos, L. S. (1989). *Lifelines from our past: A new world history.* New York: Pantheon Books.

Storms, M. D. (1973). Videotape and the attribution process: Reversing actors' and observers' points of view. *Journal of Personality and Social Psychology, 27,* 165–175.

Strickland, L. H. (1958). Surveillance and trust. *Journal of Personality, 26,* 200–215.

Swann, W. B., Jr. (1984). Quest for accuracy in person perception: A matter of pragmatics. *Psychological Review, 91,* 457–477.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social-psychological perspective on mental health. *Psychological Bulletin, 103,* 193–210.

Taylor, S. E., & Fiske, S. T. (1975). Point-of-view and perceptions of causality. *Journal of Personality and Social Psychology, 32,* 439–445.

Taylor, S. E., & Fiske, S. T. (1978). Salience, attention, and attribution: Top of the head phenomena. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 11, pp. 249–288). San Diego, CA: Academic Press.

Trope, Y. (1986). Identification and inferential processes in dispositional attribution. *Psychological Review, 93,* 239–257.

Trope, Y., & Cohen, O. (1989). Perceptual and inferential determinants of behavior-correspondent attributions. *Journal of Experimental Social Psychology, 25,* 142–158.

Trope, Y., Cohen, O., & Maoz, Y. (1988). The perceptual and inferential effects of situational inducements on dispositional attributions. *Journal of Personality and Social Psychology, 55,* 165–177.

Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology, 5,* 207–232.

Uleman, J. S. (1987). Consciousness and control: The case of spontaneous trait inferences. *Personality and Social Psychology Bulletin, 13,* 337–354.

Wachtel, P. (1973). Psychodynamics, behavior therapy, and the implacable experimenter: An inquiry into the consistency of personality. *Journal of Abnormal Psychology, 82,* 324–334.

Walden, T. A., & Ogan, T. A. (1988). The development of social referencing. *Child Development, 59,* 1230–1240.

Weber, M. (1930). *The Protestant ethic and the spirit of capitalism.* Winchester, MA: Allen & Unwin.

Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. (1972). Perceiving the causes of success and failure. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 95–120). Morristown, NJ: General Learning Press.

Wells, H. G. (1932). *The work, wealth, and happiness of mankind.* London: William Heinemann.

White, P. A. (1991). Ambiguity in the internal/external distinction in causal attribution. *Journal of Experimental Social Psychology, 27,* 259–270.

Whitney, P., Waring, D. A., & Zingmark, B. (1992). Task effects on the spontaneous activation of trait concepts. *Social Cognition, 10,* 377–396.

Wilson, T. D., & Brekke, N. (1994). Mental contamination and mental correction: Unwanted influences on judgments and evaluations. *Psychological Bulletin, 116,* 117–142.

Winter, L., & Uleman, J. S. (1984). When are social judgments made? Evidence for the spontaneousness of trait inferences. *Journal of Personality and Social Psychology, 47,* 237–252.

Winter, L., Uleman, J. S., & Cunniff, C. (1985). How automatic are social judgments? *Journal of Personality and Social Psychology, 49,* 904–917.

Wyer, R. S., & Unverzagt, W. H. (1985). The effects of instructions to disregard information on its subsequent recall and use in making judgments. *Journal of Personality and Social Psychology, 48,* 533–549.

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New Journal: *Psychological Methods*

The Publications and Communications Board of the American Psychological Association announces the publication of a new quarterly journal, *Psychological Methods*, beginning in 1996.

Although originating from the *Psychological Bulletin* section on "Quantitative Methods," the new journal has an expanded coverage policy and will be devoted to the development and dissemination of methods for collecting, analyzing, understanding, and interpreting psychological data. Its purpose is the dissemination of innovations in research design, measurement, methodology, and quantitative and qualitative analysis to the psychological community; its further purpose is to promote effective communication about related substantive and methodological issues. The audience is expected to be diverse and to include those who develop new procedures and those who employ those procedures in research, as well as those who are responsible for undergraduate and graduate training in design, measurement, and statistics. The journal solicits original theoretical, quantitative, empirical, and methodological articles; reviews of important methodological issues as well as of philosophical issues with direct methodological relevance; tutorials; articles illustrating innovative applications of new procedures to psychological problems; articles on the teaching of quantitative methods; and reviews of statistical software. Submissions will be judged on their relevance to understanding psychological data, methodological correctness, and accessibility to a wide audience. Where appropriate, submissions should illustrate through concrete example how the procedures described or developed can enhance the quality of psychological research. The journal welcomes submissions that show the relevance to psychology of procedures developed in other fields. Empirical and theoretical articles on specific tests or test construction should have a broad thrust; otherwise, they may be more appropriate for *Psychological Assessment.*

Mark I. Appelbaum, PhD, has been appointed to a 6-year term as editor of *Psychological Methods.* Beginning immediately, manuscripts should be sent to

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