

R. F. Baumeister & K. D. Vohs (2007). *Encyclopedia of Social Psychology*. Thousand Oaks, CA: Sage.

See also Actor–Observer Asymmetries; Attribution Theory; Correspondent Inference Theory; Kelley's Covariation Model

Further Readings

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ATTRIBUTION THEORY

Definition

Attribution theory—or rather, a family of attribution theories—is concerned with the question of how ordinary people explain human behavior. One type of attribution theory emphasizes people's use of folk psychology to detect and understand internal states such as goals, desires, or intentions. People then use these inferred states to explain the behavior they observe. Another type of attribution theory assumes that people observe regularities and differences in behavior to learn about dispositions (e.g., personality traits, attitudes) that are characteristic of themselves or others. Attribution theories pose a challenge to academic efforts to account for behavior that either fail to explain the individual behavior of individual people or that deny the usefulness of folk psychological (or mentalistic) concepts. Attribution theories are complemented by what is sometimes called *attributional theories*. These theories address the consequences of particular attributions for emotions (e.g., anger vs. pity), judgments (e.g., of guilt vs. innocence), and behavior (e.g., aggression vs. assistance).

Attribution as Perception

In 1958, Fritz Heider introduced an early version of attribution theory at a time when behaviorist theories of learning and memory and psychoanalytic theories of unconscious motivation dominated academic psychology. These theories had little use for naive explanations of behavior. In contrast, Heider stressed the importance of studying everyday attributions because they influence how people feel and what they do.

Heider made two important distinctions. The first distinction was whether a behavior is seen as intentional or unintentional; the second distinction was whether a behavior is seen as caused by something about the person or by something about the situation. These two distinctions are related because intentional behaviors say more about the person than about the situation. Heider anticipated that people regard personal attributions as most important. Individualist cultures, in particular, foster a tendency to see humans as autonomous agents who have some control over their own behavior. Once they have made a personal attribution, people can predict a person's future behavior more confidently. Suppose Ringo repays a loan from Paul on time. If Paul concludes that Ringo is trustworthy, he may help him again when the need arises, or feel comfortable to trust Ringo in other ways, as when confiding a piece of gossip about George.

The repayment of a loan is likely seen as an intentional act, especially when there are no signs that the person was coerced. Heider suggested that an attribution of intentionality can be made with little thought, much like the visual perception of objects is largely automatic. In social perception, the person and the behavior form a perceptual unit, and thereby suggest a causal connection. Experiments have shown that the observation of a behavior that implies a certain personality trait (such as the timely repayment of a loan suggests trustworthiness) makes that trait mentally accessible. If, for example, people read about a repaid loan and a host of other behaviors, seeing the word *trustworthy* at a later time helps them recall the specific behavior that suggested it.

Whereas the person–behavior unit is figural in social perception, the situation is usually the background. Compared with a person, a situation is typically not well organized perceptually. It can comprise the presence of other people, current moods, the weather, or the time of day. Only when a particular aspect of a situation commands attention, such as the threat of penalties in the loan example, can situational attributions become more prominent.

The attribution of an intentional, and thus personal, causation is furthered if the actor exerts effort. If we learn that Ringo recently took a second job, we feel more confident about his intention to repay the loan. In general, if a person appears to go the extra mile to produce a desired effect, people attribute the behavior to a conscious goal. The third, and perhaps the strongest cue toward intentionality is what Heider called

equifinality. Equifinality can only be revealed by several behaviors that lead to the same end result. Courting behavior is an example. A suitor who sends flowers, cards, and chocolates, and who also serenades the object of his desire really seems to mean it. Note that these cues are not independent. He who seeks many means to achieve the same end can often only do so by exerting more effort than he who is more nonchalant.

Attribution as Inference

In 1965, Edward Jones and Keith Davis proposed the more formal theory of correspondent inferences. They stressed that attributions of intentionality depend on the impression that the actor freely chose what to do. There had to be alternative options as well as a lack of situational pressures, such as coercion by others. A chosen option is most informative if its alternatives differ in their consequences, and if the person was able to foresee these consequences. For example, we can learn about Ringo's intentions from what he did with the money he borrowed. Suppose he had the options of buying a lawn mower, a new computer, or a cruise for his wife. Choosing the last option is most informative because it has the unique consequence of affirming an important personal relationship.

The question of free choice became a watershed issue for all attribution theories because it most clearly separates personal from situational causes. Originally, Jones and his colleagues believed that people would discount personal explanations if a behavior was externally constrained. In a famous experiment in 1967, Jones and Victor Harris found, however, that people thought a person who, in compliance with an experimenter's request, had written an essay in praise of Fidel Castro, privately held pro-Castro attitudes. The tendency to make inferences about the person even when the situation could fully explain the behavior, was henceforth called the *correspondence bias*, or more evocatively, the *fundamental attribution error*. In short, the theory of correspondent inferences assumed that the road from behaviors to dispositional attributions is a rocky one because of the multiplicity of considerations that is presumably necessary. In contrast, the evidence for quick and potentially biased inferences suggests that people make use of perceptual shortcuts, just as Heider had suspected.

Some of these shortcuts are self-serving. People readily attribute successes and other positive events to

their own efforts or enduring qualities, while attributing failures or other setbacks to chance or to features of the situation (e.g., "The test was unfair!"). Although self-serving biases are suspect from a normative point of view, they have adaptive benefits. People who attribute successes to their own ability and their failures to bad luck are less likely to be depressed and more likely to persevere after setbacks. These biases are truly self-serving only if they are unique to the self-perspective, that is, if the favorable explanatory pattern does not affect explanations of the behaviors or outcomes of others.

A more general bias is the actor-observer effect, which refers to the tendency to make fewer dispositional or more situational attributions for one's own behavior than for the behavior of others. This effect turns out to be rather weak. Bertram Malle has suggested that the main difference between the self- and the observer's perspective is that the former heavily relies on reasons as explanations, whereas the latter relies on causes. Reasons are derived from intentions, which people find available in their own minds but can only infer from the behavior of others; causes include all situational sources of behavior as well as personal dispositions that lie outside the realm of intentional action (e.g., habits, compulsions, automatisms).

Attribution as Induction

Perceptions and inferences regarding intentionality and causality can involve a fair amount of guesswork. Their quality depends on the perceiver's ability to make reasonable assumptions to make up for missing information. Harold Kelley suggested that attributions are a certain kind of inductive inference. That is, people induce a probable cause from available information. Following the British empiricists, and particularly John Stuart Mill's joint method of agreement and difference, Kelley proposed that an event (e.g., a behavior) is attributed to whichever potential cause is present when the event is present and that is absent when the event is absent.

In Kelley's scheme, there are three sources of variability. Variability over actors is called *consensus*. Consensus is low if only Ringo, but no one else, repays his loan. It suggests that Ringo, but not Paul, should be credited as the source of Ringo's behavior. Variability over stimuli is called *distinctiveness*. Distinctiveness is high if Ringo only repays Paul but not

George, suggesting that Paul has some control over Ringo's behavior. Finally, variability over time is called *consistency*. Consistency is high if the behavior occurs repeatedly, as when, for example, Ringo always repays his loans. By itself, consistent behavior does not reveal much about its likely cause. If, however, consensus or distinctiveness information already suggests a particular attribution, high consistency makes this attribution more certain.

A full suite of information concerning consensus, distinctiveness, and consistency is called a *configuration*. On the basis of such a configuration, a social perceiver can decide whether to attribute a behavior to the person, to the stimulus, to the particular relationship between the two, or to the circumstances prevailing at the time. With each of the three types of information being either high or low, eight different configurations are possible. The configuration of low consensus, low distinctiveness, and high consistency affords the strongest person attribution; the configuration of high consensus, high distinctiveness, and high consistency affords the strongest stimulus attribution. Over the years, numerous refinements to Kelley's model have been introduced. The goal of these efforts has been to identify unique predictions for each possible configuration, and to validate these predictions with empirical data about how social perceivers actually make attributions.

Patricia Cheng's and Laura Novick's probabilistic contrast model advances these ideas by recognizing the uncertainty of many causal attributions. In their model, an aspect of the world (e.g., a person or a situation) is perceived as a cause if the event (e.g., a behavior) is more likely to occur when this aspect is present than when it is absent. That is, causality is inferred from a difference between probabilities. This theory can account for a complex interplay of causes. Suppose that the probability of Ringo repaying a loan is greater if Paul is the lender than if George is the lender, whereas the probability of John repaying the loan is low regardless of lender. Statistically, this pattern is an interaction; it reveals the unique relationship between Ringo and Paul as the most probable cause. Yet, Kelley's theory leads to the same conclusion, because the pattern of covariation is coded as one with low consensus, high distinctiveness, and high consistency. So what has been gained? Note that Kelley's model ignores the probability of another actor (John) repaying another lender (George). If this probability

were high, Ringo's behavior would no longer be unusual, and hence, the attribution of his behavior to his relationship with Paul would also be weakened.

Attribution as Construction

The probabilistic contrast model is conceptually elegant, mathematically rigorous, and empirically well supported. However, the price for the model's precision is a lack of realism. The Cheng and Novick model, as well as other theories of inductive inference, faces several critical issues, which set the agenda for current and future refinements of attribution theory.

The first issue is that ordinary social perceivers rarely have enough information to evaluate configurations of evidence. To make attributions, they must exploit direct perceptual inferences, inferences based on partial cues, or common social background knowledge. Recent integrative models address this problem by combining aspects of the folk psychology approach with the statistical-reasoning approach.

The second issue is that sources of information are rarely independent. Behavior low in distinctiveness also tends to be highly consistent because people enter different situations sequentially. To untangle distinctiveness from consistency, they must figure out which situations they can treat as identical and how they can mentally correct the conflation of different situations with different times. Formal statistical tools can do this with numerical data, but ordinary intuition is not equipped to handle this task.

The third issue is that trait attributions, once made, do not contribute much to the causal explanation of behavior. Once we believe that Ringo is trustworthy, this characteristic of his becomes a mere enabling condition because it is always there. As a trait, trustworthiness is, by definition, a constant feature and therefore cannot vary. To explain a particular trustworthy act, some additional cause must be invoked. When the additional cause is an aspect of the situation, a peculiar shortcoming of standard attribution theory emerges. Since the days of Heider's theory, personal and situational causes have been treated as competitive. Kelley's famous discounting principle states that the stronger the situational cause is, the weaker the personal cause must be. The assumption of a hydraulic relationship between personal and situational causes may not be realistic. People who react aggressively to provocation, for example, are seen as

having aggressive personalities, whereas people who aggress without provocation are more likely seen as disturbed. Contrary to the classic logic, a situational stimulus can enable a dispositional attribution, rather than inhibit it.

The final and most fundamental issue is that patterns of covariation never prove causation. One can show that a given covariation is not causal, but one cannot prove that a covariation is *not* causal. Educated people do not believe that the crowing of a rooster calls forth the dawn of a new day even if it consistently precedes it. There is no known mechanism that links the two. In contrast, if a comedian's cracks are always followed by riotous laughter, one can examine the specific properties of the jokes as mediating variables and note the fact that the intervals between jokes can be varied at will.

When there is a plausible process, or mediator, variable that can link an effect to a putative cause, the case for causation becomes stronger, but it still is not proven. The problem reduces again to covariation, that is, to the statistical relationships between the presumed cause and the mediator variable, and between the mediator variable and the effect. That there is no end to this, no matter how many mediator variables are inserted, reinforces philosopher David Hume's skepticism regarding causation. Covariations can be accepted as causal only with the aid of perceptions, inferences, or beliefs that lie outside of the field of observable data.

Whereas attribution theories call on the concepts of folk psychology to support causal claims, the same concepts remain suspect as prescientific from an academic perspective. This leads to the ironic conclusion that ordinary people often have a greater facility in explaining individual behaviors than some formal theories do. Moreover, theories that reject intentions, or conscious will more generally, as a cause of behavior imply that the ordinary person's interest in them must be mistaken. The counterargument is that intentions are no different from other mental phenomena, such as attention, learning, or memory, that many reductionist theories invest with explanatory power. If so, insights gained from folk psychology and formalized by attribution theories can enrich academic theories of human behavior, just as Heider hoped they would.

Most scientific theories rely on experimentation to determine the causes of behavior. If experimentation were the royal road to understanding causation, one might demand ordinary people to conduct experiments before making attributions. They usually do not, and

they should not be blamed, because experimentation is difficult and costly (note that such blaming would be an act of attribution). Experimentation has its own limitations. One is that experiments are better suited for the detection of behavioral trends in groups of people than for finding out why a certain person performed a specific act. Another limitation is that personal characteristics such as traits are, by definition, stable and thus not amenable to experimental variation.

The most important limitation, however, is the general force of Hume's critique. Causality cannot be established by observation alone; instead, it requires a psychological contribution that goes beyond the data given. This is true in scientific experimentation as it is in ordinary social perception. Experiments only yield patterns of covariation. The extra knowledge that scientists use to go beyond covariation is their belief that they can replicate experimental results at will. In other words, their own intentions and sense of agency play a crucial role in their conviction that covariations observed in experimental data can keep Hume's specter at bay. By explaining the causal beliefs of behavioral scientists, attribution theory comes full circle.

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See also Actor-Observer Asymmetries; Attributions; Correspondence Bias; Fundamental Attribution Error; Kelley's Covariation Model; Self-Serving Bias; Social Projection

Further Readings

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