

## Balance Theory, Unit Relations, and Attribution : The Underlying Integrity of Heiderian Theory

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Fritz Heider's (1958c) book *The Psychology of Interpersonal Relations* and the handful of articles preceding it (e.g., Heider, 1944, Heider, 1946; Heider & Simmel, 1944) provide the cornerstone—and a major part of the foundation—of research and theory in social perception. Two very influential theories in social psychology, the causal attribution and psychological balance theories, grew out of the ideas and analysis of this seminal work. Heider himself viewed these developments as one may view a mildly wayward child, with a mixture of pleasure and a sense of regret (Heider, 1983). Heider had considered his ideas to be all of a piece, a relatively unified and coherent theory of social perception. Subsequent researchers had taken smaller bites and developed midrange theories, slightly out of the context of Heider's other ideas. Part of this result may be laid at the feet of Heider himself. None of the articles, and not even the 1958 book, fully developed the ideas, their connections, or his larger vision. Before the publication of his influential book, Heider's best-known papers were two—one on causal attribution (Heider, 1944) and one on balance (Heider, 1954/1958b)—both of which were available in the widely read Tagiuri and Petrullo (1958) volume on person perception. 1

It is primarily in his personal notebook writing that Heider developed his views fully (Baron, 1991). Fortunately, this personal writing is available in published form, edited in six volumes by Marijana Benesh-Weiner (Heider, 1987a, 1987b, 1988, 1989a, 1989b, 1990). Despite the able editing and organizing of Benesh-Weiner, the notebooks are long (six volumes of about 400 pages each) and lack a coherent flow; they remain notebooks. A tiny portion of the interesting thoughts in the notebooks appeared in the *American Psychologist* in 1982 (Benesh & Weiner, 1982).

In this article, we review some of Heider's ideas about psychological balance, unit formation, and attributions. We develop Heider's ideas on the basis of quotes from his various books, articles, and notebook writings. For some readers, this will be a familiar review of Heider's ideas; for others, it will be a first look at the conceptual understructure connecting Heider's different theories of attribution and balance. From these ideas, we develop the notion that a primary motivator for causal attribution is the desire to maintain affective consistency toward a person.

### *Fundamentals of Heider's Approach to Social Perception*

This article has several purposes. First, we set out to remind the reader of basic Heiderian concepts and to more fully describe, in a unified way, Heider's theory of social perception that is scattered across books, journal articles, chapters in edited volumes, and the published notebooks. Second, we extend the Heiderian ideas to a selection of other research areas in psychology to show the theory's breadth. Finally, we return to attributions and consider some of the implications of Heiderian ideas for modern developments in attribution theory. The article's value is primarily as a demonstration and a reminder of the intellectual power and scientific reach of Heider's ideas about perceptual, cognitive, and affective organization. In addition, we hope to show that Heider's three most important ideas—attribution, balance, and unit formation—are part of an integrated theory of person perception, which forms a foundation for a theory of motivated social cognition.

## **Emotional Prägnanz**

Heider argued that people are motivated to have an affectively uniform impression of people. One of the primary forces in Heider's theory of social perception is the search for simple structure. Simple structure may be based on logical consistency or on affective consistency. Maintaining inconsistency requires cognitive ability and some extra effort. In a section labeled "Homogeneity of the Person," Heider (1958c) wrote, "To conceive of a person as having positive and negative traits requires a more sophisticated view; it requires a differentiation of the representation of the person into subparts that are of unlike value" (p. 182).

Not only is it effortful to maintain an affectively ambivalent representation of people, but people are motivated in various ways to preserve their consistent views: "Why should one hesitate to accept a present from a hated donor? One would like to keep the hate, not to have to mix it up with gratitude" (Heider, as cited in Benesh & Weiner, 1982, p. 889). The avoidance of mixed emotions toward an object is simply a special case of the perceiver's desire to have a clear, consistent, and efficient perception of the world. Heider made a very similar argument with respect to the visual perception of a cross (+):

Completion tendencies follow simplicity... a cross can be seen as two straight lines crossing, or as two corners meeting, and so forth. Two straight lines is the simplest configuration, the most pregnant, the most redundant. All parts of a straight line are in harmony with each other. (Heider, 1988, p. 55)

In short, Heider believed that physical and social perception followed the Gestalt law of prägnanz. According to Gestalt psychologists, prägnanz is a fundamental principle of the perceptual system. Heider's contemporary, Solomon Asch, described prägnanz as "a tendency to perceive the surroundings in as clear a way as the conditions permit. This tendency to prägnanz, or to achieve maximum clarity, can function to produce either greater accuracy or quick but inadequate organization" (Asch, 1952, p. 59).

A failure to achieve perceptual clarity leads to unstable perception, ambiguity, and a sense of discomfort or distress (Asch, 1952; Rosenberg & Abelson, 1960). Perceptual confusion motivates further mental work or information gathering to obtain a meaningful percept, or alternatively it may motivate the perceiver to quit the field. Baron (1991), in his review of Volume 6 of *The Notebooks*, put it this way: "Both cognition and nature prefer simple structure" (p. 566). Perceivers will prefer a simple, consistent view of people, objects, and events; this clearly applies to the affective components of a person. Whenever possible, Heider argued, we will strive to maintain an affectively consistent appraisal of a person. In a section labeled "States of Imbalance and the Stress to Change," Heider (1958c) wrote, "The assumption that sentiment and unit relations tend toward a balanced state also implies that where balance does not exist, the situation will tend to change in the direction of balance" (p. 207).

This theme is developed further in the following section. We wish to point out here, however, that Heider viewed balance more complexly than the simple triads that are usually used to demonstrate balance theory. Multiple elements, with multiple entities, can all have (or lack) structural balance (see also Cartwright & Harary, 1956; Rosenberg & Abelson, 1960).

## **Balance and Unit Formation**

Which perceptual elements need to be in harmony? Heider, following Wertheimer and Köhler, argued that the elements that need to be in harmony, or in a balanced state, are elements that we perceive to "belong together" (Heider, 1958c, chap. 7). There is pressure toward a harmonious, uniform view of elements that are in a unit relationship with each other. Entities "form a unit when they are perceived as belonging together" (Heider, 1958c, p. 176). Thus, we wish to have a uniform or consistent affective perception of, say, the president, his personal behavior, his personality traits, his policy views, his family, and other things that we perceive belong to him. To the extent that a critic might disagree with the president's policy views, that critic will also object to his personal behavior, fail to be charmed by his personality, disapprove of his family, and generally dislike anything connected to him. Many times in his writings, Heider restated this simple observation:

x attributed to o; oUx a unit, something positive attributed to something positive. (Heider, 1988, p. 84) Good is connected only with good; bad only with bad. (Heider, 1988, p. 85) We might say that if several parts, or traits, or aspects of a person are considered, the tendency exists to see them as all positive, or all as negative... when all the single entities are of like sign, balance obtains. (Heider, 1958c, p. 183) Each person should have actions in only one class (+ or -), and it should be avoided that the region of all actions belonging to one person straddles the boundary between the regions of +acts and -acts. (Heider, 1988, pp. 84–85)

From these quotes, we can define a straightforward boundary for where we need harmonious, consistent, balanced relations. For comfortable and stable perception, balance needs to obtain among elements that are in unit relation to each other. Romeo and Juliet's discrepancy between their affection for their own families and the enmity between the Montagues and Capulets only becomes an issue of imbalance when Romeo and Juliet forge a unit relationship with each other.

### **Attribution, Balance, and Unit Formation**

Heider argued that attributions are cognitions that create a unit relationship. For example, in Jones and Davis's (1965) terms, a correspondent inference from a behavior to a trait is a perception of unit relation. For Heider, a causal attribution of any sort was equivalent to a judgment of unit relationship.

Conditions of attribution = conditions of unit formation. Effects of attribution = effects of U[nit] formation... act attributed to person, that is unit. Therefore one factor in attribution is balance, errors in attribution will follow consistency. (Heider, 1988, p. 44) We may say that the origin and the change which is attributed to the origin form a unit; that is to say, the change "belongs" to the origin. (Heider, 1944, p. 359) Attribution = balance with causal unit. (Heider, 1988, p. 44)

For Heider, causal attribution was a special case of unit formation. As a result, we can expect that causal attributions should follow the law of *prägnanz*. When unit formations are perceived, then there will be a force, or press, toward uniformity of sentiment among the elements of the unit.

Attribution serves the attainment of a stable and consistent environment, gives a parsimonious and at the same time often an adequate description of what happens, and determines what we expect will occur and what we should do about it... We find again and again that the sentiments and perceptions arrange themselves in such a way that simple harmonious configurations result. If we hear that a person we like has done something we dislike, we are confronted with a disharmonious situation, and there will arise a tendency to change it to a more balanced situation. (Heider, 1954/1958b, p. 25)

We summarize the foregoing review of Heider very simply. One function of causal attribution is to maintain affective and perceptual consistency. We make attributions to keep a simple, compact, harmonious, consistent, univalent representation of a person or a group. We make attributions to preserve balance within units. Because our perceptions are more pleasant and stable when the various elements are consistent with each other, we feel a pressure or tension (to adopt Lewin's word) to bring the elements into harmony. When a person for whom we feel affection acts rudely, we are likely to infer that the slight was unintentional—avoiding a person attribution—and thus we do not form a unit relation between the negative behavior and our friend (see also Malle, 1995; Malle & Knobe, 1997a). Similarly, if we feel positively toward ourselves, we will tend to like anything associated with us (Beggan, 1992; Nuttin, 1987), to prefer traits we have to traits we do not (J. D. Brown, 1986), to define positive traits in ways that ensure that we have them (Dunning, 1999), and to label our own negative traits as uncontrollable, thus avoiding a unit relationship (Alicke, 1985).

### **Moral Value and Attribution**

All of these issues come together for Heider when it comes to making moral judgments. Good behaviors lead to perceptions of targets as good people. "We might mention here that not only is it true that perception leads to evaluation, but evaluation can also lead to perception" (Heider, 1954/1958a, p. 31).

This bidirectionality is a critical part of Heider's approach. Attributions and judgments of unit relationship can lead to affective consequences, a finding well established by Weiner (1979, 1986, 1995), among others. Heider also argued that evaluation of moral value will lead to attributions. If we like and trust a friend, we will explain her ambiguous behavior in a way that preserves our evaluation of her.

We often have the feeling that someone ought to get a reward or punishment, that we or other people should do something, that someone does not deserve his bad or good luck, or that he has a right to act in a certain way. These oughts or obligations play a major role in not only the evaluation and determination of behavior and its consequences, but also in the fashioning of the content and emotional quality of experience. (Heider, 1958c, p. 218)

Judgments of morality are some of the most powerful and central attributions we can make. Heider observed that we often hear people speaking of another as a “good person,” and we often represent a person's moral worth or value as the central aspect in our thoughts about the person (Asch, 1946; Heider, 1958c; Reeder & Spores, 1983). The judgment of a person as good or bad will affect how we make unit relations, how we make attributions for the person's behavior, and our feelings about anything that we perceive to be in relationship to that person.

We have reviewed several of Heider's ideas and drawn some connections between attribution, unit formation, and balance; Heider himself drew these connections. In the interview with Harvey, Ickes, and Kidd that forms the first chapter of *New Directions in Attribution Research* (1976), Heider was asked, “This is in the area of intersection between your balance and attribution conceptions—Is that right?” (p. 16). He replied,

Yes, the two are very close together, I can hardly separate them. Because attribution, after all, is making a connection or a relation between some event and a source—a positive relation. And balance is concerned with the fitting or nonfitting of relations. (Heider, 1976, p. 16)

Heider's original conception had all of these ideas very closely related. But attribution theory and balance theory quickly diverged in subsequent research and theorizing. The research and theory in balance theory that followed Heider's (Heider's 1954/1958b, 1958c) had little or no interest in causal attribution (e.g., Cartwright & Harary, 1956; Newcomb, 1961; Zajonc & Burnstein, 1965). Early research and theory in attribution theory focused little, if at all, on balance (e.g., Jones & Davis, 1965; Jones & Nisbett, 1972; Kelley, 1967, 1972). (There is one small exception to this separation. Rosenberg & Abelson [1960] conceptualized causal attributions as one of the cognitions responsible for perceptual balance in a table in their chapter.)

Because the main assumptions and orienting ideas behind theoretical progress may not make it directly into the published theoretical works themselves (Polnaysi, 1958), we contacted several scientists who were central in the development of attribution theory. We asked them if they had been thinking about psychological balance while working on attribution theory. Hal Kelley (personal communication, January 16, 1996) told us that during the 1960s, when the analysis of variance model was being developed, “We didn't talk or think of linking these two.” Unfortunately E. E. (Ned) Jones died before we could ask him about balance, but fortunately his last book, *Interpersonal Perception* (Jones, 1990), is an excellent account of his own intellectual journey. In it he made no connection between attribution and balance. Keith Davis reinforced this view (personal communication, January 5, 1996). He wrote,

It is very, very hard to remember background contexts for the attribution theory work, but I do not think that balance theory was much in our minds as we developed the experiments, the explanations, and tried to fit things together with Heider's ideas.

Richard Nisbett (personal communication, November 20, 1996), who was present at the creation of many important attribution theory advances, also remembered that at the time, attribution theory and balance theory were regarded as largely separate and independent.

### **Resolving Imbalance in Person Perception**

So far, we can summarize our review of Heider's ideas quite simply. People prefer to view others in affectively consistent, coherent, simple—balanced—representations. When different parts of those perceptions appear affectively inconsistent, unit formation can be adjusted to preserve balance. One good way to manipulate unit formation is to adjust attributions (e.g., he didn't intend to be rude). This leaves us, however, with one important unresolved issue. Which part of the representation is most vulnerable to adjustment? For example, when faced with an event, behavior, or outcome that is inconsistent with their general impression of a person (e.g., when

bad things happen to good people, when a bad person does a good thing), will perceivers alter their liking of a target, or will they make attributions to adapt the new information to their older percept?

In his description of imbalance and change (chap. 7, "Sentiment"), Heider (1958c) listed the various kinds of changes people might make to restore balance—various changes in sentiment relations and various changes in unit relations—but did not make any predictions about which changes were most likely or when changes in sentiment or unit relations would occur. Similarly, we were not able to find explicit predictions in the Notebooks. Yet we can infer Heider's beliefs from the implications of his other writings. Heider reliably argued that the perception of the person is focal. This view permeates *Psychology of Interpersonal Relations* (Heider, 1958c), as well as his other writings. In one of his earliest influential papers, Heider (1944) focused on the primacy of person–trait attribution. "The prevalence of personification in an imperfectly structured environment might be caused, at least in part, by the simplicity of origin-organization. The changes are attributed to a single concrete unit as source, which is certainly a simpler organization" (Heider, 1944, p. 360).

For Heider (1958c), people are figural, they are the focus of attention, and their actions are (usually) perceived to reveal their character. Subsequent researchers following Heider (1958c) showed that people are strongly biased in favor of attributing people's actions to their attitudes (Jones & Harris, 1967), their intellectual performance to their intellect (Ross, Amabile, & Steinmetz, 1977), and their person perception performance to their own perspicacity (Ross, Lepper, & Hubbard, 1975); in short, people exhibit the fundamental attribution error (Ross, 1977) or a correspondence bias (Jones, 1990). In general, then, we argue that the resolution of conflict tends to favor preserving our previously formed impressions and evaluations of people, and people will adapt attributions and unit relations to their existing impression.

### **A Review of Some Extensions of Balance Theory**

Theoretical development from Heiderian theory has been rich, and some of the theories have been broader than the subsequent development of attribution theory and balance theory as separate entities. In this section, we briefly describe five notable examples: the work of Feather (1971, 1999) on the organization of cognitive structures; Duval and Duval's (1983) approach to consistency in cognition; Brown and Van Kleeck's (1989) theory of conversational coherence in explanations; Read, Vanman, and Miller's (1997) work on connectionist modeling; and Malle and Knobe's (1997a, 1997b; Malle, 1999) approach to the folk concept of intentionality.

Feather (1971) developed balance theory, using its offspring graph theory (Harary, Norman, & Cartwright, 1965), into a series of formal models of cognitive structure. Following Heider, he argued that people will be motivated to strive for consistency among the elements in a cognitive structure (which is akin to the perceptual field of Heider). He extended the model to achievement motivation and attributions for success and failure and found support for his model (e.g., Feather & Simon, 1971; see also Regan, Straus, & Fazio, 1974).

More recently, Feather (1999) applied balance theory to the concept of deservingness; he defined deservingness as "outcomes that are earned or achieved as a product of a person's actions" (p. 88). In the context of success and failure, a balanced system is one in which the positive or negative outcome is seen as deserved—perceptions of deservingness obtain when good things happen to good people and bad things happen to bad people. In Feather's model, deservingness must be linked via a responsibility attribution to a person's action, that is, there must be a perception of unit relationship. When the evaluation of the actor (based on values, in-group membership, etc.) matches up with the evaluation of the outcome, we perceive that outcome as deserved or, in Heider's language, balanced.

Duval and Duval (1983) suggested that not only will sentiment relations affect how people interpret actions, but also that the affective intensity of relations, outcomes, and causes should also be matched or balanced. They wrote,

As the magnitude of the positive or negative affect associated with a cognized effect increases or decreases, the magnitude of the positive or negative affect of the cognized possible cause chosen as the cause for the effect should also increase or decrease. (p. 91)

For example, a strongly positive outcome, such as election to high office or an Olympic gold medal, should be associated with a commensurately strongly positive cause, such as remarkable character or skill for a politician or enormous commitment to training for an athlete. Some strongly positive events, such as winning a large lottery prize, are associated with a small effect—buying a ticket. This is an imbalanced situation for Duval and Duval, and it should prompt an attributional search that increases the positivity of either the target's action or character.

R. Brown and Van Kleeck (1989) combined Griceian rules of conversation (see also Hilton, 1995), their work in the causality of language (e.g., implicit causality in verbs; Brown & Fish, 1983; Van Kleeck, Hillger, & Brown, 1988), and Duval-style consistency and proportionality ideas with Heiderian balance. They suggested three principles for explanation, two of which are directly relevant here: cognitive balance and proportionate imbalance repair. To maintain or restore cognitive balance, if an outcome is positive, the explanation should be positive; if the outcome is negative, something negative should be said. Second, when new statements are introduced into conversation to restore imbalance, they should be proportionate to the size of the original imbalance. When an explanation is not balanced, one must strive to make a correction that corrects only as much as is needed to restore the explanation to conversational equilibrium. For R. Brown and Van Kleeck, the goal of explanations is coherence in communication—people strive to have conversations that make sense to both participants—and coherence and psychological balance are part of people's expectation in communication.

Read and his colleagues (1997; Read & Miller, 1994) proposed a connectionist–parallel constraint satisfaction process modeling approach to solve many of the problems that Heider (1958c) posed. They provided a connectionist model based on several Gestalt principles to model behavior in a variety of psychological processes, including impression formation, cognitive consistency, and balance processes. In this kind of modeling, people and attitude objects are represented by “nodes,” and the connections among nodes are similar to balance theory—they can be positive or negative and represent unit relation or no relation. According to Read et al. (1997), connectionist modeling is superior to balance theory in that they can model the strength of relations, allow for different types of relationships (e.g., liking, competition, cooperation), and account for a wider range of phenomena.

Finally, Malle and Knobe (1997a, 1997b; Malle, 1994) have studied a “folk theory” of intentionality as a development of attribution theory. An intention in their scheme is quite similar to (but not exactly the same as) an attribution of controllability; both are judgments of unit relationship. They argued that an intention requires both a belief and a desire component. For a behavior to be intentional, however, the behavior requires not only the intention, but also the skill to perform the behavior as intended, and the awareness that one is performing the behavior. In their scheme, many pieces of information can block the connection of person to action; they have shown in several experiments people's reluctance to perceive intentionality unless all of the elements are present.

Malle (1999) has developed a more sophisticated naive theory of intentionality, which criticizes Heiderian theory and offers an alternative view. Malle pointed out that people judge others more on intentionality than on person versus situation and controllable versus uncontrollable attributions. In a study of a woman given a speeding ticket, people given a reason-based intentional fact (“she wanted to get to the store before 6 p.m.”) were more likely to perceive the woman in unit relationship with her speeding than if given a causal-based nonintentional fact (“she wasn't paying attention to her speedometer”). Although both explanations are person-based, controllable attributions, the intention-based attribution leads to a much stronger perception of unit relationship with the action than the nonintentional one. Thus, an intentional action strongly reveals character directly relevant to the action (e.g., recklessness, disregard for laws and safety), whereas a nonintentional controllable attribution may reveal a unit relationship between the person and some other, indirectly relevant trait (e.g., carelessness, distractibility).

These five applications of a more complex version of Heiderian theory represent only a portion of Heiderian extension, and they have not received the attention they deserve. Despite these theoretical developments, the majority of scientific attention to Heiderian ideas has been to less integrated versions of his ideas, focusing primarily on attribution. In the next section, we turn to a variety of applications of Heider's ideas to problems in social and personality psychology.

### *Applications of Heider's Theory to a Wide Range of Psychological Phenomena*

Heider's integrated theory provides a simple and powerful way of looking at a wide range of social-psychological phenomena. In the following section, we extend the approach to a sample of other areas of research and describe how they can be informed by the Heiderian approach to social perception. Although some of these phenomena were conceptualized with Heiderian ideas in mind, their connection to balance, attribution, and the perception of unit relationship may not have been made explicit. The following applications proceed in no particular order; the intent is to give an illustration of the breadth of phenomena that can be brought under the umbrella of Heider's original formulation.

#### **Blaming the Victim and Belief in the Just World**

William Ryan's (1971) influential book *Blaming the Victim* focused attention on the tendency to hold the weak and suppressed members of society responsible for their fate. Although Ryan's analysis focused on the justification of contempt and unwillingness to help in the areas of race and poverty, researchers have more recently shown evidence of blaming the victim for a wide range of negative life outcomes, including psychological disorders, elder abuse, pain, adolescent sexual victimization, sexual harassment, domestic violence, AIDS, social isolation, genocide, codependency, incest, and occupational health, among many others.

Blaming the victim is usually understood to be based on a belief in the just world. Lerner (1980) suggested that people are motivated by the need to believe that society is just and that people get what they deserve and deserve what they get. When an apparent injustice takes place, Lerner argued, we may try to restore justice, but when such a restoration is not possible, we restore our sense of justice by denigrating the victim, both in terms of blame and in terms of reduced moral worth.

We suggest that these two phenomena may be due to the perceivers' tendency toward *prägnanz*. Rather than the motivated perceptions based in naive theories of justice (Lerner, 1980) or social dominance (Ryan, 1971), we suggest that holding people responsible for negative life events may simply be a result of the tendency for perceptual clarity and affective harmony. When bad things happen to bad people, observers will tend to see the person and the outcome in unit relation; when bad things happen to good people, observers will be less likely to perceive this unit relation.

To test this, Crandall, N'Gbala, and Dawson (2004) had participants read about either a very moral (dedicated, caring, and skilled) or immoral (money-hungry, selfish, and skilled) surgeon who contracted HIV as a result of an emergency room mishap. People were more likely to see the HIV infection as more controllable for the immoral than for the moral surgeon. People were more likely to make an attribution of controllability (perceive a unit relation) between a bad outcome and a bad actor than between a bad outcome and a good actor. When bad things happen to bad people, they are to blame. When bad things happen to good people, they are significantly less responsible.

In the case of rape, blaming the victim for the rape not only preserves a sense of the just world, as Lerner (1980) argued, but it also preserves a harmonious and consistent perception. To form a stable perception of the person and the very negative event, which are likely to be perceived in unit relationship to each other, one must perceive the rape victim somewhat more negatively. Thus, we argue that when we see bad things happening, we see the victims as bad people not because of a defensive need to preserve our sense of controllability and self-efficacy (as Lerner, 1980, and Ryan, 1971, might have argued), but rather out of a desire for *prägnanz*, a need for a tidy, simple, and coherent perceptual representation.

The severity of punishment for murder is often based on a morality judgment of the victim. Murderers are punished more severely for killing “innocent” victims than those who can be morally sullied by the defense. The perpetrator, the victim, the act of murder, and the appropriate punishment are all in relationship with each other, and sentencing must proceed in a fashion that preserves balance. When a victim has “brought it on” him- or herself, a unit relationship can be formed between the victim and the crime, and less causal potency is attributed to the defendant.

We do not deny that people engage in motivated denigration of victims for the purpose of emotional stability, justification of an unjust system, blatant self-interest, or concern for the status quo; the evidence for such motives is excellent (e.g., Jost & Banaji, 1994; Sidanius, Levin, & Pratto, 1996; Sidanius, Pratto, & Bobo, 1996). The approach we review in this article is not a full and adequate explanation of the many results that Lerner, Ryan, and their colleagues have reported (reviewed in Lerner & Miller, 1978). Our argument is that many of their findings are consistent with the simpler perceptual processes reviewed here. Many of their findings can be explained by the simple desire for simple structure, rather than the more complicated set of beliefs and attitudes that Lerner, Ryan, et al. propose. The initial impetus for blaming the victim is probably perceptual, and the other motivations are very congenial with the immediate perceptual preference, which provides a satisfactory cognitive foundation for these other, more complex motives.

### **Excuse Making**

Snyder, Higgins, and Stucky (1983; see also Weiner, Amirkjan, Folkes, & Verette, 1987) argued that excuses have two basic dimensions. The first dimension is minimization—“It's not that bad.” The second dimension is the denial of individual responsibility—“It's not my fault.” From a Heiderian perspective, the excuse maker is trying to maintain a consistent and positive perception of him- or herself in perceiver's eye. Minimization reduces the negativity of an outcome in the perceptual field, making a more positive view of the person consistent. Denial reduces the attribution of responsibility, preventing a unit relation to form between the person and the negative event.

Higgins and Snyder (1990) analyzed a special case of excuse making—self-handicapping—from a Heiderian perspective. They argued that the link between the person, the person's self-theory, and the specific and general acts can be made consistent and positive by carefully manipulating the kinds of attributions or unit relationships the self-handicapper perceives. Self-handicapping, in their analysis, works to a large extent by making possible the negation of unit relationship between the person and the negative event.

### **Suspicion and Correspondent Inference**

Fein and Hilton have shown that when perceivers are suspicious of a target's motives for an action, they avoid making a correspondent inference (Fein, 1996; Fein & Hilton, 1994). This has the salutary effect of undermining the correspondence bias or fundamental attribution error. In Heiderian language, because the valence of the action cannot be determined, the perceptual field is poorly formed and unstable. One does not have reliable information about the goodness of the person, and so people are reluctant to form a unit relationship (correspondent inference) between the person and the action until the motivation for the behavior is known.

### **Halo Effects**

The foremost evaluative dimension is liking; we should not be surprised that judgments of good or bad have profound effects on seemingly unrelated perceptions (Thorndike, 1920). When teachers are friendly and warm, their demeanor and physical aspect is seen as more pleasing and their actions are interpreted more benignly (Kelley, 1950; Nisbett & Wilson, 1977). When a communicator is liked, she or he is viewed as having more expertise, sincerity, and open mindedness, and her or his persuasive attempts are seen as less coercive (Silvia, 2005). Good things are associated with good people—this is the essence of the halo effect.

### **Physical Attractiveness**



People who are physically attractive are also believed to be successful, kind, and helpful, to have more successful marriages, and in general to be better people, friends, and spouses (Berscheid, 1985). In addition, they are thought to be less culpable for crimes and other transgressions (Efran, 1974), and they are punished less severely for them (Seligman, Paschall, & Takata, 1974). Because physical attractiveness is a powerfully positive element that is rapidly perceived, it causes all other elements in the array to be affectively consistent with it. In addition, attributions will be made to preserve this consistency. For example, Dion (1972) found that highly attractive children who were guilty of a serious transgression were thought to be less likely to repeat the offense in the future than were less attractive children. This suggests that the trait attribution was not made, that no unit relationship between the crime and the attractive child was perceived.

### **Teacher Expectations**

One of the most controversial studies in social psychology has been Rosenthal and Jacobsen's (1968) Pygmalion in the Classroom, which found that increasing a teacher's expectations for future student performance led to increased performance by those students. These findings have been well replicated (e.g., Jussim, 1989), and although the effects are sometimes modest, they are reliable. Consistent with previous theorizing in this area (e.g., Jussim, 1986, 1991; Rosenthal & Jacobsen, 1968), we suggest that one of the most important pathways for teachers' expectations to have impact is to increase the perceived intelligence of the student (higher positive valence). Subsequently, any intelligence-relevant behavior by these students is attributed differently by teachers; "smart" behavior leads to a correspondent inference, and "dumb" behavior does not. These attributions and inferences are in turn communicated to the students, leading to better performance.

### **Principled and Symbolic Racism**

One important debate at the crossroads of social psychology and political science is the issue of ideology and prejudice. From a perspective known as principled racism, Sniderman, Tetlock, and their colleagues (e.g., Sniderman & Tetlock, 1986; Sniderman & Piazza, 1993) have argued that apparently negative attitudes toward Blacks come from a relatively benign source: the application of a consistent ideology about individual freedom and individual responsibility and a desire to avoid government intrusion in all areas of life. They have argued that these ideological beliefs, which are formed without reference to race, lead to policy attitudes that others might characterize as racist. One of the most important underlying themes of these policy attitudes is attributions for the cause of poverty, unemployment, crime, and so on. Attributions of individual responsibility are an essential component of political ideology (Skitka & Tetlock, 1993); people who hold individual Blacks responsible for their plight tend to have negative attitudes toward Blacks. Antiblack attitudes are justified by attributing individual responsibility for negative components of the stereotype (Crandall & Eshleman, 2003).

Another important approach to this problem is the theory of symbolic racism (Kinder & Sears, 1981; Sears & Kinder, 1985), which proposes that such policy attitudes reflect not an underlying race-neutral ideology, but rather reflect genuine antipathy toward Blacks. Because old-fashioned racism is not acceptable in most parts of modern U.S. society, many Americans express their racial antipathy through the more legitimate public policy disputes (see also Gaertner & Dovidio, 1986). Espousing negative attitudes toward affirmative action, busing, enterprise zones, job training, and welfare support, according to this view, represents an opportunity to express the underlying, publicly unacceptable racial prejudice. Thus, principled racism suggests that political ideology precedes—and leads to—racism. Symbolic racism suggests that political ideology is an expression of racism, that is, racism leads to political ideology.

By contrast, in Heiderian balance theory, causal pathways work in both directions; in the familiar triangle diagrams, arrows are implicitly double-headed. We would resolve this conflict by supporting both positions. When a person is racially prejudiced toward any group, affective and cognitive consistency is preserved by preferring policy positions that tend to harm (or fail to help) that group. Similarly, if one has ideological and cognitive commitments to policy positions that result in harm toward some group, affective and cognitive consistency is preserved by disliking that group and holding them personally responsible for the negative outcomes of those policy preferences (i.e., blaming the victim). Because anti-government-interference policy preferences coexist so consistently with racial prejudice, we argue that either one can lead to the other.

## **Stereotype Typicality**

Applying a stereotype to an individual member of a group can be considered a judgment of unit relationship between the person and the group. To the extent that a person chooses to belong to, intends to belong to, actively seeks membership in, or earns a place in the group, the more a perceiver will form a unit relationship between the person and group and the more the person will apply the stereotype of the group to the individual. When a person does not control membership in the group or does not willingly take on essential markers of membership, then a perceiver is less likely to be seen in unit relationship and less likely to be stereotyped.

For example, if a person fits the stereotype of obesity to the extent that a perceiver forms a unit relationship, then the more a person is perceived to have control over the obesity, the more the perceiver will believe that the target fits the “fat stereotype.” When a person is obese due to low willpower, overeating, and lack of exercise, that person will be judged responsible for the obesity and will be considered a good fit to the stereotype—that is, they will be perceived in unit relationship with their group (Crandall, 1994). When a person is obese due to some biochemical disturbance (e.g., a glandular disorder), the perception of unit relationship will be significantly weakened, and the person will not be considered a good fit to the stereotype. To test this, Crandall et al. (2004) presented participants with versions of a target who was obese either through controllable means (lack of willpower and overeating) or through uncontrollable means (a glandular problem that did not respond to dieting, exercise, or pharmaceutical treatment). Participants rated the “uncontrollably” obese person significantly more socially skilled, attractive, romantically active, and intelligent than the “controllably” obese person; dimensions of the obesity stereotype are highly relevant to perceptions of obesity, but not relevant to willpower and controllability (e.g., Allon, 1982; Crandall, 1994; DeJong, 1980; Hebl & Heatherton, 1998).

Many studies have shown that people who have no control over their obesity are seen in a more positive light than people who are considered responsible for it (Crandall, 1994; Crandall & Moriarty, 1995; DeJong, 1980; Rodin, Price, Sanchez, & McElligot, 1989; Weiner, Perry, & Magnusson, 1988). In each of these papers, the explanation for this effect was that perceived controllability leads directly to negative affect. Our view of this relationship suggests an alternative explanation. People who do not control their fatness are not perceived in unit relationship with the obese stereotype, which is largely negative. Because they are not a good fit to the stereotype, the rest of the negative attributes are not perceptually attached to the fat person, and so the fat person is seen in a less negative way. This balance approach to the reliable finding that people with “uncontrollable obesity” are rated more positively than people who are responsible for their weight is a simpler, more direct, and more parsimonious explanation of the finding.

Lord and his colleagues (Lord, DesForges, Fein, Pugh, & Lepper, 1994; Lord, Lepper, & Mackie, 1984) have suggested that attitudes are attributed, and stereotypes applied, to typical members of a group; the more atypical the member, the less generalization will take place. The current conceptualization is that a judgment of typicality is a form of unit relationship, and typical members are in unit relationship with their group. Our conceptualization is complementary to that of Lord and colleagues and is not a competing account of stereotype generalization. But their findings are certainly consistent with Heider's conceptualizations of attribution, balance, and prägnanz.

## **Intergroup Attributions**

The social perceptions based on attributions, balance, and unit relationships can be applied to groups as well as individuals (e.g., Hewstone & Jaspars, 1984). In-group favoritism tends to lead to out-group attributions of responsibility for negative outcomes (Greenberg & Rosenfield, 1979), and in general, in-groups are perceived as responsible for good outcomes, and out-groups are perceived as responsible for bad outcomes (Pettigrew, 1979; Taylor & Jaggi, 1974). Preexisting attitudes toward group members can determine the course of attributions (Hewstone, 1990; Vescio, 1995); well-liked groups are given credit for their successes but not their failures, whereas disliked groups are considered responsible for their failures but not their successes.

People tend to like the groups that they identify with. To put it in Heiderian terms, there is usually a positive sentiment relation between a person and his or her social groups. This identification with group membership is another form of unit relationship, and to preserve balance among the self, one's own social group, and the group's actions, in-groups are perceived in unit relationship with good things (e.g., responsible for their success) and not in relationship with bad things (e.g., failures are due to conspiracies against one's group).

### **Legal Decision Making and Judgments of Blame**

In a series of studies, Alicke and his colleagues (Alicke, 1994; Alicke & Davis, 1989; Alicke, Davis, & Pezzo, 1994; Alicke, Weigold, & Rogers, 1990) have shown that, contrary to normative judgment standards and legal philosophy, people use a wide variety of a posteriori outcome information to make causal attributions. For example, participants read about a homeowner who shoots an intruder in an ambiguous situation. They then learn that the victim was either a dangerous criminal or an innocent victim. Although the severity of the outcome of an action or decision (known only a posteriori) should not affect how controllable an action or decision was (which is known a priori), participants reliably increased judgments of responsibility and blame in the negative outcome conditions. They also changed the perceived importance of information relevant to the decision after learning of its outcome. These attributions create greater balance and consistency within the perceptual field.

### **Blaming Others for One's Own Failures**

The study of “self-enhancing” attributions is one of the larger literatures within the psychology of attribution (Campbell & Sedikides, 1999). Many studies have shown that people will sometimes attribute negative events to the self and suffer a drop in self-esteem (e.g., Duval & Silvia, 2001, 2002), and other times will attribute the negative event externally. The internal–external dichotomy has dominated this research area, obscuring the questions of which external target is seen as the cause of one's misfortune. Presumably people are not distributing causality indiscriminately across the environment, so what predicts the targets of their defensive attributions? Furthermore, when do people make self-serving attributions to other people? In Heider's model, attributions are fundamentally social—people make attributions to other people and their traits, intentions, motives, and dispositions, not merely to “internal and external factors.”

A recent experiment applied Heider's notions of balance and attribution to this problem (Silvia & Duval, 2001). Participants worked on a group creativity task with three fictional group members. The valence of these fake members was manipulated using false personality profiles, creating one positive member, one mildly negative member, and one very negative member. Balance theory predicts that a negative event, like failure feedback, would be connected with a negative possible cause, such as a group member with a negative personality. Indeed, when people attributed failure externally, they perceived the negative group members as responsible rather than the positive group member. This represents an attempt to achieve affective consistency between the effect and the cause.

### **Political Legitimacy**

Heider's ideas about attribution, balance, and unit formation have been extended to the legitimacy of government, judicial systems, and political leaders. Crandall and Beasley (2001) argued that one can perceive the moral value of a group, collective, business, organization, or broader social system in much the same manner as one perceives the moral value of an individual. If we perceive a government or a business as an immoral entity, then we tend to see all of its actions, values, and public proclamations in unit relationship with them and, as a result, as illegitimate and unsupportable. To many Americans, the contemporary moral value of Iraq is so low that all Iraqi actions, beliefs and values, and public proclamations have no legitimacy—if it's Iraqi, it's bad.

The perceptual theory of political legitimacy suggests that an appropriate leader is one whose moral worth exemplifies the moral worth of the group he or she leads. For example, a good person must be selected to run a church or charity, and a bad person must be selected as head of a street gang. A significant discrepancy between the moral values of the two entities—leader and led—serves to delegitimize the leader. Thus, Crandall and

Beasley (2001) suggested that a leader's legitimacy is based on a consistent, consonant perception between the goodness of a social group and the goodness of its leader.

The impeachment proceedings against U.S. President Bill Clinton in 1998–1999 provided an opportunity to test the Heiderian theory of political legitimacy. The rejection of President Clinton, for some observers, was a perceptual matter. His illegitimacy derived from the perception of his (low) moral value as a person, as a husband, and consequently as a President of the United States, which contrasts with a high perceived moral value of the United States. Those people who do not temper their perceptions with a special tolerance of ambivalence toward politicians may be dumbfounded that others don't see Clinton as completely disqualified from public life. For these people, it is not a clash of their beliefs and values with those represented by the president that motivates their opposition. Instead, the anger is driven by the fact that others apparently do not share their simple and direct perceptions of reality—that as a bad person, Bill Clinton is disqualified from the U.S. presidency, a job which is seen in unit relationship with the country. To some, it is simply traitorous to support a “bad” man to represent a good country.

To test these ideas, Crandall, Beasley, Silvia, and Joslyn (2005) polled students and residents of Lawrence, Kansas, about their attitudes toward impeachment in the 10 days leading up to the Senate acquittal. The perceptions of Bill Clinton as “moral” and “a good person” were associated with proimpeachment attitudes. Similarly, those who felt that the “United States of America is the greatest nation in the world” and “is a trustworthy and honorable country” also favored impeachment. But, most important, the discrepancy between the perceived moral worth of Clinton and of the United States predicted proimpeachment attitudes, over and above the straightforward perceptions themselves.

Another implication of this analysis is that legitimacy will come as much from outcomes as it does from procedures. That is, a government must treat bad people roughly and good people consistent with their dignity. The Heiderian analysis of political legitimacy suggests that legitimacy flows from distributive justice rather than procedural justice. According to the perceptual theory of legitimacy, it is the outcome, rather than the process, that forms the moral consistency between actions and their rewards and punishments (see Crandall & Beasley, 2001). Consistent with this, the more one favored impeachment, the less one was concerned about the procedures that Independent Counsel Ken Starr used in creating his proimpeachment report to Congress.

## **Summary**

These 12 areas of research represent only a sample of social psychological phenomena that can be understood in light of Heiderian concepts. Although few of the above-mentioned works directly mention Heider or balance theory, these concepts are clearly useful in promoting an alternative way of thinking about the phenomena. One well-conceived example of the application of balance theory to a social psychological research area is Insko, Worchel, Folger, and Kutkis's (1975) work on cognitive dissonance.

## ***Some Implications for Attribution Theory***

In the final section of this article, we consider some of the implications of the original version of Heider's theories of social perceptions to some modern issues in attribution theory. Again, these implications for modern attribution theory are only a few of the possible applications of the integrated whole of Heiderian ideas, but they represent a sample of the implications of Heider's original thought and point to areas for new research. We have chosen three areas: spontaneous attributions, the motivational impetus for attributions, and whether attribution theory should focus on the form or content of attributions.

## **Spontaneous Attributions**

In an influential paper, Wong and Weiner (1981) reviewed the question of which circumstances lead to spontaneous attributions and concluded that outcomes that are either unexpected or negative tend to prompt attributions. Several others have come to similar conclusions (e.g., Bohner, Bless, Schwarz, & Strack, 1988; Hastie, 1984; Malle & Knobe, 1997b; Pyszczynski & Greenberg, 1981). Another way of thinking about unexpected or negative events is that they create a stimulus field that is imbalanced, open, and inconsistent.

Thus, by definition, an unexpected event is one that disrupts consistency or prägnanz. The unbalanced, disharmonious perceptual state will lead to attributions. The purpose of these attributions is to restore affective and cognitive consistency.

Silvia and Crandall (2004) suggested that the primary motivation for attributions is to restore or maintain affective consistency, and they tested this idea by probing for spontaneous attributions about gossip. Participants imagined that either good or bad things were being said about them behind their back. Consistent with previous research, they found that attributions were spontaneously generated more frequently when participants were told to imagine bad things were being spread about them. But this was only true when the person spreading the rumor was described in positive terms. When the gossipier was described as a bad person, spontaneous attributions were more frequent when good things were being said. These data suggest that attributions are motivated by discrepancies in the perceptual field. We need explanations not only when bad things happen to good people, but also when good things come out of bad people.

Similarly, when people believe themselves to be a positive element—they have high self-esteem, high aspirations, or high expectations—then outcomes in which they are in unit relationship should also be positive. When a negative outcome occurs to them, it creates an affectively inconsistent perceptual field that will prompt an attribution; the goal is to reduce perceptual conflict. Higgins and Snyder (1990), among others, derived several balance-relevant predictions about patterns of attribution among people who are depressed or low in self-esteem (see also Adler, 1980; Gilmore & Minton, 1973; LaRonde & Swann, 1993). A second study by Silvia and Crandall (2004) measured self-concept valence and asked people to imagine positive or negative events happening to them. As expected, people with positive self-concepts made more spontaneous attributions for negative events, and people with negative self-concepts made more attributions for positive events.

### **Motivation, Affect, and Attribution: The Chicken-and-Egg Problem**

#### Rational or rationalizing?

The most influential modern theory of attribution and affect is Weiner's (1995, 1996) attribution–affect–action model. Weiner suggested that when perceiving an event, we make attributions (usually based on the information made available to us). For example, when a negative event occurs, an attribution of responsibility (a cognition) leads to feelings of anger (an emotion), which leads us to avoid helping (an action). This attribution–affect–action has been remarkably influential in the areas of helping, aggression, education, and achievement motivation, among many others.

The theory is entirely consistent with Heiderian theory, but it is only half of the story. In Heiderian balance, sentiment relations are represented by lines that implicitly represent double-headed arrows. Attributions of controllability for a negative event can lead to anger, as Weiner's (1986, 1995) attribution suggested. Heider, however, would also have suggested that if a perceiver is angry toward a target for whatever reason, when observing a negative event the perceiver will make an attribution of controllability.

Weiner's (1995) attribution–affect–action model is explicitly rational, but Heider's social perception theories are not; Heider represents human social perception as rationalizing, not rational. In this model, people are motivated by consistency, and they are seen to be willing to distort their cognitions in a way to preserve that consistency. In this sense, Heiderian social perception is explicitly both motivated and motivational. For Weiner, attributions cause motivation. Heiderian theory is consistent with this idea, but it is also the case that motivation can cause attributions: Attributions are motivated by imbalance, and they are guided by the desire to restore perceptual consistency.

#### A note about motivational force

Heider's theories of social perception were published at the same time that Leon Festinger was developing dissonance theory (Festinger, 1957; Festinger & Carlsmith, 1959). It has been noted elsewhere that balance and dissonance share a great deal of commonality (e.g., Insko et al., 1975). Heider was mindful of this connection and devoted several sections of his notebooks to comparing dissonance theory to his ideas (e.g., Heider, 1988,

1989). Both are cognitive consistency theories and describe the motivational process by which a perceiver comes to a state of cognitive equilibrium among various elements. Both point to discrepancies that lead to psychological tension, which in turn motivate social perception.

Still, there is a small but important difference between the two in the tenor of the motivational state. For Festinger (1957), dissonance among cognitions creates a state of tension and agitation that pushes people toward mental work that leads to a resolution—the motive is avoidance of an aversive state. By contrast, for Heider (1958c) balance is a harmonious state that one's cognitions tend to resolve naturally. Balance and *prägnanz* are attractive states to aim for—the motive is attraction to a peaceful, resolved state. This difference in motivation between the two theories—attention to discordance as compared with seeking a comfortable state—has been linked to the different personalities of the respective theorists. 2

### **Are Attributions Based on Form or Content?**

Some of the most influential models of attribution, based originally in Heider's work, are the schemes of Kelley (1967) and Weiner (1979). Both Kelley's and Weiner's papers were theories of attributions that were based primarily on the form that attributions take, the dimensions of the explanation, and not on the content of the event or target themselves. These early models of attribution are essentially “content free,” that is, specific knowledge about the people, conditions, and so forth are not a part of the conceptualization of the dimensions of attributions. Later theories of attribution and lay explanation have been historically moving toward greater content appreciation in models of attribution and explanation. Kelley's (1972) causal schemata approach is one example, although the schemas Kelley proposed are still rather general and abstract, as are the schemas proposed by Reeder and Brewer (1979).

Recent theories go further toward a content-based approach. For example, Hilton and Slugoski's (1986) abnormal conditions focus model requires an understanding of the specific event and why it typically occurs. In this model, attributions are made to explain why an unexpected result was obtained, but one must first have knowledge about what to expect normally and a theory about what brings about such a result (see also Jaspars, Hewstone, & Fincham, 1983).

Denis Hilton and his colleagues' more recent work (Hilton, 1995; Hilton, Smith & Kin, 1995) on conversational explanation models has focused on implicit information, assumptions based on the situation of communication, and so on. In this model, attributions, explanations, and social judgment all require a large body of tacit knowledge about the situation, and attributions are constructed that take account of these elements, as well as what the listener knows and believes in the current setting.

Heider's model of attribution is mostly content based, although the content focus is almost completely translated into the sentiment relations of positive–negative valence. In our account of Heiderian attribution and balance, attributions result from an attempt to maintain affective consistency among the knowledge and belief elements, by perceiving unit relations among like-signed constituents. Although the model is capable of some degree of abstraction (e.g., Heider, 1958c, pp. 203–208), to make sense of people's explanations and to predict their attributions, one must know how the perceiver values the different elements (e.g., does John like Joan? Does Joan like sailing?). From Heider's perspective, judgments of value, morality, and liking determine what kinds of attributions or other unit relations will be formed.

### **Some Last Comments**

Heider's ideas are more complete, more integrated, and broader than they have appeared. For many decades, researchers have cited Heider (1958c) for specific ideas in attribution theory or balance theory. The published record underemphasizes the integration and breadth of his conceptualization. Furthermore, the small number of elements in his theory makes a powerful, wide-ranging, and remarkably parsimonious account of social perception.

This is not to say that Heider's original ideas adequately cover all the empirical evidence and theoretical advances in recent years. They don't, and we do not wish to give the impression that the last word in social perception was written in 1958. Our purpose is to rectify the impression one would get from reading the journals that Heider had a couple of good-but-vague ideas that others turned into viable research theories. We suggest that Heider had a complex, integrative, and coherent theory of social perception that is adequate to explain many, many social phenomena and is still worthy of sustained attention.

### Envoi

We conclude our review of the interrelated concepts of balance, unit relations, and attribution. Although the collection of ideas were published separately or were contained in the relatively obscure notebooks, they have not been well connected in an easily available source; we hope that this review provides a start. We leave the last words to Heider:

After all is said and done, however, there is always the likelihood that quite a different reason accounts for the instances that do not fit the balanced case, namely, the theory is not 100 per cent perfect. But that should not bother us too much, if, in spite of its shortcomings, the theory aids scientific work. (1958, p. 212)

### *Footnotes*

1 We are grateful to Hal Kelley for pointing this out to us.

2 We are grateful to Herb Kelman for pointing this out to us.

### *References*

- Adler, S. (1980). Self-esteem and causal attributions for job satisfaction and dissatisfaction. *Journal of Applied Psychology*, 65, 327–332.
- Alicke, M. D. (1985). Global self-evaluation as determined by the desirability and controllability of trait adjectives. *Journal of Personality and Social Psychology*, 49, 1621–1630.
- Alicke, M. D. (1994). Evidential and extra-evidential evaluations of social conduct. *Journal of Social Behavior and Personality*, 9, 591–615.
- Alicke, M. D., & Davis, T. L. (1989). The role of a posteriori victim information in judgments of blame and sanction. *Journal of Experimental Social Psychology*, 25, 362–377.
- Alicke, M. D., Davis, T. L., & Pezzo, M. V. (1994). A posteriori adjustment of a priori decision criteria. *Social Cognition*, 12, 281–308.
- Alicke, M. D., Weigold, M. F., & Rogers, S. L. (1990). Inferring intentions and responsibility from motives and outcomes: Evidential and extra-evidential judgments. *Social Cognition*, 8, 286–305.
- Allon, N. (1982). The stigma of overweight in everyday life. In B. Wolman (Ed.), *Psychological aspects of obesity: A handbook* (pp. 130–174). New York: Van Nostrand Reinhold.
- Asch, S. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology*, 41, 1230–1240.
- Asch, S. (1952). *Social psychology*. New York: Prentice Hall.
- Baron, R. (1991). A meditation on levels of structure. *Contemporary Psychology*, 36, 566–568.
- Beggs, J. K. (1992). On the social nature of nonsocial perception: The mere ownership effect. *Journal of Personality and Social Psychology*, 62, 229–237.
- Benesh, M., & Weiner, B. (1982). On motivation and emotion: From the notebooks of Fritz Heider. *American Psychologist*, 38, 887–897.
- Berscheid, E. (1985). Interpersonal attraction. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., pp. 413–484). New York: Random House.
- Bohner, G., Bless, H., Schwarz, N., & Strack, F. (1988). What triggers causal attributions? The impact of valence and subjective probability. *European Journal of Social Psychology*, 18, 335–345.
- Brown, J. D. (1986). Evaluations of self and others: Self-enhancement biases in social judgments. *Social Cognition*, 4, 353–376.
- Brown, R., & Fish, D. (1983). The psychological causality implicit in language. *Cognition*, 14, 237–273.

- Brown, R., & Van Kleeck, M. H. (1989). Enough said: Three principles of explanation. *Journal of Personality and Social Psychology*, 57, 590–604.
- Campbell, W. K., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias: A meta-analytic integration. *Review of General Psychology*, 3, 23–43.
- Cartwright, D., & Harary, F. (1956). Structural balance: A generalization of Heider's theory. *Psychological Review*, 63, 277–293.
- Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology*, 66, 882–894.
- Crandall, C. S., & Beasley, R. K. (2001). The perceptual basis of legitimacy of governmental leaders, the justice system, and prejudice: Psychological balance, attribution, and the perception of essence. In J. Jost & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations*. New York: Cambridge University Press.
- Crandall, C. S., Beasley, R. K., Silvia, P., & Joslyn, M. (2005). The perceptual theory of legitimacy and the impeachment of President Clinton. Unpublished manuscript.
- Crandall, C. S., & Eshleman, A. (2003). A justification-suppression model of the expression and experience of prejudice. *Psychological Bulletin*, 129, 414–446.
- Crandall, C. S., & Moriarty, D. (1995). Physical illness stigma and social rejection. *British Journal of Social Psychology*, 34, 67–83.
- Crandall, C. S., N'Gbala, A. N., & Dawson, K. (2004). Attribution, balance, and unit formation: Four empirical investigations. Unpublished manuscript, University of Kansas.
- DeJong, W. (1980). The stigma of obesity: The consequences of naive assumptions concerning the causes of physical deviance. *Journal of Health and Social Behavior*, 21, 75–87.
- Dion, K. (1972). Physical attractiveness and evaluation of children's transgression. *Journal of Personality and Social Psychology*, 24, 207–213.
- Dunning, D. (1999). A newer look: Motivated social cognition and the schematic representation of social concepts. *Psychological Inquiry*, 10, 1–11.
- Duval, T. S., & Duval, V. H. (1983). *Consistency and cognition: A theory of causal attribution*. Hillsdale, NJ: Erlbaum.
- Duval, T. S., & Silvia, P. J. (2001). *Self-awareness and causal attribution: A dual-systems theory*. Boston: Kluwer Academic.
- Duval, T. S., & Silvia, P. J. (2002). Self-awareness, probability of improvement, and the self-serving bias. *Journal of Personality and Social Psychology*, 82, 49–61.
- Efran, M. G. (1974). The effect of physical appearance on the judgment of guilt, interpersonal attraction, and severity of recommended punishment in a simulated jury task. *Journal of Research in Personality*, 8, 45–54.
- Feather, N. T. (1971). Organization and discrepancy in cognitive structures. *Psychological Review*, 78, 355–379.
- Feather, N. T. (1999). Judgments of deservingness: Studies in the psychology of justice and achievement. *Personality and Social Psychology Review*, 3, 86–107.
- Feather, N. T., & Simon, J. G. (1971). Causal attribution for success and failure in relation to expectations of success based on selective and manipulative control. *Journal of Personality*, 39, 602–628.
- Fein, S. (1996). Effects of suspicion on attributional thinking and the correspondence bias. *Journal of Personality and Social Psychology*, 70, 1164–1184.
- Fein, S., & Hilton, J. L. (1994). Judging others in the shadow of suspicion. *Motivation and Emotion*, 18, 167–198.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology*, 68, 359–366.
- Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice discrimination and racism* (pp. 61–89). Orlando, FL: Academic Press.
- Gilmore, T. M., & Minton, H. L. (1973). Internal versus external attribution of task performance as a function of locus control, initial confidence and success-failure outcome. *Journal of Personality*, 42, 159–174.



- Greenberg, J., & Rosenfield, D. (1979). Whites' ethnocentrism and their attributions for the behavior of Blacks: A motivational bias. *Journal of Personality*, 47, 643–657.
- Harary, F., Norman, R. Z., & Cartwright, D. (1965). *Structural models: An introduction to the theory of directed graphs*. New York: Wiley.
- Hastie, R. (1984). Causes and effects of causal attribution. *Journal of Personality and Social Psychology*, 46, 44–56.
- Hebl, M. R., & Heatherton, T. F. (1998). The stigma of obesity in women: The difference is Black and White. *Personality and Social Psychology Bulletin*, 24, 417–426.
- Heider, F. (1944). Social perception and phenomenal causality. *Psychological Review*, 6, 358–374.
- Heider, F. (1946). Attitudes and cognitive organization. *Journal of Psychology*, 21, 107–112.
- Heider, F. (1958a). Consciousness, the perceptual world and communication with others. In R. Tagiuri & L. Petrullo (Eds.), *Person perception and interpersonal behavior* (pp. 27–32). Stanford, CA: Stanford University Press. (Original work published 1954)
- Heider, F. (1958b). Perceiving the other person. In R. Tagiuri & L. Petrullo (Eds.), *Person perception and interpersonal behavior* (pp. 22–26). Stanford, CA: Stanford University Press. (Original work published 1954)
- Heider, F. (1958c). *The psychology of interpersonal relations*. New York: Wiley.
- Heider, F. (1976). A conversation with Fritz Heider. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), *New directions in attribution research* (Vol. 1, (pp. 3–21). Hillsdale, NJ: Erlbaum.
- Heider, F. (1983). *The life of a psychologist: An autobiography*. Lawrence, KS: University of Kansas Press.
- Heider, F. (1987a). *Fritz Heider: Notebooks: Vol. 1. Methods, principles, and philosophy of science* (M. Benesh-Weiner, Ed.). München-Weinheim, Germany: Psychologie Verlags Union.
- Heider, F. (1987b). *Fritz Heider: Notebooks: Vol. 2. Perception* (M. Benesh-Weiner, Ed.). München-Weinheim, Germany: Psychologie Verlags Union.
- Heider, F. (1988). "The notebooks"/Fritz Heider: Vol. 3. Motivation (M. Benesh-Weiner, Ed.). München-Weinheim, Germany: Psychologie Verlags Union.
- Heider, F. (1989a). "The notebooks"/Fritz Heider: Vol. 4. Balance theory (M. Benesh-Weiner, Ed.). München-Weinheim, Germany: Psychologie Verlags Union.
- Heider, F. (1989b). *Fritz Heider: Notebooks: Vol. 5. Attribution* (M. Benesh-Weiner, Ed.). München-Weinheim, Germany: Psychologie Verlags Union.
- Heider, F. (1990). *Fritz Heider: Notebooks: Vol. 6. Units and coinciding units* (M. Benesh-Weiner, Ed.). München-Weinheim, Germany: Psychologie Verlags Union.
- Hewstone, M. (1990). The "ultimate attribution error"? A review of the literature on intergroup causal attribution. *European Journal of Social Psychology*, 20, 311–335.
- Hewstone, M., & Jaspars, J. (1984). Social dimensions of attribution. In H. Tajfel (Ed.), *The social dimension: European developments in social psychology* (Vol. 2). Cambridge, England: Cambridge University Press.
- Higgins, R. L., & Snyder, C. R. (1990). Self-handicapping from a Heiderian perspective: Taking stock of "bonds". In R. L. Higgins, C. R. Snyder, & S. Berglas (Eds.), *Self-handicapping: The paradox that isn't* (pp. 239–274). New York: Plenum Press.
- Hilton, D. J. (1995). The social context of reasoning: Conversational inference and rational judgment. *Psychological Bulletin*, 118, 248–271.
- Hilton, D. J., & Slugoski, B. R. (1986). Knowledge-based causal attribution: The abnormal conditions focus model. *Psychological Review*, 93, 75–88.
- Hilton, D. J., Smith, R. H., & Kin, S. H. (1995). Processes of causal explanation and dispositional attribution. *Journal of Personality and Social Psychology*, 68, 377–387.
- Insko, C. A., Worchel, S., Folger, R., & Kutkus, A. (1975). A balance theory interpretation of dissonance. *Psychological Review*, 82, 169–183.
- Jaspars, J., Hewstone, M., & Fincham, F. (1983). Attribution theory and research: The state of the art. In J. Jaspars, F. D. Fincham, & M. Hewstone (Eds.), *Attribution theory and research: Conceptual, developmental and social dimensions* (pp. 3–36). London: Academic Press.
- Jones, E. E. (1990). *Interpersonal perception*. New York: Freeman.
- Jones, E. E., & Davis, K. J. (1965). From acts to dispositions: The attribution process in person perception. *Advances in Experimental Social Psychology*, 2, 220–266.

- 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.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, 33, 1–27.
- Jussim, L. (1986). Self-fulfilling prophecies: A theoretical and integrative review. *Psychological Review*, 93, 429–445.
- Jussim, L. (1989). Teacher expectations: Self-fulfilling prophecies, perceptual biases, and accuracy. *Journal of Personality and Social Psychology*, 57, 469–480.
- Jussim, L. (1991). Social perception and social reality: A reflection-construction model. *Psychological Review*, 98, 54–73.
- Kelley, H. H. (1950). The warm-cold variable in first impressions of persons. *Journal of Personality*, 18, 431–439.
- Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska Symposium on Motivation* (Vol. 15, (pp. 192–238). Lincoln, NE: University of Nebraska Press.
- Kelley, H. H. (1972). Causal schemata and the attribution process. 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. 151–174). Morristown, NJ: General Learning Press.
- Kinder, D., & Sears, D. O. (1981). Prejudice and politics: Symbolic racism versus racial threats to the good life. *Journal of Personality and Social Psychology*, 40, 414–431.
- LaRonde, C., & Swann, W. B., Jr. (1993). Caught in the crossfire: Positivity and self-verification strivings among people with low self-esteem. In R. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 147–166). New York: Plenum Press.
- Lerner, M. J. (1980). *Belief in a just world: A fundamental delusion*. New York: Plenum Press.
- Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychological Bulletin*, 85, 1030–1051.
- Lord, C. G., DesForges, D. M., Fein, S., Pugh, M. A., & Lepper, M. R. (1994). Typicality effects in attitudes toward social policies: A concept mapping approach. *Journal of Personality and Social Psychology*, 66, 658–673.
- Lord, C. G., Lepper, M. R., & Mackie, D. (1984). Attitude prototypes as determinants of attitude-behavior consistency. *Journal of Personality and Social Psychology*, 46, 1254–1266.
- Malle, B. F. (1994). *Intentionality and explanation: A study in the folk theory of behavior*. Unpublished doctoral dissertation, Stanford University.
- Malle, B. F. (1995, September). *Intentionality and explanation: A study in the folk theory of behavior*. Award address at the joint SESP/EAESP convention, Washington, DC, in receipt of the SESP Outstanding Dissertation Award, 1995.
- Malle, B. F. (1999). How people explain behavior: A new theoretical framework. *Personality and Social Psychology Review*, 3, 23–48.
- Malle, B. F., & Knobe, J. (1997a). The folk concept of intentionality. *Journal of Experimental Social Psychology*, 33, 101–121.
- Malle, B. F., & Knobe, J. (1997b). Which behaviors do people explain? A basic actor-observer asymmetry. *Journal of Personality and Social Psychology*, 72, 288–304.
- Newcomb, T. (1961). *The acquaintance process*. New York: Holt, Rinehart & Winston.
- Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology*, 35, 250–256.
- Nuttin, J. F. (1987). Affective consequences of mere ownership: The name letter effect in twelve European languages. *European Journal of Social Psychology*, 17, 381–402.
- Pettigrew, T. F. (1979). The ultimate attribution error: Extending Allport's cognitive analysis of prejudice. *Personality and Social Psychology Bulletin*, 5, 461–476.
- Polanyi, M. (1958). *Personal knowledge*. Chicago: University of Chicago Press.

- Pyszczynski, T. A., & Greenberg, J. (1981). The role of disconfirmed expectancies in the instigation of attributional processing. *Journal of Personality and Social Psychology*, 40, 31–38.
- Read, S. J., & Miller, L. C. (1994). Dissonance and balance in belief systems: The promise of parallel constraint satisfaction processes and connectionist modeling approaches. In R. C. Schank & E. Langer (Eds.), *Beliefs, reasoning and decision making: Psycho-logic in honor of Bob Abelson* (pp. 209–235). Hillsdale, NJ: Erlbaum.
- Read, S. J., Vanman, E. J., & Miller, L. C. (1997). Connectionism, parallel constraint satisfaction process, and gestalt principles: (Re)introducing cognitive dynamics to social psychology. *Personality and Social Psychology Review*, 1, 26–53.
- Reeder, G. D., & Brewer, M. B. (1979). A schematic model of dispositional attribution in interpersonal perception. *Psychological Review*, 86, 61–79.
- Reeder, G. D., & Spores, J. M. (1983). The attribution of morality. *Journal of Personality and Social Psychology*, 44, 736–745.
- Regan, D. T., Straus, E., & Fazio, R. (1974). Liking and the attribution process. *Journal of Experimental Social Psychology*, 10, 385–397.
- Rodin, M., Price, J., Sanchez, F., & McElligot, S. (1989). Derogation, exclusion, and unfair treatment of persons with social flaws: Controllability of stigma and the attribution of prejudice. *Personality and Social Psychology Bulletin*, 15, 439–451.
- Rosenberg, M. J., & Abelson, R. P. (1960). An analysis of cognitive balancing. In M. J. Rosenberg, C. I. Hovland, W. J. McGuire, R. P. Abelson, & J. W. Brehm (Eds.), *Attitude and organization and change: An analysis of consistency among attitude components* (pp. 112–163). New Haven, CT: Yale University Press.
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom*. New York: Rinehart and Winston.
- Ross, L. (1977). The intuitive psychologist and his shortcomings. *Advances in Experimental Social Psychology*, 10, 173–220.
- 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., Lepper, M., & Hubbard, M. (1975). Perseverance in self-perception and social perception: Biased attributional processes in the debriefing paradigm. *Journal of Personality and Social Psychology*, 32, 880–892.
- Ryan, W. (1971). *Blaming the victim*. New York: Pantheon.
- Sears, D. O., & Kinder, D. R. (1985). Whites' opposition to busing: On conceptualizing and operationalizing group conflict. *Journal of Personality and Social Psychology*, 48, 1148–1161.
- Seligman, C., Paschall, N., & Takata, G. (1974). Effects of physical attractiveness on attribution of responsibility. *Canadian Journal of Behavioural Science*, 6, 290–296.
- Sidanius, J., Levin, S., & Pratto, F. (1996). Consensual social dominance orientation and its correlates within the hierarchical structure of American society. *International Journal of Intercultural Relations*, 20, 385–408.
- Sidanius, J., Pratto, F., & Bobo, L. (1996). Racism, conservatism, affirmative action, and intellectual sophistication: A matter of principled conservatism or group dominance? *Journal of Personality and Social Psychology*, 70, 476–490.
- Silvia, P. J. (2005). Deflecting reactance: The role of similarity in increasing compliance and reducing resistance. *Basic and Applied Social Psychology*, 27, 277–284.
- Silvia, P. J., & Crandall, C. S. (2007). Attribution and perceptual organization: Testing Heider's approach to spontaneous causal thinking. Manuscript submitted for publication.
- Silvia, P. J., & Duval, T. S. (2001). Predicting the interpersonal targets of self-serving attributions. *Journal of Experimental Social Psychology*, 37, 333–340.
- Skitka, L., & Tetlock, P. E. (1993). Providing public assistance: Cognitive and motivational processes underlying liberal and conservative policy preferences. *Journal of Personality and Social Psychology*, 65, 1205–1223.
- Sniderman, P. M., & Piazza, T. (1993). *The scar of race*. Cambridge, MA: Belknap/Harvard University Press.
- Sniderman, P. M., & Tetlock, P. E. (1986). Symbolic racism: Problems of motive attribution in political analysis. *Journal of Social Issues*, 42, 173–188.
- Snyder, C. R., Higgins, R. L., & Stucky, R. J. (1983). *Excuses: Masquerades in search of grace*. New York: Wiley.

- Tagiuri, R., & Petrucco, L. (Eds.). (1958). *Person perception and interpersonal behavior*. Stanford, CA: Stanford University Press.
- Taylor, D. M., & Jaggi, V. (1974). Ethnocentrism and causal attribution in a south Indian context. *Journal of Cross Cultural Psychology*, 5, 162–171.
- Thorndike, E. L. (1920). A consistent error in psychological ratings. *Journal of Applied Psychology*, 4, 25–29.
- Van Kleeck, M. J., Hilliger, L. A., & Brown, R. (1988). Pitting verbal schemas against information variables in attribution. *Social Cognition*, 6, 89–106.
- Vescio, T. K. (1995). *The attributional underpinnings of stereotyping and prejudice*. Unpublished doctoral dissertation, University of Kansas.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, 71, 3–25.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer.
- Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. New York: Guilford Press.
- Weiner, B. (1996). Searching for order in social motivation. *Psychological Inquiry*, 7, 199–216.
- Weiner, B., Amirkjan, J., Folkes, V. S., & Verette, J. A. (1987). An attributional analysis of excuse giving: Studies of a naive theory of emotion. *Journal of Personality and Social Psychology*, 52, 316–324.
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, 55, 738–748.
- Wong, P. T., & Weiner, B. (1981). When people ask “why” questions, and the heuristics of attributional search. *Journal of Personality and Social Psychology*, 40, 650–663.
- Zajonc, R. B., & Burnstein, E. (1965). The learning of balanced and unbalanced social structures. *Journal of Personality*, 33, 153–163.