THE NAIVE SCIENTIST REVISITED: NAIVE THEORIES AND SOCIAL JUDGMENT

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Heider's (1958) proposal of a "common sense" psychology in which people's "naive theories" are central to a scientific understanding of social phenomena is discussed. The "naive theory" construct is discussed in relation to similar concepts such as lay beliefs, intuitive theories, and implicit theories. Special attention is given to the use of the term "implicit" in social psychological contexts. Finally, the contributions to this special issue on "Naive Theories and Social Judgment" are described. In these articles, a variety of leading scholars discuss and/or present research that goes beyond the study of the content of naive theories in order to investigate the impact of naive theories on related perceptions and behaviors.

In the 1950s, Fritz Heider issued a call for the study of "common-sense" psychology in which peoples' "naive" understandings would play a central role in building a scientific theory of interpersonal relations and other social phenomena (Heider, 1958). Heider's case for such an enterprise rested on two primary arguments: (a) that peoples' naive understandings of psychological phenomena included many truths that could form the basis of scientific theories, and (b) that common-sense psychology forms an important part of the phenomena of interest because it guides both peoples' perceptions of others and peoples' behavior toward others. That is, Heider noted that "one can talk about a 'naive psychology' that gives us principles we use to construct our picture of the social environment and that guides our reactions to it. An explanation of this behavior, must therefore deal with common-sense psychology, regardless of whether its assumptions and principles prove valid under scien-

tific scrutiny" (p. 5). Thus, Heider foreshadowed a variety of more recent commentaries on the "naive theories" that people hold, noting that, although these theories might in many circumstances be erroneous, people nonetheless act on these naive beliefs about how the social world around them works (cf., Anderson, Krull, & Weiner, 1996; Kahneman & Tversky, 1973; Nisbett & Wilson, 1977; Wegener & Petty, 1997).

Heider's (1958) view of the social perceiver as a naive scientist attempting to understand why things happen (e.g., so that one can better predict the reactions of others in the future) has proven to be enormously influential in social psychological theory (especially in its fostering the study of causal attribution—e.g., see Jones, Kanouse, Kelley, Nisbett, Valins, & Weiner, 1972; Harvey & Weary, 1985). Although social perceivers certainly do not always engage in extensive pseudo-scientific scrutiny and testing of hypotheses (see Anderson et al., 1996; Fletcher & Fincham, 1991; Kruglanski, 1989; Petty & Cacioppo, 1986; Trope & Liberman, 1996), people have been widely characterized as motivated to develop "correct" perceptions of themselves and others (e.g., Festinger, 1954; Petty & Cacioppo, 1986), and much of the pursuit of these perceptions is characterized as entailing hypothesis generation and testing (e.g., see Kruglanski, 1989; Trope & Liberman, 1996). What do people do with these theories once they have been formulated? Heider's (1958) position suggests that much of human behavior is guided by such understandings of the social world, no matter how "naively" these conceptions might have been formed or tested. Many researchers have taken Heider's views to heart and have studied the content of naive perceivers' theories as an interesting research question unto itself. In the articles of this current special issue, researchers go beyond the study of theory content to also investigate the implications of these naive theories on perception and behavior.

The "naive theories" of which we write have also been called lay beliefs, intuitive theories, common-sense understandings, and implicit theories. We prefer the term "naive theory," in part in deference to Heider's (1958) discussion of "naive psychology," but also because of the richness of the term for describing such psychological entities. The term "theories" is appropriate because, consistent with Heider's (1958) discussions, we believe many of these conceptions derive from a goal of possessing an abstract understanding of the workings of the social world (similar to an important function served by scientific theories). The term "naive" is appropriate in that people rarely, if ever, have the complete, unconfounded data necessary to make strong inferences (Platt, 1964)— regardless of whether or not people realize that this is the case. To be sure, such "naive theories" are likely to be rather intuitive and are formulated by lay perceivers, so there is no inherent conflict between use of these terms and the "naive theory" formulation. However, use of the term "implicit" theory can at times lead to potential confusions.

Although the term "implicit" theory has a long history, especially as it pertains to implicit personality theory (e.g., Bruner & Tagiuri, 1954), recent work in cognitive and social psychology has used the term "implicit" to refer to the inability of people to report the existence or operation of some entity or past experience (e.g., Jacoby, Toth, Lindsay, & Debner, 1992; for a review, see Greenwald & Banaji, 1995). For many of the naive theories addressed in the articles of this special issue (and the existing literature more generally), however, people seem able to report the content of those theories, and thus measures used to identify the theories have been (and can be) rather direct. Within the recent discussions of "implicit social cognition" (Greenwald & Banaji, 1995) such theories would be characterized as explicit rather than implicit (though they are still "naive" and generated by lay perceivers).

There are also a number of issues not previously addressed regarding "implicit" social cognition. For example, we believe it is important to distinguish between the various aspects of social cognition that can be "implicit" or "explicit." Consider a case in which some independent variable (IV; e.g., a naive theory) is discussed as having an influence on a dependent variable (DV; e.g., an attitude toward a target object—one could also reverse the positions of these psychological entities or use other entities such as feelings, thoughts, memories, etc.). The one factor in this example that could be either implicit or explicit is the *existence* (content) of the naive theory (i.e., the IV). That is, the social perceiver might or might not realize, or even have access to, the existence of this particular naive theory. However, it also might often be the case that people are unaware of the implicit *effects* of representations or events, the *content* of which can be *explicitly* reported. For example, a person able to directly report his or her opinion of a proposed policy might not realize that this opinion has biased the assessment of new information about the policy. In this case, although the effect of attitude is implicit, the attitude itself is explicit (i.e., it is open to awareness and direct reporting of content). Similarly, a person able to explicitly report the content of a stereotype of a social group, might also be unaware of implicit effects of the stereotype on perceptions and behavior.

We suspect that *implicit effects* of *explicit theories* are as common as, or more common than, implicit effects of implicitly held theories. Because of this, we would reserve the term "implicit theory" for instances in which people remain unaware that they hold some theory, and "implicit effect" for instances in which people are ignorant of the effects of either an implicit or explicit theory. Existence and effect are conceptually related, as failing to realize the existence of a theory would make it unlikely that the theory's influence on other perceptions or behaviors would be perceived. Yet, the two are conceptually distinct in that effects could be either implicit or explicit when theories are explicitly held.

Finally, just as the IV, in our example, can be implicit or explicit, so can the DV, as one could find evidence of effects using measures of implicit or explicit DVs. In fact, there could be every combination of implicit versus explicit IV and DV. For example, one could have an implicit theory (i.e., a theory that the person cannot access and thus cannot directly report) influencing an attitude that the person can access and report (i.e., an explicit attitude). Alternatively, both the theory (IV) and attitude (DV) might be explicit or implicit, or the theory might be explicit and the attitude implicit. Of course, if the DV is implicit, it is unlikely that people will be aware of the effect on that DV. If the DV is explicit, then the social perceiver might be aware or unaware of effects of the IV. If the DV is explicit, it is also possible that a social perceiver might realize that there is a change in the DV, but fail to identify the IV as the reason for that change (i.e., the effect on the DV is explicit, but the reason for the effect is implicit).

A potentially important aspect of separating implicit versus explicit IVs and DVs from implicit versus explicit effects of the IVs on the DVs is the existing implications for measurement of the theories. If one is studying the content of an implicit theory (as a IV or DV), then some kind of indirect measure is the only theoretically justified measurement method (see Greenwald & Banaji, 1995). If one is more interested in implicit *effects* of theories, then one could often investigate these implicit effects even if one uses quite direct measures of the theories (e.g., asking people to list the content of the theory, or using directed questions aimed at quantifying the extent of a particular belief). For example, in our own work on the use of naive theories of bias in bias correction, we often use direct measures of these theories, but we would not expect people to have complete access to the correction *process* in which these theories might be employed (e.g., see Wegener & Petty, 1997; Wegener & Petty, in press).[1] Likewise, even if the effect of the IV is hypothesized to be implicit, this does not mean that such an effect could not be detected using a direct measure of an explicitly held DV (i.e., people can be aware of content of the DV without realizing the effect of the IV on the DV).

In this special issue of *Social Cognition*, a number of articles represent various ways in which social perceivers' naive theories influence substantive issues in social psychology. Many of these articles began as presentations in a symposium at the 1995 meeting of the Society for Experimental Social Psychology. We retained a symposium-like format for this issue, concluding the issue with a "discussant" paper by Tory

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1. Such a situation is quite consistent with the discussions by Nisbett and Wilson (1977), who did not say that people are unable to report *what* their views of an object might be, but rather noted that people are often incapable of specifying *why* their particular view was formed or changed.

Higgins, in which he discusses an attribution-like "aboutness" principle aimed at organizing and commenting on the empirical and theoretical content of the other contributions.

This special issue opens with a theoretical article by Anderson and Lindsay discussing processes responsible for the formation, use, and persistence of naive social theories. Drawing upon processes of illusory correlation, data distortion, and availability, this article focuses on the ability of naive theories to create biases in social perception. Following this, two empirical articles demonstrate the power of naive theories to shape social judgment. Wittenbrink, Hilton, and Gist present two studies that address the role of naive theories in concept formation and stereotyping. Wittenbrink et al. argue that stereotypes based on naive theories of social group attributes provide a better account of stereotyping than similarity-based conceptions focusing on structural aspects of attribute covariation (cf. Murphy & Medin, 1985). Yzerbyt, Leyens, and Corneille use a bogus pipeline procedure to argue, from their social judgeability perspective, that naive theories of judgment validity can increase use of stereotypes.

In addition to naive theories creating or enhancing judgmental bias, naive theories also can be used in attempts (though sometimes ill-fated) at removing or avoiding potential biases. Using a common recognition memory paradigm, Förster and Strack describe how manipulations of naive theories concerning biases in recall influence peoples' classifications of objects as "new" or "old" in the typical recognition task. Petty, Wegener, and White address the role of theory-based corrections in persuasion processes, noting that theory-based corrections can reduce and also create undue influences of factors unrelated to the merits of persuasive arguments. Wilson, Houston, and Meyers demonstrate that naive theories of social influence (e.g., believing that one can more successfully resist influence by consciously perceived persuasive attempts than by subliminal messages) can also lead people to expose themselves to situations in which unwanted social influence takes place.

In addition to effects of naive theories on perceptions of other people and policies, naive theories can also have potent effects on self-perception. Drawing on intuitive theories of growth and change, Ross and Newby-Clark review research addressing peoples' constructions of their own past and future. In doing so, they address why and when people generate unrealistically rosy views of the future in light of, and in spite of, more mixed views of a positive and negative past. Finally, Levy and Dweck review an extensive research program on the implications for social behavior of beliefs in the mutability (or immutability) of human attributes. Implications of variability in "entity" versus "incremental" conceptions of attributes are discussed across intellectual, moral, and social domains, and include perceptions of self and others.

Though the articles in this special issue cut across a variety of domains, they are not meant to represent the whole of the literature on naive theories. Rather, they present a cross-section of current work on the influences of naive theories. Naive theories have recently been discussed in areas ranging from emotion (e.g., Russell, Fernandez-Dols, Manstead, & Wellenkamp, 1995), attribution (e.g., Fletcher & Fincham, 1991; Malle & Knobe, 1997; Morris & Peng, 1994), and concept formation (e.g., Wisiniewski & Medin, 1994) to education (e.g., Mintzes, Trowbridge, Arnaudin, & Wandersee, 1991; Wiser, 1995), health (e.g., Furnham & McDermott, 1994; Sigelman, Estrada, Derenowski, & Woods, 1996), consumer behavior (e.g., Broniarczyk & Alba, 1994; Snell, Gibbs, & Varey, 1995; Friestad & Wright, 1994) and beyond (for a wide-ranging discussion, see Furnham, 1988). As noted earlier, in much of this existing research, the focus has been on content of naive theories held by social perceivers. Consistent with Heider's (1958) comments, the work discussed in this special issue (and ongoing in a number of research labs) extends outside the assessment of theory content to map out the influence of these naive theories on related perceptions and behaviors.

It is our hope that this special issue will foster the inclusion of perceivers' naive theories in models of human thought and behavior. We are encouraged that researchers and theorists have taken up Heider's (1958) call to include a "common sense" or "naive" psychology in the development of a scientific understanding, and we believe that future conceptual and empirical developments will include additional refinements regarding when and how perceivers' naive theories impact social judgments and behavior.

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