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"Meaningful" social inferences: Effects of implicit theories on inferential processes ☆

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Abstract

Perceivers' *shared* theories about the social world have long featured prominently in social inference research. Here, we investigate how fundamental *differences* in such theories influence basic inferential processes. Past work has typically shown that integrating multiple interpretations of behavior during social inference requires cognitive resources. However, three studies that measured or manipulated people's beliefs about the stable versus dynamic nature of human attributes (i.e., their *entity* vs. *incremental* theory, respectively) qualify these past findings. Results revealed that, when interpreting others' actions, perceivers' theories selectively facilitate the consideration of interpretations that are especially theory-relevant. While experiencing cognitive load, entity theorists continued to incorporate information about stable dispositions (but not about dynamic social situations) in their social inferences, whereas incremental theorists continued to incorporate information about dynamic social situations (but not about stable traits). Implications of these results for how perceivers find meaning in behavior are discussed.
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Social environments are often complex and confusing. Thus, people must frequently rely upon their fundamental assumptions, or *implicit theories*, about the workings of the social world to simplify and make sense of such environments (Kelly, 1955). But what, exactly, are the assumptions that people typically make about social behavior? This question has long occupied psychologists in a variety of different domains (see Morris, Ames, & Knowles, 2001; Wegener & Petty, 1998).

One area of research where interest in this question has been particularly strong and enduring concerns the inferences people draw from others' actions. In his seminal work on the topic, Heider (1958) argued that understanding perceivers' shared implicit theories about the general causes of behavior is essential for understanding the meaningful interpretations they give to this behavior (an argument soon extended by others, e.g., Jones & Davis, 1965; Kelley, 1973). More recently, the idea that a common set of interpretations does typically arise from widely shared theories has inspired in-depth investigations of the precise mechanisms by which such interpretations are encoded and processed (e.g., Gilbert & Malone, 1995; Krull & Erickson, 1995a; Trope & Alfieri, 1997).

Examining the shared assumptions perceivers have about social actions has therefore done much to clarify the ways in which social inferences are formed. Yet, as productive as this line of research has been, even more might be learned by exploring how fundamental differences in perceivers' implicit theories alter social inference processes (Molden & Dweck, in press; Morris et al., 2001). For example, cross-cultural investigations have repeatedly illustrated that those with Western European cultural backgrounds analyze social interactions using a profoundly different set

of assumptions than those with East Asian cultural backgrounds; Westerners generally find greater meaning in the stable personality traits of those interacting, whereas Easterners generally find greater meaning in the shifting social environment in which the interaction occurs (Choi, Nisbett, & Norenzayan, 1999). Moreover, such variations in Westerners' and Easterners' implicit theories of social behavior have been found to produce dramatic variations in their processing and interpretation of social information.

In this article, we further explore how different implicit theories of social behavior affect social inference by examining the distinct theories that exist even among individuals with the same cultural background. We begin by (a) briefly elaborating upon both the nature of these distinct theories and the mechanisms of social inference, and (b) discussing how different implicit theories might systematically alter such mechanisms. We then present three studies which extend previous research in this area by (a) directly measuring and manipulating individuals' implicit theories, rather than inferring them from cultural backgrounds, and (b) examining how this alters both the processes and outcomes of judging others' actions. Finally, we conclude by discussing general frameworks for conceptualizing the role of implicit theories in social inference.

Entity and incremental theories of social behavior

In what ways can individuals vary in their implicit theories of the social world? Although there are certainly a number of important differences that exist (see Morris et al., 2001), we argue that one with particularly far reaching influence centers on people's basic beliefs about the stability or malleability of human attributes (Molden & Dweck, in press). Therefore, we focus here on the effects of these specific beliefs to illustrate the more general implications of implicit theories for social inference.

Much previous research has shown that *entity theorists*, who believe that people's basic attributes are fundamentally stable and incapable of change, find markedly different meaning in social behaviors than do *incremental theorists*, who believe that people's basic attributes are fundamentally dynamic and can be developed (see Dweck, Chiu, & Hong, 1995; Levy, Plaks, & Dweck, 1999). Consistent with the belief that people are fundamentally stable, entity theorists tend to be *trait-focused* and seek to assess individuals' unchanging psychological properties (i.e., fixed personality traits); when viewing others' actions, they typically look to encode and explain them in terms of such traits. However, consistent with the belief that people are fundamentally malleable, incremental theorists tend to be *process-focused* and seek to assess the dynamic psychological processes that arise from individuals' changing mental states and situations; when viewing others' actions, they typically look to encode and explain them in terms of such states and situations (e.g., Chiu, Hong, & Dweck, 1997; Levy, Stroessner, & Dweck, 1998; McConnell, 2001; Plaks, Stroessner, Dweck, & Sherman, 2001).

Social inference processes

How, then, might holding an entity or incremental theory influence the processes by which social inferences are formed? One of the most broadly applicable accounts of such processes has been outlined by Krull and colleagues (Krull, 1993; Krull & Erickson, 1995a). In their view, perceivers assemble social inferences across a number of different stages (see also Gilbert, Pelham, & Krull, 1988; Trope & Alfieri, 1997). Upon observing someone's actions, people (a) decide what kind of action it is, (b) construct some meaningful interpretation of what this action signifies, and (c) consider whether there are any other meaningful interpretations that might also apply. That is, using the terminology favored by Krull et al., people *categorize* what type of behavior is being performed, *characterize* what this behavior may imply about either the persons or social situations involved, and then *correct* their initial characterizations in light of any possible alternatives (see Krull & Erickson, 1995a). Furthermore, according to this and other *correction models* of social inference (see Gilbert et al., 1988), these separate stages differ in the effort and cognitive resources they require. Behavior categorization and the formation of initial characterizations are thought to occur spontaneously and require minimal effort or cognitive resources (see also Ham & Vonk, 2003; Krull & Dill, 1996; Todorov & Uleman, 2002). In contrast, correcting for alternate characterizations is considered to be more deliberate and require both substantial effort and plentiful cognitive resources.[1]

Thus, correction models of inference suggest two primary routes through which perceivers' judgments of others' actions may diverge (i.e., assuming they are able to easily and unambiguously categorize what these actions are, which certainly is not always the case, see Trope & Alfieri, 1997). First, as illustrated in Fig. 1, when viewing behavior, people may, at times, begin with the question "What type of

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[1] It is important to note that Trope and colleagues (Trope & Alfieri, 1997; Trope & Gaunt, 2000) have developed an account of social inference that shares many of the same features as correction models, but also has several crucial distinctions as well. Like correction models, Trope's *integration* account divides the inference process into an earlier, effortless stage, where perceivers *identify* what type of behavior is being performed, and a later, effortful stage, where alternate interpretations of this behavior are considered. However, instead of a two-step process where an initial effortless characterization is followed by an effortful correction, Trope proposes that this later stage involves a unitary process of effortful hypothesis testing and integration. Although this difference can have important implications (see Trope & Gaunt, 2000), in many cases both correction and integration perspectives make identical predictions for social inference: in the absence of cognitive resources, people will rely more on their initial impressions of behavior (i.e., uncorrected characterizations or incompletely integrated hypotheses) and will not incorporate all of the available information. Thus, as discussed below, any factors that increase perceivers' attention to multiple pieces of information while under cognitive load represent an expansion of both correction and integration perspectives.