

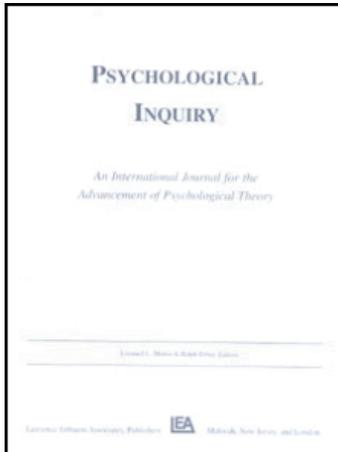
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Finding Meaning in Others' Intentions: The Process of Judging Intentional Behaviors and Intentionality Itself

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The ultimate purpose of social inferences is to give meaning to others' actions. To successfully negotiate their social environments, people must establish at least some understanding of the reasons for the behaviors of those around them. Only with this understanding can they then anticipate how their own behaviors might be received and select a course of action that will allow them to achieve their various social objectives.

This basic insight lay at the heart of Heider's (1958) seminal theorizing on the processes through which people do find meaning in social behavior and has at least implicitly guided the decades of subsequent research on this topic. However, in focusing on perceivers' broad objectives for predicting and controlling their social environment, this research has predominantly emphasized how people think about broad and stable causes for behavior, such as individuals' inherent dispositions or the general constraints posed by particular social situations (Gilbert & Malone, 1995; Jones & Davis, 1965; Kelley, 1973; Ross & Nisbett, 1991). In his target article, Reeder discusses another crucial piece of information that perceivers may use to assign meaning to others' actions: the extent to which these actions are believed to be intentional. He proposes that judgments of intentionality have a profound effect on how people interpret social behavior. When others' actions are believed to be unintentional, social perceivers may instead be more interested in the general causal forces that are affecting behavior; however, when others' actions are believed to be intentional, social perceivers may instead be more interested in the specific goals that are currently motivating behavior.

Like others before him (Malle, 1999; McClure, 2002), Reeder presents a compelling argument for the importance of distinguishing between how people attempt to understand intentional versus unintentional behavior. Furthermore, he convincingly reviews a number of instances in which traditional accounts of social inference processes (Gilbert & Malone, 1995; Krull & Erickson, 1995a; Lieberman, Gaunt, Gilbert, & Trope, 2002; Trope & Gaunt, 2000) do not fully capture the judgments that people make about particular actions that he argues are distinguished by being perceived as more intentional than many of those that are typically studied (e.g., Reeder, Hesson-McInnis, Krohse, & Scialabba, 2001; Reeder, Kumar, Hesson-McInnis,

& Trafimow, 2002; Reeder, Monroe, & Pryor, 2008; Reeder, Vonk, Ronk, Ham, & Lawrence, 2004). To address these shortcomings of the traditional accounts, Reeder outlines a new multiple inference model (MIM) of social judgment that directly incorporates people's perceptions of the intentionality of the behaviors they observe and generally describes how social perceivers might attempt to determine the motives behind those behaviors that are indeed judged to be intentional.

On the whole, the MIM appears to have the potential to integrate much of the vast literature on social inference, as well as to reinvigorate research in this area by suggesting a variety of interesting new directions that could be explored. To contribute to the realization of this potential, in this article, I first discuss some specific questions concerning the cognitive processes by which people draw inferences from intentional as compared to unintentional behavior that, if addressed, would further refine the MIM and broaden its scope and utility. I then discuss more general questions concerning how social perceivers determine the intentionality of others' behaviors. Although these types of judgments have thus far received less attention in the social inference literature, the MIM suggests that they could be critical in determining people's subsequent processing of social information. I propose that (a) it is unlikely that lay perceivers simply classify behaviors as either intentional or unintentional and that judgments of intentionality are instead likely to vary along a continuum, and (b) people are likely to hold a variety of lay theories about intentionality that could have important influences on how they determine where on this continuum a particular behavior falls. Finally, I present data from a small study designed to provide a preliminary examination of these propositions.

The Process of Forming Inferences About Intentional Behavior

One of the most basic properties of goals is that they are *multifinal*; the same objective can be satisfied by a variety of different means, and any given behavior can signify the pursuit of a variety of different goals (Kruglanski et al., 2002; Lewin, 1935). Thus, as Reeder notes, to narrow the many possible motivational

interpretations of behaviors that are perceived to be intentional and make an inference about the presence of a specific goal, people must consider additional information about both the larger social context in which the behaviors occur and the person who performs them. For example, after observing Adam compliment Emily, determining what specific goal he is pursuing would require some knowledge about the social circumstances in which this complement took place (e.g., Are Adam and Emily sitting alone at a coffee shop after spending the afternoon together? Did they just bump into each other on the street?), as well as some knowledge about Adam (e.g., Is Adam heterosexual? Does he currently have a romantic partner? How long have Adam and Emily known each other?). Based on what else is known (or can be readily judged) about Adam and the circumstances of this complement, his goals could be characterized as anything from a good-natured attempt to cheer up a friend to an underhanded attempt to engage in romantic infidelity.

Therefore, one of the most important implications of the MIM perspective is that before social perceivers can derive any meaning from behaviors that are seen as intentional, they must make a series of inferences about the range of possible goals implied by these behaviors, about the traits and social circumstances of the individuals involved, and about how all of these pieces of information can be coherently integrated. An immediate question that the MIM perspective on social inference raises, then, is how do people accomplish this somewhat involved task? That is, what types of cognitive processing are required to form the multiple inferences necessary for understanding intentional behaviors?

Does Forming Multiple Inferences About Intentional Behavior Require More Effort?

Much research on people's comparatively simpler inferences involving just the specific traits or situational constraints implied by a particular behavior has demonstrated that even in these presumably less demanding circumstances, social perceivers find it effortful to integrate various pieces of information (Gilbert, Pelham, & Krull, 1988; Krull & Erickson, 1995b; Lee & Hallahan, 2001; Trope & Alfieri, 1997)—and they often fail to achieve this integration if they are unmotivated to do so or their information-processing resources are depleted (i.e., they are experiencing *cognitive load*). This implies that the more demanding formation and integration of multiple inferences could require an even higher degree of motivation or availability of cognitive resources.

However, it is also possible that these somewhat stringent motivational and attentional requirements are not entirely necessary for a complete integration of multiple inferences about people's traits, situations

and motivations when judging intentional behaviors. Research by Trope and Gaunt (2000) has shown that people are able to integrate several pieces of information while forming trait inferences under cognitive load if the relevant information is made particularly salient, accessible, or relevant. Similarly, Molden, Plaks, and Dweck (2006) demonstrated that particular individuals who believe pieces of information concerning either others' traits or others' social situations to be especially relevant—because of their general lay theories about the causes of others' behaviors—can also continue to integrate these subjectively relevant pieces of information into the social inferences they form under cognitive load (see also Knowles, Morris, Chiu, & Hong, 2001). As discussed previously, before forming any kind of definitive inference about others' goals from their behaviors, it is always necessary to know something more about these individuals' traits and situations. Thus, the very act of attempting to infer goals could itself increase the salience, accessibility, or relevance of any available information about traits or situations that are required for these inferences, which would perhaps allow the integration of all of these sources of information even when social perceivers' motivation and attention are otherwise occupied.

If attempting to form inferences about others' goals does facilitate the processing of information about their traits and situations, a further implication of this process would be that variations in the perceived intentionality of a particular behavior could actually alter the amount of cognitive resources people require to integrate trait and situational information into their judgments of that behavior. That is, if, as proposed by the MIM, judging intentional behaviors focuses people on inferring others' goals whereas judging unintentional behaviors focuses people on inferring the more general causal forces that might be at work (see also Malle, 1999, 2004), then beliefs about the intentionality of behaviors could have an important influence on people's sensitivity to information about others' traits or the situations these individuals are experiencing; when regarded as a necessary component for understanding others' goals, this type of information might be readily integrated into people's judgments, whereas when regarded simply as independent causes that each separately might be sufficient to understand others' behaviors, this type of information might be less readily integrated. Thus, ironically, attempting to integrate multiple inferences when judging intentional behavior could potentially require less processing resources than attempting to isolate a single inference when judging unintentional behaviors. Whether or not this pattern of results emerges, future research on how much effortful processing is required for inferences about intentional as compared to unintentional behavior could enrich the MIM perspective and further distinguish it from traditional accounts of social inference.

Do Some Inferences About Intentional Behavior Take Priority Over Others?

Beyond these general questions concerning the effort and attention social perceivers might require to make the types of inferences described by the MIM, another question raised by this perspective concerns the specific sequence or hierarchy of the various judgments that perceivers must make to understand intentional behaviors. Although Reeder makes some reference to the possibility that judgments about others' goals, traits, and the situational contexts of their actions may occur in parallel (cf. Read & Miller, 1998; Thagard & Kunda, 1998), the graphical representation he presents of the MIM seems to imply that perceivers give the greatest priority to inferences about the situational context in which behaviors occur and then use these inferences to make further judgments about the goals and traits the behaviors might imply. If true, this would further distinguish the information processing involved in inferences about intentional behavior from the processing involved in inferences about what Reeder classifies as unintentional behavior—when judging this type of unintentional behavior people are rarely found to give the influences of situational contexts much weight (e.g., Gilbert & Malone, 1995; Ross & Nisbett, 1991). However, it seems more plausible that inferences about people's stable traits allow just as much insight into the current goals guiding their behavior as do inferences about situational contexts and that trait inferences would have equal priority.

Returning to the example of Adam and Emily described previously, knowing that Adam is dispositionally faithful and reliable—or, alternatively, that he is an unrepentant philanderer—provides just as much indication of his motives in complementing Emily as does knowing whether the compliment came in the context of a romantic or more casual setting. Moreover, knowledge about Adam's traits could just as easily affect people's impressions of the social context of the behavior (i.e., the extent to which he is seen to be a philanderer could influence how romantic the meeting at the coffee shop is perceived to be), as knowledge about the context of his encounter with Emily could affect impressions of his dispositions (see Trope, 1986). Thus, it appears that judging intentional behaviors would not require the primacy of inferences about situational contexts; such impressions could also be built upon prior dispositional inferences as well. Indeed, returning to the idea of inference mechanisms that are operating in parallel, people may even begin their judgments of intentional behavior by simultaneously making inferences about potentially relevant traits and situations and then subsequently using both types of inferences to determine the specific goals that are at work. This last possibility would be consistent with recent findings by Ham and Vonk (2003) and Todd, Molden,

Ham, and Vonk (2009), who demonstrated that when people are exposed to brief descriptions of behavior (e.g., “Nick avoids the big dog at the house on the corner”) as part of a “distracter” task, they show automatic activation of both relevant trait (e.g., “afraid”) and situation (e.g., “ferocious”) concepts, as measured by the speed of their responses on subsequent lexical-decision and probe-reaction tasks. Future investigation of the sequence or primacy of the multiple inferences necessary to adequately understand intentional behavior would also further enrich the MIM perspective on social judgment.

How Are Inferences About Motives for Intentional Behavior Encoded in Lasting Social Impressions?

A final question raised by the distinctions made by the MIM perspective concerning the inferences people form about intentional versus unintentional behavior involves the role that judgments of others' immediate goals and motivations might play in the more general impressions that people form of these individuals. As Reeder notes at the outset of his discussion, early theorizing about social inference largely focused on how people judge what they believe to be stable dispositions of those with whom they interact (Heider, 1958; Jones & Davis, 1965). Indeed, is it these type of judgments that best allow people to anticipate how future interactions with others might unfold and gain a sense of control over their social environment, which is one of the primary functions of social inference (see also Plaks, Grant, & Dweck, 2005). In contrast, inferences about people's specific goals for performing a particular behavior can provide immediate insight about how best to respond to this behavior but may, at best, provide only indirect information about any stable qualities these individuals possess that could serve as the basis for expectations about future interactions.

Given these potentially different social functions of inferences about goals or dispositions, the way in which these types of inferences are encoded in relation to the broader social impressions people form over time might differ as well. Because the specific goals that inspire people to perform a particular behavior can be fleeting or highly context dependent, judgments about these goals may not be attributed or “attached” to these individuals (cf. Todorov & Uleman, 2002, 2004) in the same manner as judgments about their traits. For example, Carlston and Skowronski (2005) make a distinction between social inferences that are *associated* with particular individuals because they have simply been activated in connection with these individuals (e.g., the cognitive link formed between the concept “lazy” and the person who informs you that Jane spent the whole weekend watching TV), as opposed to social inferences

that are *attributed* to particular individuals because they actually describe these individuals' behaviors (e.g., the cognitive link formed between the concept "lazy" and Jane herself). Research investigating how these inferences differ has shown that although (somewhat surprisingly) both associations and attributions affect the impressions that people form of others (i.e., not only is Jane perceived to be relatively lazy, but so too is the person who has told you about her behavior; see Carlston & Skowronski, 2005; Skowronski, Carlston, Mae, & Crawford, 1998), the impressions that stem from attributions are stronger and more robust.

Although inferences about others' goals and traits both describe the behaviors these individuals perform, it is possible that the cognitive links formed between goal-inferences and particular individuals more closely resemble associations whereas the cognitive links formed between trait-inferences and particular individuals more closely resemble attributions. That is, the goal itself that is inferred from a behavior that is believed to be intentional may not be as directly linked to representations in memory of the person who performed the behavior, whereas any dispositions that are inferred may have these direct links (see Srull & Wyer, 1989). This is not to say that goal inferences should be considered unimportant for the stable representations social perceivers form of others, only that the influences that goal inferences have on these impressions may largely operate through the further insight that they provide about the dispositions of the individual who is pursuing this goal. Future research examining these questions concerning how different types of social inferences are encoded and linked to the individuals performing these behaviors could thus help the MIM perspective to further differentiate the social function of goal and trait inferences and illustrate how these functions may overlap or diverge for actions that are perceived to be intentional versus unintentional.

To summarize, the general distinctions made by the MIM between the means by which social perceivers judge behaviors they believe to be intentional versus unintentional have a variety of implications for differences in the information processing that occurs as these judgments are formed. Future studies that explore these information processing differences could help to further enrich the MIM perspective that Reeder proposes and more firmly establish this perspective as an alternative to more traditional approaches to social inference.

Judging Intentionality

In addition to specific questions concerning how social perceivers process information about behaviors they believe to be intentional as compared to information about behaviors they believe to be unintentional,

a more general issue at the heart of the MIM perspective is the means by which people distinguish intentional from unintentional behaviors. Building on previous philosophical perspectives developed by Aristotle and others, Reeder suggests that in most cases people use the simple logical criteria of whether the individual who performs a behavior could have chosen to act in a different manner. Although he acknowledges that people see some gradations in the amount of choice others may have over their actions (e.g., choosing to comply with a polite request versus choosing to comply under the threat of force), Reeder further proposes that, at least for the purpose of forming social inferences, perceivers essentially divide these behaviors into two categories: those performed in the presence of *soft constraints*, by which people may be influenced but which they are not compelled to honor (e.g., desires to create positive impressions in others), and those performed in the presence of *hard constraints*, which are direct causal forces that may not be resisted (e.g., the difficulty of a task that one is given to perform). Whereas people are presumed to see behavior in the presence of hard constraints as unintentional, and thus requiring a causal analysis of the constraints involved, they are presumed to see behavior in the presence of soft constraints as intentional, and thus requiring a motivational analysis of these intentions.

Reeder makes a good case for the categorical distinction between behavior in the presence of hard and soft constraints as a useful tool for organizing the various conditions under which social inferences have been studied and for explaining the differences observed in perceivers' judgments under these conditions. Yet it does not seem entirely plausible that social perceivers uniformly make this kind of clear, logical separation between unintentional and intentional behavior; instead, they may more heuristically judge the intentionality of different behaviors along a continuum. Thus, a more fundamental question that the MIM highlights concerning social inference is how do people generally judge whether others' behaviors are intentional?

Intentionality as a Logical Versus Heuristic Concept

The small amount of existing research on this topic (at least among adults) has largely focused on determining what qualities of a particular action perceivers consider to be logically *necessary* for people to generally define it as intentional (e.g., Malle & Knobe, 1997). That is, beginning with philosophical models of how intentionality should rationally be defined (Bratman, 1987; Mele, 1992; Searle, 1983), these studies have manipulated the presence of various components of behavior (e.g., whether the outcome of this behavior is desired and planned; whether the individual performing the behavior has the skill to achieve the outcome, the

belief that his or her actions can produce the outcome, and the awareness that the outcome occurred) to reveal how this affects whether lay perceivers do indeed classify the behavior as intentional or not. Although informative, this previous research also tends to regard intentionality as a categorical concept that social perceivers use to sort others' actions into candidates for motivational versus causal analysis. Furthermore, it tacitly adds yet another potentially complex layer of reasoning to the process of forming social inferences in which people must first attempt to assess the extent to which an observed behavior possess any or all of the various components of intentionality (e.g., Did the person desire that outcome? Was she aware of what she just did?), before then presumably attempting to parse the causal forces at play, if none of these components are present, or to integrate information about someone's goals, traits, and situation, if evidence for intentionality is found.

It is certainly possible that social perceivers perform this extended series of judgments in some circumstances, but given the frequency with which people are called upon to make inferences about those around them (and the speed and effortlessness with which they can do so; see Ham & Vonk, 2003; Malle, 2008; Todd et al., 2009), it seems likely that they often employ heuristic shortcuts in their judgments of intentionality as well. For example, Dweck and Molden (2008) argued that one factor potentially influencing people's relative perceptions of intentionality is the lay theories they hold about whether behavior is generally a product of stable dispositions or of dynamic thoughts, feelings, and motivations. Those who believe that stable dispositions largely guide behavior tend to frequently offer causal explanations that evoke these dispositions for both their own and others' actions, regardless of whether these actions involve desired or undesired outcomes or whether there is prior indication of possessing the skills necessary to accomplish the desired outcome; in contrast, those who believe that dynamic thoughts and feelings guide behavior tend to frequently offer motivational explanations that evoke these mental states across these same sets of circumstances (for reviews see Dweck, 1999; Molden & Dweck, 2006). Based on the reasoning outlined by the MIM perspective, this suggests that lay theories concerning the elevated influence of stable dispositions of behavior may generally reduce people's perceptions of intentionality, leading them to understand these behaviors in terms of broad dispositional causes. Lay theories concerning the elevated influence of dynamic mental processes on behavior, however, may generally increase people's perceptions of intentionality, leading them to understand these behaviors in terms of people's immediate motivations.

In addition to these potential effects of general lay theories about the factors that typically influence

behavior, there might also be additional heuristic influences on people's perceptions of intentionality of more specific lay theories concerning the types of behaviors that tend to be more or less intentional. For example, people could typically endorse the generally cynical perspective that people only engage in positive, prosocial actions under at least somewhat coercive circumstances, such as a felt need to curry favor with others or as an attempt to simply relieve their own negative feelings (cf. Cialdini et al., 1987). This assumed coercion (even if, logically, it only represents a soft constraint) could then reduce the degree to which individuals are given "credit" for intentionally behaving in a positive manner. In contrast, given the many social and legal prescriptions designed to inhibit negative, antisocial behaviors, having performed such behaviors anyway could be judged to more clearly indicate people's true intentions. That is, because negative behaviors are at odds with any coercive forces that might be perceived to exist, they may be judged as more unambiguously intentional. Conversely, another possibility is that people typically hold the more benevolent perspective that, on the whole, people's intentions tend to be positive (cf. Cacioppo, Gardner, & Berntson, 1997; Gouldner, 1960) and thus would not discount these intentions for potentially coercive influences when observing positive behavior. Indeed, this type of lay theory would suggest that it is negative behaviors that are more likely to be the product of some kind of coercive force that has subverted whatever positive intentions someone might have initially held, perhaps resulting in judgments of negative behaviors as less intentional.

Testing Logical Versus Heuristic Perspectives

To illustrate this general point about the potential influence of lay theories of intentionality, I conducted a small experiment in which 64 participants read a list of 23 short scenarios adapted from Hong (1994). Approximately half of these scenarios described generally *positive* events, whereas the others described *negative* events. Furthermore, to evaluate any possible differences between the effects of behavior valence on actions generally regarded as intentional versus actions generally regarded as unintentional, approximately half of these scenarios described *behaviors* in which the actor was described as performing some kind of action, whereas the others described *outcomes* in which some event was described as happening to the actor. Thus, overall, there were close to an equal number of four different types of scenarios: positive behaviors (e.g., "Melissa let her classmates borrow the notes she made on the readings"), negative behaviors (e.g., "Ben stole some bread from a bakery"), positive outcomes (e.g., "Henry's friends often sought advice from him"), and negative outcomes (e.g., "Tony received many complaints about his work"). Participants

were asked to rate the extent to which they thought the actor in each scenario performed that behavior intentionally on a 0 (*not at all intentional*) to 7 (*completely intentional*) scale. Following the procedures of Malle and Knobe (1997), intentionality was defined for participants as “the person had a *reason* to do what he or she did, and that he or she *chose* to do so.”

By definition, the outcomes described involved less choice by the actor and therefore should be rated as less intentional than the behaviors. Furthermore, in line with Reeder’s suggestion that people generally judge failure to be less intentional than success (see also Malle & Knobe, 1997), the negative outcomes (which described or generally suggested some kind of failure) should be rated as more unintentional than the positive outcomes (which described or generally suggested some kind of success). The most interesting contrast is therefore between participants’ judgments of the positive and negative behaviors. Based on Reeder’s analysis, the high choice inherent in both types of behaviors would logically lead them to be judged equally intentional; however, if people are also reasoning heuristically based on some kind of lay theory as described previously, differences could emerge in how intentional they perceive the positive and negative behaviors to be.

Results of a 2 (event type: behavior vs. outcome) \times 2 (event valence: positive vs. negative) analysis of variance (ANOVA) with repeated measures on both factors showed the large expected main effect of event type, $F(1, 189) = 238.50$, $p < .001$, $d = 2.05$. There was also a large main effect of event valence, $F(1, 189) = 54.03$, $p < .001$, $d = 1.31$ and a Valence \times Type interaction, $F(1, 189) = 21.55$, $p < .001$. Follow-up comparisons within each event type further revealed that, although the predicted difference in the rated intentionality of positive outcomes ($M = 4.78$, $SD = 1.26$) as compared to negative outcomes ($M = 3.32$, $SD = 1.25$), was larger, $F(1, 189) = 71.91$, $p < .001$, $d = 1.17$, there was also a significant difference in people’s ratings of the different types of behaviors, such that positive behaviors ($M = 6.11$, $SD = 0.76$) were rated as more intentional than negative behaviors ($M = 5.78$, $SD = 0.94$), $F(1, 189) = 3.69$, $p = .05$, $d = 0.39$.

Although this evidence is somewhat crude, it does at the very least suggest that (a) social perceivers may regard intentionality more as a continuously varying attribute of any given behavior rather than as a discrete means of separating behaviors into different classes, and (b) people may indeed possess general lay theories about particular types of actions that are more or less likely to be intentional, which can then heuristically affect the intentionality they perceive in specific behaviors. However, whether the “benevolent” lay theory of intentionality found here is one that perceivers frequently employ, or whether these more heuristic, continuous perceptions of intentionality are generally

common as compared to logical, categorical judgments must be evaluated in future research.

Summary and Conclusions

To conclude, the MIM proposed by Reeder highlights many important new questions concerning social inference that could spur a resurgence of interest in this research area and substantially alter the field’s view of social judgment processes. In this article, I focused on two particular issues raised by the MIM that seem particularly worthy of further study. The first concerns the need for a more thorough elaboration of the information processing mechanisms through which people might form the multiple judgments presumably required to understand intentional behaviors, and a comparison of these mechanisms to those that have already been outlined for the relatively simple analysis of unintentional behaviors (Gilbert & Malone, 1995; Krull & Erickson, 1995a; Lieberman et al., 2002). The second concerns the need for a greater understanding of how social perceivers determine the intentionality of others’ behaviors in the first place and whether this understanding comes about through a logical classification of actions as either intentional or unintentional versus a heuristic placement of actions along a continuum of intentionality that is informed by people’s lay theories of social behavior. Regardless of what research along these lines reveals, the MIM will have helped provide greater insight into how social perceivers achieve their ultimate objective of determining the essential meaning of others’ actions.

Note

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