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Dispositional Attribution: Multiple Inferences About Motive-Related Traits

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This research views dispositional inference as a process whereby perceivers integrate multiple inferences about a target person's motives and traits. The findings suggest that although perceived motives may stimulate extra attributional processing (S. Fein, 1996), the content of the inferred motive is important as well. Perceivers learned about situational forces implying that a target person had free choice, no choice, or an ulterior motive for helpful behavior. Inferences about the target's helpfulness differed depending on whether the target's behavior was attributed to an obedience motive (no-choice condition) or to a selfish motive (ulterior-motive condition). In general, inferences about motives were more predictive of dispositional inferences than were global causal attributions (to situational vs. dispositional forces) or base rate assumptions.

> Always this subtle criticism and appraisal of other people, this analysis of other people's motives
>
> —D. H. Lawrence, *St. Mawr*

D. H. Lawrence offered the above quote in reference to Mrs. Witt, who he described as the "fiendish psychologist" for being so preoccupied with other people's motives. But to some extent we are all amateur psychologists, as Heider (1958) proposed, and inferences about motives and goals are common in everyday life (Ames, Flynn, & Weber, in press; Idson & Mischel, 2001; Jones, 1964; Malle, Moses, & Baldwin, 2001; McClure, 2002; Mischel & Shoda, 1995; Read, Jones, & Miller, 1990; Read & Miller, 1993; Reeder, Kumar, Hesson-McInnis, & Trafimow, 2002; Vonk, 1998, 1999b). For example, suppose that Andrew, a new colleague at your workplace, invites you to lunch. Rather than take the invitation at face value, you might find yourself wondering about his motives: Does he simply want to make a friend? Is he looking for a business contact or collaborator? Does he have a romantic interest in me? Depending on the motive you attribute, you might respond differently to the invitation.

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A bedrock assumption of most influential models of dispositional inference is that causal attributions to situational and dispositional factors underlie trait inferences (Gilbert, 1998; Krull, 1993; Trope, 1998). Accordingly, when a perceiver concludes that a target person's behavior was under the influence of potent situational forces, the perceiver will refrain from making extreme judgments about the target. In sharp contrast, the present research assumes that perceivers who judge that a behavior is situationally caused may still infer motive-related traits in the target person (Reeder et al., 2002). In turn, inferences about motives play a role in shaping other dispositional inferences about the target. For example, imagine that a worker made a large donation to his or her boss's favorite charity, knowing all the while that the boss would become aware of the gift. The donation behavior appears to be situationally induced. Yet, perceivers of this behavior may still infer something important about the worker: They are likely to assume that the worker is motivated by selfish ambition. In turn, this inference about the selfish nature of the worker may lead the perceiver to assume that the worker is not a particularly helpful person. Although perceivers appear to have discounted the trait of helpfulness (Kelley, 1973; McClure, 1998), evidence presented in this article suggests that it would be a mistake to assume that perceivers did not learn anything significant about the character of the worker.

At the present time, social psychologists know little about the role of motive inferences in the process of dispositional inference (Fein, 2001; Kammrath, Mendoza-Denton, & Mischel, 2003; Vonk, 1998). As an introduction to this topic, we first review general, mainstream approaches to dispositional inference (Gilbert, 1998). We then outline two alternative perspectives that address the issue of inferred motives. One of these approaches concerns suspicion of ulterior motives (Fein, 1996; Fein, Hilton, &

Miller, 1990), whereas our own approach concerns the multiple (motive-based) inferences that perceivers draw (Reeder et al., 2002). These three perspectives on dispositional inference make different assumptions about the relative importance of perceived global causes and motives. We then describe the current research in which perceivers witnessed a target person's helping behavior and drew inferences about global causality, motives, and traits of the target person. Although the focus of our analysis is on the multiple inference model (MIM), we hope to shed light on the similarities and differences between the various perspectives.

Global Causal Attributions and Dispositional Inference

The dominant statements on dispositional inference (Gilbert, 1998; Krull, 1993; Ross & Nisbett, 1991; Trope, 1986, 1998) posit general rules of inference on the basis of a dualistic view of perceived causality (see also Kelley, 1973). Accordingly, the perceived causes of behavior are of two sorts: person causes and situational causes. In Gilbert's (1998) words, perceivers make "either a dispositional attribution (a correspondent inference of extraordinary disposition) or a situational attribution (an inference of ordinary dispositions)" (p. 107). The discounting principle (Kelley, 1973; McClure, 1998) is the centerpiece of general models of dispositional inference. According to the principle, the two types of causal attribution operate in hydraulic fashion such that when behavior is under the control of a situational cause, the perceiver tends to learn little about the unique character of the target.

Given the theoretical importance of the discounting principle, researchers in the field have been captivated by evidence that perceivers sometimes violate the principle (McClure, 1998). The most celebrated evidence for such a violation concerns the correspondence bias (Gilbert & Malone, 1995). Research in this tradition demonstrates that perceivers often draw behavior-correspondent dispositional inferences about a target person whose behavior, in actuality, was under the control of situational forces (Jones & Harris, 1967; Ross & Nisbett, 1991). Perhaps the most common theoretical account of this bias assumes that perceivers misconstrue or underestimate the power of situational forces, in part because situations are often invisible to the perceiver (Gilbert & Malone, 1995; Ross & Nisbett, 1991). That is, perceivers who fail to give proper attention or weight to situational causality, fall prey to the bias of attributing a correspondent trait to the target person.

In addition to relying on the discounting principle, general models of dispositional inference often focus on perceivers' assumptions about the base rate of a given behavior (Borgida & Brekke, 1981; Kelley, 1967). Accordingly, when behavior is attributed to a situational cause, perceivers tend to assume that almost anyone would have behaved in the same way. In other words, situationally induced behavior is accompanied by the assumption that the behavior has a high base rate (that is, that everybody does it). In turn, general models hold that high base rate behaviors do not allow the perceiver to attribute extreme traits to the target person (Gilbert, 1998; Ross, Greene, & House, 1977).

The hydraulic logic of causal attribution that underlies the discounting principle and its accompanying base rate assumption have become articles of faith in social psychology (Gilbert, 1998). Yet a number of authors have raised doubts about these relationships (Borgida & Brekke, 1981; Johnson, Jemmott, & Pettigrew, 1984; Krull, 2001; Nisbett & Borgida, 1975; Reeder & Spores, 1983; Trafimow, Reeder, & Bilsing, 2001; Vonk, 1999a). One aim of the present research was to assess global causal attributions (to situational and dispositional factors) and base rate estimates directly in an effort to determine their relationship to dispositional inferences. Of greater importance, the research examined the use of two alternative theoretical models that recognize the role of perceived motives in dispositional inference. These two motive-based approaches—focusing on suspicion of ulterior motives (Fein, 2001) and multiple inferences about motive-related attributes (Reeder et al., 2002)—are described below.

Suspicion of Ulterior Motives

Whereas Gilbert and Malone (1995) outlined the factors that lead perceivers toward biased trait inferences, Fein and his colleagues (Fein, 1996; Fein, Hilton, & Miller, 1990; Hilton, Fein, & Miller, 1993) identified a potent antidote for the bias. The cure came in the form of perceiving that a target person has an ulterior motive. For instance, participants in a study by Fein (1996) read about a student who prepared an essay defending the introduction of minimum academic standards for college athletes. In one condition, background information indicated that the student had "no choice" concerning the direction of the essay (Jones & Harris, 1967), because the professor had assigned him to defend the minimum standards. In the ulterior-motive condition, however, the student was told that he was free to defend either side of the issue. But these participants also learned that the student was to be evaluated by the professor and that the student was aware that the professor was personally in favor of the minimum standards. After reading the student's essay, perceivers in the no-choice situation manifested the typical correspondence bias by viewing the student as strongly in favor of the minimum standards. In contrast, perceivers in the ulterior-motive situation refrained from making correspondent inferences about the student's attitude. Additional evidence indicated that the situational forces in the no-choice condition were perceived to be at least as strong as those in the suspicion condition.

Fein (1996) maintains that the presence of an ulterior motive leads perceivers to be suspicious of the target's motives. A state of suspicion, in turn, encourages perceivers to engage in more sophisticated attributional processing. In the process, perceivers consider multiple hypotheses for the target's behavior and decide, essentially, to suspend judgment. In other words, perceivers who detect an ulterior motive for behavior decide that the information at hand does not allow any firm conclusions to be drawn about the target. Suspicious perceivers, then, tend to use the discounting principle and thereby avoid the correspondence bias.

Fein's (1996) research is important in at least two respects. First, it suggests that situational forces that may appear equally strong in the eyes of the perceiver (e.g., situations involving no choice vs. the presence of ulterior motives) lead to different types of trait inferences. Second, Fein identified the perception of an ulterior motive as a crucial factor that leads perceivers to engage in extra processing that leads to discounted trait inferences about a target person. Below, we outline an alternative perspective on the role of perceived motives in dispositional inference.

A Multiple Inference Model

The two approaches to dispositional inference described above focus on a single trait or attitude within the target person. Although neither approach explicitly states such a limited focus, they each tend to make the simplifying assumption that the essence of dispositional inference can be understood by tracking inferences about a single trait across several stages of processing. For example, Gilbert's (1998; Gilbert, Pelham, & Krull, 1988) influential model assumes that perceivers first identify a behavior in terms of a focal trait dimension, infer a correspondent trait, and then make adjustments to that trait inference as cognitive resources allow. In the formal model itself, then, there is no place for inferences about other attributes in the target person. Fein's (1996, 2001) suspicion model assumes that when perceivers notice the presence of an ulterior motive, they engage in a greater degree of attributional processing and, consequently, tend to suspend judgment about the target person. Like the general models, however, there is no explicit recognition that (a) perceivers make multiple trait-related inferences about the target person or that (b) perceivers attempt to reconcile (or integrate) these different inferences.

In contrast, MIM assumes that perceivers may draw a variety of inferences about a target person and attempt to integrate those inferences into a coherent impression (Idson & Mischel, 2001; Read & Miller, 1993; Reeder et al., 2002; Shoda & Mischel, 1993; Van Overwalle, 2004; Vonk, 1999b). According to Malle and his colleagues (Malle, 1999; O'Laughlin & Malle, 2002), perceivers explain intentional behavior in terms of the motive or reason for the behavior. In turn, we propose that inferences about motives help to shape other trait-related inferences about the target person. For example, some of the participants in a study by Reeder, Hesson-McInnis, Krohse, and Scialabba (2001) watched a videotape in which a target person performed poorly while kicking a soccer ball. When situational forces encouraged low performance (the target was bribed), perceivers "discounted" an inference of low ability. That is, they inferred that the target had relatively high ability. Additional analyses indicated that inferences about the target's motivation mediated the effect of the situation. For example, when the situation encouraged low performance, perceivers inferred low effort on the target's part. In turn, perceivers who inferred low effort tended to attribute relatively higher levels of ability to the target. In short, perceivers made inferences about both effort and ability, integrating the two in a coherent fashion (Heider, 1958).

The basic premise of MIM, then, is that situational forces exert their impact on dispositional inference via inferences about the motives of the target person. An implicit assumption of the approach, of course, is that the behavior is a voluntary or controllable response to the situation (Jones & Davis, 1965; Malle, 1999). When situational forces exert their effect directly on behavior (as when a strong wind prevents a long distance kick of a soccer ball), the motives of the target person may be less relevant to dispositional inference (see Study 2 in Reeder et al., 2001). Given that a behavior is voluntary, we need to ask how inferences about motives are integrated with trait inferences. The model assumes that perceivers seek unity among the different attributes in the impression (Asch, 1946; Read & Marcus-Newhall, 1993; Read & Miller, 1993). Indeed, Roese and Morris (1999) provided evidence that perceivers seek compatibility between their dispositional inferences and other types of information about a target person. They found that an important basis of such compatibility is the evaluative tone of the information (Asch, 1946). Accordingly, if the perceived motive for a behavior is judged as positive, the perceiver is likely to attribute relatively positive traits to the target.

Consider a study reported by Reeder et al. (2002) that examined inferences of morality for a target person's negative (aggressive) behavior. Perceivers learned about a person who delivered an electric shock to another research participant. In one condition the target was provoked by the victim (e.g., the victim had delivered a shock to the target at an earlier point in time), whereas in a second condition the experimenter offered the target a financial incentive for delivering the shock. Although the situation encouraged the expression of aggression in each case, perceivers inferred different motives in the two situations. The aggression in response to provocation was attributed to the motives of revenge and self-defense, whereas aggression in response to a financial incentive was attributed to a selfish motive. Because the motives of revenge and self-defense are evaluated more positively than a selfish motive, the target in the provocation situation was attributed higher morality than the target in the incentive situation. MIM's approach to dispositional inference, then, shifts attention away from situational versus dispositional causality in the direction of perceived motives. Of course, perceivers may conceptualize motives as having causal (or generative) force. Yet it is useful to distinguish between causes and motives because motives represent a more specific type of cause that perceivers use to explain intentional action (Malle, 1999).

Because both the multiple inference approach and the suspicion model deal with inferences about motive, it is important to consider the similarities and differences between them. The suspicion model maintains that the presence of an ulterior motive leads the perceiver to engage in more sophisticated attributional processing, thereby prompting greater use of the discounting principle. In contrast, the multiple inference approach is mute about the extent of processing produced by different types of situational forces. Rather, MIM focuses on the content of the inferred motive and perceivers' efforts to integrate that motive with other traits of the target person. As described in later sections of this article, these two perspectives on motive make similar predictions where trait inferences about helpful (positive) behavior are concerned (Study 1) but make different predictions for inferences about unhelpful (negative) behavior (Studies 2 and 3).

There is another important difference between the two perspectives. Whereas the suspicion model is concerned only with ulterior motives, the multiple inference approach is concerned with perceived motives of all kinds. In fact, a basic assumption is that when the same intentional behavior occurs in the presence of different situational forces, perceivers will infer different kinds of motives. In the present research on inferences about helping behavior, we studied the impact of two different types of constraining situational forces. The first concerns the familiar "no-choice" situation common to many attribution studies (Jones & Harris, 1967). For example, a target person's helping behavior occurred in response to instructions from an authority figure (the target's supervisor at work). Under these circumstances, we assumed that perceivers would infer the motive of obedience. The second situational force involved an ulterior motive (Fein, 1996). That is, by being helpful, the target could better her chances of winning an important award.

We assumed that perceivers would infer a selfish motive for the helping behavior in this latter situation. As described below, MIM implies that these different sorts of motives will lead to different inferences about the target's dispositional level of helpfulness.

Comparing the Three Models of Dispositional Inference

Although the main goal of the present research is to test predictions derived from MIM, a secondary goal is to compare MIM with general models and the suspicion perspective. Within these broad goals, several specific themes were explored. First, MIM suggests that there is value in examining the multiple inferences that perceivers make about attributes of a target person, particularly inferences about motives. In the present studies we assumed that dispositional inferences of helpfulness would be comprehensible only when viewed in the context of inferences about motives related to obedience and selfishness. Second, we extended the study of perceived motives in dispositional inference by comparing the suspicion perspective with the multiple inference approach. The suspicion model maintains that the perception of an ulterior motive leads to discounted trait inferences because the perceiver engages in more sophisticated attributional processing. In contrast, MIM focuses on the content of inferred motives. Accordingly, inferences about the specific nature of motives (such as obedience and selfishness) are integrated with trait inferences. The present studies are an initial attempt to discriminate between these possibilities. Third, where dispositional inference is concerned, what is the relative importance of inferences about global causes versus inferences about motives? In Studies 1 and 2 we assessed causal attributions to the situation and to the person. We then investigated the relative importance of these global causal attributions, as compared with motive-related inferences as determinants of dispositional inference. Although MIM does not make predictions about causal attribution to the person, MIM suggests that the influence of situational attributions on dispositional inference is often indirect. In particular, we assume that the impact of situational attributions is often mediated by inferences about motive.

In Study 1 of this article, perceivers watched videotapes about a target person named Sara who helped a professor move a stack of books. The helpful behavior occurred in one of three situations. In the free-choice situation, there were no obvious situational pressures on Sara. In the no-choice situation, in contrast, Sara was described as working under the constraints of her employment: Sara's supervisor instructed her to help professors with tasks such as moving books. Finally, in the ulterior-motive condition, perceivers learned that Sara might have an ulterior motive for helping (i.e., by impressing the professor, Sara could increase her chance of winning an award). After watching the videotapes, perceivers provided judgments about the causes of Sara's behavior and rated her along several trait dimensions, including her helpfulness, obedience, and selfishness.

The three models of dispositional inference discussed above make divergent predictions regarding impressions of Sara. The middle column of Table 1 displays some of the processing assumptions that underlie each of these models and the column on the right displays predictions about perceivers' dispositional attributions of helpfulness. For example, general models assume that causal attributions underlie dispositional inference. From this perspective, perceivers should make a person attribution in the free-choice condition, whereas they should make a situation attribution in both the no-choice and ulterior-motive condition. In turn, dispositional inferences of helping should be more correspondent (more helpful) in the free-choice condition than in either of the other two conditions. The suspicion model, in contrast, makes a different prediction. Perceivers within the ulterior-motive condition should engage in more extensive processing, accompanied by a suspension of judgment about Sara's traits. According to this logic, perceivers should provide lower ratings of helpfulness in the ulterior-motive condition, relative to the other conditions. Finally, MIM suggests that perceivers will attribute different motive-relevant traits across the three conditions. In turn, inferences about motive will guide inferences about Sara's helpfulness. In the free-choice condition, perceivers are likely to view Sara's helping as being motivated by an unselfish trait and rate her high in helpfulness. In the no-choice condition, perceivers should attribute Sara's helping to the motive-relevant trait of obedience (she obeyed her supervisor). Because perceivers may assume that obedient people are generally helpful people, the model suggests that ratings of helpfulness will be high in the no-choice condition. In the ulterior-motive condition, however, the model assumes that perceivers will attribute her behavior to a selfish motive (Sara is only interested in winning the award) and attribute a low level of helpfulness to Sara. Study 1 aims to provide a test of these various predictions.

Table 1
Attributions About Helping Behavior: Comparing the Predictions of Three Models

Condition	Perceived cause	Attribution
	Predictions of general models	
Free choice	Person	Helpful
No choice	Situation	Less helpful
Ulterior motive	Situation	Less helpful
Condition	**Process**	**Attribution**
	Predictions of the suspicion model	
Free choice	Make judgment	Helpful
No choice	Make judgment	Helpful
Ulterior motive	Suspend judgment	Less helpful
Condition	**Motive-related trait**	**Attribution**
	Predictions of the multiple inference model	
Free choice	Unselfish	Helpful
No choice	Obedient	Helpful
Ulterior motive	Selfish	Less helpful

Study 1

Method

Overview and participants. Participants were 176 male and female undergraduates from a midsize Midwestern university, who received extra credit toward their psychology course. All participants watched two videotapes. One of the videos described the situational forces (free choice, no choice, or ulterior motive) surrounding a target person's helping be-

havior, whereas the other video portrayed the helping behavior itself. After watching the videos, participants provided their impressions of the target person.

Materials and procedure. Participants in small groups were informed that the study concerned their impressions of a student named Sara. They were told to base their impressions on the two videotapes that they would watch. One of the videotapes focused on Sara's behavior, whereas the other videotape focused on the situation surrounding that behavior. The two videotapes were shown in counterbalanced order. All participants watched the same *behavior tape,* which featured an interaction between Sara and a professor in the hallways of the Psychology Department. The professor was stacking books and journals on a cart, located just outside of his office. Sara greeted the professor by name, indicated that she had some free time, and then offered to help. The professor responded that the loading work was a big job and that it would take about 20 min. Sara agreed to help and began moving a stack of journals.

Participants were randomly assigned to watch one of three *situational tapes.* Each tape depicted an interaction between Sara and a secretary in the Psychology Department that had occurred prior to the helping incident described above. In the *free-choice situation,* the secretary asked Sara why she was there when she was not working. Sara responded that she had some free time and was going to use it to "roam the halls." It was apparent, therefore, that Sara was under no particular situational constraints.

The *no-choice situation* portrayed Sara as an employee in the Psychology Department and focused on her first day of work. A secretary, who played the role of her supervisor, instructed her to help faculty with small tasks like moving books. It was apparent, therefore, that part of Sara's job consisted of helping professors move books. After receiving her instructions, Sara began walking the halls, looking for faculty who needed any help.

Finally, in the *ulterior-motive situation,* Sara played the role of a student who initiated a conversation with a secretary in the Psychology Department. Sara informed the secretary that she had been nominated for a $1,000 award and asked the secretary if she could provide any advice on how she should approach the professor who was to oversee the award. The secretary responded that she knew the professor quite well and said that he would give the award to a certain kind of student:

> someone who is genuinely a nice person and likes to help out. He is not interested in someone who is just after their career and who is selfish. So if you really want to impress him, just act like a caring, helpful person.

This condition was designed to create the impression that Sara had an ulterior motive for helping the professor.

After watching the behavior tape and one of the three situational tapes, participants were asked to write several sentences describing why they thought the target person acted as she did. Following these open-ended explanations, participants then rated the target person on a series of closed-ended measures in the order described below. The major item consisted of a rating of Sara's dispositional helpfulness: "In general, how helpful do you think Sara is?" (1= *not at all helpful*; 10 = *very helpful*). Participants also rated Sara's dispositional obedience (1 = *not at all obedient*; 10 = *very obedient*) and her dispositional selfishness (1 = *not at all selfish*; 10 = *very selfish*).[1] Causal attributions were assessed concerning, first, the situation: "To what extent was Sara's reaction to the professor due to the situation she was in (what she talked about with the secretary)?" (1 = *not at all due to the situation*; 10 = *very much due to the situation*). Second, causal attributions were assessed concerning the target person: "To what extent was Sara's reaction to the professor in the hall due to Sara's personality?" (1 = *not at all due to her personality*; 10 = *very much due to her personality*). A measure of base rate was included: "Would most people have helped the professor if they were in Sara's situation?" (1 = *certainly not*; 10 = *yes, definitely*). Finally, participants responded to a manipulation check concerning how much choice the target had concerning whether she would help the professor (1 = *low choice*; 10 = *high choice*).

Results

Manipulation check on perceived choice. Preliminary analyses indicted no significant effects of the order in which the situational and behavioral videotapes were viewed. Consequently, the analyses presented below were collapsed across that variable. Ratings of choice differed across the three situations in the expected direction, $F(2, 173) = 32.91$, $p < .01$. The target person in both the free-choice condition and the ulterior-motive condition was seen as having high choice concerning whether she would help the professor (Ms = 8.19 and 7.45, respectively, on a scale in which 10 indicated the highest possible level of choice). A Student Newman–Keuls post hoc test indicated that these two conditions did not differ from one another significantly, whereas both conditions differed significantly from the no-choice condition, in which ratings of choice were considerably lower ($M = 4.44$), ps $< .05$.

Perceptions of helpfulness, obedience, and selfishness. Both the suspicion model and the multiple inference perspective suggest that ratings of helpfulness should display the greatest discounting (i.e., ratings should be lowest) within the ulterior-motive condition. A one-way analysis of variance revealed support for this prediction, $F(2, 173) = 11.78$, $p < .01$. As shown in Table 2, post hoc tests indicated that ratings of helpfulness were significantly lower in the ulterior-motive condition than in the other two conditions. In attributional terms, then, perceivers displayed discounted ratings of helpfulness in the ulterior-motive condition, but not in the no-choice condition. In fact, if anything, ratings in the no-choice condition were nonsignificantly higher than ratings in the free-choice condition.

In line with the predictions of MIM, perceptions of obedience varied by situation, $F(2, 173) = 7.60$, $p < .01$, such that ratings of obedience were significantly higher in the no-choice condition than in the remaining conditions, which did not differ from one another significantly. Ratings of selfishness also varied across the three conditions, $F(2, 173) = 19.23$, $p < .01$, with ratings highest in the ulterior-motive condition, significantly lower in the free-choice condition, and significantly lower still in the no-choice condition.

It is worth noting that perceivers' impressions reflect a certain coherency, particularly with regard to inferences about motive-related traits. For example, in the no-choice condition, perceivers viewed the target's helping as reflecting traits related to high obedience and low selfishness. Given the positive valence of these motives, perceivers apparently rated the target as high in helpfulness. In contrast, perceivers in the ulterior-motive condition viewed the target as selfishly motivated, and their inferences of

[1] When coding the open-ended responses and when interpreting the closed-ended measures of inferred motive, we did not differentiate between motives as a temporary state of mind (O'Laughlin & Malle, 2002) and motive-related traits (defined as a general tendency toward a particular motive). Distinguishing between these two possibilities would be difficult in the present studies because participants apparently inferred motive-related traits (e.g., a trait of selfishness) from the presence of a temporary motive (a particular instance in which a target appeared motivated by selfishness).

Table 2
Judgments About Helping Behavior as a Function of Situation: Study 1

Measure	Free choice	No choice	Ulterior motive
Helpfulness			
M	7.25_a	7.78_a	6.10_b
SD	1.95	1.73	2.09
Obedience			
M	7.96_a	8.83_b	7.72_a
SD	1.52	1.72	1.64
Selfishness			
M	4.75_b	3.93_a	6.33_c
SD	2.41	1.78	2.21
Situational cause			
M	7.05_a	8.19_b	8.32_b
SD	2.10	2.20	2.07
Person cause			
M	7.50_b	6.67_a	6.27_a
SD	1.94	2.09	2.10
Base rate			
M	6.09_a	8.34_b	8.47_b
SD	2.31	1.89	1.77

Note. Higher numbers signify greater attribution on a scale of 1–10. *n*s = 57, 59, and 60 in the free-choice, no-choice, and ulterior-motive conditions, respectively. Means that do not share a subscript are significantly different from one another.

low helpfulness in this condition are consistent with that motive. The overall pattern, then, is consistent with that predicted by MIM.

Global causal attributions. Ratings of situational causality showed significant variation across the three conditions, $F(2, 172) = 6.11$, $p < .01$. Relative to the free-choice condition, situational attributions were significantly higher in both the ulterior-motive and no-choice conditions. General models of dispositional inference assume that perceptions of personal causality and situational causality tend to vary inversely. This prediction received support. Indeed, causal attributions to the target person reflected a pattern that was opposite of situational attributions, $F(2, 172) = 5.46$, $p < .01$. That is, relative to the free-choice condition, person attributions were significantly lower in the no-choice and ulterior-motive conditions. In sum, causal attributions within the no-choice and ulterior-motive conditions were quite similar in that perceivers inferred relatively high situational causality and low personal causality in these conditions.

Assumed base rates. General models of dispositional inference imply that trait inferences depend on assumptions about the base rate of a given behavior. Accordingly, strong trait inferences should occur only for behavior that is perceived as having a low base rate (i.e., as being uncommon). In the present study, assumed base rates showed large differences across the conditions in the design, $F(2, 173) = 25.87$, $p < .01$. As displayed in Table 2, the perceived base rate of helping behavior was significantly higher in the no-choice and ulterior-motive conditions than in the free-choice condition.

Relationships among major variables. In order to assess the relative importance of our measures as they contributed to ratings of helpfulness, we conducted a multiple regression analysis in which ratings of helpfulness were regressed simultaneously on ratings of motives (obedience and selfishness), causal attributions (to the situation and the person), and base rates. MIM leads us to expect that ratings of the two motive-related traits of obedience and selfishness should make significant contributions to the prediction of helpfulness. In contrast, general models assume that causal attributions and perceived base rates should contribute to ratings of helpfulness. The regression analysis indicated that both ratings of obedience, $B = 0.22$, $t(169) = 3.36$, $p < .01$, and ratings of selfishness, $B = -0.46$, $t(169) = 6.84$, $p < .01$, contributed independently to ratings of helpfulness. In contrast, causal attributions to the person made only a marginal contribution, $B = 0.11$, $t(169) = 1.74$, $p < .10$. Neither causal attributions to the situation or perceived base rates contributed significantly to the regression equation.

We examined inferences about motive-related traits as mediators of attributed helpfulness in order to provide a more precise test of MIM. Recall that situational forces within both the no-choice condition and the ulterior-motive condition facilitated the expression of helping behavior. Yet the level of helpfulness attributed in these two conditions differed significantly. The multiple inference perspective assumes that inferences about obedience and selfishness underlie this difference. To test this assumption, we conducted a mediation analysis (Kenny, Kashy, & Bolger, 1998) within just these two conditions. As shown in Figure 1, separate regressions revealed that the situational manipulation predicted ratings of helpfulness, $B = -0.40$, $t(117) = -4.77$, $p < .01$; as well as both of the proposed mediating motives, $B = 0.52$, $t(117) = 6.53$, $p < .01$, for selfishness, and $B = -0.32$, $t(117) = -3.62$, $p < .01$, for obedience. When the situational manipulation and the two mediators were examined simultaneously as predictors of helpfulness, the effect of the situation was reduced to nonsignificance, $B = -0.13$, $t(115) = -1.49$, $p < .20$, *ns*, whereas the effect of both mediators remained significant, $B = -0.35$, $t(115) = 3.92$, $p < .01$, for selfishness, and $B = 0.30$, $t(115) = 3.67$, $p < .01$, for obedience. Sobel's test indicated that the effect of the situation was reduced significantly for both selfishness ($z = -4.02$, $p < .01$) and obedience ($z = -2.85$, $p < .01$). In sum, the evidence suggests that inferences about motive-related traits mediated the significant effect of the situational manipulation.

A final set of mediation analyses examined the relationship between perceivers' situational attributions and their inferences about helpfulness. Over the full design, situational attributions were modestly correlated with inferences about helping ($r = -.15$, $p < .05$). This correlation was more substantial, however, when we examined just the data from the free-choice and ulterior-motive

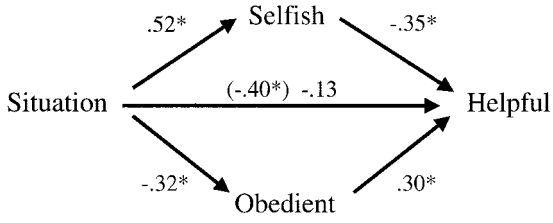

Figure 1. Inferred motives of selfishness and obedience as mediators of inferences about helpfulness. The coefficient in parentheses (−.40) represents the direct effect of the situational manipulation on inferred helpfulness, whereas the adjacent coefficient (−.13) was observed when the inferred motives were controlled. Coefficients followed by an asterisk are statistically significant.

conditions, $r(116) = -.26$, $p < .01$. Within these two conditions, general models imply a direct (negative) relationship between situational attribution and ratings of helpfulness. In contrast, MIM suggests that inferences about motive should mediate that relationship. We conducted a mediation analysis to discriminate between these possibilities. In brief, separate regressions indicated that situational attributions predicted selfishness, $B = 0.26$, $t(114) = 2.91$, $p < .01$, but not obedience, $B = 0.06$, $t(114) = 0.66$, *ns*. When situational attribution and inferences about selfishness were examined simultaneously as predictors of helpfulness, the effect of situational attribution was reduced to nonsignificance, $B = -0.10$, $t(113) = -1.31$, $p < .20$, whereas the effect of selfishness remained significant, $B = -0.63$, $t(113) = -8.53$, $p < .01$. Sobel's test also suggests that inferences about selfishness carried the influence of situational attribution to ratings of helpfulness ($z = -2.74$, $p < .01$). In other words, to the extent that situational attribution affected ratings of helpfulness, this influence was mediated by inferences about motive.

Discussion

Prior evidence in support of MIM focused on inferences about a target person's negative behavior (Reeder et al., 2002). Study 1 in this article extends the analysis to address positive (helpful) behavior. The evidence from this study provides support for three main themes of this article. First, the coherent pattern of ratings across the three traits of helpfulness, obedience, and selfishness suggests the value of viewing dispositional inference as a multiple inference process. For instance, perceivers' inferences about the motive-related traits of obedience and selfishness mediated judgments about the target's level of helpfulness. Second, although earlier work guided by the suspicion model suggests that perceived motives result in extra attributional processing (Fein, 2001), the current research stresses the content of an inferred motive. Dispositional inferences of helpfulness varied depending on whether perceivers viewed the target's helpfulness as motivated by obedience, as opposed to selfishness. Third, Study 1 questions the importance of global causal attributions in dispositional inference. In general, causal attributions to situational and dispositional forces were less predictive of dispositional inferences of helpfulness than were inferences about motive. In fact, when causal attributions did predict ratings of helpfulness, this influence was mediated by inferences about motive.

In comparative terms, how did the three models of dispositional inference fare in Study 1? Overall, the results of this study are consistent with both the predictions of MIM and the suspicion model. Each perspective predicted the finding that inferences of helpfulness would be lowest within the ulterior-motive condition. Perceivers' ratings of motive-related traits provided additional support for MIM. In the no-choice condition, perceivers inferred a high level of obedience, whereas in the ulterior-motive condition, perceivers inferred a high level of selfishness. In turn, inferences about these motive-related traits mediated inferences along the focal trait of helpfulness.

Support for general models was equivocal. Supporting this perspective, causal attributions to the situation were highest in the two conditions in which situational forces were manipulated (e.g., the no-choice and ulterior-motive conditions), whereas attributions to the person were diminished in these same conditions. Nevertheless, causal attributions failed to predict trait inferences. For example, causal attributions were nearly identical in the no-choice and ulterior-motive conditions, even though ratings on all three traits differed significantly within these two conditions. Similarly, inferences about base rates failed to predict dispositional inferences.

Several potential objections might be raised about the evidence in support of MIM. For example, perhaps discounting was not evident in the no-choice condition because the manipulation of the situation was weak in that condition. At least three aspects of the data conflict with this interpretation. First, the manipulation check indicated that perceivers attributed a low level of choice to the target in the no-choice situation. Second, perceivers acknowledged a high level of situational causality in this condition. Finally, perceivers attributed a high level of obedience to the target in this condition. All of these patterns are indicative of a strong manipulation.

A second potential concern is that the target person's behavior, itself, may have been perceived differently across the three situations. According to this behavior-identification alternative, helpful behavior may be particularly ambiguous and perceivers may have used the situation to disambiguate the behavior (Trope, 1986). Indeed, research suggests that when behavior is ambiguous, situational cues that are presented prior to the appearance of the behavior can alter the identification of the behavior. But when situational information is presented after the behavior, behavior identification is not affected (Trope, Cohen, & Alfieri, 1991). The design of our study varied the order of presentation of the situation and behavior tapes. If the major findings of this study reflect the process of behavior identification, we would expect to find a strong effect of order of presentation on these findings. Instead, we observed no significant effect of order of presentation on any of our measures. This pattern argues against the possibility that our findings are primarily due to the behavior-identification stage of processing.

A third issue concerns the spontaneity with which people infer motives. Our analysis in terms of MIM assumes that perceivers considered the motives of obedience (in the no-choice condition) and selfishness (in the ulterior-motive condition) at the time they drew trait inferences. Did our participants, in fact, consider motives on their own, without having to be prompted by closed-ended questions? The open-ended descriptions which participants provided prior to filling out the trait scales enabled us to answer this question. Two coders (blind to condition) scored the protocols independently (1 = *mentioned a motive*; 0 = *did not mention the motive*) for the two motives of obedience (e.g., wanting to do what she is told, do her duty, show that she is a good worker) and selfishness (e.g., seeking money, wanting to win). Interrater reliability was acceptable (coefficient $\alpha = .76$ and .96, respectively); consequently, the two coders met to resolve differences and obtain final scores. As expected, participants mentioned motives related to obedience more frequently in the no-choice condition (77%) than in the ulterior-motive condition (13%) or the free-choice condition (38%), $\chi^2(2, N = 168) = 48.20$, $p < .01$. Also in line with expectations, participants mentioned selfish motives more frequently in the ulterior-motive condition (89%) than in the no-choice condition (2%) or the free-choice condition (11%), $\chi^2(2, N = 168) = 116$, $p < .01$. These patterns suggest that perceivers consider motives spontaneously, without having to be prompted.

Study 2

In Study 1, both the suspicion model and MIM predicted the low ratings of helpfulness found in the ulterior-motive condition. Study 2 was designed to provide a clearer test between the suspicion model and the multiple inference approach. Perceivers in Study 2 watched a videotape of a target person named Sara who refused to help a professor who was moving a stack of books. Once again, the behavior was emitted in the presence of the three types of situational forces used in Study 1. Thus, in the free-choice situation, there were no obvious situational pressures on Sara. In the no-choice situation, in contrast, Sara's supervisor instructed her to ignore requests for help from professors. Finally, in the ulterior-motive condition, the information suggested that Sara might have an ulterior motive for not helping the professor. After watching the tapes, perceivers provided judgments about the causes of Sara's behavior and rated her along the trait dimensions of helpfulness, obedience, and selfishness.

Table 3 provides a summary of the predictions of three models of dispositional inference. As in the earlier study, general models predict causal attributions to the person in the free-choice condition, whereas they predict attributions to the situation in the no-choice and ulterior-motive conditions. This pattern of causal attribution implies, once again, that perceivers should discount their trait inferences in the no-choice and ulterior-motive conditions. Given that Sara behaved in a nonhelpful way in this study, discounted trait inferences should take the form of relatively high ratings of helpfulness in these latter two conditions. The suspicion model makes a different prediction: Perceivers should engage in more extensive processing and suspend judgment in the ulterior-motive condition. Consequently, they should provide relatively high ratings of helpfulness in this condition. Finally, MIM focuses on inferences about obedience and selfishness. Inferences about these motive-related traits are expected to guide inferences about Sara's helpfulness. In the free-choice condition, perceivers should view Sara's nonhelping as motivated by a selfish trait and rate her low in helpfulness. In the no-choice condition, however, perceivers should attribute Sara's nonhelping to obedience. Because perceivers tend to assume that obedient people are helpful, ratings of helpfulness should be high in the no-choice condition. Finally, in the ulterior-motive condition, the model once again assumes that perceivers will attribute to a selfish motive, and consequently, ratings of helpfulness should be relatively low. In short, MIM implies a different pattern of data than that suggested by the suspicion model. Study 2 has the aim of investigating these differences.

Table 3
Attributions About Nonhelping Behavior: Comparing the Predictions of Three Models

Condition	Cause	Attribution
	Predictions of general models	
Free choice	Person	Not helpful
No choice	Situation	More helpful
Ulterior motive	Situation	More helpful
Condition	**Process**	**Attribution**
	Predictions of the suspicion model	
Free choice	Make judgment	Not helpful
No choice	Make judgment	Not helpful
Ulterior motive	Suspend judgment	More helpful
Condition	**Motive-related trait**	**Attribution**
	Predictions of the multiple inference model	
Free choice	Selfish	Not helpful
No choice	Obedient	More helpful
Ulterior motive	Selfish	Not helpful

Method

Overview and participants. Participants were 62 male and female undergraduates from a midsize Midwestern university, who received extra credit toward their psychology course. As in Study 1, all participants watched two videotapes. One of the videos described the situational forces (free choice, no choice, or financial reward) surrounding a target person's helping behavior, whereas the other video portrayed the instance of nonhelping behavior itself.

Materials and procedure. The procedure was the same as that of Study 1, with the exception that all participants watched the situational videotape before watching the behavioral video. The *free-choice situation* of Study 2 used the same video that was used in the analogous condition in Study 1. The dialogue in the remaining two situational videos was altered. In the *no-choice situation,* Sara was told by her supervisor to type some faculty memos and then deliver them to the faculty. The supervisor added that the memos, "need to be done right away. So if anybody asks you to do anything else, you just have to say 'no.'" It was apparent, therefore, that Sara was instructed to ignore other types of requests from the faculty. In the *ulterior-motive situation,* as in Study 1, we attempted to create the impression that there might be a financial incentive for the target's nonhelping behavior. Once again, Sara informed a secretary in the Psychology Department that she had been nominated for an award and asked for advice on how to approach the professor who was responsible for the award. The secretary responded that she knew the professor quite well, adding that he would give the award to a certain kind of student:

> Someone who can make it solely based on talent. He's not looking for a touchy-feely-type person who's always doing favors for other people. So, if you want to impress him, just act like you're busy and into your own career. Don't try to butter him up or do any favors for him. He really hates brown nosers. He'll be impressed if you're a tough, take-care-of-business-type person.

All participants then watched the behavior tape, which once again featured an interaction between Sara and a professor in the hallways of the Psychology Department. In this case, however, Sara refused to help the professor. The behavior tape contained an initial sequence in which a professor greeted Sara and then asked for a favor:

> Ah, I wonder if you could do me a favor? I've got a whole lot of books that I need to put in boxes to take down to the basement. It's kind of a big job, about 20 minutes. I wonder if you could give me some help?

Sara looked at her watch, shook her head, and said, "Oh, you know what, I really just don't have time right now. Sorry." After watching the

two videos, participants responded to the same rating scales used in Study 1.

Results

Manipulation check on perceived choice. Ratings of choice differed across the three situations in the expected direction, $F(2, 60) = 13.56$, $p < .01$. The target person in both the free-choice condition and the ulterior-motive condition was seen as having high choice (Ms = 8.38 and 8.24, respectively). Post hoc tests indicated that these two conditions did not differ from one another significantly, whereas both conditions differed significantly from the no-choice condition ($M = 5.10$), ps $< .05$.

Perceptions of helpfulness, obedience, and selfishness. Because the target person in this study refused to help the professor, correspondent inferences should take the form of inferring that the target is nonhelpful (or low in helpfulness). We expected that trait inferences for this nonhelping behavior would allow us to discriminate between MIM and the suspicion model. MIM suggests that ratings of helpfulness in the ulterior-motive condition should remain depressed because perceivers are likely to infer a selfish motive for the nonhelping behavior. From this perspective, the highest ratings of helpfulness (i.e., the greatest amount of discounting) should be evident in the no-choice condition, in which perceivers are likely to infer a motive to obey. In contrast, the suspicion model suggests that perceivers should suspend judgment in the ulterior-motive condition and, thus, discounting should be more evident in the ulterior-motive condition than in the no-choice condition.

Table 4 displays ratings of helpfulness across the three situations, $F(2, 60) = 15.17$, $p < .01$. Supporting the multiple inference perspective, ratings of helpfulness were significantly higher in the no-choice condition than in the other two conditions. Although there was evidence of significant discounting (of low helpfulness) in the ulterior-motive condition relative to the control condition, it is noteworthy that perceivers discounted their attributions to a significantly greater extent in the no-choice condition. This finding supports MIM and is at odds with the suspicion model. Additional support for MIM emerged from ratings of obedience, $F(2, 60) = 15.62$, $p < .01$, such that perceivers inferred significantly higher obedience in the no-choice condition than in the other two conditions. Finally, analysis of selfishness ratings, $F(2, 60) = 18.46$, $p < .01$, supported MIM's expectation that perceivers would view the target as highly selfish in both the free-choice and ulterior-motive conditions, compared with the no-choice condition. Ratings within the former two conditions did not differ significantly.

Table 4
Judgments About Nonhelping Behavior as a Function of Situation: Study 2

Measure	Free choice	No choice	Ulterior motive
Helpfulness			
M	3.19_a	6.47_c	4.90_b
SD	1.92	1.60	2.23
Obedience			
M	5.10_a	8.62_c	6.76_b
SD	2.10	1.60	2.36
Selfishness			
M	7.57_b	5.14_a	7.76_b
SD	1.43	1.53	1.70
Situational cause			
M	4.43_a	8.05_b	8.67_b
SD	2.66	2.11	2.15
Person cause			
M	7.05_b	5.14_a	4.33_a
SD	1.83	2.20	2.13
Base rate			
M	7.38_b	5.38_a	$6.62_{a,b}$
SD	2.29	2.09	2.29

Note. $n = 21$ in each cell of the design. Means that do not share a subscript are significantly different from one another.

Causal attributions. Causal attribution to the situation, $F(2, 60) = 20.46$, $p < .01$, and to the person, $F(2, 60) = 9.63$, $p < .01$, followed the same pattern as observed in Study 1. That is, perceivers made significantly stronger attributions to the situation in both the no-choice and ulterior-motive conditions, relative to the free-choice condition. In complementary fashion, perceivers made significantly stronger attributions to the person in the free-choice condition, relative to the other two conditions.

Perceived base rates. As in Study 1, perceivers rated the extent to which others would help the professor. Given that the target refused to help, higher numbers in Table 4 represent lower expectations about the base rate of nonhelping behavior across the three situations, $F(2, 60) = 4.33$, $p < .05$. From this standpoint, perceivers expected significantly more nonhelping behavior in the no-choice condition than in the free-choice condition. Expectations about the base rate were intermediate within the ulterior-motive condition, in which ratings did not differ significantly from either of the other two conditions.

Relationships among the major variables. Multiple regression analysis was conducted to identify the strongest predictors of ratings of helpfulness. The predictors included ratings of obedience, selfishness, causal attributions to the situation, causal attributions to the person, and perceived base rates. Ratings of selfishness made the only significant contribution, $B = -0.37$, $t(57) = -2.94$, $p < .01$, although ratings of obedience made a marginally significant contribution, $B = 0.21$, $t(57) = 1.72$, $p < .10$. Causal attributions (to the situation and the person) and base rates did not make significant contributions to the regression equation.

As in Study 1, we examined inferences about obedience and selfishness as mediators of ratings of helpfulness within the no-choice and ulterior-motive conditions. Separate regressions revealed that the situational manipulation predicted ratings of helpfulness, $B = -0.38$, $t(40) = -2.62$, $p < .01$, as well as both of the proposed mediators, $B = 0.64$, $t(40) = 5.25$, $p < .01$, for selfishness, and $B = -0.43$, $t(40) = -2.98$, $p < .01$, for obedience. When the situation and the two mediators were examined simultaneously as predictors of helpfulness, the effect of the situation was reduced to nonsignificance, $B = -0.02$, $t(38) = 0.93$, *ns*. The effect of selfishness as a mediator remained significant, $B = -0.59$, $t(38) = -3.38$, $p < .01$, whereas the effect of obedience did not attain significance, $B = -0.02$, $t(38) = -0.12$, *ns*. Sobel's test indicated that the reduction in the effect of the situation was significant in the case of selfishness ($z = -2.88$, $p < .01$) but not in the case of obedience ($z = -.45$, $p < .65$). In sum, the evidence suggests that inferences about the motive-related trait of selfish-

ness mediated the significant effect of the situational manipulation.[2]

Discussion

By focusing on inferences about nonhelping behavior, Study 2 had the aim of providing a test between MIM and the suspicion model. In general, the pattern of data was consistent with the assumptions of MIM. The model suggests that discounting of (low) helpfulness ratings should be most apparent in the no-choice condition, compared with the other two conditions. This expectation received strong support. As described below, this pattern is coherent when viewed in terms of the multiple inferences perceivers made about selfishness and obedience.

MIM suggests that perceivers are likely to rely on inferences about motives when they make a judgment on the focal trait of helpfulness. Within the ulterior-motive condition, perceivers viewed the target person as motivated by selfishness. Because selfish people are perceived in a negative light and are thought to be low in helpfulness, the target in this condition was rated relatively low in helpfulness. In contrast, perceivers in the no-choice condition inferred an obedience motive. A motive to obey a legitimate authority figure (such as the target person's boss at work) should be seen in a positive light. Therefore, to the extent that perceivers inferred a high level of obedience, they inferred a relatively high level of helping as well. In short, inferences about motives help to explain why perceivers provided higher ratings of helpfulness in the no-choice condition than in the ulterior-motive condition.

At best, support for the suspicion model was mixed. The suspicion model suggests that perceivers should suspend judgment in the ulterior-motive condition, leading to relatively high ratings of helping. Although significant discounting occurred in the ulterior-motive condition (relative to the free-choice condition), the extent of discounting in this condition was significantly less than that observed in the no-choice condition. Thus, contrary to the expectations of the suspicion model, the ulterior-motive condition did not produce the greatest level of discounting.

Support for general models was mixed as well. As expected, attribution to situational causality was high in both the no-choice and ulterior-motive conditions, whereas attribution to personal causality was low in these conditions. However, like Study 1, the similarity in causal attributions across these two conditions was not reflected in the types of trait inferences that were drawn. For example, in these conditions, perceivers made very different inferences about all three traits. Finally, like causal attributions, perceived base rates did not vary significantly across the no-choice and ulterior-motive conditions. Base rates, then, cannot account for the significantly different trait inferences across these conditions.

Study 3

Perhaps the most basic assumption of MIM is that perceivers consider the motive of the target person when formulating a trait judgment. The open-ended data from Study 1 indicated that perceivers mentioned motives spontaneously when providing descriptions of the target person's behavior (see also Reeder et al., 2001, 2002). This evidence suggests that the perceptions of motive reported in this article are not artifacts of questionnaires that ask for ratings of motive. Study 3 has the goal of shedding further light on the process of how motives are inferred. Consider the no-choice condition of Studies 1 and 2. If perceivers spontaneously infer a motive to obey in this condition, as we assume, we would expect relatively fast response times to answer a question about obedience. Evidence of this sort would suggest that the motive was precomputed and accessible to perceivers. Study 3 investigated this possibility.

Study 3 investigated a second process-related issue that is relevant to the suspicion model. The suspicion model assumes that perceivers tend to suspend judgment in the ulterior-motive condition. It follows, then, that when perceivers are asked a question about the helpfulness of the target, those in the ulterior-motive condition should display longer response times than those in the free choice or no-choice conditions.

Finally, Study 3 had the goal of extending the generality of the research reported in Studies 1 and 2. One issue is that the previous studies examined inferences about helpful and nonhelpful behavior across separate experiments. Stronger conclusions could be derived if the type of behavior were varied within the same experimental design. Another issue involves generality across experimental labs with different populations. Study 3 was conducted in the Netherlands and included assessments of the same trait ratings reported in our earlier studies.

Method

Design and participants. Participants were 300 male and female students from the University of Nijmegen, who received the equivalent of $3 for their 20 min of participation. The stimulus materials from Studies 1 and 2 were translated into Dutch for use in this study. All participants were native Dutch speakers. While watching a computer screen, participants were randomly assigned to read one of three descriptions of the situation (free choice, no choice, or ulterior motive) and one of two descriptions of the target person's behavior (helpful or nonhelpful). The computer recorded participants' trait ratings of the target person and response times.

Procedure. The experiment was introduced as a study of how people perceive others. Participants were told that they were to read a short story and then answer a few questions about their impression of the main character. The experiment started with a practice round to familiarize participants with responding quickly but accurately. In the practice round, six questions were asked that could all be answered with a "yes" or "no" response. Participants were told that they could respond by pressing the *a* key to indicate "no" or the *6* key to indicate "yes." Before the practice round started, participants were instructed to keep their left and right index fingers above the indicated keys. Practice round questions included the following: "Do you study psychology?" "Do you think it is hot today?" and "Is Bergen the capital of Norway?". Questions remained on screen until one of the two keys was pressed. After the practice round, participants received feedback on their average response time. Fast participants (average response time faster than 900 ms) were asked to devote more attention to the questions. Slow participants (average response time slower than 3 s) were asked to try to respond faster.

After reading about the situation and the target person's behavior, all participants were asked to respond to a series of *yes–no* questions, includ-

[2] As in Study 1, mediational analyses indicated that the influence of situational attribution on dispositional inference was either mediated or partially mediated by inferences about the motives of selfishness and obedience (Kenny et al., 1998).

Table 5
Judgments About Helping and Nonhelping Behavior as a Function of Type of Behavior and Situation: Study 3

	Helping behavior			Nonhelping behavior		
Measure	Free choice	No choice	Ulterior motive	Free choice	No choice	Ulterior motive
Helpfulness						
M	4.35_b	4.27_b	3.16_a	2.08_a	3.38_b	2.35_a
SD	0.56	0.67	0.82	0.79	0.90	0.74
Obedience						
M	3.44_a	4.28_b	3.48_a	2.27_a	4.28_c	3.06_b
SD	0.85	0.72	0.81	0.84	0.68	1.01
Selfishness						
M	1.81_a	1.63_a	3.28_b	2.98_b	1.87_a	2.96_b
SD	0.93	0.63	0.99	1.11	0.71	1.09

Note. *n*s ranged between 47 and 52 in each condition. Means in each behavior condition that do not share a subscript are significantly different from one another.

ing questions about whether the target person was helpful or obedient.[3] The order of these questions was counterbalanced. Following the *yes–no* questions, participants were asked to rate their agreement that the target person possessed a number of traits, including the traits of being helpful, obedient, and selfish. These ratings were made on 5-point scales, in which higher ratings indicated stronger agreement that the target was characterized by the trait. These trait-rating questions were presented in random order. Response times to the *yes–no* questions were measured in milliseconds, with an accuracy of 16.67 ms.

Results

Perceptions of helpfulness, obedience, and selfishness. In general, the trait ratings replicated those from the earlier studies. Because of the large number of means being compared, Newman–Keuls post hoc tests were used separately for the helpful-behavior and nonhelpful-behavior conditions. As shown in Table 5, ratings of helpfulness within the helpful-behavior condition were significantly lower in the ulterior-motive condition than in the free-choice and no-choice condition, indicating the presence of discounting in the ulterior-motive condition. This finding is supportive of both MIM and the suspicion model. Within the nonhelping conditions, however, the strongest discounting occurred in the no-choice condition, in which ratings of helping were significantly higher than in the free-choice and ulterior-motive conditions. This pattern supports MIM and is inconsistent with the suspicion model. In addition, unlike the results of Study 2, there was no significant evidence of discounting in the ulterior-motive condition (relative to the free-choice condition). Overall, then, the data were quite supportive of MIM and offer only mixed support for the suspicion model.

In general, ratings of obedience and selfishness were as expected. Across both levels of helpful behavior, ratings of obedience were significantly higher in the no-choice condition than in the free-choice and ulterior-motive conditions. Within the helpful-behavior condition, ratings of selfishness were significantly higher in the ulterior-motive condition than in the free-choice and no-choice conditions. Within the nonhelpful-behavior condition, however, ratings of selfishness were significantly higher in both the ulterior-motive condition and the free-choice condition than in the no-choice condition. In sum, although this study used a new method of stimulus presentation and involved participants in a different country, the major results were in line with Studies 1 and 2.

Response time for decisions about helping and obedience. Preliminary analyses of the *yes–no* responses revealed that the order of the two measures did not interact significantly with either the situation or the type of behavior. Consequently, the order factor was dropped from the analyses. Once again, Newman–Keuls tests were conducted separately at each level of behavior. Decisions about obedience provided support for the main prediction of MIM. As shown in Table 6, participants were significantly quicker to make a decision about obedience in the no-choice condition than in the free-choice and ulterior-motive conditions. This finding supports a crucial assumption of MIM: Inferences about the motive of obedience were apparently highly accessible to perceivers in the no-choice condition.

Evidence was also obtained in support of the suspicion model. Within the helpful-behavior condition, participants were significantly slower to make decisions about helpfulness in the ulterior-motive condition than in the free-choice or no-choice conditions. This pattern supports the notion that perceivers engaged in more sophisticated attributional processing in the ulterior-motive condition. In line with Fein's (1996) reasoning, perceivers in this condition may have been considering alternative hypotheses, resulting in extended response time. Within the nonhelpful conditions, however, no significant differences in response time were observed.

From the standpoint of the suspicion model, the reason that an ulterior motive leads to greater discounting is because it encourages more sophisticated attributional processing. As described above, in the helpful-behavior conditions, response time was indeed significantly longer in the ulterior-motive condition, suggesting that perceivers engaged in more sophisticated processing. In contrast, MIM suggests that the reason that an ulterior motive leads to greater discounting is that the content of the inferred motive

[3] The procedure of Study 3 did not measure response time for selfishness but instead measured response time for the trait of calculating. This substitution proved to be unfortunate, however, as the data from this latter trait were not germane to this article and are not reported.

Table 6
Response Time (in Seconds) as a Function of Type of Behavior and Situation: Study 3

	Helping behavior			Nonhelping behavior		
Measure	Free choice	No choice	Ulterior motive	Free choice	No choice	Ulterior motive
Helpfulness						
M	1.25_a	1.21_a	1.72_b	1.73_a	1.76_a	2.04_a
SD	0.44	0.32	0.72	0.60	0.74	0.72
Obedience						
M	2.22_b	1.44_a	2.14_b	2.22_b	1.43_a	2.14_b
SD	0.89	0.49	0.98	0.94	0.36	0.81

Note. *n*s ranged between 45 and 52 in each condition. Means that do not share a subscript are significantly different from one another.

may be inconsistent with other inferences that perceivers draw about the target person. For example, an inference about selfishness in the ulterior-motive condition is inconsistent with an inference about helpfulness. Although these explanations (process vs. content) are not mutually exclusive, it is nevertheless of interest to determine whether the processing explanation can fully explain differences in ratings of helpfulness. To examine this possibility, we analyzed helpfulness ratings within the helpful-behavior condition, controlling for response time in an analysis of covariance (ANCOVA). In the ANCOVA, the effect of the covariate (response time) was marginally significant, $F(1, 146) = 3.53$, $p = .06$. The effect of the situation (free choice vs. no choice vs. ulterior motive) remained highly significant in this analysis, $F(2, 146) = 31.04$, $p < .01$. Thus, to the extent that response time can be taken as a marker for increased attributional processing, a processing explanation is not sufficient to account for ratings of helpfulness.

Discussion

Study 3 extended support for MIM in several important respects. First, although this study used a new method of stimulus presentation and involved participants in a different country, the trait ratings closely paralleled the findings of our earlier studies. Of greater importance, the response time analyses supported MIM's assumption that perceivers tend to focus on the motive of obedience in the no-choice condition. We assumed that this motive would be highly accessible to perceivers in this condition. Indeed, perceivers were quicker to make a decision about obedience in the no-choice condition than they were in the remaining conditions. Finally, although response time for the trait of helpfulness was elevated in the ulterior-motive condition of the helpful-behavior condition (as predicted by the suspicion model), analysis of covariance indicated that differences in the extent of attributional processing cannot fully explain the trait ratings of helpfulness.

General Discussion

The research in this article broadens the study of person perception in three important respects. First, in contrast to most theories of dispositional inference that focus on a single trait inference about a target person, the present studies suggest a multiple inference process. That is, perceivers infer the motives for intentional behavior and, in the process, appear to integrate those perceptions with other trait inferences about the target. Second, the effect of perceiving a motive may go beyond simply increasing the extent of attributional processing (Fein, 1996, 2001). The content of the inferred motive is important as well. For instance, perceivers who thought that a target's helping behavior reflected an obedience motive perceived the target as having a more helpful disposition than did perceivers who attributed the same behavior to a selfish motive. Finally, under some circumstances at least, dispositional inferences are more strongly related to inferences about specific motives than to global causal attributions or perceived base rates. For example, perceivers in both the no-choice and ulterior-motive conditions of Studies 1 and 2 made strong causal attributions to the situation. Yet the different motives that were inferred in these two conditions led to very different inferences about the target's dispositional level of helpfulness.

Single Inference Models Versus MIM

In contrast to MIM, most models of dispositional inference give primary attention to inferences about a single trait within the target person (Gilbert, 1998; Krull, 1993; Reeder, 1993; Trope, 1998). According to these models, inferences about the focal trait include both relatively automatic aspects (identifying or categorizing the behavior in terms of the focal trait) and relatively controlled aspects (making an adjustment to the initial trait inference to reflect the influence of situational forces). A major advantage of these models is that they provided an elegant framework for studying the interplay of automatic and controlled components of the process. Yet, in focusing on a single inference, these models tend to overlook some of the rich complexity of everyday social perception. Perceivers' impressions about a target person are multifaceted, composed of inferences about goals, motives, and traits (Idson & Mischel, 2001; Mischel & Shoda, 1995; Read, 1987; Read & Miller, 1993). In the present studies, for example, inferences about a target's dispositional level of helpfulness are comprehensible only when viewed in the context of inferences about motive-related traits such as obedience and selfishness. From the standpoint of MIM, inferences about motive are the glue that holds the impression together, allowing for a coherent impression of intentional behavior (Malle, Knobe, O'Laughlin, Pearce, & Nelson, 2000; Read & Miller, 1993).

Although the research in this article concentrated on inferences about obedience and selfishness, the analysis offered by MIM is

not limited to inferences about only these two motives. In general, the particular inferences that are made depend on both the type of situation and the nature of the behavior observed. For example, consider aggressive behavior. Depending on the situation surrounding the aggression, perceivers may infer a variety of motives including revenge, self-defense, and personal gain, which are then integrated with other trait inferences about the target (Reeder et al., 2002). Nevertheless, we believe that the motives investigated in this article—obedience and selfishness—may be especially common in everyday interactions (Milgram, 1974; Miller, 1999). Moreover, such motives are particularly relevant to the literature on dispositional inference, in which manipulations are often similar to the no-choice condition (e.g., Jones & Harris, 1967) or to the ulterior-motive condition (e.g., Fein, 1996; Hilton et al., 1993) of our research.

Extra Processing Versus Motives as Content

Research by Fein (2001) demonstrated that an ulterior motive leads to a state of suspicion that is accompanied by an increased level of attributional processing. As a result of this more sophisticated processing, the suspicion model holds that perceivers are more likely to use the discounting principle when making dispositional inferences (Fein, 1996). According to the model, then, perceivers suspend judgment about the target in the presence of an ulterior motive. The research in this article contributes to this analysis by pointing out that the content of an inferred motive is important as well. For example, perceivers who interpreted a target's helping behavior as motivated by obedience tended to see that behavior as reflecting a very helpful disposition. In contrast, perceivers who interpreted that same behavior as being motivated by selfish ambition tended to see the target as much less helpful.

The helpful-behavior conditions of Studies 1 and 3 provide some support for the predictions of the suspicion model. Perceivers discounted their ratings of helpfulness in the ulterior-motive condition, relative to the free-choice and no-choice conditions. Further, in Study 3, perceivers took longer to respond in the helpful behavior/ulterior-motive conditions than in the remaining conditions, suggesting that perceivers were engaging in greater attributional processing (Fein, 2001). From another angle, however, it is less clear that perceivers suspended judgment about the target in the ulterior-motive condition. Although perceivers may have suspended judgment about the trait of helpfulness, the open-ended responses (from Study 1) and the relatively extreme trait ratings of selfishness (in all three studies) suggest that perceivers were quite willing to infer a selfish trait. Thus, future research on the suspicion model might specify the particular traits on which judgments are suspended (see Sabini, Siepmann, & Stein, 2001, for a related perspective).

MIM also gave a good account of the data in the helpful-behavior conditions of these studies. Inferences about the (positive) motive of obedience were highest in the no-choice condition, whereas inferences about the (negative) motive of selfishness were highest within the ulterior-motive condition. In line with the logic of MIM, these inferences about motive were apparently integrated with inferences of helpfulness. Specifically, the emphasis on obedience in the no-choice condition kept ratings of helpfulness at an elevated level, whereas the emphasis on selfishness in the ulterior-motive condition tended to lower ratings of helpfulness. Multiple regression and mediation analyses supported this line of reasoning.

The nonhelping-behavior conditions of Studies 2 and 3 allowed for a clearer test between the suspicion model and MIM. According to the suspicion model, perceivers who are confronted with an ulterior motive for nonhelping behavior should engage in relatively extensive processing, leading to a suspension of judgment. Consequently, they should provide relatively high ratings of helpfulness in the ulterior-motive condition. In sharp contrast, MIM draws attention to inferences about obedience and selfishness. Inferences about these motive-related traits should have been integrated with judgments about Sara's helpfulness. In the no-choice condition, we expected that perceivers would attribute Sara's nonhelping to obedience. Because obedience is likely to be viewed positively in this context, we also expected that ratings of helpfulness would be high in the no-choice condition. In the ulterior-motive condition, however, we expected that perceivers would infer a selfish motive for the nonhelping behavior. Consequently, we expected that ratings of helpfulness would be low in the ulterior-motive condition. In both experiments that included nonhelpful behavior, the data offered strong support for MIM's predictions, whereas the predictions of the suspicion model received only mixed support.

Causal Attribution in Dispositional Inference

Even a cursory glance at past research on the link between causal attribution and dispositional inference reveals a troubled past (Gawronski, 2003b; Hamilton, 1998; Krull, 2001; Sabini et al., 2001; Solomon, 1978). Early on, Ross (1977) noted that causal attribution to situational and dispositional causes are inseparable. For example, the statement "Jack bought the house because it is secluded" appears to imply a situational cause. But the statement also implies that Jack values seclusion—a dispositional cause. Nevertheless, Ross (1977, p. 180), and most subsequent theorists, held to the notion that dispositional inferences about a target person are discounted to the extent that situational forces influenced the behavior. This direct trade-off between situational causality and dispositional inference can be represented in terms of Kelley's (1973) multiple sufficient cause schema: If the situation is viewed as sufficient to account for the behavior, there is no need to infer anything special about the target's dispositions.

Although the trade-off between situational causality and dispositional inference underlies the logic of most theories of dispositional inference (Gilbert, 1998), the empirical literature documents many violations of this trade-off (Krull, 2001; McClure, 1998; Reeder, 1993). Early attribution research indicated that perceivers drew correspondent dispositional inferences from a target person's behavior, even when strong situational forces apparently controlled the behavior (Jones & Harris, 1967) and even when perceivers explicitly acknowledged the strength of those situational forces (Johnson et al., 1984). In fact, much of the literature on dispositional inference better fits the multiple necessary cause schema described by Kelley (1973): Both situational causes and dispositional causes are thought necessary for the occurrence of behavior (McClure, 1998). For example, perceivers seem to operate on the assumption that, regardless of the situational forces surrounding the creation of an essay, a strong essay in support of Fidel Castro could be written only by a supporter of Castro

(Gawronski, 2003a; Morris & Larrick, 1995; Reeder, Fletcher, & Furman, 1989).

Reeder and Brewer (1979; Reeder, 1993) expanded on the logic of Kelley's multiple necessary cause schema, proposing that trait–behavior expectations determine the trade-off between situational attribution and dispositional inference. As one example, they proposed that perceivers expect moral behavior from persons with both moral and immoral traits, but immoral behavior is expected only from persons with an immoral trait. A consequence of these trait–behavior expectations is that immoral behavior can be highly diagnostic of the target's dispositional qualities (Reeder, 1993; Skowronski & Carlston, 1989) and situational forces surrounding the behavior are more or less irrelevant. For instance, although perceivers might attribute a teenager's participation in a robbery to social pressure from peers, they may still attribute low morality to the teen (Reeder & Spores, 1983). In contrast, behaviors that exemplify high morality, such as giving to charity, are often assumed to reflect the influence of situational forces alone (e.g., pressure from the boss to make a donation). For highly moral behavior, then, the analysis in terms of trait–behavior relations implies that situational attribution and inferring a highly moral disposition may indeed be negatively related.

The research in this article contributes to our knowledge of dispositional inference by incorporating perceived motives in the analysis. We found that global causal attributions for (moral) helpful behavior were not consistently related to dispositional inferences of helpfulness. In contrast, specific inferences about motive were strongly related to dispositional inferences. In addition, when perceivers displayed a trade-off between situational attribution and dispositional inference (as predicted by most attribution theories), inferences about motive played a mediating role. By taking account of perceived motives, researchers can make more precise predictions about how situational attributions will affect dispositional inferences for intentional behaviors. In this respect, one might say that the perception of motive is the active ingredient in a situational attribution.

Finally, a focus on motive allows researchers to recognize the important insight that behavior is always an interaction between situation and disposition (Lewin, 1935; Sabini et al., 2001). Rather than viewing behavior as a product of either situational forces or dispositional forces, the present research suggests that perceivers typically see both forces at work. Recall Ross's (1977) example of situational causality in which a person bought a house because it is secluded. The present perspective implies a perceiver who recognizes the importance of the secluded setting and the person's motivation to find seclusion. Thus, the situational force holds power only to the extent that the perceiver believes the person is motivated to respond to it. In this sense, the perceiver resembles a naive Lewinian, who sees behavior as inextricably related to both situational and dispositional forces.

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