

Incorporating *If . . . Then . . .* Personality Signatures in Person Perception: Beyond the Person–Situation Dichotomy

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Three studies investigated conditions in which perceivers view dispositions and situations as interactive, rather than independent, causal forces when making judgments about another's personality. Study 1 showed that perceivers associated 5 common trait terms (e.g., *friendly* and *shy*) with characteristic *if . . . then . . .* (if situation *a*, then the person does *x*, but if situation *b*, then the person does *y*) personality signatures. Study 2 demonstrated that perceivers used information about a target's stable *if . . . then . . .* signature to infer the target's motives and traits; dispositional judgments were mediated by inferences about the target's motivations. Study 3 tested whether perceivers draw on *if . . . then . . .* signatures when making judgments about Big Five trait dimensions. Together, the findings indicate that perceivers take account of person–situation interactions (reflected in *if . . . then . . .* signatures) in everyday explanations of social behavior and personality dispositions. Boundary conditions are also discussed.

Keywords: social perception, intuitive interactionism, person schemas, attribution, personality traits, person–situation interactions

Of all of the lay causal schemas that Kelley (1972) described, the most interesting has also been the most neglected. Unlike simple or additive schemas, *complex* causal schemas, according to Kelley, depict personality dispositions and situations as forces that exert interactive, mutually dependent effects on behavior—that is, a disposition that manifests itself differently depending on the situation, or a situation that affects people differently depending on their dispositions. Although Kelley speculated that complex schemas undoubtedly exist in lay personality theories, research in this area—including Kelley's own empirical work—has primarily focused on simple and additive schemas, in which person and situation causes are treated as independent (Gilbert, 1998; Kelley, 1972; Krull, 1993; Trope, 1986; but see Malle, 1999, and Reeder, Kumar, & Hesson-McInnis, 2002, for exceptions).

The lack of attention to complex schemas for many years is understandable, given the separation of person from situation in traditional conceptions of personality (cf. Cervone, 2004; Mischel,

2004). Over the past decade, however, this long-standing person–situation dichotomy has been challenged by a notable development in the personality literature that is just beginning to impact research and thinking in person perception. Namely, it has been discovered that interactive effects between dispositions and situations are common, everyday expressions of personality (Mischel, 2004; Mischel & Shoda, 1995). At the behavioral level, individual differences are expressed not just in the overall frequency of a given behavior but also in stable intraindividual *patterns of variability* that show a distinctive profile of *if . . . then . . .* situation–behavior relationships (e.g., Jane is more friendly than others if *a* but less friendly than others if *b*; Shoda & Lee-Tiernan, 2002; Shoda, Mischel, & Wright, 1994). These “signatures of personality” provide a route for observers, be they professional scientists or lay perceivers, to infer the individual's underlying processing dynamics: the person's goals, values, motives, and beliefs, all interconnected in an associative network whose activation is guided and constrained by features of the situation (e.g., Plaks, Shafer, & Shoda, 2003; Shoda, 1999).

Converging research in person perception has demonstrated that for traits as diverse as friendliness, aggressiveness, and “slimness,” perceivers not only expect, but can easily interpret, interactive effects between dispositions and situations (Cantor & Mischel, 1979; Shoda & Mischel, 1993; Vonk, 1998). Perceivers have been known to suspend judgment while they gather information about how the actor responds to different types of situations (Hilton, Fein, & Miller, 1993), and they intuitively hedge their trait statements with situational qualifiers (Wright & Mischel, 1988). They resist Likert scales that force an either–or decision between person and situation causes (Malle, Knobe, O'Laughlin, Pearce, & Nelson, 2000), and they draw on characteristic situation–behavior

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patterns to describe those with whom they are close (Chen, 2003; Chen-Idson & Mischel, 2001). In sum, research is just beginning to uncover the full prevalence and significance of person–situation interactions in folk theories of mind (Malle, 2001).

The discovery of *if . . . then . . .* signatures of personality, and the change in the model of personality that it demands (e.g., Mischel & Shoda, 1995, 1998; Mischel, Shoda, & Mendoza-Denton, 2002), now provides the necessary theoretical framework to understand and empirically unpack the notion of complex schemas mentioned by Kelley 30 years ago but still largely unexplored in person perception theory and research. In this article, we examine the proposition that *if . . . then . . .* signatures are implicitly encoded in many of the trait terms and concepts perceivers use to describe personality. The present research demonstrates the important role of such signatures—and the motivational dynamics that they signal—in person perception, making it clear that lay theories of traits go much beyond the classic person–situation dichotomy.

Perceivers’ Intuitive Theories of Traits

Traditional attribution theories postulate that perceivers adopt an additive (i.e., “main effects”) schema of dispositions and situations (Gilbert, Pelham, & Krull, 1988; Jones & Davis, 1965; Krull, 1993; McArthur, 1972; Trope, 1986; see Figure 1A). From this perspective, a primary task for perceivers is to *factor out* situational influences on behavior when forming impressions about personality. Given a single instance of behavior, perceivers are likely to use the discounting principle to weigh the relative

contributions of dispositions and situational presses (Jones & Davis, 1965; Kelley, 1967). If multiple actions are observed over time and across situations, on the other hand, an additive schema would suggest that “the average, the maximum, or even the minimum degree of [behavior] provides clues to the level of the stable causal factor” (Kelley, 1972, p. 159). Although they differ considerably from one another in form, discounting (Jones & Harris, 1967), averaging (Buss & Craik, 1983), and maximum/minimum (Reeder, 1993) strategies share a common aim: to determine the effect of personality dispositions on behavior by first removing situational effects.

Despite the attention devoted to additive schemas in person perception, a growing number of researchers have argued that such schemas may not adequately represent the perceiver’s intuitive model of social behavior (Malle et al., 2000; Rosati et al., 2001; Shoda & Mischel, 1993; see Figure 1B). Developmental psychologists point out that often the basic query at the heart of perceivers’ attempts to understand one another is not “person or situation?” but rather “which intention, what aim?” (Flavell, 1999; Gopnik & Meltzoff, 1997; Rosati et al., 2001). Likewise, a growing body of research suggests that many trait descriptors capture not just a set of trait-correspondent behaviors but also an implicit lay theory about the beliefs, values, and goals that motivate a person’s characteristic behavior patterns (Fletcher, 1984; John, 1986; Read, 1987; Read, Jones, & Miller, 1990; Trope, 1989). We propose that when people concern themselves with questions of motive and intention (and the dispositions that underlie those intentions), they draw on a target’s characteristic *if . . . then . . .* pattern of responses

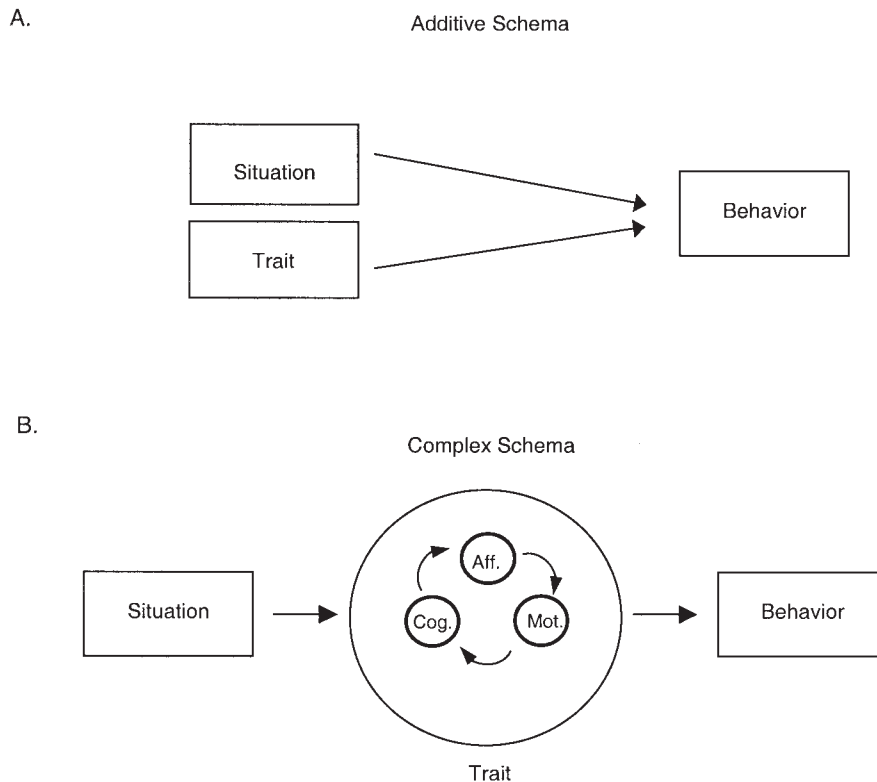


Figure 1. Two lay causal schemas. Cog. = cognition; Aff. = affect; Mot. = motivation.

to different situational incentives. For example, how does Joan respond to monetary incentives versus relational incentives? Here situational variation cannot be distinguished from dispositional variation: Dispositions are revealed through situations, not despite them (Shoda, Mischel, & Wright, 1989, 1993).

Perceivers consider a friendly person, for example, to be someone whose social behaviors stem specifically from a genuine concern for others and not from a self-serving desire to ingratiate (Hilton et al., 1993; Jones, 1964; Vonk, 1999). A person who genuinely cares for the well-being of others might be expected to behave sympathetically toward a man who makes a socially awkward gaffe at a party but to display a distinct *lack* of sympathy toward a woman who amuses her friends by ridiculing that man. This person is expressing a fundamental friendliness in both situations, although with opposite behavioral manifestations, and it is the pattern as a whole that distinctively captures the friendly dynamic; a person pursuing social advancement would be expected to respond in exactly the reverse fashion. We postulate, therefore, that when perceivers associate a trait with a set of specific underlying motives (genuine caring, desire for advancement, and so forth), they will expect it to be manifested in a stable pattern of differential responses to situations: in short, an *if . . . then . . .* profile.

It is precisely by observing behavior under different situational contingencies that dispositions are most clearly revealed, whether to the lay perceiver or to the psychological researcher studying the nature and expressions of personality dispositions (Mischel, 2004; Mischel & Shoda, 1995, 1998; Shoda & Mischel, 1993). In daily life, it is often not just one person-in-situation episode that helps disambiguate the disposition (cf. Trope, 1986), but rather a pattern of such episodes. The question shifts from “person or situation?” to “which situation, and why?” (cf. Reeder et al., 2002; Reeder, Vonk, Ronk, Ham, & Lawrence, 2004; Sabini, Siepmann, & Stein, 2001). In such cases, perceivers should draw dispositional inferences not because they factor the situation out, but because they factor the situation *in*.

The Present Research

We hypothesize that perceivers’ intuitive understandings of the motivational dynamics of traits will lead them to expect interactions between dispositions and their associated situational triggers, in the form of *if . . . then . . .* profiles. Specifically, we propose that (a) when perceivers are provided with traits associated with distinctive motivations, they will generate unique *if . . . then . . .* profiles for them; (b) when shown these *if . . . then . . .* profiles, perceivers will be able to supply the appropriate trait labels; and (c) the link between *if . . . then . . .* profile information and trait judgments will be mediated by perceivers’ inferences about the target’s motivations. In addition, we explore the possibility that some trait judgments do not require motivational inferences and, as such, may not be sensitive to *if . . . then . . .* profile information.

In Study 1, participants were provided with a trait label (e.g., “friendly” or “shy”) and asked to predict the target’s feelings and behavior across a range of situations. From these data, it was possible to construct the expected *if . . . then . . .* “profile” for each trait. If perceivers held additive schemas of the dispositions, these profiles would reflect main effects of disposition and situation but no interaction effects. A significant interaction between disposition

and situation, however, would provide evidence of complex trait schemas. Mediation analyses further allowed us to investigate the extent to which motivational inferences could account for the link between dispositions and profiles, as predicted.

Study 2 tested the hypothesis that, when shown profiles similar to those of Study 1, perceivers would draw conclusions about a target’s traits, and they would do this by forming impressions of the target’s underlying motivations. In this study, we presented participants with targets who displayed the same number of sociable and unsociable behaviors but in different *if . . . then . . .* patterns (see Plaks et al., 2003, and Vonk, 1998, for similar paradigms). Participants rated several motivational explanations for the targets’ behavior and then rated the targets’ personality traits. Despite the fact that the targets did not differ in the average, maximum, or minimum level of behavior displayed, we expected perceivers to hone in on the *if . . . then . . .* profiles, perceive the targets to be acting for different reasons, and, as a result, judge them to have different underlying dispositions.

In Study 3, perceivers were presented with the same profiled targets as in Study 2; this time, however, they were asked to make personality inferences about two Big Five dimensions: agreeableness and extraversion. Our aim was to test whether even broad trait constructs such as the Big Five are sensitive to *if . . . then . . .* profile information and can be understood within the motivational framework proposed here.

Taken together, the three studies tested the proposition that lay perceivers readily employ complex trait schemas that connote *if . . . then . . .* profiles and that they do so guided by an implicit theory of the motivations that govern these disposition–situation interactions. Collectively, the studies document a folk psychological phenomenon that is intuitively compelling and readily predicted by a model that makes person–situation interaction central in its conception of personality, yet is difficult to explain within the framework and language of traditional attribution models (Malle et al., 2000; Shoda & Mischel, 1993).

Study 1

Study 1 was designed to show that perceivers hold complex *if . . . then . . .* schemas of diverse common trait concepts and to probe the hypothesis that implicit motivational theories are at the core of such schemas. Participants in this study were given trait information about a female target and asked to predict how she would feel and act in different interpersonal situations. For the present investigation, we selected five traits relevant to social warmth (to provide a common behavioral dimension for comparison) and marked by different social motives: *friendly*, *shy*, *kiss-up*, *flirtatious*, and *unfriendly*. Consistent with previous research, we anticipated that perceivers might expect broad overall differences in the average social warmth displayed by targets with different traits (Buss & Craik, 1983). Similarly, perceivers might expect situations to differ in the extent to which they generally “pull” for social warmth (Heider, 1958). This study aimed to demonstrate, however, that in addition to these main effects of traits and situations, perceivers would also expect characteristic trait–situation *interactions*. More specifically, if participants expect traits to be motivated differently by the various situational features, each trait (including the broad dispositions *friendly* and *unfriendly*) should be associated with a distinctive *if . . . then . . .* profile.

Overall, the design of Study 1 allowed us to explore the richness of perceivers' theories of traits, situations, motivation, and behavior and to highlight the significance of complex interactionist schemas in everyday social explanations.

Method

Participants. One hundred forty-nine native-English-speaking college students (83 female; *M* age of sample = 21.4 years) participated in this study for either course credit or cash reimbursement. All results remained similar when analyses were conducted controlling for participants' gender.

Materials and procedure. On arrival, participants were randomly assigned to one of five target conditions and were given a booklet corresponding to the appropriate condition. The first page of each booklet instructed participants to imagine a fictional college student named Jane who was a friendly person, a kiss-up, a flirtatious person, a shy person, or an unfriendly person. The booklet then instructed participants to think about what it means to have the disposition in question and to spend a few moments imagining what Jane might be like as a person.

In the subsequent pages of the booklet, participants were asked to predict how Jane would feel and behave in six different interpersonal situations: "with peers," "with professors," "with women," "with men," "with people she is meeting for the first time," and "with people she has known a long time." The presentation order of the interpersonal situations was counter-balanced across participants within conditions. For each interpersonal situation, participants were initially instructed to predict, on an 11-point scale, how warmly Jane would behave in that situation. Participants were

then asked to make a series of motivation ratings regarding how Jane would feel in that interpersonal situation.

Each of three motivations—feelings of caring, goals to impress, and feelings of security—was assessed with two items rated on 11-point scales. As an example, one of the items assessing feelings of caring asked participants to rate the target's feelings in the situation on a scale ranging from -5 (*Jane feels basically cold and indifferent toward . . .*) to 5 (*Jane feels genuine warmth and caring toward . . .*). Once participants had provided behavior and motivation ratings for all six interpersonal situations, they were thanked and debriefed.

Results

Expected behavior patterns for targets. As shown in Figure 2, participants clearly expected each of the five targets to display distinctive *if . . . then . . .* profiles. These behavior rating data were analyzed in a univariate repeated-measures analysis of variance (ANOVA) of five (target-trait) between-subjects conditions and six (interpersonal-situation) within-subject conditions.

Participants' ratings showed a significant effect of target trait, $F(4, 144) = 111.3, p < .001$, such that across all situations, friendly targets ($M = 3.49, SE = 0.18$), kiss-up targets ($M = 2.64, SE = 0.23$), and flirtatious targets ($M = 2.65, SE = 0.23$) were expected to behave more warmly than were shy targets ($M = -0.19, SE = 0.23$) or unfriendly targets ($M = -1.14, SE = 0.18$). There was also a main effect of situation, $F(5, 720) = 52.5, p <$

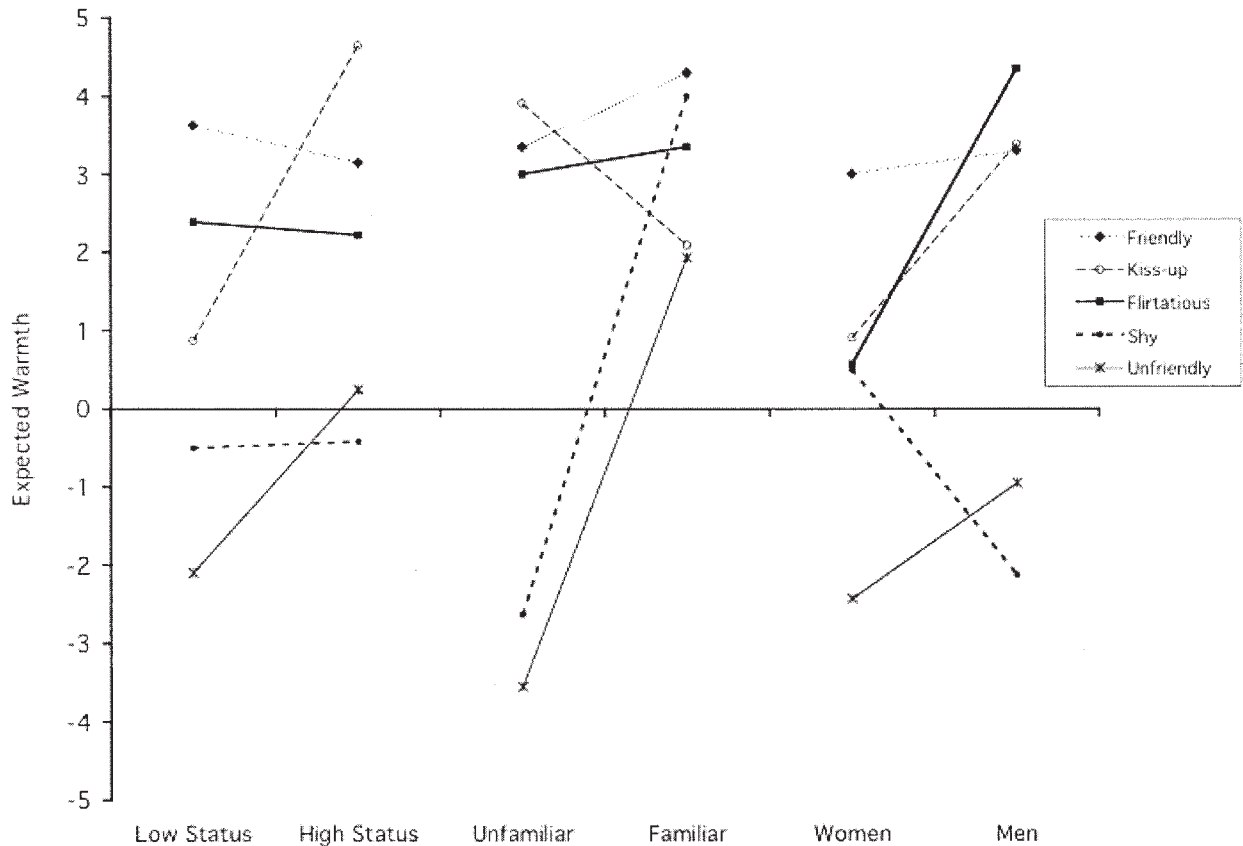


Figure 2. Study 1 participants expected targets with different traits to display different *if . . . then* profiles of warmth across situations.

.001. Participants expected that, on average, the target would behave more warmly with authorities than with peers ($d = 1.06$, $SE = 0.21$), with men than with women ($d = 1.12$, $SE = 0.19$), and with familiar people than with strangers ($d = 2.32$, $SE = 0.19$).

A significant interaction between target trait and interpersonal situation, $F(20, 720) = 24.1$, $p < .001$, indicated that participants expected the five trait terms to be expressed in distinctive patterns of *if . . . then . . .* variation. Kiss-up targets ($d = 3.78$, $SE = 0.60$, $p < .001$) and unfriendly targets ($d = 2.35$, $SE = 0.38$, $p < .001$) were expected to act more warmly with authorities than with peers. Friendly targets ($d = -0.51$, $SE = 0.18$, $p < .05$), on the other hand, were expected to act more warmly with peers than with authorities.

Participants expected flirtatious targets ($d = 3.78$, $SE = 0.49$, $p < .001$) and kiss-up targets ($d = 2.48$, $SE = 0.52$, $p < .001$) to act more warmly with men than with women. Unfriendly targets were expected to display the same pattern, although to a lesser extent ($d = 1.48$, $SE = 0.54$, $p < .01$). Conversely, participants expected shy targets to act more warmly with women than with men ($d = -2.63$, $SE = 0.49$, $p < .001$).

Finally, participants expected shy targets ($d = 6.63$, $SE = 0.43$, $p < .001$) and unfriendly targets ($d = 5.48$, $SE = 0.44$, $p < .001$) to act more warmly with familiar people than with strangers. They expected friendly targets to display the same pattern, to a lesser extent ($d = 1.00$, $SE = 0.23$, $p < .001$). Kiss-up targets, on the other hand, were expected to act more warmly with strangers than with familiar people ($d = -1.83$, $SE = 0.47$, $p < .01$).

Expected motivations for targets. The rating data for each of the three motivations (feelings of caring, desires to impress, and feelings of security) were analyzed in a 5 (target-trait) \times 6 (interpersonal-situation) repeated-measures ANOVA. The mean motivation ratings for each condition are shown in Table 1.

Participants' ratings of the targets' impression management goals showed a main effect of trait, $F(4, 144) = 46.7$, $p < .001$, with participants expecting that friendly targets would generally feel the most caring ($M = 2.93$, $SE = 0.20$) and unfriendly targets would feel the least caring ($M = -1.62$, $SE = 0.20$). There was also a main effect of situation, $F(5, 720) = 91.7$, $p < .001$, with participants expecting that targets would generally feel the most caring with familiar people ($M = 2.88$, $SE = 0.14$) and the least caring with strangers ($M = -0.34$, $SE = 0.15$). Moreover, participants expected traits to interact with situation in the generation of caring feelings, $F(20, 720) = 6.1$, $p < .001$. For example, shy targets were expected to care more for peers than for professors ($d = 0.56$, $SE = 0.21$), whereas unfriendly targets were expected to care less for peers than for professors ($d = -0.77$, $SE = 0.21$).

Participants' ratings of the target's impression management goals showed a main effect of trait, $F(4, 144) = 182.7$, $p < .001$, with participants expecting that kiss-up targets would generally have the strongest goals to impress ($M = 3.04$, $SE = 0.31$) and unfriendly targets would have the weakest goals to impress ($M = -0.95$, $SE = 0.24$). There was also a main effect of situation, $F(5, 720) = 6.1$, $p < .001$, with participants expecting that targets would generally feel the strongest desires to impress professors ($M = 2.94$, $SE = 0.17$) and the weakest desires to impress women ($M = 0.52$, $SE = 0.19$). In addition, participants expected traits to interact with situations in the activation of impression management goals, $F(20, 720) = 9.7$, $p < .001$. For example, they expected friendly targets to want to impress strangers more than familiar people ($d = 2.34$, $SE = 0.45$), and they expected unfriendly targets to want to impress strangers less than familiar people ($d = -2.84$, $SE = 0.53$).

Participants' ratings of the target's feelings of security showed a main effect of trait, $F(4, 144) = 38.6$, $p < .001$, with participants expecting that friendly targets would generally feel the most secure

Table 1
Expected Motivations for Traits: Study 1

Target condition	Situation						Average
	With peers	With professors	With women	With men	With familiar people	With strangers	
Friendly target							
Feelings of caring	2.73	2.82	3.18	1.86	4.40	2.92	2.93
Desires to impress	1.36	2.92	1.85	3.04	0.31	2.68	2.04
Feelings of security	2.80	2.60	3.13	2.28	4.37	2.58	3.00
Kiss-up target							
Feelings of caring	-0.68	-0.10	-0.26	-0.94	0.90	-1.46	-0.43
Desires to impress	1.85	4.04	2.14	2.89	0.85	4.44	3.04
Feelings of security	0.20	0.77	0.33	1.23	1.81	0.57	0.82
Flirtatious target							
Feelings of caring	0.04	1.36	1.70	0.26	3.09	0.13	1.10
Desires to impress	-0.23	4.28	2.82	3.41	1.55	3.64	2.58
Feelings of security	0.65	3.17	2.89	1.12	3.33	1.70	2.14
Shy target							
Feelings of caring	1.57	0.79	1.50	0.94	4.17	0.65	1.60
Desires to impress	1.87	2.35	1.96	2.40	0.88	1.66	1.85
Feelings of security	-1.69	-3.75	-2.56	-2.79	3.51	-3.92	-1.87
Unfriendly target							
Feelings of caring	-2.61	1.60	-2.37	-1.60	1.83	-3.38	-1.62
Desires to impress	-2.34	0.02	-1.71	0.92	0.11	-2.73	-0.95
Feelings of security	-1.07	-1.16	-0.80	-1.19	2.09	-1.56	-0.61

Table 2
Regressing Behavior Predictions on Motivation Inferences: Study 1

Predictor variable	Target				
	Friendly	Kiss-up	Flirtatious	Shy	Unfriendly
Feelings of caring/uncaring	0.41 _a	0.08 _b	0.16 _b	-0.02 _b	0.37 _a
Goals to impress	0.24 _a	0.67 _b	0.49 _c	0.10 _a	0.42 _c
Feelings of security/insecurity	0.27 _{a,b}	0.18 _a	0.38 _b	0.86 _c	0.24 _{a,b}

Note. Values are standardized regression coefficients. Values within a row that do not share a subscript differ significantly at $p < .05$.

($M = 3.00$, $SE = 0.21$) and shy targets would feel the least secure ($M = -1.87$, $SE = 0.27$). In addition, there was a main effect of situation, $F(5, 720) = 12.9$, $p < .001$, with participants expecting that targets would generally feel the most secure with familiar people ($M = 3.03$, $SE = 0.13$) and the least secure with strangers ($M = -0.13$, $SE = 0.17$). Furthermore, participants expected traits to interact with situation in the generation of feelings of security, $F(20, 720) = 12.9$, $p < .001$. For example, flirtatious targets were expected to feel more secure with men than with women ($d = 2.52$, $SE = 0.50$), whereas shy targets were expected to feel less secure with men than with women ($d = -2.06$, $SE = 0.33$).

Mediation analyses. In an attempt to understand how (and whether) participants expected the targets' behaviors to be motivated by the three social motives assessed, we analyzed the data in a repeated measures regression analysis in which motivation inferences were used to predict behavior ratings. The results are summarized in Table 2.

Overall, participants expected the behavior of all five targets to be significantly motivated by feelings of caring, desires to impress, and feelings of security. As hypothesized, participants also expected the strength of these motivational systems to differ between dispositions. Participants expected feelings of caring/uncaring to be particularly strong motivators for friendly ($\beta = .41$) and unfriendly ($\beta = .37$) targets. They expected that the presence/absence of impression management goals would be a strong motivator for kiss-up ($\beta = .67$), flirtatious ($\beta = .49$), and unfriendly ($\beta = .42$) targets. They expected feelings of security/insecurity to be strong motivators for shy targets ($\beta = .86$).

Regression analyses were conducted to ascertain the extent to which motivation inferences mediated the effects of trait, situation, and Trait \times Situation interactions. The results indicated substantial mediation: Motivations mediated 95% of the variability originally explained by the main effect of trait (original $R^2 = .41$, incremental $R^2 = .02$), 88% of the variability originally explained by the main effect of situation (original $R^2 = .08$, incremental $R^2 = .01$), and 80% of the variability originally explained by the Trait \times Situation interaction (original $R^2 = .15$, incremental $R^2 = .03$). These results support the claim that perceivers rely on motivational theories to generate expectations about complex situation-behavior patterns.¹

Discussion

The results of Study 1 demonstrate that perceivers hold complex representations of the five traits under investigation and provide support for the claim that implicit motivational theories underlie

these complex trait schemas. Participants associated all five dispositions with distinctive *if . . . then . . .* profiles, including such broad trait concepts as *friendly* and *unfriendly*. The targets were expected to differ in their affective and motivational experiences across the six interpersonal situations, and, as hypothesized, these expected motivational differences substantially explained the *if . . . then . . .* profiles associated with the dispositions, mediating 95% of the variability originally explained by the main effect of trait, 88% of the variability originally explained by the main effect of situation, and 80% of the variability originally explained by the Trait \times Situation interaction.

The present data provide evidence that trait terms can embody rich motivational theories (Read et al., 1990; Wellman, 1990) and connote characteristic patterns of meaningful *if . . . then . . .* variation (Cantor & Mischel, 1979; Cantor, Mischel, & Schwartz, 1982; Shoda et al., 1989). Significantly, the data also provide preliminary evidence connecting these two findings, suggesting that it is implicit motivational theories that give rise and meaning to the complex behavior schemas associated with trait constructs. The ease with which people are able to think about others in terms of *if . . . then . . .* signatures underscores the need to extend person perception research beyond additive models that dichotomize the person and the situation. It seems fruitful to consider dispositions as revealed by the pattern of situations in which they are expressed, rather than as obscured by situations, in line with contemporary person-situation interaction models of personality.

Study 2

Study 1 demonstrated that perceivers are able to generate complex *if . . . then . . .* profiles for trait terms by imagining how targets with different dispositions might be distinctively and uniquely motivated across different situations. Study 2 aimed to demonstrate the converse: that perceivers are able to move from *if . . . then . . .* profiles to trait constructs, using information about how a target differentially responds to various situations to infer the target's stable motives and dispositions.

¹ An alternative model to consider is that perceivers use expectations of behavior to generate expectations of mental states. As do most investigators of folk theories (Audi, 1993; D'Andrade, 1995; Schank & Abelson, 1977), we theoretically maintain that perceivers are intuitive mentalists rather than intuitive dissonance theorists; that is, perceivers expect that a person will act warmly because she or he desires to make a good impression, *not* that the person will want to make a good impression because she or he has recently acted warmly.

In this study, we investigated how systematic manipulations of a target's *if . . . then . . .* profile of sociable and unsociable behavior would influence perceivers' inferences about the target. Participants viewed information about one of nine targets who displayed the same frequency of sociable and unsociable behaviors, but in different situation-behavior patterns. Three of the targets displayed behavior that varied systematically as a function of the dyadic partner's *status* (e.g., a female target who was always friendly to professors but unfriendly to peers). Another three targets displayed behavior that varied as a function of the partner's *gender* (e.g., a female target who was always friendly to men but unfriendly to women). The remaining three targets displayed behavior that varied as a function of the partner's *familiarity* (e.g., a female target who was always friendly to intimates but unfriendly to strangers). Participants rated these targets on the following trait dimensions: friendliness-unfriendliness, shyness, kiss-upness, and flirtatiousness.

The targets in this study displayed an identical amount of distinctiveness in their behavior (no consensus information was provided, and consistency was equally high in all conditions). Likewise, they displayed identical maximum, minimum, and average behavior levels. If perceivers were to pursue a discounting strategy, they might weight certain situation-behavior combinations less heavily (e.g., social behavior toward authorities or familiar people), but the same logic would then require them to weight the reverse combinations *more* heavily (e.g., unsocial behavior toward authorities or familiar people). Hence, a discounting strategy would not clearly differentiate the friendly-authority target from the friendly-peer target or the friendly-familiar target from the friendly-unfamiliar target.

Accordingly, if social perceivers employed traditional, additive attribution strategies in this paradigm, we would see no differences in their judgments of the profiled targets. Nevertheless, we anticipated that profile manipulations would significantly influence perceivers' impressions of the targets, because the profiles suggest different underlying motivations for the targets' behaviors (Chen, 2003; Fein, Hilton, & Miller, 1990; Plaks et al., 2003; Vonk, 1998). The design of Study 2 allowed an explicit test of these two alternatives. After presentation of the profiled targets, perceivers were asked to indicate the extent to which the target's sociable behavior was caused by either (a) sincere feelings of caring or (b) desires to make a good impression. They were also asked to indicate the extent to which the target's unsociable behavior was caused by either (a) feelings of uncaring or (b) feelings of insecurity. They were then asked to rate the target's traits. This design made it possible to investigate the effect of *if . . . then . . .* profiles on trait judgments and motive attributions and to examine the extent to which motive attributions might mediate the effects of *if . . . then . . .* profiles on trait judgments.

Method

Participants. Two hundred ten English-speaking college students (115 female; *M* age of sample = 23.7 years) participated in this experiment for either course credit or cash reimbursement. All results remained similar when analyses were conducted controlling for participants' gender.

Procedure. On arrival, participants were given a booklet corresponding to one of nine target conditions. They were instructed to work through the booklet at their own pace and contact the experimenter when they had

finished. The first page of each booklet contained impression formation instructions, as follows:

You are about to read 12 stories about a college student named Rene. As you read the stories, ask yourself the question, "what is Rene like as a person?" Once you have read the stories, you will be asked to respond to some questions about Rene.

After these instructions, each booklet presented 12 vignettes about the target, describing six sociable and six unsociable behaviors in different interpersonal situations. The first 10 vignettes were presented in an alternating sequence of sociable and unsociable behaviors. After these 10 vignettes, the booklets informed participants that they would read 2 more vignettes about the target, only this time they would answer questions about why the target behaved as she did in each story. Participants then read and rated motivation attributions for the final sociable vignette and unsociable vignette. The order of these final sociable and unsociable vignettes was counterbalanced across participants within conditions.

After making motivation attributions for the final two vignettes, participants were asked to judge the target's personality dispositions. They were then thanked and debriefed.

Design and materials. Nine female targets were created for this study. Each target was portrayed in 12 vignettes, 6 of which described sociable behavior and 6 of which described unsociable behavior. Three of the targets displayed behaviors that varied systematically across the dyadic partner's status. The friendly-authority target displayed six sociable behaviors toward authority figures and six unsociable behaviors toward peers. The friendly-peer target displayed six sociable behaviors toward peers and six unsociable behaviors toward authorities. The friendly-random (status) target served as the control in this set, displaying three sociable and three unsociable behaviors toward both peers and authorities.

Three of the targets displayed behaviors that varied systematically across the dyadic partner's gender. The friendly-female target displayed six sociable behaviors toward women and six unsociable behaviors toward men. The friendly-male target displayed the reverse pattern. The friendly-random (gender) target served as the control in this set, displaying three sociable and three unsociable behaviors toward both women and men.

The final three targets displayed behaviors that varied systematically across the dyadic partner's familiarity. The friendly-familiar target displayed six sociable behaviors toward friends and acquaintances and six unsociable behaviors toward strangers. The friendly-unfamiliar target displayed the reverse pattern. The friendly-random (familiarity) target served as the control in this set, displaying three sociable and three unsociable behaviors toward both familiar and unfamiliar partners.

The same 12 vignettes were used to create all nine of the target profiles. For each vignette, the setting and the behavior remained constant; only the characteristics of the dyadic partner were altered. A sample sociable vignette is as follows:

On the first [last] day of her English course, Rene has arrived early. As she sets down her bag and takes out her books, her new [longtime] professor [classmate] looks up from her [his] notes, smiles, and says, "So how did you like Dostoyevsky?" "I loved it," Rene says, "I could'nt put it down! Especially the part where Alyosha gets the letter. Wasn't that beautiful?"

The following is a sample of an unsociable vignette:

Rene is on her way out of the University Bookstore when she hears a voice calling her name. She immediately recognizes the voice of her Chemistry professor [lab partner], Dr. Mark Johnson [Marsha Johnson], who Rene has known a long time [who Rene does not know very well]. Rene pretends not to hear and exits the store.

The 12 vignettes were presented in the same order for all nine targets, 4 per page, in a repeating pattern of 2 sociable vignettes followed by 2 unsociable vignettes.

Motivation ratings. After reading the last sociable vignette, participants were asked to rate to what extent the target's behavior was caused by two motivations: (a) the target's feelings of caring toward the other person and (b) the target's desire to impress that person. Participants rated two caring items and two desire to impress items (as described in Study 1) on 11-point scales. The scores on the item pairs were subsequently averaged to create the final attribution scores for feelings of caring and desires to impress.

After reading the last unsociable vignette, participants were asked to rate to what extent the target's behavior was caused by two motivations, this time (a) the target's feelings of uncaring toward the other person and (b) the target's feelings of insecurity around that other person. Participants rated two uncaring and two insecurity items (the same items described in Study 1) on 11-point scales. The scores on the item pairs were subsequently averaged to create the final attribution scores for feelings of uncaring and feelings of insecurity.

Personality judgments. After rating the target's motivations, participants were asked to rate the target's friendliness, "kiss-upness," flirtatiousness, and shyness on 9-point Likert scales.

Results

Personality judgments. As shown in Table 3, one-way ANOVAs indicated that, in all three profile sets, profile manipulations significantly affected personality judgments. In the status conditions, the friendly–authority target was perceived to be significantly more of a kiss-up ($d = 2.50$, $SE = 0.60$) and significantly less friendly ($d = -2.04$, $SE = 0.45$) than the control target. The friendly–peer target was perceived to be significantly less of a kiss-up ($d = -2.34$, $SE = 0.60$) than the control target.

In the gender conditions, the friendly–male target was perceived to be significantly less friendly ($d = 1.12$, $SE = 0.49$), significantly more flirtatious ($d = 3.63$, $SE = 0.48$), and marginally more of a kiss-up ($d = 0.79$, $SE = 0.51$) than the control target. She was

Table 3
Personality Judgments of Profiled Targets: Study 2

Target condition	Friendly	Kiss-up	Flirtatious	Shy
Status profiles				
F-authority	-2.17 _b	3.71 _a	-0.92 _a	-1.00 _a
F-peer	0.63 _a	-1.17 _b	0.08 _a	0.25 _a
F-random	-0.13 _a	1.21 _c	0.08 _a	-0.88 _a
ANOVA $F(2, 69)$	20.9	32.8	2.3	2.2
p	<.001	<.001	.11	.12
Gender profiles				
F-male	-1.70 _b	2.88 _a	3.67 _a	-1.83 _a
F-female	-0.79 _{a,b}	0.25 _b	-2.80 _b	0.42 _b
F-random	-0.58 _a	2.08 _a	0.04 _c	-0.83 _a
ANOVA $F(2, 69)$	2.6	14.2	90.3	8.21
p	.08	<.001	<.001	<.01
Familiarity profiles				
F-familiar	-0.57 _a	0.57 _a	-1.52 _a	1.13 _a
F-unfamiliar	-1.60 _a	2.20 _b	-0.65 _a	-0.40 _b
F-random	-1.45 _a	1.74 _{a,b}	-0.74 _a	-0.56 _{a,b}
ANOVA $F(2, 63)$	1.6	3.0	1.7	3.6
p	.20	.06	.20	<.05

Note. For each profile set, values within a column that do not share a subscript differ significantly at $p < .05$. F = friendly; ANOVA = analysis of variance.

also perceived to be marginally less shy ($d = -1.00$, $SE = 0.56$) than the control target. The friendly–female target was perceived to be significantly less flirtatious ($d = -2.83$, $SE = 0.48$), significantly less of a kiss-up ($d = 1.83$, $SE = 0.51$), and significantly more shy ($d = 1.25$, $SE = 0.56$) than the control target.

In the familiarity conditions, none of the contrasts between the two experimental targets and the control target reached statistical significance; however, the experimental targets did significantly differ from each other. The friendly–familiar target was perceived to be significantly more shy ($d = 1.64$, $SE = 0.70$) than the friendly–unfamiliar target. The friendly–unfamiliar target, on the other hand, was perceived to be significantly more of a kiss-up ($d = 1.17$, $SE = 0.67$).

Motivation ratings. Did profile information help perceivers disambiguate the underlying motivations for the targets' sociable and unsociable behaviors? As shown in Table 4, profile manipulations did significantly influence participants' motive attributions.

Perceivers attributed the sociable behavior of the friendly–peer target, the friendly–female target, and the friendly–familiar target both to strong underlying feelings of caring and to strong desires to make a good impression. Perceivers attributed the sociable behavior of the friendly–authority target, the friendly–male target, and the friendly–unfamiliar target, on the other hand, solely to strong underlying desires to make a good impression.

Differences were also seen in the attributions perceivers made for the targets' unsociable behaviors. Participants attributed the unsociable behavior of the friendly–authority target, the friendly–male target, the friendly–female target, and the friendly–unfamiliar target to strong feelings of uncaring. They attributed the unsociable behavior of the friendly–familiar target both to feelings of uncaring and to feelings of insecurity. Finally, they attributed the behavior of the friendly–peer target solely to feelings of insecurity.

Mediating disposition judgments. The final question of interest was whether the motivations attributed to the targets' behaviors would account for the dispositions ascribed to the targets' personalities. To investigate this question, we first used motivation attributions to predict personality judgments. The resulting standardized regression coefficients are presented in Table 5. Participants were most likely to label a target as friendly if they made caring attributions for her sociable behavior and did not make uncaring attributions for her unsociable behavior. Participants were most likely to label a target as a kiss-up when they attributed her sociable behavior to impression management goals over feelings of caring and when they attributed her unsociable behaviors to feelings of uncaring rather than to feelings of insecurity. Participants were likely to judge a target as flirtatious when they attributed her sociable behaviors to high impression management goals rather than to feelings of caring. Participants were more likely to label a target as shy when they attributed her sociable behavior to caring and not to impression management goals and when they attributed her unsociable behavior to insecurity rather than feelings of uncaring.

To investigate the mediation hypothesis, we regressed participants' personality judgments on traits, situations, Trait \times Situation interactions, and motivation attributions. The results of these mediation analyses are presented in Table 6. Together, motivation attributions mediated between 46% and 72% of the variance originally explained by profile condition in judgments of friendliness,

Table 4
Motivation Attributions for Profiled Targets: Study 2

Target condition	Attributions for friendly behavior		Attributions for unfriendly behavior	
	Sincerely cared	Wanted to impress	Did not care	Felt insecure
Status profiles				
F-authority	0.77 _a	4.27 _b	3.52 _a	0.40 _a
F-peer	2.73 _b	2.81 _a	1.31 _b	3.33 _b
F-random	1.33 _a	2.00 _a	2.40 _b	0.25 _a
ANOVA <i>F</i> (2, 69)	6.2	5.9	7.3	18.3
<i>p</i>	<.01	<.01	<.001	<.001
Gender profiles				
F-male	1.13 _a	3.67 _a	3.93 _a	1.71 _a
F-female	2.79 _b	2.94 _{a,b}	3.89 _a	1.71 _a
F-random	1.63 _{a,b}	2.31 _b	2.77 _b	1.69 _a
ANOVA <i>F</i> (2, 69)	3.5	2.9	5.8	2.3
<i>p</i>	.03	.06	<.01	.11
Familiarity profiles				
F-familiar	2.85 _a	2.44 _a	2.50 _a	1.91 _a
F-unfamiliar	−0.50 _b	2.15 _a	3.83 _a	0.38 _b
F-random	0.89 _c	1.65 _a	3.11 _a	1.09 _{a,b}
ANOVA <i>F</i> (2, 63)	14.0	0.6	0.5	3.2
<i>p</i>	<.001	.55	.62	<.05

Note. For each profile set, values within a column that do not share a subscript differ significantly at *p* < .05. F = friendly; ANOVA = analysis of variance.

“kiss-upness,” and shyness. Motivation attributions mediated only 8% of the variance originally explained by profile condition in judgments of flirtatiousness.

Discussion

Study 2 indicated that perceivers were able to successfully extract dispositional information from a target’s characteristic *if . . . then . . .* profile. The friendly–authority target (friendly to authorities and unfriendly to peers) was judged to be an unfriendly kiss-up, the friendly–male target (friendly to men and unfriendly to women) was judged to be an unfriendly flirt, and the friendly–familiar target (friendly to familiar people and unfriendly to

Table 5
Regressing Personality Judgments on Motivation Attributions: Study 2

Trait judgment	Attributions for friendly behavior		Attributions for unfriendly behavior	
	Sincerely cared	Wanted to impress	Did not care	Felt insecure
Friendly	.28*	−.04	−.42*	−.05
Kiss-up	−.42*	.30*	.22*	−.12*
Flirtatious	−.24*	.14*	.04	.08
Shy	.22*	−.15*	−.26*	.26*

Note. Values are standardized regression coefficients. **p* < .05.

Table 6
Mediation Analysis: Study 2

Trait judgment	Variance explained by profile conditions		
	Original <i>R</i> ²	Incremental <i>R</i> ²	Effect mediated (%)
Friendly	.18	.05	72
Kiss-up	.33	.12	64
Flirtatious	.48	.44	8
Shy	.13	.07	46

strangers) was judged to be shy. Interestingly, these were not the only profiles to affect personality judgments. The friendly–peer target (friendly to peers and unfriendly to authorities) and the friendly–female target (friendly to women and unfriendly to men) were both judged to be somewhat shy, and the friendly–unfamiliar target (friendly to strangers and unfriendly to familiar people) was perceived to be a bit of a kiss-up. These data suggest that perceivers did not heavily rely on traditional, additive attribution strategies, such as aggregation or discounting, when judging the profiled targets.

The mediation analyses strongly suggested that the mechanism by which perceivers extracted traits from profiles was a “goal-based” attribution strategy that relied on the identification of specific *if . . . then . . .* contingencies motivating the target’s sociable and unsociable behaviors. The friendly–authority, friendly–male, and friendly–unfamiliar targets were judged to be motivated by feelings of general uncaring tempered by occasional desires to make a good impression. The friendly–peer and friendly–familiar targets, on the other hand, were perceived to be caring of others but also somewhat insecure. These effects of profile manipulations on motivation attributions substantially mediated three of the four trait judgments. With the exception of judgments of flirtatiousness, motivational attributions accounted for between 46% and 72% of the variance in trait judgments originally explained by profile condition. Although it was surprising that motivation inferences did not successfully mediate flirtatious judgments, it may be that perceivers distinguish a goal to impress from a goal to attract, and we did not assess inferences for the latter in this study. Overall, the findings suggest that perceivers attend to *if . . . then . . .* signatures when making sense of others’ behavior and interpret these signatures as part of the intuitive “mind-reading” process (Ames, 2004) to infer others’ stable goals, beliefs, and values.

Study 3

Studies 1 and 2 suggest that *if . . . then . . .* profiles, motives, and trait terms are richly connected in lay personality theories. In Study 3, we examined whether perceivers draw on *if . . . then . . .* profile and motive information when making judgments about Big Five traits. An extensive array of data from the trait tradition has demonstrated that trait descriptors occupy a psycholexical space reducible to five dimensions, referred to as the “Big Five,” that are reliable, consensually shared, and stable in lay perceptions of personality (Costa & McCrae, 2000; Goldberg, 1990; John, 1990). Despite the importance of *if . . . then . . .* patterns of behavioral variability on the one hand, and the importance of Big Five factors in person perception on the other, the relationship

between the two has yet to be systematically examined experimentally. If perceivers' Big Five judgments could be linked to *if . . . then . . .* profiles, this would provide a new perspective on the kinds of behavioral consistencies that trait judgments may reflect, building a bridge between two empirically rich—yet historically disconnected—paradigms.

In this study, participants were presented with the profiled targets from Study 2 and asked to make judgments regarding two Big Five traits: agreeableness and extraversion. These two traits are the Big Five dispositions most closely associated with sociability, the behavioral dimension manipulated across the profiles.

Method

Participants. Two hundred twenty-five English-speaking college students (110 female; *M* age of sample = 20.4 years) participated in this experiment for either course credit or cash reimbursement. All results remained similar when analyses were conducted controlling for participants' gender.

Procedure. On arrival, participants were given a booklet corresponding to one of nine target conditions. The booklet instructed participants that they were to read stories about a fictional female target and form an impression of her personality. The booklet then presented 12 vignettes about the target, describing friendly and unfriendly behaviors in different interpersonal situations. After reading the vignettes, participants were asked to rate the target's extraversion and agreeableness using Goldberg's transparent bipolar Big Five scale (Goldberg, 1992). They were then thanked and debriefed.

Design and materials. The nine targets for this study were taken directly from Study 2. Three of the targets displayed status profiles: the friendly–authority target, the friendly–peer target, and the friendly–random (status) target. Three of the targets displayed gender profiles: the friendly–female target, the friendly–male target, and the friendly–random (gender) target. The final three targets displayed familiarity profiles: the friendly–familiar target, the friendly–unfamiliar target, and the friendly–random (familiar) target.

Personality judgments. Participants were asked to rate the target's agreeableness and extraversion using the two 10-item subscales of Goldberg's bipolar transparent Big Five scale (Goldberg, 1992).

Results and Discussion

As shown in Table 7, one-way ANOVAs indicated that, in all three profile sets, profile manipulations significantly affected agreeableness judgments but not extraversion judgments. For judgments of agreeableness, there were main effects of target profile in the status conditions, $F(2, 72) = 16.5, p < .001$; the gender conditions, $F(2, 72) = 4.0, p < .05$; and the familiarity conditions, $F(2, 72) = 3.1, p = .05$. Overall, the friendly–authority target ($d = 2.42, SE = 0.50$), the friendly–male target ($d = 0.74, SE = 0.47$), and the friendly–unfamiliar target ($d = 1.16, SE = 0.54$) were all perceived to be significantly less agreeable than complementary targets who displayed the same frequency of sociable and unsociable behaviors but in opposite *if . . . then . . .* patterns. In contrast, target profile had no effect on judgments of extraversion in any of the conditions.

Why would judgments of agreeableness be sensitive to *if . . . then . . .* information, but not judgments of extraversion? There are several possibilities. We have argued that perceivers look to *if . . . then . . .* profiles when inferring motives. One possibility is that whereas certain dispositional judgments require perceivers to infer

Table 7
Extraversion and Agreeableness Judgments of Profiled Targets: Study 3

Target condition	Extraverted	Agreeable
Status profiles		
F-authority	0.46 _a	-1.71 _b
F-peer	0.72 _a	0.71 _a
F-random	0.10 _a	0.08 _a
ANOVA $F(2, 72)$	1.5	16.5
<i>p</i>	.24	<.001
Gender profiles		
F-male	0.90 _a	-1.62 _b
F-female	0.70 _a	-0.88 _a
F-random	0.94 _a	-0.58 _a
ANOVA $F(2, 72)$	0.6	4.0
<i>p</i>	.56	.02
Familiarity profiles		
F-familiar	-0.13 _a	-0.57 _a
F-unfamiliar	0.29 _a	-1.73 _b
F-random	0.14 _a	-1.20 _{a,b}
ANOVA $F(2, 72)$	1.0	3.1
<i>p</i>	.38	.05

Note. For each profile set, values within a column that do not share a subscript differ significantly at $p < .05$. F = friendly; ANOVA = analysis of variance.

motivational dynamics, other judgments merely require perceivers to be able to see that a given target is *able* to act in a particular way (Reeder & Brewer, 1979; Mischel, 1968, 1973). Agreeableness judgments, in other words, may be judgments about motivation, whereas extraversion judgments may be more about ability.

Previous work (Reeder & Fulks, 1980) indicates that perceivers adopt hierarchically restrictive schemas when inferring abilities, focusing on peak performances (and ignoring situational variability). If extraversion is construed as an ability trait, participants would only need to see that the targets were able to behave sociably to label them as extraverted, regardless of profile. Although some support for this hypothesis has been found in other studies (Messick & Reeder, 1972, 1974; Reeder, Messick, & Van Avermaet, 1977), our participants did not appear to focus on peak performances. None of the nine targets in this study was labeled an extravert.

Another possibility is that some trait judgments may truly describe nothing more than aggregate behavior trends (Fletcher, 1984; Reeder, Pryor, & Wojciszke, 1992; Rosati et al., 2001). People merit the label "talkative," for example, only if they speak long and often (not if they merely have the capacity to be talkative, and regardless of what motivates them to be talkative). In the case of such act-frequency traits, it is simply the frequent and consistent performance of a class of behavioral acts that earns the trait label, irrespective of motive or context (Buss & Craik, 1983; Reeder, 1993). Recent work in person perception has suggested that act frequencies may be more important for judgments of extraversion than for judgments of agreeableness, which involve more motivational inferences (Kammrath & Ames, 2004; Pytlík Zillig, Hemenover, & Dienstbier, 2002). In support of this possibility, participants' judgments of the targets' extraversion were highly neutral,

consistent with a notion that they aggregated on extraversion but not on agreeableness.

Together, the results of Studies 1–3 contribute to a growing body of evidence that *if . . . then . . .* signatures play a central role in perceivers' causal theories of dispositions and situations. The present results also provide evidence that complex schemas of trait–situation interactions are the natural byproducts of laypeople's concern with perceiving, understanding, and predicting the motivational dynamics driving an individual's social behavior.

General Discussion

Consistent with traditional trait theories of personality, most mainstream attribution theories postulate that laypeople generally adopt an *additive* causal schema, viewing the basic dispositions of a person as independent of, and unconnected with, situations (with causal powers attributed to either one or the other). This framework would require perceivers to search for the basic characteristics of the person by factoring out the variability introduced by different situations: through discounting, averaging, or other means. Numerous empirical results have supported the claim that perceivers use such attribution strategies to explain many behavioral events (Gilbert et al., 1988; Jones & McGillis, 1976; Krull, 1993; Trope, 1986).

Nonetheless, although an additive model may accurately describe how perceivers reason about certain types of events, it cannot adequately capture lay explanations for person–situation interactions: cases in which the effect of the situation is expected to depend on the person, and vice versa (Fein, 2001; Malle et al., 2000; Ross, 1977; Sabini et al., 2001; Shoda & Mischel, 1993). The present studies show that perceivers adopted a complex, interactionist perspective when predicting a target's behavior across different interpersonal situations and when inferring the target's dispositions from her characteristic patterns of situation–behavior variation. These results are consistent with, and predicted by, current social–cognitive models of personality (e.g., Mischel, 2004; Mischel & Shoda, 1995) and document an obvious folk psychological phenomenon. But they present a challenge to traditional models of causal attribution and dispositional inference in which person and situation are dichotomized, and one is factored out to uncover the effects of the other.

Study 1 demonstrated that perceivers expected targets with different traits (e.g., friendly or shy) to display significantly different *if . . . then . . .* patterns of variability across different interpersonal situations. Studies 2 and 3, in turn, showed that perceivers not only generated profiles from traits but also inferred traits from profiles, extracting dispositional meaning from a target's distinctive pattern of responses to different situational contingencies. Thus, rather than dichotomizing dispositional and situational causes, perceivers appeared to expect the expression of dispositions to depend on, and be revealed through, various situational contexts.

A Motivational Account of Complex Schemas

An account that incorporates perceivers' sensitivity to the interactive effects of dispositions and situations has recently grown out of research in social cognition (Malle, 1999; Shoda & Mischel, 1993; Trope, 1989), theory of mind (Ahn & Kim, 2001; Flavell,

1999; Gopnik & Meltzoff, 1997), and folk psychology (D'Andrade, 1987; Lillard, 1998; Rips & Conrad, 1989). This model adopts a *motivational* stance, emphasizing the central role of goals, cognitions, expectations, values, and affect in many trait constructs. According to this view, perceivers represent many dispositions as sets of stable and accessible beliefs and desires, which are manifested in characteristic *if . . . then . . .* behavior signatures (Cantor & Mischel, 1979; Shoda & Mischel, 1993; Shoda et al., 1989, 1993).

The present findings support the view that perceivers hold complex, motivational schemas of the five trait constructs studied. Given a trait label, participants in Study 1 were able to generate hypotheses about the unique feelings and motivations the target would experience in response to different interpersonal situations and, in consequence, predict a distinctive *if . . . then . . .* pattern that might characterize the target's behavior across those situations. Conversely, participants in Study 2 were able to use a target's *if . . . then . . .* profile of sociable and unsociable behavior to form impressions of her underlying motivations, and these motivational inferences, in turn, enabled participants to draw conclusions about the target's stable dispositions. These results, together with other recent findings (Chen, 2003; Chen-Idson & Mischel, 2001; Plaks et al., 2003; Read & Miller, 1993; Reeder et al., 2002; Rosati et al., 2001), strongly suggest that complex, motivational schemas play a crucial, but as yet underappreciated, role in lay causal reasoning.

Boundary Conditions for Lay Schemas

Note that complex schemas are not expected to underlie all attribution processes; it has been well established that, in many circumstances, perceivers will readily adopt an additive perspective of dispositions and situations (Gilbert, 1998). Thus, elaborating the conditions under which perceivers represent dispositions and situations as independent versus interacting forces is an important issue to be empirically explored.

Study 3, in particular, showed that participants exploited characteristic patterns of person–situation interaction when making inferences about agreeableness but not when making inferences about extraversion, at least not when given the information about *if . . . then . . .* patterns used in the present research. We suspect that profile information may be particularly useful to perceivers seeking to disambiguate a target's motives (rather than abilities or act trends). Indeed, converging research suggests that perceivers' attribution strategies do vary considerably as a function of the type of disposition in question (Reeder, 1993; Reeder & Brewer, 1979; Rothbart & Park, 1986; Trafimow, 2001).

Methodological Implications for Social Perception Research

Shedding light on lay causal schemas requires that perceivers have the opportunity to observe the behaviors of the perceived across diverse situations. In most experiments on person perception and impression formation, however, such information is absent. On the whole, research in this area has employed paradigms that describe only a single instance of the target's behavior, effectively precluding assessment of perceptions of behavioral variability across situations. When perceivers are asked to make inferences

from single behaviors, the task is, in effect, one of extrapolation: Will this behavior generalize to a new situation? A wealth of empirical evidence has indicated that perceivers usually assume that behavior *will* generalize (Fiedler, Semin, & Bolten, 1989; Jones & Harris, 1967; Ross, 1977).

When perceivers are presented with multiple vignettes that depict cross-situational variability, however, the task is that of integration: Perceivers must find a way to generate explanatory coherence among the variable behaviors (Kunda, 1999; Kunda & Thagard, 1998; Read & Marcus-Newhall, 1993; Thagard, 1989). Evidence suggests that when laypeople are integrating information about multiple behaviors, their inferential strategies significantly differ from those used when they are extrapolating from single behavior episodes. Although perceivers often fail to take sufficient account of the situation in the first case, they can be quite sensitive to situational information in the second (Cantor et al., 1982; Chen, 2003; Shoda et al., 1989; Vonk, 1998; Zuroff, 1982), as shown by the present results. Much is known about the processes underlying lay extrapolations, but the empirical study of lay integrations is still in its early stages. Sometimes perceivers use a motivational explanation to make sense of seemingly inconsistent behaviors (Plaks et al., 2003), as they did in our studies. At other times, they appear to make external attributions for inconsistent acts (Hampson, 1998). To continue to address questions about how perceivers make sense of behavioral variability, it will be critical for research to move beyond studying the judgments of perceivers constrained to view targets' behavior in a single situation.

Conclusion

The present findings contribute to a growing body of evidence suggesting that complex causal schemas (Kelley, 1972) are a natural and vital part of lay personality theories (Chen, 2003; Chen-Idson & Mischel, 2001; Mendoza-Denton, 1999; Plaks et al., 2003; Vonk, 1998). Our data suggest that these complex schemas arise from the layperson's intuitive concern with motivation and intention and that they direct attention to diagnostic patterns of stable situation-behavior variation, patterns that are a major reflection of stability and consistency in personality and a fundamental expression of the individual's underlying cognitive-affective and motivational processing system (Mischel, 2004; Mischel et al., 2002). The need now is to examine with increasing depth how lay judgments about people hinge on the patterned relationships between behaviors and their natural situational contexts, specifically when multiple conditions and actions are observed—as common in everyday social perception as it is rare in social perception research.

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