

Chapter 15

What Theory of Mind Can Teach Social Psychology: Traits as Intentional Terms

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I. Introduction

A. *Theory of Mind and Mentalism*

Twenty years ago, Premack and Woodruff (1978) noted that the human concept of the mind is like a theory in that mental states are unobservable entities used to predict and explain behavior. Since then, we have learned an enormous amount about what young children know about mental states and how they use this knowledge to predict and explain behavior. Infants under a year old, for example, impute agency to abstract shapes that move in a goal-directed manner (Leslie, 1982), while eighteen-month-olds use expressed emotions to predict another person's desires (Repacholi & Gopnik, 1997). Two-year-olds use information about desires to predict a person's actions and reactions to situations (Wellman & Wooley, 1990); by age 4, children understand that actions are constrained by the extent to which a person's beliefs about reality correspond to actual situations (Perner, 1991).

In this chapter, we will explore how the wealth of information about intentionality and mental state ascription from the theory of mind research tradition can revitalize a classic problem of social psychology — how people attribute personality traits to others, and how they use those attributions to explain behavior. Before addressing the relationship between mental states and traits, we first consider a brief history of the study of traits in social psychology.

B. *Models of Behavior Explanation in Adult Social Psychology*

While research in the social psychology of adults has not directly asked what adults know or think about “the mind”, many studies of person perception have examined how adults explain the behavior of themselves and of others. In thinking about how people interpret behavior, Heider (1958) proposed that perceivers infer an actor's underlying “dispositions”, which for him included mental states such as intentions, desires, beliefs, and feelings. With some exceptions (e.g., Buss, 1978; Locke & Pennington, 1982; Fein, 1996; Malle, 1999), however, studies of behavior explanation since Heider have ignored the role of mental states. Instead, they have narrowed the category of “disposition” to personality traits and focused on the process of trait attribution.

1. Computational models of attribution

Some researchers in social psychology have argued that the attributional process is best characterized by multivariate factor analyses in which perceivers try to correctly assign causality for events. In their correspondence inference theory account, Jones and Davis (1965) postulated that an analysis of “noncommon” effects determines the assignment of causality. In other words, it may be only the unique outcomes associated with a choice that yield insight into the agent's intent. If everyone in a society is constrained to act generously because of social norms, then generous actions don't tell us much about a particular individual. According to Kelley's (1967) covariation model, perceivers make attributions based on whether an actor's behavior is distinctive for a situation and consistent in that situation, and on whether many other people act the same way in that situation.

2. Knowledge-structure models of attribution

Historically, social psychologists have tended to assume that people attribute traits to others rather automatically, as a response to particular pieces of data. More recently, however, researchers have begun to argue that attributions also reflect preexisting theories about how people are likely to behave. Dweck and her associates (Chiu, Hong, & Dweck, 1997; Dweck, Chiu, & Hong, 1995) argue that individual differences in the tendency to attribute behavior to underlying traits are mediated by the perceiver's implicit theories of those traits. These implicit theories set up an interpretive framework within which information is processed. For example,

some people may be “entity theorists” — they believe that an individual’s personality consists of static, fixed traits. Entity theorists are more likely to use dispositions to predict and explain behavior than are “incremental theorists”, who view personality as consisting of dynamic qualities that can be changed or developed.

In a series of experiments, Chiu, Hong, and Dweck (1997) investigated whether entity and incremental theorists differed in their tendency to explain behavior in terms of traits. Ross and Nisbett (1991) argued that ordinary people over-emphasize traits in explaining behavior – they are “lay dispositionists”. Lay dispositionism includes (a) viewing behavior as a reflection of an underlying disposition, (b) predicting behavior in a particular situation from knowledge of a relevant trait, and (c) expecting that behavior will be consistent across situations. As Chiu et al. predicted, entity theorists were much more likely than incremental theorists to engage in all 3 processes. They also found this relation between implicit theories and lay dispositionism in Chinese as well as American subjects in spite of the fact that these 2 groups have very different general patterns of social understanding (e.g., along dimensions of individualism vs. collectivism). Dweck and colleagues concluded that implicit theories of personality may be diverse but universally available worldviews which individuals can develop to understand and give meaning to social experiences.

A number of researchers have documented an attributional difference between individualist and collectivist cultures. People from individualist cultures, which stress a sense of personal determinism and autonomy, are likely to make trait attributions, while those from collectivist cultures are likely to stress situations (Miller, 1986; Morris & Peng, 1994). Morris and Peng (1994), for example, found that American and Chinese subjects differed in their explanations for crimes. American subjects focused on the internal dispositions of the actor, while Chinese subjects were more likely to point out the social context in which the crime had occurred. These differences seem to be due to differences in implicit theories construed at a cultural level. Different cultural norms can lead to different characteristic patterns of social behavior. Members of a culture then construct an implicit theory that is based on these characteristic patterns. Miller’s (1986) research, discussed later, provides empirical support for this notion in that these attributional differences emerge relatively late in development, perhaps as children experience more of these culturally characteristic behavior patterns and develop a knowledge of the cultural norms that underlie them. Once we understand that norms lead to particular kinds of actions, we may use that knowledge to predict and explain behavior in a variety of settings.

In short, social psychologists have recently moved towards the view that attributions are mediated by theories. Perceivers’ implicit conceptions of how people work influence, even determine, the way that they explain their actions. This new view has clear links to the “theory of mind” literature that tries to explain what these implicit conceptions are like and how they develop.

II. The Role of Intentions in the Architecture of Traits

So trait attributions seem to involve theories. But are these theories theories of mind? We would argue that they are, at least most of the time. To ascribe a trait to someone, or to explain their behavior as resulting from a trait, is to make reference to some enduring influence on their intentions and other mental states. The central significance of a trait seems to be that it involves a stable, enduring quality of a person that may be responsible for many different configurations of mental states. In contrast, “situational” influences on a person’s behavior may be both internal (e.g., temporary beliefs and desires) and external (e.g., features of the environment) and

may be either mentalistic or physical or biological. “Situation” is really a kind of catch-all term for any kind of explanation that does not involve traits. Of course, traits need not necessarily be interpreted mentalistically. People talk about biological traits (e.g., eye color) which may explain outcomes (or be imputed) with no connection to mental states or psychological events. Some researchers (Buss & Craik, 1985; Yuill, 1997; Yuill & Pearson, 1998) have pointed out that it is possible to conceive of traits solely as summaries of behavioral regularities. Nevertheless, we think most trait attributions are, in fact, attributions about underlying mental states.

Traits seem to be entities that bias people toward certain mental states. Traits cause mental states like beliefs and desires, which in turn cause behaviors. We might think of them as distal causes of behavior. Most work in theory of mind has focused on conceptions of the immediate occurrent mental states that are the efficient causes of behaviors — states like beliefs, and desires. To the extent that research has explored conceptions of the distal causes of mental states, the focus has been on perception and inference as sources of belief. Some traits, like gullibility, may also influence beliefs. Traits, however, seem to play a more important role as sources of desire. Traits lead to characteristic individual patterns of desires. A shy person may characteristically want to avoid people where an outgoing person will seek other people out, a mean person will want to cause distress while a nice person will want to allay it and so on (Yuill & Pearson, 1998). Research is just beginning to explore the ways in which traits might be represented within theories of mind.

One of the advantages of thinking of traits in this way is that we can make some more fine-grained distinctions between different types of traits. Different traits may be related to different mental states in different ways and these differences may be important for attribution, explanation, and social judgment. Some traits involve intentional or voluntary mental states, while other traits seem to be part of an involuntary cascade of mental events. Fearfulness, for example, is a trait that operates outside of intentional control; if you are fearful, the appropriate stimuli automatically generate fear. Generosity is a trait that enters into a chain of voluntary action. No matter how strong the trait of generosity is within an individual, we still credit them with an intentional decision for each act of altruism. Trait attributions, in general, may put the locus of causation within the individual and indicate in this way that the individual was responsible for the action. In a richer, moral sense, however, different psychological trait ascriptions differ in their implications for responsibility.

A mentalistic model of traits is quite compatible with other theory-based views of traits. A possible explanation for the difference between entity and incremental theorists, for example, may simply be that entity theorists are more likely to rely on traits as both a cognitive and conversational shorthand for intentions, while incremental theorists think and speak more directly about the more basic mental states that underlie behavior. In fact, Chiu, Hong, and Dweck (1995) found empirical evidence for this notion. Incremental theorists were more likely to explain characters’ behaviors by referring to “internal psychological states”, such as a character who stole “because he was hungry or desperate” (p. 28). Entity theorists, then, may view individuals as independent, stable beings who always have the same intentional tendencies; incremental theorists, on the other hand, may view the self as more flexible.

III. Traits and Theories of Mind: Empirical Evidence

A. *Insights From Developmental Psychology*

The developmental literature suggests an interesting account of the genesis of trait attributions. Why do children attribute traits in the first place? If we think of traits as theory of

mind terms then they might well arise out of the same explanatory pressures as other theoretical terms. They might be motivated by what Gopnik and Schwitzgebel have called “the explanatory drive” (Gopnik, 1998; Schwitzgebel, 1998). Understanding the mind in terms of occurrent intentional states such as beliefs and desires leaves out an important regularity: Individual actors tend to have recurring beliefs and desires, and these tend to be different from those of other actors. If we want to explain this consistency and variance, simply talking about occurrent beliefs and desires won’t do. The theoretical attribution of traits does have some explanatory power, even if we may sometimes overestimate that power (as in other cases of theoretical attribution). Just as we think that children develop a notion of representational belief, and indeed perhaps of belief, tout court, in order to explain regularities in intentional action, so they may later develop a notion of traits as a way of explaining these regularities in individual actors.

An interesting fact in this context is that trait attribution in children seems to blossom in the school-age period, after belief-desire psychology has been established. An important ecological difference between preschoolers and school-age children is a new concern for peers and peer group relations (even in fact, in cultures without formal schooling). In the context of a family, individual differences may best be explained by roles: Mom does this and Big Brothers do something else. But members of a peer group typically share similar socially defined roles; we’re all third graders together. Explaining consistent individual differences in beliefs and desires among peers requires something more like a trait concept. One might hypothesize that this helps drive the development of trait concepts in this age range.

A theory of personality traits seems to be a refinement of a more rudimentary theory of mind that associates the causal relationship between simple mental states, such as beliefs, desires, plans, and emotions, with simple behaviors. Later in development, as children work out the basics about minds in general, they can begin to perceive the finer distinctions between individual minds that lead to unique and complex behavior patterns for different individuals. A coherent understanding of personality is thus likely to follow a coherent understanding of how intentions function commonly in people. Traits are part of what we might think of as an advanced theory of mind.

If the use of traits to predict and explain behavior stems from a theory, we may expect to see changes in the way that traits are used as that theory is enriched through experience. We may expect a period in development, for example, before a theory of traits has been established, during which traits are either not used at all or are used infrequently, or are used in inappropriate or global ways. We might also predict that children’s uses of traits will shift from a focus on more concrete features of persons, such as height, to more abstract features of persons, such as shyness, over the course of development. Certain particularly salient trait terms, such as *good-bad* and *smart-not smart*, may appear earlier than others. Finally, if trait understanding is based on a theory of minds and persons, we may expect cultural differences in those theories and thus in the ways that traits are used to explain behavior. In this section, we review evidence addressing these points.

1. Increasing dispositionism over the course of development

If the concept of traits is developed as part of an explanatory theory of mental states, we might expect that trait explanations would appear only after children have established a basic understanding of belief-desire psychology. In fact, developmental research suggests that a full understanding of traits does not begin to emerge until around age 7 (Ruble & Dweck, 1995), though some primitive understandings may emerge a bit earlier (e.g., Heyman & Gelman, 1999).

One method that has been used to study trait understanding asks children to predict a character's behavior in a novel situation on the basis of the character's behavior in a past situation. If children believe that information about a person's traits or dispositions can be used to predict behavior, they will use that information to predict the behavior in a new scenario. Gnepp and Chilamkurti (1988) presented kindergarten, second-grade, fourth-grade, and college students with a series of stories that described three examples of a character's past behavior from which a personality trait could be inferred. In addition to predicting the character's future behavior, subjects were also asked to predict and explain the character's emotional reaction to a new event. They found an increase with age in the use of personality attributions to predict and explain behavior, as well as an increasing tendency to use trait information to predict emotional responses. Similarly, Rholes & Ruble (1984) found an increase with age between 5 and 9 years in consistent behavior predictions—while younger children recognize and use the appropriate trait term for a given behavior, they are less likely to generalize the behavior to new situations. Thus, while trait terms may be used at an early age to label behavior, this does not seem to suggest an understanding of traits in terms of stable, underlying mental states.

A study by Aloise (1993) using a *confirmability paradigm*, in which subjects are asked how many instances of a particular behavior they would require before attributing a trait to an actor, suggests that adults use traits to explain behavior more quickly and with more facility than do children. She found that younger subjects (grades 3 to 5) set higher attribution criteria than did college-aged subjects along trait dimensions such as *smart-dumb*, *polite-rude*, *gentle-rough*, and *messy-neat*. Aloise (1993) concluded that the developmental decrease in the number of instances of behavior required for trait ascription is due to the fact that younger children have not had as much experience in noting the behavioral consistencies of individuals.

2. Criteria for trait ascriptions shift over time

Changes in the way that children use traits to predict and explain behavior also suggest that traits are theoretical entities that may be revised in the light of new data. Support for this notion comes from a study by Livesley and Bromley (1973), who found that prior to age 8, children are much more likely to refer to peripheral, perceptually salient features of appearance and behavior when they are asked for open-ended descriptions of themselves. After age 8, children are more likely to focus on central features such as personality traits, motives, and needs. Before age 7 or 8, then, it may be that children have yet to perceive stabilities in individuals' mental states and intentional actions. This seems to apply both to children's conceptions of themselves and of others.

An ongoing study by Rosati (1999) provides further evidence that the criteria for trait ascription shift over the course of development from a focus on overt behavior to a focus on underlying mental states. When subjects are presented with a story character whose behavior conflicts with their desires, 5- and 6-year-olds ascribe a personality trait to that character based on the character's overt behavior. Younger subjects thus ascribe the trait "nice" to a character who perform good deeds, even if the character harbors mean thoughts. By age nine or ten, subjects more often cite underlying mental states in their ascriptions of personality traits to characters (Rosati, 1999).

3. Domain specificity in trait understanding increases with age

Ruble and Dweck (1995) review evidence suggesting that when children younger than seven use dispositions to explain behavior, those dispositions tend to be characterized by domain-general global goodness or badness. Five- and six-year-olds who receive criticism for failure at a task, for example, are likely to conclude that they are bad, rather than not smart, as

older children conclude (Ruble & Dweck, 1995). Early trait concepts thus appear to consist of only a few general categories that are likely very familiar or salient to children. One explanation of these findings, as suggested by Rholes, Newman, and Ruble (1990), is that young children's trait terms, unlike the trait terms of older children and adults, do not refer to a complex internal, psychological causal structure. Instead, these very early trait attributions may reflect global, evaluations of others.

4. Cultural divergence in trait ascription occurs at a specific point in development

If traits are part of an advanced theory of mind, a theory that is based on observations of characteristic patterns of stable individual differences, we might expect that children in different cultures might converge on somewhat different theories. The “basic” theory of mind that involves belief-desire psychology seems to be relatively universal, and indeed human behavior can be quite generally explained in terms of beliefs and desires. But we know that adult conceptions of traits, and the stability of adult behavior, differs in different cultures. In collectivist societies, social conventions and norms seem to play a larger role in causing behavior than individual differences, in individualist cultures this seems to be reversed.

In Miller's (1986) research, American and Hindu Indian subjects had increasingly differentiated attributional patterns over the course of development. In her study, American and Hindu adults and children aged 8, 11, and 15 years were asked to provide examples of prosocial and socially deviant behavior. She found that when subjects were asked to explain an agent's behavior, the youngest subjects in both cultures preferred concrete, instance-oriented social concepts. With increasing age, American subjects became more oriented towards trait explanations. Hindu subjects, however, became more likely to refer to situations, often social contexts, as the cause of an agent's behavior. Children in very different cultures appear to initially reason in similar ways about the causes of behavior, and diverge with respect to their preferred stated causes only in later childhood. This provides further support for the notion that traits are part of an advanced theory of mind that is based on the evidence that children observe.

In sum, while even young preschoolers demonstrate an understanding of how mental states such as desires and beliefs can cause a person to act and behave in specific ways (e.g., Wellman & Woolley, 1990), children do not seem to infer traits until later, around age 7 or 8. While children may use trait terms earlier, they do not seem to understand these terms in a genuinely theoretical way. The increasing use of personality traits to explain behavior and the increasing abstractness and complexity of those explanations provide support for the notion of a change in theory of mind in later childhood. This theoretical shift involves understanding that: (1) individual minds tend to have particular characteristic patterns of mental states, patterns that are caused by underlying personality traits, and (2) these characteristic patterns of mental states affect and govern a wide range of behaviors.

B. Adult Folk Theories of Personality Traits

Having charted the development of mentalistic trait conceptions in children, we now turn to evidence from the “endpoint” of development. Specifically, we review social psychological evidence that, in adults, trait ascriptions constitute ascriptions of constellations of mental states — and thus reflect the application of a theory of mind.

1. Some traits are consensually mentalistic in meaning

Despite the enormous amount of social psychological research on trait attribution few researchers have examined what traits actually mean to people. If our present thesis is correct — if some traits encode underlying patterns of mental states — then the onus is on us to “unpack “ adults' traits conceptions and show that they are indeed mentalistic

In ongoing work, Knowles and Ames (1999) have uncovered suggestive evidence that some, though not all, frequently-used folk traits are heavily mentalistic and that most are at least partly mentalistic. These researchers began by collecting a sample of the most-used trait terms among various populations, including college-age students and adults. Another group of participants rated the extent to which knowing that a target had each trait would allow two kinds of predictions: the individuals' future actions/behavior

2. Some perceivers have a proclivity for mentalistic construal of traits

In addition to discovering diversity among trait terms, such that some are more mentalistic in character than others, Knowles and Ames (1999) also found reliable differences between perceivers' proclivities for these different modes of construal. The researchers administered an individual difference measure of the tendency toward mentalistic vs. behavioral interpretation of behavior. Items measured both mentalism (e.g., "When I try to figure people out, I try to learn what they think, not just what they do") and behavioralism (e.g., "I care more about what someone does than what they think"). This measure was found to predict participants' ratings concerning the degree to which given traits supported predictions of behavior vs. predictions of mental states.

3. The trait ascription process process reflects the mentalistic content of traits

As Knowles and Ames (1999) showed, the nature of many trait terms is at least partly mentalistic. This and other developmental theory of mind work (e.g., Rosati, 1999) suggests that mental-state inferences must play an important role in impression formation. Ongoing work by Ames (1999) supports this hypothesis. The route from observing behaviors to inferring traits is often mediated by judgments about a target's mental states. Perceivers saw a variety of ambiguous events (such as a student helping a professor with a broken bicycle or an office worker being singled out for credit after explaining his work team's ideas to his superior). They imputed a wide-range of different belief, desires, and emotions to the actors. For instance, participants rated the extent to which the "helpful" student believed he would get a better grade and the extent to which the office worker wanted to share credit with the others. These judgments were strongly related to a variety of trait inferences and global impressions – perceivers who thought that the student was after a grade rated him as less generous than those who thought he was simply trying to help. In other words, behavior matters in impression formation only to the extent that it leads to inferences about intentions.

To test the causal role between impressions and intention inferences, Ames also had participants review scenarios with varying explicit intention information. When the same overt behavior was paired with different mental states (e.g., "David wants to share credit with the others and believes they will be recognized for their work" versus "David wants to move ahead in the company and believes no one else was around to see or hear him"), perceivers formed substantially different impressions of the actors' traits. In sum, as developmental theory of mind scholarship would predict, impressions aren't simply formed on the basis of behavior; Rather, perceivers rely on a theory of mind to infer varying mental states from behavior and these mentalistic inferences in turn drive impressions.

IV. Conclusions

In this chapter, we have attempted to show that one of the areas of greatest interest in social psychology — that is, personality trait attribution — can be enriched by one of the most fruitful research traditions in developmental psychology — theory of mind. The link, we have argued, stems from the fact that the everyday trait conceptions studied by social psychologists involve the mental states and intentional actions that have long been the focus of theory of mind

research. We suggest that traits are part of an advanced theory of mind that extends and elaborates on basic belief-desire psychology. We have reviewed developmental and social psychological evidence that suggests that the development of personality trait conceptions depends on and parallels the development of theory of mind abilities. Trait attributions in children exhibit properties one would expect if trait conceptions are theory-like (i.e., defeasibility, cultural variation, and domain-specificity). In the social psychological sphere, we have presented preliminary but suggestive evidence that folk trait conceptions have mentalistic content and that the process of trait ascription reflects this content. We believe that this fundamental continuity between theory of mind and folk conceptions of traits, largely unacknowledged by both research traditions, is a rich resource for all future studies of person perception, regardless of the age of our subjects.

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