Initial Impressions of Others

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Abstract

"Initial impressions" bring together personality and social psychology like no other field of study—
"personality" because (1) impressions are about personalities, and (2) perceivers' personalities affect
these impressions; and "social" because (3) social cognitive processes of impression formation, and
(4) sociocultural contexts have major effects on impressions. To make these points, we first review
how people explicitly describe others: the terms we use, how these descriptions reveal our theories
about others, the important roles of traits and types (including stereotypes) in these descriptions, and
other prominent frameworks (e.g., narratives and social roles). Then we highlight recent research on
the social cognitive processes underlying these descriptions: automatic and controlled attention, the
many effects of primes (semantic and affective) and their dependence on contexts, the acquisition of
valence, spontaneous inferences about others, and the interplay of automatic and control processes.
Third, we examine how accurate initial impressions are, and what accuracy means, as well as deception
and motivated biases and distortions. Fourth we review recent research on effects of target features,
perceiver features, and relations between targets and perceivers. Finally we look at frameworks for
understanding explanations, as distinct from descriptions: attribution theory, theory of mind, and
simulation theory.

Keywords: traits, stereotypes, social cognition, attention, priming, spontaneous inferences,
avticity, accuracy, deception, attribution, theory of mind, simulation

Who are you? How should we describe you? A colleague once asked me (JSU) if I knew what it was
like to be a bat, referring to Nagel's (1974) famous essay on consciousness and the mind-body prob-
lem. I said that I didn't even know what it was like to be me. Where should I begin? What should I
leave out, so the account takes less than a lifetime, and is responsive to his question? What about the
influences and processes I'm oblivious to or have
forgotten? How accurate are my impressions, and
against what standards of accuracy? Is there one
truth or many? These are the kinds of questions this
chapter addresses (but does not answer), by noting
how social and personality psychologists approach
them, in theory and in research. We hope to give
you an overview of the terrain in this area.

In some ways, the impressions studied by social
and by personality psychologists could not be more
different. The initial impressions studied by social
psychologists are fleeting and dissipate in the face of
extended interactions; exist only in the minds of
perceivers; can be manipulated or managed; and are
presumed to be flawed guides to future behavior.
The initial impressions studied by personality psy-
chologists are stable and coherent over time and
place; exist apart from particular perceivers; and
should provide true guides to future acts.

However, our view is that they are inseparable,
two sides of the same coin. Both are social construc-
tions (like the economy or the legal system). Both
concern the nature of persons: what their character-
istics are; what causes them to behave in particular
ways in specific situations, as well as more generally; what they think and feel; and so on. And both arise from the same initial evidence: other people’s behaviors in particular situations. Social psychologists focus on perceivers and what they make of this evidence; personality psychologists focus on targets and what produces this evidence. But perceivers have personalities too; and targets act in the actual or imagined presence of perceivers. Individual differences are a part of the picture throughout. So these two emphases are not only two sides of the same coin, they are two intertwined aspects of a conceptual Gordian knot. Cutting through this knot to divide it into social and personality halves does violence to all these interrelations. So this apparent division is largely a matter of (real) professional territoriality, that is, different scientific traditions and academic audiences.

Because this chapter focuses on initial impressions, we draw more heavily from social psychologists’ work. But the complementary concerns of personality psychologists, with their long-term perspectives, make important contributions too.

How we form impressions of others has long been a fundamental question in both social and personality psychology, because our interactions depend in fundamental ways on our impressions of others. (Of course we might start with questions about impressions of social situations or relationships. But Western, and especially U.S. psychology has been individualistic for a long time, for cultural (Lehman, Chiu, & Schaller, 2004) and ideological (Ichheiser, 1949) reasons. We begin with the terms we explicitly use to describe other people. What are these terms, and when do we use them? How are they related to each other, and what do their relations reveal about our theories about other people?

We also form implicit (unspoken and unconscious) impressions, and our explicit descriptions are based on processes of which we are largely unaware. What are some of these processes? What captures our attention, unhidden? What produces positive or negative evaluations? How do we unconsciously infer inner qualities (e.g., traits) from outer observables (e.g., behaviors)? The second section of this chapter reviews some of these processes. Distinctions between explicit and implicit impressions, and automatic and controlled processes are central.

Research on accuracy has been oddly independent of research on processes, in part because Cronbach’s (1955) devastating critique of accuracy research intimidated other researchers for decades, and Mischel’s (1968) critique of personality research raised questions about whether there is anything to be accurate about. But now there are more sophisticated approaches to these questions, and this is a lively area of research. We review conceptions of accuracy in trait judgments and sample current results. We also describe recent research on deception (lying), and some motivated biases and distortions in forming initial impressions.

The fourth section surveys some of the features of targets, of perceivers, and of their relations with each other that affect initial impressions. Faces and other visual information form most of the work on targets. We also note recent work on impressions in cyberspace, and reputation. Relations include power and psychological distance.

Finally we note recent work on explanations of others’ behaviors, focusing on three frameworks: (1) attribution theory, (2) theory of mind, and (3) simulation theory and self-reference. Explanations are more than descriptions. They are more motivated and judgmental, and carry clearer implications for responsibility, credit, and blame. They depend on large and often implicit theories, such as Tetlock’s (2002) politician, theologian, and prosecutor frameworks.

Lay Descriptions of Others

How do people describe one another? Park (1986) had members of her seminar at Northwestern University describe each other every week for 7 weeks. She content-analyzed the results into five categories: traits and habits; behaviors; attitudes, feelings, and beliefs; demographics; and physical and biological characteristics. Traits dominated the descriptions (65%), followed by behaviors (23%). Traits were used more and behaviors were used less as targets became better known. So traits are central in describing others.

People differ in how they describe others, even at “zero acquaintance” (Kenny & West, 2008). In their classic demonstration, Dornbush, Hastorf, Richardson, Muzzy, and Vreeland (1965) asked summer campers to describe their tent mates. On average, when one percever described two different targets, the categories overlapped 57%, but when two perceivers described the same target, categories overlapped only 45%. Perceivers affected category choice more than targets did. People differ in which categories are chronically accessible (come easily to mind; Higgins, 1996), and this produces different descriptions, and memories. Thus an important determinant of individual (i.e., personality) differences in describing and remembering targets is differences in the chronic accessibility of perceivers’ concepts.
Looking beyond initial impressions (as we occasion- 
ally do), familiarity with the target affects category 
use. Idson and Mischel (2001) found that traits usu- 
ally outnumbered mental states. But relatively fewer 
traits were used the longer perceivers had liked (but 
not disliked) targets, and the more situations they had 
seen them in. Fewer traits were used for important 
(vs. unimportant) targets. Familiarity also affects how 
targets are categorized automatically. Unfamiliar faces 
get categorized by salient stereotyped categories, 
whereas familiar faces do not (Quinn, Mason, & 
Macrae, 2009.) Thus descriptions of unfamiliar tar- 
gets contain more traits, fewer mental states, and are 
less conditional on situations than familiar others.

Communicating descriptions to an audience 
changes the descriptions. Zajonc’s (1960) classic 
study showed that descriptions are more “diff erenti- 
ated, complex, unified, and organized” (p. 166)
when perceivers expect to communicate. Lassiter, 
Geers, and Apple (2002) found that this organiza-
tion produced fewer units of behavior, fewer remem-
bered behaviors, and less positive affect. When 
people know something about their audience, com-
munications are “tuned” to the audience. Todorov 
(2002) showed not only that these tuned descrip-
tions affect memory for and attitudes toward tar-
gets, but also these descriptions mediate tuning’s 
effects. Wyer and Gruenfeld (1995) provided a 
thoughtful review of related literature.

Perceivers’ cultures also affect descriptions. 
Westerners use more trait terms and fewer relational 
and contextually qualified terms than Asians. For 
example, Shwed and Bourne (1984) asked resi-
dents of Chicago and Orissa, India, to describe close 
acquaintances. Americans use more context-free 
descriptions (71.7%), including unqualified traits, 
than did Oriyas (50.4%), and more abstractions 
than Oriyas (74.6% vs. 35.2%). Self-descriptions 
show similar cultural differences (Rhee, Uleman, 
Lee, & Roman, 1995). Although this difference is 
often explained by individualist versus collectivist 
conceptions of individuals, Kashima, Kashima, 
Kim, and Gelfand (2006) suggest that it reflects cul-
tural differences in linguistic practices. Westerners, 
more than Asians, objectify and decontextualize 
descriptions not only of individuals, but also of rela-
relationships and even groups (also see Adams, chapter 
8, this volume).

Traits’ Relations to Each Other

Implicit theories of traits’ relations to each other, 
that is, implicit personality theories (IPT), have 
been studied primarily through factor analyses of 
trait ratings (Schneider, 1973). The same Big Five 
factors of personality—openness to experience, 
conscientiousness, extraversion, agreeableness, and 
neuroticism—emerge from ratings of traits’ seman-
tic similarity, co-occurrence likelihoods, and the 
prototypicality of acts, as well as from ratings of 
complete strangers, well-known others, and the self 
(John, 1990). A long-standing controversy concerns 
whether IPT reflects actual relations among traits or 
merely semantic relations, which distort judgments 
of actual relations. Borkenau (1992) found that dis-
tortion happens occasionally, but cannot fully 
account for IPT.

Poon and Koehler (2008) looked for individual 
differences in inferring traits and behaviors from 
other traits and behaviors, with particular attention 
to Dweck’s (Dweck, Chiu, & Hong, 1995) entity 
theorists (who believe traits are fixed) and incre-
mental theorists (who believe traits are malleable). 
For semantically similar (vs. unrelated) traits and 
behaviors, inferences were more extreme for entity 
than incremental theorists. Thus, moderately reli-
able theories (0.57 over 8 weeks) about the reliabil-
ty of trait and behavioral information affect 
found that priming entity knowledge made partici-
pants more confident about trait inferences.

How universal is this Big Five structure? With 
some important caveats, Heine and Buchtel (2009) 
concluded that “there is good evidence that the Big 
Five reflect the universal structure of personality” (p. 
378), when scales are based on translated English 
rating scales. But studies based on indigenous 
Chinese, Filipino, Spanish, or Greek traits uncov-
ered six or seven factors, only some of which corre-
spond to the Big Five. Saucier (2003a) reports 
evidence that the seven factors from studies of 
Filipino and Hebrew traits may be more universal 
than the Big Five. Heine and Buchtel (2009) describe 
some interesting functional evolutionary ideas about 
possible origins of the Big Five factor structure. (See 
also Fleeson, chapter 3, this volume.)

Rosenberg, Nelson, and Vivekananthan (1968) 
suggested that most IPTs are dominated by two cor-
related but distinct evaluative dimensions: social 
warmth and competence. Recently Judd, James-
Hawkins, Yzerbyt, and Kashima (2005) have termed 
these “the fundamental dimensions of social judg-
ment,” and examined their relations in judging 
groups. Although usually related positively in judg-
ing individuals, they are negatively related in judg-
ing groups. They are sometimes called the “Big Two” 
dimensions, in homage to the Big Five.
How well do the Big Five describe individual targets? All the analyses above are based on data aggregated over many targets, but individual targets show idiosyncratic trait structures, and individual perceivers organize traits in idiosyncratic ways. Exploratory factor analyses of ratings of single targets, rated repeatedly over many days, do not yield the familiar Big Five for most targets. Nesselroade and Molenaar (1999) report that fewer than a third of their targets showed the Big Five pattern, and Borkenau and Ostendorf (1998) put this figure at 10%. Thus multiple ratings of single individuals over time rarely yield the Big Five.

Finally, most traits are hierarchically organized, for example, being charitable is a way of being generous, which is a way of being kind, which is a way of being good. Targets’ familiarity and likability affect the preferred level of description, and there is a basic (default) level for most hierarchies (John, Hampson, & Goldberg, 1991). Each factor has several hierarchical subcomponents; for example, extraversion includes sociability, lack of restraint, assertiveness, and adventurousness.

Conceptions of Traits

Traits are part of the “(folk) theory of mind” (section “Explanations,” below), a set of concepts that people use to understand others (and themselves). Malle (2004) presents the most articulated version available for American adults, developed to account for their explanations of behaviors. Malle’s fundamental distinction is between intentional behaviors (i.e., actions, which have reasons) and unintentional behaviors (which have causes). Causes of unintended behaviors (“She failed organic chemistry.”) can be in the situation or the person, and include traits (e.g., stupid). Actions have three kinds of explanations: (1) enabling factors, which include traits such as abilities; (2) reasons, based on targets’ values, beliefs, and desires; and (3) causal histories of reasons, that is, the background or origin of the targets’ reasons (including traits, e.g., ambitious) without the reasons themselves. Thus traits play several different roles and have different meanings in folk theories of mind.

Understanding others also involves narratives (e.g., Schank & Abelson, 1995). Read (1987) argued that explaining an extended sequence of behavior—and (we would add) even describing it—requires a scenario, including targets’ plans and goals. He conceives of most traits as goal-based categories. Read, Jones, and Miller (1990) showed that ratings of how effective behaviors are at attaining trait-related goals predicts ratings of behaviors’ typicality (in the graded structure of trait categories) as well as confidence in making trait inferences from behaviors. (See also Read & Miller, 2005.)

Working with a prototype conception of personality trait and state categories, Chaplin, John, and Goldberg (1988) found that trait and state category “prototypes are not defined by averages . . . but by ideal (or extreme) attribute values. Like other ideal-based categories, traits and states serve particular goals. Trait concepts permit people to predict the present from the past; state concepts identify those behaviors that can be controlled by manipulating the situation” (p. 541).

Dweck and her colleagues have produced the most extensive research on individual differences in person concepts, with their entity and incremental theorists (e.g., Levy, Plaks, & Dweck, 1999). Different judgments and explanations of individual, as well as group characteristics (Levy, Plaks, Hong, Chiu, & Dweck, 2001), follow from these two orientations. Entity theorists emphasize traits, trait-consistent information, and evaluations in their descriptions. Hong, Chiu, Dweck, and Sacks (1997) found that entity theorists make more implicit
evaluative inferences (assessed via evaluative priming). McConnell (2001) showed that incremental theorists make memory-based judgments and entity theorists make on-line judgments. Plaks, Stroessner, Dweck, and Sherman (2001) showed that entity theorists attended more to stereotype-consistent information, whereas incremental theorists attended more to stereotype-inconsistent information. Plaks, Grant, and Dweck (2005) showed that attention is also differentially affected by how consistent new information is with perceivers’ theories of change.

Church et al. (2003) examined lay theories of behavior in two cultures, with their questionnaire about beliefs about traits and situations. The five trait beliefs concern traits’ stability, cross-situational consistency, predictive validity, ease of inference from a few behaviors, and accuracy for describing and understanding others. The five situational beliefs are roughly parallel. These two belief sets formed two factors that are essentially orthogonal. Dweck’s measures are only moderately related to them. Thus, beliefs about the trait- and context-driven nature of human behavior (Church et al. 2003), as well as dispositionist, situationist, and interactionist thinking (Baumann & Skitka 2006; Norenzayan, Choi, & Nisbett, 2002) are not mutually exclusive, and vary by individual as well as culture.

**Types**

Traits are not the only terms we use to describe others. One of the most important alternatives is types, including stereotypes. Andersen and Klaztky (1987) showed that social types (e.g., clown, bully) are more distinctive, and visually and associatively richer than related traits. People can also answer behavioral questions about others more quickly when they are described in terms of types rather than traits, suggesting more efficient information processing (Andersen, Klaztky, & John, 1990). Saucier (2003b) reported 2- and 8-factor structures of 372 common English types. The two factors were contempibleness (including moron, rat, monster), implying social rejection and derogation; and admirableness (hero, star). The 8-factor solution included some factors that resemble the Big Five, but more that suggest types have unique functions and are often highly evaluative. Ethnophaulisms (racial and ethnic slurs) constitute one class of evaluative types that has received particular attention from Mullen (e.g., Leader, Mullen, & Rice, 2009). As some ethnophaulisms suggest, we may see others as not fully human. Haslam and colleagues distinguish uniquely human attributes from human nature. The former “implicate culture, social learning, and higher cognition, whereas human nature implicates what is natural, innate, and affective” (Haslam, Loughnan, Kashima, & Bain, 2008, p. 58). Human nature is universal, essential, and the concept emerges early in individual development, whereas uniquely human qualities are infrequent and emerge in maturity (e.g., Haslam, Bain, Douge, Lee, & Bastian, 2005). The denial of uniquely human qualities is the basis for animalistic dehumanization, wherein people (especially outgroups) are likened to animals. The denial of human nature is the basis for mechanistic dehumanization, wherein people are likened to machines (Haslam et al., 2008). These are empirically distinct across a number of cultures (e.g., Australia, China, and Italy; Haslam, Kashima, Loughnan, Shi, & Sutiner, 2008).

Leyens and colleagues (Leyens et al., 2000) studied variations in descriptions of the emotions of essentialized social group members. They differentiate primary emotions (simpler, physiological, externally caused) from secondary emotions or sentiments (French; complex, cognitively oriented, and internally caused). The latter are more "uniquely human" versus animal (Demoulin et al., 2004). Ingroups are accorded more sentiments than are outgroups; and there is a reluctance to attribute sentiments to outgroups (Cortes, Demoulin, Rodriguez-Torres, Rodriguez-Perez, & Leyens, 2005).

Essentialism—the belief that types are based on intrinsic, inherited qualities—plays an important role in stereotyping others, especially when the stereotypes have a plausible biological basis such as with gender, race, and sexual orientation (see Yzerbyt, Judd, & Corneille, 2004). Carnaghi et al. (2008) found that the use of nouns rather than adjectives to describe others is associated with more essentialistic beliefs about them. Gelman (2003) argued that preschoolers naturally employ essentialistic concepts in developing their folk psychologies.

**Stereotypes**

Stereotyping is a huge topic, so we touch on only a few highlights. Schneider notes that at a minimum, “stereotypes are qualities perceived to be associated with particular groups or categories of people” (2004, p. 24). Some but not all theorists hold that stereotypes are also negative, inaccurate, and/or consensual. In practice, the categories most often studied as "stereotypes" have been those most socially, politically, and legally fraught, for example,
race, ethnicity, gender, and age. Prejudice is the affective or attitudinal/evaluative component of stereotypes, and discrimination is the behavioral consequence. So all the theoretical and empirical complexities associated with attitudes and their relations to behavior apply to prejudice, including the distinction between implicit and explicit processes and measures. In addition, much of the research on social identity, self-categorization, and intergroup perceptions involves stereotypes.

Notwithstanding race, gender, and so forth, many social features can be used to categorize others. Weeks and Vincent (2007) showed that people spontaneously use religion, even when another salient category (race) is available. Lieberman, Oum, and Kurzban (2008) showed that kinship is as important a category as sex or age. Kindzler, Shutt, DeJesus, and Spelke (2009) showed that when 5-year-old children were asked to “choose friends” from among novel others, who did or did not share their own language or race, same-language trumped same-race. Paladino and Castelli (2008) showed that simply categorizing others as ingroup versus outgroup members (based on ethnicity, nationality, age, political views, or even a minimal group paradigm) has immediate motoric approach-avoidance consequences. The last three papers present evolutionary arguments.

The stereotype content model (SCM; Fiske, Cuddy, Glick, & Xu, 2002), and its successor, the BIAS map (Behaviors from Intergroup Affect and Stereotypes; Cuddy, Fiske, & Glick, 2007), describe relations among social structure, stereotype contents, and the emotions and behaviors associated with them. Perceptions of group members vary along two fundamental dimensions by contrasting them in a compensatory direction relationship in comparative judgments of groups. Kervyn, Yzerbyt, Provost, and Corneille (2005) found that when a group was higher on one dimension, it was seen as lower on the other. Kervyn, Yzerbyt, Judd, and Nunes (2009) showed how this compensatory relationship plays out through confirmatory biases in impression formation. They define the compensation effect as “the tendency to differentiate two social targets in a comparative context on the two fundamental dimensions by contrasting them in a compensatory direction” (p. 829). This compensatory relationship is unique to these two dimensions, and contrary to the well-known halo effect (Yzerbyt, Kervyn, & Judd, 2008).

Given that many stereotypes are ambivalent, why do evaluations of stereotyped group members seem so univalent? Quinn, Hugenberg, and Bodenhausen (2004) showed that, consistent with research on retrieval-induced forgetting, cued-recall rehearsal of some targets’ traits (e.g., Susan— independent) inhibits free recall of nonrehearsed traits (e.g., liberal, opinionated), regardless of their valence. However, activating an applicable stereotype (e.g., feminist) changes this effect, facilitating free recall of nonrehearsed traits that are evaluatively consistent with rehearsed traits, and inhibiting recall of evaluatively inconsistent traits. This effect may...
underlie “the momentary experience of evaluative consistency in person perception” (p. 519). Gawronski, Peters, Brochu, and Strack (2008) presented a general theory and supportive evidence on how and when cognitive consistency operates to reconcile conflicting evaluations and beliefs in prejudiced behavior. People belong to many social groups. For example, Weeks and Lupfer (2004) found that “lower-class Black targets were primarily categorized by race, whereas middle-class Black targets were primarily categorized by social class,” spontaneously (p. 972). Multiple categories facilitate subtyping, in which targets who disconfirm a stereotype are put into a subcategory that preserves the stereotype itself, or subgrouping, in which stereotypes are differentiated (Richards & Hewstone, 2001). More generally, goals and situational factors can determine which categories or subcategories are activated, often automatically (e.g., Gilbert & Hixon, 1991). Crisp and Hewstone (2007) reviewed research on multiple social categorization, and its implications for reducing and preserving stereotyping.

Finally, important individual differences in stereotyping and prejudice are tapped by both explicit and implicit prejudice measures; see the section on unconscious processes, below. Sibley and Duckitt (2008) performed a meta-analysis of 71 studies looking at relations between the Big Five, prejudice, right wing authoritarianism (RWA), and social dominance orientation (SDO). SDO and RWA mediated most effects, consistent with “a dual-process motivational model of ideology and prejudice” (p. 248).

**Other Frameworks for Describing Others**

People are often described through stories or narratives. Being complex, such impressions almost always combine descriptions, judgments, and explanations. Narratives can arise to simply convey information, to form impressions (Wyer, Adaval, & Colcombe, 2002), or to judge guilt (e.g., Pennington & Hastie, 1992). Park has long contended (1986) that people form complex multidimensional person models of others, organized around central concepts and used to generate attributions, explanations, and predictions through simulation. In a methodological tour de force, Park, DeKay, and Kraus (1994) presented participants with brief self-descriptions of how several targets behaved in five different settings: work, home, social, chore, and leisure (Study 1). Kenny’s (1994) social relations model (which decomposes ratings into components due to targets, to perceivers or judges, and to their statistical interaction) showed that perceivers organized the behavioral information with some consistency across situations, producing a large target effect. A large judge x target effect showed that different perceivers (judges) developed different person models, even though all perceivers had the same information. Perceivers also wrote brief descriptions of the targets, and there seemed to be only a few different central concepts for each target, based more on how behaviors were combined (i.e., the person models) than on how each behavior was interpreted.

In Study 2, participants read the five self-descriptive statements for each of four targets from Study 1, and then wrote free descriptions and five descriptive traits for each. Then they rated each target on many traits, completed a recognition memory test for the original statements, and chose which of three possible person models (adapted from Study 1) best captured their impressions. Even though participants all read the same descriptions, they developed different models (as seen in their free descriptions and model choices), and these predicted differences in trait ratings and recognition memory, including false recognition of conceptually related foils. There was no relation between model choices and perceivers’ self-descriptions. The authors suggest that person models are spontaneously constructed during impression formation, and are flexible combinations of traits, narratives, and other elements organized around central concepts. Many of these effects were replicated and extended by Mohr and Kenny (2006), who also saw them as explaining the robust finding that there is typically low consensus among perceivers of the same targets.

A completely different approach can be found in Carlson’s (1994) associated systems theory. It describes relations among four systems: sensory (esp. visual appearance), verbal (esp. traits), affective (esp. responses to others), and action (esp. behavioral responses). While the theory has not received extensive testing (cf. Claypool & Carlson, 2002), it organizes several literatures and underscores the complexity of our representations of others.

Finally, social roles describe others, including role stereotypes. Social roles are also common in self-descriptions. For example, Rhee et al. (1995) coded self-descriptions from 353 American and Korean college students, using “probably the most elaborate and sophisticated coding scheme to date” (Kashima et al., 2006, p. 390). Traits were the most common description (30%), but 22% were social...
identities. Most of these were social roles. Social roles can be classified into ascribed versus attained, voluntary versus involuntary, and hierarchical categories. Such distinctions play little part in impression formation research, even though many languages (e.g., Japanese) make elaborate role distinctions in forms of address. Rather, research often treats roles as situational or contextual explanations for behavior, contrasting them with dispositional explanations, perhaps because Westerners think of people as “occupying” or “playing” roles, whereas they “have” dispositions.

One exception to the neglect of roles is Alan Fiske’s (1992) proposal that there are four basic types of social relationships: (1) communal sharing, as among close kin; (2) authority ranking, among superiors and subordinates; (3) equality matching, or egalitarian relationships; and (4) market pricing, based on equitable exchanges. Fiske, Haslam, and Fiske (1991) predicted that when one makes errors that substitute one person for another—by misnaming them, misremembering who did what to whom, or acting toward one person as though they were another—these confusions are more likely between others with whom one has the same kind of basic relationship. Across seven studies, they found that these relationship types “and gender predict the pattern of errors as well as or better than the age or race of the people confused” (p. 673). This suggests that people implicitly categorize others in terms of these four types of relationships, and that even when these types do not appear in descriptions, they affect memories of and actions toward others.

**Processes of Impression Formation**

Where do our descriptions of others come from? As noted above, they are shaped and constrained by our concepts, theories, and culture. And as elaborated below (“Features of Targets, Perceivers, and Relations”), they depend on the stimuli that others emit: appearance, behavior, and so forth. But how can we understand the pathways from receiving stimuli to producing descriptions or explanations of others? This is the purview of “social cognition,” which investigates the cognitive and motivational processes that construct our phenomenological social world. Our treatment here must be brief, but see Carlston (forthcoming) and Uleman, Saribay, and Gonzalez (2008) for more detail.

Dual-process theories dominate this area, and many dichotomies feature the distinction between automatic and controlled cognitive processes. Thoroughly automatic processes take place outside of awareness, without intentions, without conscious control, and quickly and efficiently (free from interference by concurrent cognitive operations). Controlled processes have the opposite features (Barth, 1994). But these features do not always co-occur, so it is important to specify how a process is or is not automatic (Moors & De Houwer, 2007).

Closely related to this (oversimplified) dichotomy is the one between implicit and explicit measures. In promoting this distinction, Greenwald and Banaji (1995, p. 4) focused on awareness. “The signature of implicit cognition is that traces of past experience affect some performance [e.g., a measure], even though the influential earlier experience is not remembered in the usual sense—that is, it is unavailable to self-report or introspection.” But implicit measures are often treated as though they are thoroughly automatic. So De Houwer, Teige-Mocigemba, Spruyt, and Moors (2009) redefined implicit measures as “outcomes of measurement procedures that are caused in an automatic manner” (p. 347), even though Nosek and Greenwald (2009) demur. De Houwer et al. (2009) provide a useful conceptual analysis of how automaticity’s features apply to two prominent implicit measures (the Implicit Association Test, or IAT, and affective priming).

A study that illustrates many of these concepts (Rydell, McConnell, Mackie, & Strain, 2006) independently manipulated and measured explicit and implicit attitudes toward a target person, Bob. In the first block of 100 trials, participants formed an impression by reading brief descriptions of positive behaviors performed by Bob. Each behavior was preceded by a subliminal negative word. Participants’ explicit evaluations of Bob at the end of this series were positive, but an IAT showed negative implicit associations with him. Then they read 100 additional behavioral descriptions of Bob, which were now negative, each preceded by a subliminal positive word. After this second block of trials, explicit attitudes had become negative but implicit associations with Bob were positive. Participants were not aware of the subliminal stimuli, their implicit attitudes, or the connection between the two. Implicit attitudes were thus formed without intentions, and were completely at odds with explicit attitudes. (This study did not examine efficiency or controllability.)

Automatic processes are important in many ways including directing attention, activating concepts (including traits and stereotypes), in evaluative
conditioning and priming, in forming inferences, and in interactions with controlled processes.

Attention

Several theories, including evolution, suggest that some stimuli should automatically capture our attention. Subliminally presented threatening faces attract more attention than neutral faces, but only when presented in the left visual field (Mogg & Bradley, 1999). Concurrent tasks that reduce working memory can eliminate the ability of angry faces to capture attention (Van Dillen & Koole, 2009).

In deliberate searches of multiface arrays, there is conflicting evidence for an “angry face” effect. Juth, Lundqvist, Karlsson, and Öhman (2005) found that happy (vs. angry or fearful) faces were detected faster and more accurately among neutral distractors, but socially anxious participants showed the angry face effect, suggesting important personality differences. Implicating more functional and motivational moderators, Öhman and Juth (2010, p. 59) report that the angry face effect is restricted to “male targets in the context of familiar [vs. novel] faces—a common situation for interpersonal violence.” Thus these automatic effects are not invariant, and are moderated by several variables.

Goals are among the most important moderators. For example, participants with experimentally created egalitarian goals are less successful at ignoring words related to egalitarianism (Moskowitz, 2002). Maner, Gailliot, and Miller (2009) found that participants exposed to mating primes and not in a committed relationship showed automatic attention to physically attractive opposite-sex others. Maner, Gailliot, Rouby, and Miller (2007) showed automatic “attentional adhesion” to potential rivals by participants primed with mate-guarding, but only if they were insecure in their own relationships.

Attention operates at several levels, from automatic attention capture to deliberate information search. At the automatic level, negative information is more likely to capture attention (Pratto & John, 1991), although this can be moderated by affective context (Smith et al., 2006). The encoding flexibility model (Sherman, Lee, Bessenoff, & Frost, 1998) describes how attention is flexibly deployed between consistent and inconsistent information about a stereotyped target; when cognitive resources are scarce, inconsistent information attracts more attention. Unprejudiced perceivers seek stereotype-inconsistent information (Wyer, 2005). De Bruin and Van Lange (2000) found that people search first for, and are more influenced by information relevant to morality than competence. And differentially attending to those we like, including ingroup members, unintentionally biases stimulus sampling in the social environment, with interesting consequences for impression formation (Denrell, 2005).

Other people’s attention is often signaled by their gaze direction, and this in turn captures perceivers’ attention, often without awareness. Indeed, gaze following is one of the foundations of competent social interaction from infancy onward (Frischen, Bayliss, & Tipper, 2007).

Priming

Brief, even subliminal exposures to stimuli can activate concepts that then influence impressions. The classic study by Higgins, Rholes, and Jones (1977) exposed participants to traits (e.g., adventurous or reckless) which influenced their impressions of a target who behaved in ways that could be interpreted either way. Besides such assimilation effects, priming can produce contrast effects. Förster, Liberman, and Kuschel’s (2008) “global/local processing style model” (GLOMO) describes some of the variables that determine whether assimilation or contrast occurs. See also Bless and Schwarz (2010) and Stapel (2007) for important alternative accounts of assimilation and contrast effects.

There are several types of priming (Förster, Liberman & Friedman, 2008). Repetition priming (when the same stimulus is repeated) typically increases perceptual fluency and reduces response times. Semantic priming can activate semantically related concepts (which then disambiguate stimuli, or bias subsequent judgments), goals (which direct behavior and ensure persistence by deactivating competing goals), or behaviors themselves. Procedural priming makes particular cognitive operations more likely. Affective or evaluative priming influences evaluations outside of awareness. Even cultural orientations, including individualism and collectivism, can be primed (Oyserman & Lee, 2008).

Semantic primes’ effects depend on many variables (Weisbuch, Unkelbach, & Fiedler, 2008). For example, Petty, DeMarree, Brínol, Horcajo, and Strathman (2008) showed that subtle primes work best for people high in the need for cognition, whereas blatant primes work best for those who are low in the need for cognition.

Stereotypes are primed by many stimuli including simply faces (e.g., Rule, Macrae, & Ambady, 2009). Stereotyping is supported by differential attention and attribution processes (Sherman, Stroessner, Conrey, & Azam, 2005); is reinforced...
through nonconscious mimicry by those who agree
with stereotyped statements (Castelli, Pavan, Ferrari,
& Kashima, 2009); and is supported by perceivers’
nonconscious positive moods (Huntsinger, Sinclair,
& Clore, 2009). Goal activation and goal satisfac-
tion influence the application of stereotypes (van
den Bos & Stapel, 2009); and the mere presence of
other ingroup members can prompt egalitarian
goals and affect implicit attitudes (Castelli &
Tomelleri, 2008). Activated stereotypes and implicit
evaluations predict different behaviors (Amadio &
Devine, 2006). Kunda and Spencer’s (2003) widely
cited framework describes which goals operate in
social interactions with stereotyped group members,
and how they affect both stereotype activation and

Valence Acquisition

Stimuli, including other people, acquire positive or
negative valence in many ways. Some of the most
interesting recent research is in the attitudes litera-
ture. Duckworth, Bargh, Garcia, and Chaiken
(2002) showed that completely novel stimuli are
automatically evaluated within milliseconds. The
bases of these automatic evaluations are unknown,
but this work suggests that many novel stimuli are
inherently valenced (Zajonc, 1980).

Single events can confer valence on otherwise
neutral people. Balance theory (Heider, 1958) and
research show that we like the friends of our friends,
and as well as the enemies of our enemies (Tashakkori &
Insko, 1981). Strangers may also be (dis)liked
because they resemble significant others who are
(dis)liked, even when that resemblance is not recog-
nized (Andersen, Reznik, & Glassman, 2005). Such
social cognitive transference is largely automatic.

Evaluations based on explicit information (e.g., tar-
et’s membership in a valenced group) can persist
well after the information itself is forgotten (Castelli,
Zogmaister, Smith, & Arcuri, 2004). And perceiv-
ers’ current emotions can also confer valence.
found that induced anger (vs. sadness or neutrality)
created implicit negative attitudes toward minimal
outgroups.

Over many trials, repeated mere exposure to stim-
uli (including other people) can make them more
positively valued, through greater familiarity and
processing fluency, even if that exposure is sublimi-
nal (Bornstein, 1989). Thus rapid supraliminal or
subliminal exposure to outgroup members’ faces
increases liking for new faces from those outgroups
(Zebrowitz, White, & Wiencek, 2008), and expo-
sure to white faces can increase whites’ prejudice
(Smith, Dijksterhuis, & Chaiken, 2008). People’s
liking for average over distinctive faces seems to be
based on mere exposure, even though attractiveness
ratings are not (Rhodes, Halberstadt, Jeffery, &
Palermo, 2005).

Explicit evaluations of others, based on the same
behaviors, can be quite ideosyncratic. Schiller,
Freeman, Mitchell, Uleman, and Phelps (2009)
detected large individual differences during impres-
sion formation in fMRI activation of the amygdala
and posterior cingulate cortex by particular behav-
iors, and these predicted subsequent evaluations of
the actors. “Subjects regarded different segments of
person-descriptive information as being relevant or
irrelevant for their subsequent evaluations. The
idosyncratic basis for this . . . shapes how subjects
weigh different types of information and which
information is selected for additional processing”
(p. 511).

Evaluative conditioning (EC), through repeated
pairings with valenced objects, can impart positive
or negative valence to previously neutral people.
Wâ†œther, Nagengast, and Trasselli (2005) suggest
that EC does not depend on awareness or on highly
invariant contingencies, unlike classical or signal
conditioning; resists extinction; is subject to coun-
terconditioning; produces evaluations that spread to
other stimuli that were already associated with the
target; and is based on association mechanisms. So
it likely plays an important role in many familiar
social phenomena. See also Ferguson (2007).

Attitudinal ambivalence occurs when evaluations
of others are simultaneously positive and negative.
Van Harreved, van der Pligt, and de Liver (2009)
describe this conscious phenomenon and its conse-
quences for decision-making, in their model of
ambivalence-induced discomfort (MAID). A dif-
f erent sort of ambivalence arises when implicit
...
(inaccessible) and explicit (accessible) attitudes differ (Rydell et al., 2006). Son Hing, Chung-Yan, Hamilton, and Zanna (2008) describe several interesting implications of such a two-dimensional (positive-negative and implicit-explicit) model for prejudice. And Rydell and McConnell (2006) provide a convincing dual “systems of reasoning” approach to how differing implicit and explicit attitudes toward the same object (e.g., person) can themselves change and also affect behavior.

**Spontaneous Inferences from Behaviors**

Early models of impression formation assumed that “behaviors will typically not be spontaneously encoded in terms of trait (attribute) concepts unless a specific processing objective requires it” (Wyer & Srull, 1986, p. 328). Research on “spontaneous trait inferences” (STIs), using more than a half-dozen paradigms, challenged this assumption. Reading descriptions of targets’ trait-diagnostic behaviors with the intent to memorize or familiarize oneself with them produces trait inferences, with little or no effort or awareness, and these inferences affect subsequent judgments (Uleman, Newman, & Moskowitz, 1996). Implied traits are activated (lexical decision and probe recognition paradigms) and bound to representations of the target (false recognition and savings-in-relearning paradigms; Carlston & Skowronski, 2005; Todorov & Uleman, 2004).

STIs are more likely in individualistic (Anglo) than collectivist (Hispanic) cultures (Zárate, Uleman, & Voils, 2001), and more likely by those high on collectivism (Duff & Newman, 1997) and the personal need for structure (Moskowitz, 1993). Once STIs are formed about one member of a social group that is high (but not low) in entitativity, they generalize to other group members (Crawford, Sherman, & Hamilton, 2002).

Besides traits, people spontaneously infer goals (Hassin, Aarts, & Ferguson, 2005), justice concepts (Ham & Van den Bos, 2008), counterfactual behaviors (Roese, Sanna, & Galinsky, 2005), and nonsocial causes (Hassin, Bargh, & Uleman, 2002). Both traits and situational causes may be activated simultaneously (Ham & Vonk, 2003). Target valences are inferred spontaneously, especially by extraverts, and persist for days (Bliss-Moreau, Barrett, & Wright, 2008). Moreover, some affect prompted by targets’ behaviors (e.g., disgust) is spontaneously retrieved on subsequent encounters with their faces (Todorov, Gobini, Evans, & Haxby, 2007), as detected by fMRI. There are other neuroscience STI studies. Mitchell, Cloutier, Banaji, and Macrae (2006) located a region of dorsal medial prefrontal cortex that is spontaneously activated (fMRI) by trait-diagnostic, but not by nondiagnostic behaviors. Van Overwalle, Van den Eede, Baetens, and Vandekerckhove (2009) report differential ERP evidence for spontaneous and intentional trait versus goal inferences.

Spontaneous trait transference (STT) refers to communicators becoming associated with the trait implications of behaviors they ascribe to others (Skowronski, Carlston, Mae, & Crawford, 1998). Several interesting differences between STIs and STTs implicate different cognitive processes (e.g., Carlston & Skowronski, 2005). Participants with the task of judging the veracity of trait-implying statements show no evidence of STIs, but STTs persist (Crawford, Skowronski, Stiff, & Scherer, 2007). STTs do not occur when representations (photos) of both communicator and target are present at encoding (Goren & Todorov, 2009). Gawronski and Wälther (2008) present evidence for their transfer of attitudes recursively (TAR) model, in which communicators become associated with the evaluative (not trait) implications of behaviors ascribed to others. They provide a lucid discussion of differences (in predictions and mechanisms) among STT, balance theory, EC, and TAR, including evidence that TAR is inferential rather than associative.

**Control and Automatic Processes**

The old dichotomy between controlled and automatic processes is too simple. Not only do (1) the several criteria for automaticity not always co-occur, but also (2) virtually all processes of interest to social psychologists involve both control and automatic processes, and (3) there are many kinds of mental control (e.g., Pennebaker & Wegner, 1993). One fruitful approach to this complexity is provided by Jacoby’s (1991) process dissociation procedure (PDP), which defines control in terms of the difference in performance on the same basic task under two conditions: one in which automatic and controlled processes work together to facilitate performance, and the other in which they oppose each other. Often the former condition involves simply performing the task as intended, and the latter condition involves eliminating or controlling effects of prior information on performance, by excluding it. Hence the definition of control is straightforward and natural. Control exists to the extent that performance differs between the two conditions. Once control (C) is estimated, a pair of equations provides estimates of A, automatic processes. See

2 Most PDP research on person perception involves stereotyping, because of the strong interest in controlling its undesirable effects. For example, in Payne’s (2001) weapons identification task, participants must identify a stimulus as a tool or a gun as quickly as possible, while trying to avoid the influence of preceding photos of a black or white man on each trial. On black-gun trials, automatic processes (stereotypic associations of black men with violence) and controlled processes (detecting a gun rather than a tool) both contribute to rapid accurate performance. But on black-tool trials, they oppose each other. Typical results show both C and A making significant contributions, so the interesting questions concern variables that influence their magnitude. Payne (2008) provides an excellent overview of research using this approach, including its use in conjunction with social neuroscience conceptions of control (Amadio, Devine, & Harmon-Jones, 2008).

3 More complex multinomial models of control and automatic processes’ joint operation are possible. A particularly well developed one, the quad model (Sherman et al., 2008) includes two parameters that usually represent automatic processes (AC, activation; and G, guessing) and two for control processes (D, detection; and OB, overcoming bias).

4 AC is the probability that a particular construct, evaluation, or behavioral impulse is activated by the stimulus, as in priming. D is the probability of detecting the correct response, strategically. OB is the probability that a correction occurred, given that AC could produce a response different from what D suggested. And G is the probability of guessing a correct response, given that neither AC nor D suggested a response. The model has shown adequate fit to data from semantic and evaluative priming tasks, weapons identification, the IAT, and the Go/No-Go Associations Test (GNAT). Sherman et al. (2008) describe several cases in which reanalyses with the quad model modify previous conclusions. For example, context effects on “automatic associations” may result from changes in control processes as well. Training to reduce biased stereotypic associations can both decrease AC and increase D. Implicit biases that increase with alcohol consumption were shown to result simply from decreases in OB. And individual differences in controlling race bias (Amadio et al., 2008) were traced to differences in AC and D, but not OB.

5 Virtually all applications of the quad model to date have used reaction times, but it is not restricted to these. Burke and Uleman (2006) described a study of the effects of spontaneous trait inferences on subsequent trait ratings of targets. They showed heightened AC of implied traits to targets; minimal G; and significant individual differences—for participants run in the first part of the semester. Participants run at the end of the semester showed less AC and greater G, supporting informal observations that these Ps unconsciously learned less and guessed more.

6 The quad model will change our view of automatic and controlled processes, from the idea that each is tapped by particular tasks, or that if they co-occur they always compete with each other, to the view that there are be several kinds of each, and that they complement and compete with each other, depending on task demands and conditions. The prospect of correlating quad parameters with behaviors and social neuroscience markers is particularly exciting.

7 Accuracy of Initial Impressions

8 Gauging perceivers’ accuracy depends on having criteria against which to compare their perceptions. When objective criteria for accuracy exist (e.g., height, income), there are few problems. But subjective criteria or ratings (e.g., how tall or successful) present special problems, including how perceivers interpret the question (Uleman, 2005) and frame the comparisons they are making. Thus a woman may be judged as the same height as a man, but relatively “tall” because she is implicitly compared with other women (Biernat, 2003). Many of the criteria of interest to personality and social psychologists are subjective (e.g., traits) with shifting comparison frames.

9 If subjective ratings of a target are used as criteria, are a target’s self-ratings, or a composite of others’ ratings more valid? There seems to be no general answer. Vazire and Mehl (2008) present evidence that each has substantial predictive validity for a range of everyday behaviors’ frequencies, and each often has unique validity. Behaviors are probably the least controversial criteria for accuracy (Kenny & West, 2008), especially (and perhaps only) when the behaviors are unambiguous.

10 The accuracy of stereotypes has been a research topic in its own right. Jussim (2005) has been particularly vigorous in documenting the accuracy (as well as the errors) of stereotypes, often with behavioral evidence in natural settings such as schools. He provides an excellent discussion of how to distinguish between accuracy and self-fulfilling prophecies.
the importance of differentiating levels of analysis in analyzing stereotypes, and how accuracy can sometimes lead to discrimination.

4 Accuracy in Trait Judgments

There are at least four major conceptions of accuracy in trait judgments. Kruglanski (1989) viewed traits as useful social constructs based on consensus, with their reality moot. Gill and Swann described "pragmatic accuracy" as "accuracy that facilitates the achievement of relationship-specific interaction goals" (Gill & Swann, 2004, p. 405). They found that both group members and romantic partners had more functional, pragmatically accurate perceptions of others in task- and relationship-relevant domains than otherwise. Gagné and Lydon (2004) found that in relationships, bias and accuracy coexist in different areas. Perceivers are "more accurate in epistemic-related relationship judgments while being more positively biased in esteem-related relationship judgments" (p. 322).

Funder's realistic accuracy model (RAM; 1995) assumes traits are "real," and advocates multifaceted criteria to assess them. So Letzring, Wells, and Funder (2006) used self-ratings, ratings by knowledgeable peers, and clinical interviews to establish criteria for accuracy, in a study of perceptions of triads of strangers. Reminiscent of Brunswik's lens model, RAM holds that accuracy depends on (1) the relevance of behavioral cues to a trait, (2) how available these cues are for observation, (3) the ease with which they can be detected, and (4) how they are used. In an interesting extension, Letzring (2008) found that the accuracy of observers of triadic interactions was positively related to the number of "good judges" (good social skills, agreeable, well adjusted) within the triads. This suggests that good judges are not only better at detecting and using relevant cues, but that they also elicit them in ways other observers can use.

Ickes (2009) focuses on empathy in social interactions; has developed innovative methods for defining and measuring accuracy in knowing what interaction partners were thinking and feeling; and has generated a wealth of interesting results.

The most quantitatively sophisticated views of accuracy emerge from Kenny's social relations model (SRM; Kenny, 1994) and PERSON model (Kenny, 2004). This work isolates several sources of accuracy, in both targets and perceivers. The SRM decomposes ratings of many targets, by many perceivers, into independent components attributable to targets, to perceivers, and to their unique interactions ("relationship effects"). The PERSON model decomposes the variance in such ratings into components that are more psychologically meaningful (namely Personality, Error, Residual, Stereotype, Opinion, and Norm; but note that Kenny's quantitative definitions of these mnemonic terms are not always obvious). PERSON generates predictions and explanations of several interesting phenomena, once appropriate parameters from past research are employed. For example, the surprising degree of consensus among perceivers at "zero acquaintance" and from "thin slices" of behavior is attributable largely to Stereotypes ("shared assumptions based on physical appearance"; Kenny, 2004, p. 268). With increasing acquaintance, asymptoting at about 100 acts after a few hours of interaction, consensus hardly increases, but is based entirely on Personality (perceivers' consistent shared interpretation of the target's acts). Yet consensus only accounts for about 30% of the variance in impressions. The remainder is based on Opinion (the consistent, private, and "unique view that the perceiver has of the target," Kenny, 2004, p. 268).

PERSON accounts for other important results. First, consensus partly depends on how much perceivers observe the same target behaviors. Yet this effect only makes a large difference for extraversion (among the Big Five, usually employed in these studies), probably because perceivers typically observe the same behaviors in groups, and group settings are uniquely appropriate for extraverted behaviors. Second, O is the dominant contributor to accuracy under standard conditions. Kenny (2004, p. 272) notes that Swann has called this "circumscribed accuracy" and claimed it reflects behaviors that are uniquely available to the perceiver. But most research suggests that it represents unique interpretations of target's behaviors by the perceiver, not unique behaviors. There is much more to PERSON, and to Kenny's general approach, than can be described here (e.g., Kenny & West, 2008). It simultaneously takes into account accuracy and bias of various sorts (e.g., Kenny & Acitelli, 2001); accounts for changes in perceptions over time; and models many of the findings from natural and experimental settings. As the field becomes more sophisticated and software becomes friendlier, it will become increasingly influential.

Deception

Bond and DePaulo (2008) analyzed how well perceivers can detect strangers' deception, across 247 experimental studies, and found that their ability is
negligible. Perceivers differ from each other in sus-
1 piciousness, but not in accuracy. Overall, they judge
2 others as truthful. Some targets are more credible
3 (believable) than others, based partly on physical
4 appearance. Credibility differences among targets
5 are larger than differences in trust/suspicion among
6 perceivers, but these are also unrelated to detecting
7 deception. Results are essentially the same when
8 testing lies by acquaintances, and high-stakes lies.
9 These studies, however, exclude important factors
10 that lead to detecting deception in real-world set-
11 tings. Park, Levine, McCornack, Morrison, and
12 Ferrara (2002) asked over 200 undergraduates to
13 describe incidents of detecting deception in their
14 own lives. People usually relied on information from
15 third parties, and physical evidence. Becoming sus-
16 picious in the first place was critically important;
17 and that the process often took days to months or
18 longer. All of this suggests that cues from liars’
19 behavior alone are not only few and far between,
20 they are also relatively unimportant in detecting
21 deception. (See also Kassin & Kovera, chapter 30,
22 this volume.)

24 Motivated Biases and Distortions

Motivated biases and distortions occur in many
26 ways. When the self-concept is threatened (e.g., via
27 failure feedback), stereotypes are more likely acti-
28 vated and applied, and this restores self-esteem (Fein
29 & Spencer, 1997). Furthermore, self-concept threat
30 selectively activates the relevant (vs. irrelevant) con-
31 tent in a stereotype, which is then selectively applied
32 to stereotyped (vs. nonstereotyped) targets (Govorun,
33 Fuegen, & Payne, 2006).

34 In general, perceivers are motivated to draw
35 inferences about others that are harmonious with
36 their current self-concepts, if not also self-affirming
37 (see Dunning, 2003, for a review). In defining posi-
38 tive traits, perceivers (particularly those with high
39 self-esteem) emphasize self-descriptive manifesta-
40 tions of these traits, and evaluate others who fit
41 these definitions more positively (e.g., Beauregard
42 & Dunning, 2001). When a target is known to be
43 competent in a given domain, perceivers infer that
44 s/he possesses self-descriptive attributes (McElwee,
45 Dunning, Tan, & Hollmann, 2001). Thus a violin-
46 list who learns that a well-liked target is musical
47 assumes she plays the violin.

48 Repressors show less evidence of STIs from negative
49 (vs. positive) behaviors, but this bias disappears when
50 they must respond quickly. This suggests that they
51 attend to threat cues early in processing and engage in
52 avoidance at later stages (Caldwell & Newman 2005).

53 Defensive projection involves perceiving in
54 others qualities that are unacceptable in oneself.
55 Newman, Duff, and Baumeister (1997) argued that
defensive projection is not directly motivational, but
56 is a by-product of cognitively suppressing thoughts
57 of self-relevant but undesirable qualities. This sup-
58 pression then makes these thoughts hyperaccessible,
59 so they affect perceptions of others. Perceivers led to
60 believe they have an undesirable trait that they are
61 asked to suppress perceive this trait in another group,
62 and the success of suppression predicts the strength
63 of projection (Newman, Caldwell, Chamberlin, &
64 Griffin, 2005). Others argue that perceiving nega-
65 tive qualities in others may function to deny their
66 relevance to oneself: Perceivers who received feed-
67 back that they were high on an undesirable trait
68 (anger or dishonesty), and then had a chance to proj-
69 ect the trait onto a target, showed less accessibility and
70 self-attribute of the trait (Schimel, Greenberg, &
71 Martens, 2003).

72 Functional projection occurs when people per-
73 ceive qualities in targets that are functionally related
to their own mental states (Maner et al., 2005). For
74 instance, following the activation of self-protection
75 goals, white U.S. participants perceive more anger
76 (but not other, functionally irrelevant emotions)
77 only in faces of outgroups implicitly associated with
78 threat (e.g., black males and Arabs, but not black
79 females or whites). Similarly, white U.S. males per-
80 ceive more sexual arousal in white female faces after
81 a mating goal is primed. Chronic self-protection
82 and mating goals show similar effects.

83 Mortality salience (MS, i.e., thoughts of one’s
84 own death) motivates people to increase the search
85 and preference for stimuli that validate their cultural
86 worldview. Those high in MS prefer stereotype-
87 consistent outgroup targets (Schimel et al., 1999)
88 and targets who praise or endorse their worldview
89 (Greenberg et al., 1990). MS also increases seeking
90 and preferring order and stability in the social
91 world. So MS increases primacy effects in impres-
92 sion formation and the preference for Heiderian
93 interpersonal balance (Landau et al., 2004), espe-
94 cially for perceivers high in the personal need for
95 structure.

96 Ideological beliefs affect person perception in
97 motivational ways. Rich targets are seen as more
98 competent (e.g., intelligent), and poor targets as
99 warmer, consistent with the SCM (Fiske et al.,
100 2002). The source of affluence (inheritance or hard
101 work) and perceivers’ belief in the Protestant work
102 ethic influences these impressions (Christopher
103 et al., 2005). Conversely, exposure to targets who
104
display complementary qualities (e.g., “poor but happy” and “rich but miserable”) increases explicit endorsement of system-justifying views, because the belief that “no one has it all” legitimizes an unjust world (Kay & Jost, 2003). Similar effects on justification of gender inequalities occur for exposure to complementary gender stereotypes (Jost & Kay, 2005). Exposure to innocent victims implicitly activates justice concerns, because such targets threaten perceivers’ belief in a just world (Hafer, 2000). These findings show that simple exposure to hypothetical others with particular combinations of characteristics can activate political views of broad social significance.

Features of Targets, Perceivers, and Relations

Target Features

The face is central for identifying individuals, but within the first few hundred milliseconds, perceivers also extract social category membership (Macrae, Quinn, Mason, & Quaflieg, 2005); infer personality attributes (Todorov, Pakrashi, & Oosterhof, 2009), sexual orientation (Rule, Ambady, & Hallett, 2009), sexual strategy (e.g., Boothroyd, Jones, Burt, DeBruine, & Perrett, 2008), and social dominance (e.g., Chiao et al., 2008), and retrieve previously learned behavioral information (Todorov et al., 2007). Zebrowitz (2006) outlined much of what is known and what remains to be discovered, for a comprehensive theory of face perception.

Information from a target’s face, and information known through other channels, provide the context for each other (Johnson & Freeman, 2010). For example, inferences from a target’s face are used in interpreting verbal information (“reading from faces”), and personality knowledge influences the perception of faces (“reading into faces”; Hassin & Tropel, 2000). Similarly, a target’s social category membership influences perception of facial features (Eberhardt, Dasgupta, & Banaszynski, 2003) and facial expressions of emotions (Hugenberg & Bodenhausen, 2003). Perception of facial emotions and implicit prejudice guide category inferences (Hugenberg & Bodenhausen, 2004), as does disliking the target (Richeson & Trawalter, 2005). The widely reported amygdala response, indicating white perceivers’ racial bias to black male faces (e.g., Phelps et al., 2000), only occurs when target faces are looking at perceivers (Richeson, Todd, Trawalter, & Baird, 2008).

Sophisticated quantitative analyses of faces and responses to them are increasingly prominent.

Oosterhof and Todorov (2008) used a statistical model of face shapes to generate a multidimensional array of emotionally neutral faces, and then got trait ratings of them. Two dimensions—trustworthiness/valence and dominance/power—account for these ratings quite well. In another approach, the extent to which “normal” faces resemble anomalous or baby faces (as measured by activations in a connectionist network) predicted perceivers’ trait impressions of the faces (Zebrowitz, Fellous, Mignault, & Andreoletti, 2003). While their accuracy is debated (e.g., Penton-Voak, Pound, Little, & Perrett, 2006), face-based inferences from faces affect such important behaviors as voting (Todorov, Mandisodza, Goren, & Hall, 2005) and criminal sentencing (Blair, Judd, & Chapleau, 2004).

Other visual cues, from posture to hand movements (self-touching) to hair style, have a wide range of meanings. The ability of targets to accurately send nonverbal cues (“encoding”) and of perceivers to interpret them (“decoding”) varies. Perceivers with better psychosocial adjustment and higher intelligence generally decode nonverbal cues more accurately (Hall, 2009). Perceivers also differ in their reliance on perceptual cues, as measured by the paper-and-pencil Perceptual Reliance Index (PRI; Livingston, 2001).

“Thin slices” are short, dynamic audio and/or visual streams of behavior with a mixture of information about targets (e.g., facial expressions, body posture and movements, speech, context of behavior, etc.). Perceivers accurately detect such diverse outcomes from thin slices as doctors’ effectiveness in treating patients and their history of malpractice, teachers’ effectiveness, the type and quality of relationship that dyads have, a variety of dispositions, personality disorders, and targets’ testosterone levels (see Ambady, Bernieri, & Richeson, 2000). Such judgments rely mostly on nonconscious, intuitive processes (Choi, Gray, & Ambady, 2005). The accuracy of thin slice judgments is limited by familiarity with the target’s cultural background and context, the kind of judgment made, and perceivers’ ability to decode relevant information. Speed-dating provides live thin slices, allowing dyadic processes to be examined in real time with high external validity (Finkel & Eastwick, 2008).

Point-light displays enable researchers to study kinematic cues separately from other bodily and facial features. They afford social inferences as detailed as a target’s vulnerability to attack (see review by Johnson, Pollick, & McKay, 2011).
Johnson and Freeman (2010) argue that visual cues and the inferences they afford set the context for one another, as when angry bodies (in point-light displays) are categorized as male more often than female, and vice versa for sad bodies; or when a target’s sex and gender, inferred from body shape, influences whether or not particular body motions are seen as attractive. Gifford (2006) warned of the complexities of nonverbal research, particularly using targets’ self-reports or informants’ reports to evaluate accuracy. He argued, on the basis of Brunswik’s (1956) lens model, that an ideal study should employ a set of independent, trained judges that code targets’ nonverbal behaviors. This allows the researcher to test which cues are encoded (displayed) by targets; what their personality dispositions are (cue validity); which of these cues are decoded by perceivers; and what kinds of personality impressions they arrive at (cue utilization). For instance, in judgments of extraversion-gregariousness, head nodding was both a valid (i.e., more extraverted targets nodded more) and a utilized cue (i.e., the frequency of nods correlated positively with perceivers’ judgments of extraversion).

Auditory cues provide information about targets’ affect (see Juslin & Scherer, 2005, for an excellent review). Cues from different modalities interact. Integrating facial and vocal information has implications for affect and identity perception (reviewed by Campanella and Belin, 2007). People can match unfamiliar faces to voices, and vice versa, at better than chance levels (Kamachi, Hill, Lander, & Vatikiotis-Bateson, 2003). Such findings suggest that, while often studied in isolation, cues from different modalities are perceived concurrently, as a Gestalt.

Olfaction and hormone effects have been studied mostly in terms of women’s increased sensitivity (e.g., faster categorization times) to male faces for heterosexual women and female faces for homosexual women (Brinsmade-Stockham, Johnston, Miles, & Macrae, 2008), and women’s preference for more masculine faces for short-term relationships during the high fertility phase of their menstrual cycle (Penton-Voak et al., 1999). See Schaller (2007) for a review. Olfactory cues influence person perception even when they do not come from the target (Dematté, Österbauer, & Spence, 2007).

Artifacts, byproducts, and settings provide useful cues about targets. For example, music preferences support personality inferences (Rentfrow & Gosling, 2006), as do ambient sound samples, recorded unobtrusively by a device carried by targets (Mehl, Gosling, & Pennebaker, 2006). People construct the physical settings they occupy (home, office, bedroom, etc.) by deliberately decorating them (“identity claims”) or otherwise leaving marks behind (“behavioral residue”) (Gosling, Ko, Mannarelli, & Morris, 2002). Observers pick up mostly valid cues from residential spaces (e.g., how organized a person’s office is) and arrive at consensual and generally accurate judgments (judged against self- and informant-reports) of targets’ standing on the Big Five factors.

Cyberspace provides many ways for people to express themselves. Personal Web sites consist almost entirely of identity claims (vs. behavioral residue) and thus may provide a particularly clear and coherent message about the author’s personality. Overall, Web site observers develop consensual and accurate impressions of targets, as judged by self- and informant-reports (Marcus, Machilek, & Schütz, 2006; Vazire & Gosling, 2004). Inferences of openness to experience from Web sites are about as accurate (relative to self-reports) as from long-term acquaintanceships. The accuracy of impressions from Web sites is comparable to impressions from offices and bedrooms.

Reputations are shared impressions of a target. Anderson and Shirako (2008) argued that reputations develop because perceivers are motivated to pass on their impressions of targets. They also showed that targets that are more visible in a community are more likely to develop reputations, and that these reputations are more closely tied to their behavior history.

In their distributed social cognition (DSC) model, Smith and Collins (2009) explored “multiple perceivers and targets who actively elicit information from each other in interaction and share their impressions within networks of social relationships, influencing each others’ impressions over time” (p. 344). They outlined various mechanisms that suggest that “the structural patterns of social ties among individuals can be just as important as the individual and dyadic processes of impression formation in determining what information each individual has access to, as well as the overall patterns of impressions” (p. 349). Using multiagent simulation with only three simple mechanisms (e.g., the likelihood of sampling information about an actor decreases as the valence of the actor becomes more negative), they provide insights into complex emergent phenomena that are hard, if not impossible, to predict otherwise.
**Perceiver Features**

Aging may reduce basic social-cognitive abilities related to theory of mind (Sullivan & Ruffman, 2004), recognizing emotions (Phillips, MacLean, & Allen, 2002) and establishing joint attention with others (Slessor, Phillips, & Bull, 2008). Diminished cognitive inhibition may produce more stereotyping and prejudice (von Hippel, 2007). In addition, people rely more on affective (vs. deliberative) information processing strategies as they age, due to declines in the efficiency of control processes (Peters, Hess, Västfjäll, & Auman, 2007). They are more susceptible to making dispositional attributions (Blanchard-Fields, 1994) unless they are high in attributional complexity (Horhota & Blanchard-Fields, 2006). This latter finding may represent an increased reliance on cultural explanations for behavior, because older Chinese adults do not show greater correspondence bias (Blanchard-Fields, Chen, Horhota, & Wang, 2007).

On the other hand, older adults have some advantages and ways to compensate for their biases. The older a person is, the more they are likely to rely on trait-diagnostic information, suggesting increased ability “to discriminate between more and less informative aspects of individuals’ behaviors” (Hess & Auman, 2001, p. 507). When the target is more personally relevant and when they are held accountable, older adults make more accurate trait inferences and recall more target information (Hess, Osowski, & Leclerc, 2005). Additional time for making judgments can alleviate older adults’ bias toward dispositional attributions (Chen & Blanchard-Fields, 1997), and eliminate other age differences (Ybarra & Park, 2002).

Working memory capacity (WMC), measured by attention span tasks, is directly related to controlling attention. So WMC should be related to stereotype suppression, correcting initial impressions (e.g., to take into account situational factors), forming on-line versus memory-based impressions, and forming more complicated person impressions that integrate multiple, inconsistent elements (Barrett, Tugade, & Engle, 2004, pp. 560–561). The importance of executive functioning in person perception is well established (see Macrae & Bodenhausen, 2000). But there is still “a dearth of research on the impact of individual differences in attentional resources on social cognition” (Conway, 2000, p. 7).

Not all types of cognitive load impair person perception in the same way (e.g., Macrae, Bodenhausen, Schloerscheidt, & Milne, 1999), and the effects of alcohol on person perception cannot be reduced to overall impairment of WMC (Bartholow, Pearson, Gratton, & Fabiani, 2003).

Emotional Intelligence (EI) is attracting increased empirical attention following recent theoretical advances that provide a clearer definition of the construct (Mayer, Roberts, & Barsade, 2008). But little is known about how EI relates to first impressions, including the accurate perception of emotions.

**Relational Features**

Perceivers and targets are related in many ways that develop over time. Because this chapter concerns only initial impressions, we restrict our review to two relations that are present initially: power and psychological distance.

Power that perceivers hold over targets, or even over others who are not targets, can affect impression formation (Guinote & Vescio, 2010). For example, Houssais, Uleman and Saleem (2009) found that merely thinking about past situations in which one had power over others produced more STIs about unrelated targets. But usually power describes relations between perceiver and target.

Early research showed more stereotyping of the powerless by the powerful (Fiske, 1993; also Vescio, Snyder, & Butz, 2003). But power can lead to individuation of powerless targets if they are useful for attaining goals, especially goals that are mentally active and supported by a legitimizing organizational structure (Overbeck & Park, 2006). High-power perceivers are attracted to goal-relevant targets more than low-power perceivers, especially when the relevant goal is activated (Gruenfeld, Inesi, Magee, & Galinsky, 2008), an important qualification of the general finding that goal-relevant stimuli are evaluated more positively (Ferguson & Bargh, 2004). Mast, Jonas, and Hall (2009) found that priming high power (vs. low power) led to greater interpersonal sensitivity, partially mediated by positive social emotions (e.g., pride, feeling respected)—results contrary to some earlier research (e.g., Galinsky, Magee, Ines, & Gruenfeld, 2006). Importantly, this was true only when power was construed empathically (feeling responsible for subordinates) and not egoistically (putting oneself first).

Targets’ power affects attributions about their behavior by unrelated perceivers. Overbeck, Tiedens, and Brion (2006) argued that the stereotype for “powerful people” includes being less constrained and therefore more likely to act on dispositional than situational bases. This may be more than just
a stereotype (e.g., Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008). Perceivers attribute the actions of high (vs. low) power targets more to dispositional than situational causes (Overbeck et al., 2006). Attributions about low-power targets are also influenced by the type of power to which they are subject. Coercive power leads to more situational attributions than referent power. Differential attributions to high vs. low-power targets are also more evident when the role of situational constraints is unclear.

Psychological distance (spatial, temporal, and in terms of probability) has effects on a remarkable range of phenomena (Liberman, Trope, & Stephan, 2007). Construal level theory (CLT; Trope & Liberman, 2000) asserts that psychological distance (vs. closeness) produces high-level construal of events and objects, including other people, and this is associated with a focus on abstract, global, and superordinate features. Traits are relatively high level, abstract ways of thinking about others. Thus when targets are more distant, the correspondence bias is stronger (Henderson, Fujita, Trope, & Liberman, 2006; Nussbaum, Trope, & Liberman, 2003, Study 1), behavior is seen as more cross-situationally consistent (Nussbaum et al., 2003, Study 2), and perceivers ask more decontextualized, abstract questions about others when predicting their future behavior (Nussbaum et al., 2003, Study 3). Perceivers use more abstract (e.g., trait) terms in describing distant vs. close others (Fujita, Henderson, Eng, Trope, & Liberman, 2006). And people are more likely to make STIs when targets are spatially or temporally distant, or when in an abstract mind-set (Rim, Uleman, & Trope, 2009). So psychological distance produces more trait use when intentionally describing, predicting, and explaining others, as well as when thinking about them spontaneously.

Explanations

Explanations (vs. descriptions) of others’ behavior involve causal theories, and these invariably involve attributions and assignments of responsibility, credit, and blame. The line between descriptions and explanations is not always clear, and it is obscured when “descriptions” are crafted to deflect blame. Nevertheless, this distinction is important (Hamilton, 1998). Three general frameworks for understanding explanations have been popular: attribution theory, theory of mind, and simulation theory. Each has a long history, so we focus on recent developments.

Attribution Theory

A basic but seldom asked question concerns the accuracy of attributions of causality. Robins, Mendelson, Connell, and Kwan (2004) looked at perceivers’ consistency and agreement on their partners’ and their own behaviors and their causes. Although there was relatively high consistency and agreement on behaviors (such as talkative, warm, nervous, and effective), there was virtually no agreement on their causes (target’s mood, personality, partner, and other aspects of the situation). This suggests “that causal attributions are more strongly influenced by implicit biases” (p. 342).

Nevertheless, when presented with highly selective behavior summaries, perceivers do show many of the regularities first suggested by early attribution theorists. Hilton (2007) presents important updates. Regarding Kelley’s ANOVA model, he notes that attributions are not based solely on observed covariation, but depend heavily on general world knowledge, which determines what is expected and what is not. Only the latter needs explanation. Further, early misspecification of the model produced underestimates of people’s rationality and overestimates of bias. He notes Morris and Larrick’s (1995) Bayesian demonstration that faulty beliefs rather than faulty reasoning from these beliefs account for the “fundamental attribution error” (FAE), and that there is wide variation in beliefs about relations between situational and dispositional causes (e.g., Church et al., 2003). Gawronski (2004) posed a more fundamental challenge to the FAE (the belief that situational factors have little impact on behavior), contending that it is dead but that the correspondence bias lives on. Hilton (2007) emphasizes that attributions are based on spontaneously imagined counterfactuals as well as actual observations, and are also constrained by the Gricean rules of conversations. These were missing from earlier theories.

Malle (2006) challenged the actor-observer asymmetry, in which perceivers attribute others’ behaviors to dispositions, but their own behaviors to situations. In a meta-analysis of 173 studies, he found that, “the classic actor-observer asymmetry was very small or non-existent” (p. 900). Furthermore, the effect was evident for negative events, but reversed for positive events. Malle, Knobe, and Nelson (2007) reported six new studies that also collectively failed to find the actor-observer asymmetry, either in terms of the person-situation dichotomy or in trait ratings.

The other major development concerns attributions of blame and responsibility. Earlier formulations (e.g., Shaver, 1985) posited that these followed...
from attributions of causality, accompanied by attributions of intention, foreseeability, capacity, and so forth. Only then was blame attributed. Haidt (2001) turned this formulation on its head and posited that intuitions (often emotionally based) come first, followed by rationalizations and reasoning. And most of the reasoning happens socially, between people, rather than through inner speech. Thus, “moral intuitions and emotions drive moral reasoning” (p. 830). Not all moral reasoning depends on others’ opinions (Haidt & Kesebir, 2010), but much of it does. Haidt’s formulation has precedents. Aliche (2000) showed clearly that people’s evaluation of causality in culpable events is affected by outcomes over which the target had little or no control.

Theory of Mind

“Theory of mind” attempts to delineate how people (and other mammals) infer the mental events that occur in others’ minds. Malle (2004) developed an adult folk theory that organizes people’s explanations for others’ behaviors in natural settings, in the spirit of Heider (1958), and provides an alternative to classical attribution theory. Explanations are communications, not simply private thoughts. So they follow conversational (Gricean) rules, and carry implications of praise and/or blame in addition to mere causality. The central distinction is between accidental behaviors (e.g., stumbling) and intentional acts, not between situational and dispositional causes. Intentionality judgments depend on multiple cues, and the ability to make them emerges early in life. Sensitivity to the various features of animacy occurs during infancy (Rakison & Poulin-Dubois, 2001). By 16 months, infants distinguish intentional acts from accidental behaviors, and are less likely to repeat an adult’s action that is followed by “Whoops” (and hence accidental) than by “There!” (Carpenter, Akhtar, & Tomasello, 1998). Even 6- to 10-month-old infants form impressions, and prefer puppets who intentionally help rather than hinder other puppets (Hamlin, Wynn, & Bloom, 2007). In Malle’s (2004) framework, only behaviors (accidental) are explained by causes, whereas acts are explained by reasons. Causes can be situational or personal (including traits), whereas reasons depend on the target’s values, beliefs, and desires. If such immediate mental states are unknown, a causal history of reasons explanation is offered, in personal (e.g., “he is lazy”) and/or situational terms. Finally, acts may be explained in terms of situational and/or personal enabling factors, again including traits.

This framework has considerable support and leads to novel predictions. For example, Malle et al. (2007) found good evidence for three kinds of actor-observer asymmetries (although not the traditional one).

Reeder’s multiple inference model (Reeder, Vonk, Ronk, Ham, & Lawrence, 2004) is consistent with Malle’s framework. It contends that people explain others’ intentional acts in terms of motives (i.e., reasons, based on values, beliefs, and desires); that multiple motives are considered; that these motives have specific content; and that these are reconciled with situational pressures to produce trait inferences (or not). Specific motives mediate specific trait inferences. Reeder, Monroe, and Pryor (2008) showed that the nature of situational constraints affect the motives and traits inferred about the “teacher” in Milgram’s obedience situation. Reeder (2009) discusses the model more generally, contrasting it with traditional attribution theory.

The theory of mind or “mindreading” perspective is also consistent with Idson and Mischel’s (2001) findings noted above, and with Royzman, Cassidy, and Baron’s (2003) “epistemic egocentrism,” which shows that adults retain much of the failure in perspective-taking seen in young children’s failure at the false-beliefs task.

Simulation Theory and the Self-Referential Perceptions of Others

Simulation theory (e.g., Perner & Kühberger, 2005) is less an explicit deductive theory than the other two, involving not so much inferring the other’s mental state or situation from general principles as imagining oneself in the other’s situation, and reading off from that simulation an explanation of why the other acted as that way, and what the other might feel and do. Much research on understanding others emphasizes the self as a starting point (Alicke, Dunning, & Krueger, 2005). People seem to use self-knowledge automatically to make inferences about others, and assume self-other similarity by default (Epley, Keysar, Van Boven, & Gilovich, 2004; Krueger, 2003; Mussweiler, 2003), particularly for ingroup members (Robbins & Krueger, 2005). Others’ emotions are understood by feeling them in ourselves (Niedenthal, Barsalou, Ric, & Krauth-Gruber, 2005), as are other aspects of people’s behavior (Chartrand, Maddux, & Lakin, 2005). People spontaneously project both their chronic and primed goals onto others (Kawada, Oettingen, Gollwitzer, & Bargh, 2004). They also
Mental state inferences are no longer a "haphazard motivational (e.g., self-enhancement) reasons. Cognitive (e.g., high accessibility of the self) and biases and knowledge when perceiving others for rent self-views, or better yet, self-enhance (Balcetis & Dunning, 2005; Dunning, 2003). As noted earlier, motivated biases link self with others, and even an adaptive strategy in the absence of information about others, adults make egocentric inferences even when they have ready access to concrete knowledge of others’ beliefs (Keysar, Lin, & Barr, 2003; Royzman et al., 2003). Van Boven and Loewenstein (2003) proposed a dual-judgment model, in which people first imagine being in the other’s situation. An "empathy gap" occurs in self-predictions (i.e., predictions of one’s own future acts are colored by current mental states), and this gap also appears in predicting others. Thus thirsty perceivers projected more thirst than warranted for others in a different situation, and this was mediated by self-predictions. Judging others (vs. self) can use different information (folk theories vs. introspection, respectively), producing divergent inferences about intrapersonal and interpersonal insight (Pronin, Kruger, Savitsky, & Ross, 2001). Others may also be seen as different from self in having less essential humanness (Haslam et al., 2005), being more driven by ulterior motives or self-interest (Reeder, Pryor, Wohl, & Griswell, 2005), and more susceptible to influence and bias (Ehrlinger, Gilovich, & Ross, 2005; Van Boven, White, Kamada, & Gilovich, 2003). See Pronin, Gilovich, and Ross (2004) for a review. People project what they are interested in or attuned to; on how you look, and what that means to us; on the social categories to which you belong, and what we are interested in or attuned to; on how you look, and what that means to us; and on who is asking, and why, as well as what we all want to believe. Rather than a single answer, there is a Rashomon of realities (Kurosawa, 1950), each with its own truths and biases. Impressions are conjoint social constructions by targets and perceivers, their personalities and cultures. Understanding them requires analyses at multiple levels (cultural, personal, social, neuronal) in multiple time frames (lifetimes, years, immediate situations, and milliseconds) and degrees of awareness (explicit and implicit), and from multiple points of view (self, perceiver, consensus, and some future eye-of-God scientific framework that integrates all of these). There is no sword to cut this Gordian knot. It must be unraveled and assembled one thread at a time. But we hope you find, as we do, that the skins and fabrics that have emerged so far are fascinating.

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Personality and assessment

Personality in adulthood:


