

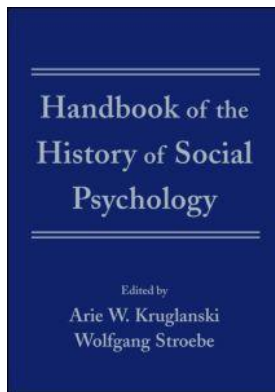
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## **Handbook of the History of Social Psychology**

Arie W. Kruglanski, Wolfgang Stroebe

### **A History of Social Cognition**

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Michael S. North, Susan T. Fiske

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## 4 A history of social cognition

*Michael S. North and Susan T. Fiske*

Social psychology is all about people's influence on other people's thoughts, feelings, and behaviors, according to a classic definition (Allport, 1954). That influence depends on our impressions of those potentially influential others and how they relate to us: Who is that stranger, and why is he smiling at me? Are immigrants coming here to join our culture or to exploit it? Is my new friend a trustworthy expert about "how we do things around here?" Does that person of my dreams really share my dreams? Each of these influence situations depends on our interpretation of the other person's predispositions.

Social cognition comprises all the ways that we make sense of other people and ourselves (Fiske & Taylor, 2008). We think about people because they matter to us. Social cognition both conditions social interaction and results from it (Jones & Gerard, 1967). We cannot enter an encounter without some assumptions about the other person and ourselves, "going beyond the information given" (Bruner, 1957) to infer intent, traits, abilities, beliefs. And we leave the encounter with impressions and influences that reveal that person as one thread in our lives. Social cognition interweaves the fabric of all social processes.

Not surprisingly, social psychologists have addressed topics relevant to social cognition since the field's earliest texts a century ago. Psychologist McDougall (1908) posited a variety of instincts for the purpose-driven human, and later introduced the idea of the group mind—how a social collective develops shared (cognitive) beliefs and purpose. Simultaneously, sociologist Ross (1908) introduced social psychology as concerned with conformity, imitation, and custom, forming postulates for people's thinking. The earliest *Handbook of Social Psychology* (Murchison, 1935) contained chapters on cognitively relevant phenomena such as language, magic, and attitudes, but none of these books addressed social cognition *per se*.

Isolated early landmarks of expressly social-cognition research include Solomon Asch's (1946) study of impression formation from trait lists and Fritz Heider's (1958) volume on interpersonal relations, most of which were cognitive inferences about relationships. Both Asch and Heider relied on Gestalt approaches in which the configuration forms a whole that emerges distinct from its constituent parts. A beard on Santa Claus carries a different meaning from the same beard on a terrorist recruiter. An enemy's intelligence (*shly*) differs from an ally's intelligence (*wise*). The state of the contemporary science appeared in two collected volumes, one on current

views of cognition (Bruner et al., 1957) that included social psychologists Festinger, Heider, and Osgood, and the other on person perception (Tagiuri & Petruccio, 1958) that set the agenda for early cognitive social psychology by including chapters by Asch, Bruner, Cronbach, Dornbusch, Heider, Jones, and Secord. The latter volume stemmed from a Harvard conference that inspired those who would become the elders of social-cognition research (see Gilbert, 1998, for one account).

Despite social psychology's theme of cognition about other people—and its persistent interest in attitudes, another cognitively informed phenomenon—the rest of psychology had scorned cognition for decades. During the behaviorist era (Boring, 1950), only directly observable stimulus and response counted as science. This learning theory stance rejected any hypothetical constructs such as mental states, goals, and cognitions. Nevertheless, social psychology persisted in studying inferred variables such as attitudes and impressions (see Briñol & Petty, this volume, on attitudes, and Hilton, this volume, on person perception). Social psychology had escaped the behaviorist prohibition against cognition.

During the 1970s, social psychology faced a crisis of a different sort, variously viewed as socially irrelevant (too inward-looking), overly phenomenon-driven (cute demonstration studies), and conceptually limited (focusing only on the person as consistency-seeker). These intellectual doldrums generated depressive symposia and soul-searching essays, enough to drive any self-respecting graduate student out of the field.

Then came the cognitive revolution. Tectonic shifts in experimental psychology heralded two events, as the field next door set the stage for social psychologists to embrace cognitive theories and methods. In experimental psychology, first, the expressly anti-cognitive stimulus–response theories had failed to explain language development and use (Chomsky, 1959, critiquing Skinner, 1957). Behaviorist approaches simply were not accounting satisfactorily for complex (social) phenomena. Second, work on acquisition of knowledge and skills had developed an approach termed "information processing" (Broadbent, 1958). Information-processing theories specify the sequence of mental operations between stimulus and response. In response to both developments, new tools and theories emerged in experimental psychology, now dubbed "cognitive psychology" (Anderson, 1980; Holyoak & Gordon, 1984).

Just as an earlier generation had seized the technology of the day—steam engines—as the metaphor for human psyche (think of the hydraulics involved in repression leaking via Freudian slips), psychology now seized on the computer, seeing people as information processors. As the next sections show, new ideas emerged: for example, that people take efficient but misleading mental shortcuts. New methods arrived: for example, reaction times and memory errors, to reveal the influences of cognitive organization. New paradigms surfaced: for example, expectancy confirmation, which focused on the role of beliefs in bringing about social reality through both behavioral and cognitive confirmation. New theories appeared: for example, stereotypes as cognitive prototypes, not motivated ideologies. In short, a new field materialized, adapting cognitive principles to social settings.

Why were people so enthusiastic about the cognitive approaches to social phenomena? Cognitive dissonance (attitude change from psychological inconsistency) theory had resembled other mid-level motivational theories; they dominated the field during the 1950s and 1960s, by explaining particular domains (e.g., equity in close relationships, altruism in helping). These mid-level theories had seized the stage from grand motivational theories (e.g., Freudian theory, learning theory). The mid-level theories relied on specific motivations (consistency-seeking, fairness), and they proved heuristic for research as experimental social psychology proliferated. But the major theories had reached a plateau, where new insights were scarce. One reason, then, for adopting the new cognitive approach was precisely that it was new and offered opportunities to explore untrampled territory. Americans in particular assume new is better, of course. But in addition, the older a domain, the more reviewers have strong *a priori* opinions about what has been done already and how new things must fit that tradition. As the gatekeepers become more entrenched, they stifle innovation with constricted requirements. As a literature's domain becomes more crowded, the possibility of making a novel contribution diminishes. Thus, social cognition seeming new had its advantages.

Another reason was that purely motivational approaches began to seem arbitrary; people could be motivated to do almost anything under the right circumstances, as flashy demonstration studies had shown. Given the crisis in social psychology, newcomers to the field wanted to find a space that seemed more open, systematic, and principled. Science always envies and imitates the “harder” science next door, and social psychologists viewed cognitive psychology as somehow more rigorous and systematic.

Specific events then marked the arrival of social-cognition research. Some of the earliest were in the development of collaborative training, whereby new researchers benefited from having both cognitive and social mentors. An exemplar among them was Nancy Cantor, a newly minted Stanford PhD, who combined memory training with person perception to produce one of the most notable harbingers of the era, documenting traits as prototypes (Cantor & Mischel, 1977). Another was

Hazel Markus (Markus, 1977), a University of Michigan PhD, who identified the self-concept as a self-schema. Both translated cognitive concepts into theoretically transformative social-cognitive structures, measuring processes through reaction time, then rare in social psychology journals. In these ways, they served as role models for others within and after their cohorts. Around the same time, the first commentaries planted flags to mark the turf of social cognition. Michigan's Melvin Manis (1977) was one of the first. He claimed that cognitive theories already dominated social psychology—although he included cognitive dissonance theory in this claim, a reasonable perspective, except that dissonance research was not yet borrowing heavily from cognitive theory and method. (Charles Kiesler, an attitude-consistency theorist, once told Fiske that they had had many of the right theories about cognitive structure, just no way to measure them yet.)

Just three short years later, ambitious authors and editors were creating compilations of this new field. University of Illinois's Robert Wyer, one of the most prolific founders of person-memory research, along with Reid Hastie (then at Harvard), Thomas Ostrom (Ohio State University), Ebbe Ebbesen (University of California at San Diego), David Hamilton (University of California at Santa Barbara), and Donal Carlston, Wyer's student, collectively wrote another of the first social-cognition volumes (Hastie et al., 1980), which focused on the role of memory organization in person perception. Another early entry was Michigan's Richard Nisbett and Stanford's Lee Ross's *Human Inference* (1980), which highlighted errors and biases in judgment. And an Ontario Symposium on social cognition appeared in 1981, spearheaded by Tory Higgins, with Peter Herman and Mark Zanna. Stanford's Albert Hastorf and Alice Isen (1982) edited a volume collecting early perspectives on the new social cognition. In a few short years, a field was established, with its own journal (*Social Cognition*, first published in 1982; David Schneider was its founding editor), published by Seymour Weingarten's Guilford Press, as many influential social-cognition publications continue to be. The field soon had its own *Handbook* (Wyer & Srull, 1984), published by Lawrence Erlbaum, another early promoter of the (social) cognitive revolution. Without these visionary publishers willing to take a risk, the field would have been slower to take off.

It was in 1984 that Susan Fiske and Shelley Taylor (who met when Taylor earlier advised Fiske at Harvard) produced the first self-declared textbook, *Social Cognition*, mainly because they needed an overview to assign their graduate students and because Fiske's Department Chair invited them. Ross later told Fiske that 1980 was the latest he and Nisbett could have written their own book without having a sizeable literature to review, as Fiske and Taylor eventually did in three editions (1984, 1991, and 2008).

Multiple training programs also took the plunge. Starting in 1974, for the next decade at least, almost all winners of the dissertation award from the Society of Experimental Social Psychology were social-cognition researchers: David Wilder on social categorization (Wisconsin), Yaacov Trope on information

value in choice (Michigan), Thomas Srull on person memory (Illinois), Donal Carlston on person memory (Illinois), Nancy Cantor on traits as prototypes (Stanford), Steven Penrod on jury decision-making (Harvard), Ann Boggiano (Princeton) on information in overjustification effects, John Bargh on attention and automaticity (Michigan), Paget Gross on expectancies and information (Princeton), Leonard Martin on using concepts in impression formation (UNC-Greensboro). Illinois, Michigan, Stanford, Harvard, and Princeton were prominent training programs in social cognition.

Universities other than those mentioned developed reputations as centers for the new social cognition: When Taylor moved to UCLA, she joined Harold Kelley, a founding father of attribution theory, and Bernard Weiner, another early luminary. New York University soon became another center of social-cognitive research, boasting Susan Andersen, John Bargh, Shelly Chaiken, Diane Ruble, and James Uleman, all notable for early contributions to this field.

As well as in training programs, pioneers in this new field met in person at pivotal conferences, most notably an annual social-cognition workshop, part of a series in social psychology sponsored by Bibb Latané at his beach-house/conference center in Nags Head, NC, where people gave talks in t-shirts and flip-flops. Fiske remembers being terrified to present her research, as one of only two women (with Patricia Linville), and several years younger than most of the other attendees, all of whom seemed to be middle-aged male journal editors. Still, free professional advice, disguised as long walks on the beach, no doubt benefited her career. Thus trained to defend their ideas, she and Linville (1980) wrote a defense of the schema concept against reactionary critiques claiming that a schema was *only* a reinvented [fill in the blank: attitude, stereotype, expectancy, concept, category, proposition, . . .].

All social-cognition researchers had a lot of defending of their field to do. Social psychologists claimed that it was insufficiently social, and cognitive psychologists claimed that it was insufficiently cognitive, and both agreed it was nothing new anyway. Sometimes for the newcomers it felt like strangers riding through town, being shot at from both sides of the street. Both critiques proved inadequate. Granted, social psychology had always had cognitive elements, as social psychologists noted (e.g., attitudes are importantly cognitive constructs; cognitive dissonance theory and balance theory posited cognitive elements; Zajonc, 1980a). Granted, too, that social-cognition research is often defined as investigating the cognitive foundations of social phenomena (Devine, Hamilton, & Ostrom, 1994), so perhaps it is merely cognitive theory and method, applied to an arbitrary domain that happens to be social.

In response, Ostrom (1984) flipped this critique on its head, claiming that *social* cognition is sovereign, for several reasons. Arguably, the new social cognition was independent of the earlier ways that social psychology had been cognitive; using basic research on cognition, the models providing a new conceptual vocabulary, adopted by many branches of psychology. Indeed, he argued, social cognition may be developmentally

prior to nonsocial cognition because people are the first and most important stimuli in an infant's experience. The social-cognitive approaches allow a more principled understanding of linkages to affect, in his view, citing Gordon Bower's (1981) work on mood and memory, Petty and Cacioppo's (1981) EMG work on affectivity of information, Clark and Fiske's Carnegie symposium and edited volume (1982) on affect and cognition, and Lazarus' (1982) discussion of primitive cognitions as underlying affect. Finally, Ostrom argued, social-cognitive theories held out the promise of integration into neural systems. This unabashed crowning of social-cognition research heartened its practitioners, changing their stance from defensive to proud.

In another response to the critiques of social-cognition research from both sides, in due course, the research process identified unique features of purely social cognition, critical differences between thinking about people (including self) versus thinking about things. Among other characteristics, people are active agents, similar to the self, who perceive the perceiver back (Fiske & Taylor, 1984). The target's internal states matter more when making sense of your spouse than of your slippers. The importance of inferring one's own or another person's inner predispositions generated enthusiasm. Social cognition provided an abundant field for energetic exploration. Soon it boasted its own *Advances* series (Brewer's (1988) paper was in Srull & Wyer's first volume).

One way to understand the advances in social cognition since the new beginnings is to frame them as models of the social being (Fiske & Taylor, 2008; Taylor, 1998). Just as the behaviorist, reinforced learner gave way to actively thinking organisms throughout the formative periods of social-cognition research, so too did view of the social thinker develop, roughly divided by decade: the naïve scientist (1970s), the cognitive miser (1980s), the motivated tactician (1990s), and the activated actor (2000s). Research strategy has variously portrayed the role of cognitive processes in perceivers as motivated by economy or interaction, or maybe even hard-wired. The current chapter describes these approaches, illustrating each with some relevant major theories. The next section begins with the 1970s–1980s cognitive miser because other chapters cover the consistency seeker (Briñol & Petty) and the 1960s–1970s naive scientist (Hilton).

### **Social cognition in the 1970s–1980s: Born from the cognitive revolution, and raised with its principles**

The human-as-information-processor metaphor introduced a new model of the social thinker. Economists in particular had promoted a view of people as making rational choices, but psychologists thought they knew better. Information-processing did not mean thorough, thoughtful, and rational, but instead required efficiency. The cognitive-miser reaction against rational choice theories began abundantly documenting people's shortcomings compared with a normative ideal (what people should do). According to these descriptive models (what people actually do), these newly understood thinkers now appeared quite

irrational, falling susceptible to a number of biases in their processing of social information. Contrary to prevailing rational-choice beliefs, under many circumstances people proved far from “optimizers,” carefully aiming to maximize their precision in interpersonal judgments, but rather more often “satisficers,” who settle for mere adequacy in making social inferences (Simon, 1979). Thus, research in this era began to focus much more on people’s efficiency-driven weaknesses in reasoning, rather than their (theretofore exaggerated) strengths. In this spirit, a new model of the social thinker was born and raised throughout the 1970s and 1980s: the cognitive miser. People’s online limits meant they need to take mental shortcuts, which appeared in work on heuristics, judgmental biases, temporal construals, social attention, social memory, and cognitive aspects of affect.

### **Cognitive roots: Heuristics and biases in decision-making**

If the idea that people are not as rational as once thought was the main act, then Amos Tversky and Daniel Kahneman were the lead players. Their now famous, Nobel-worthy work centered on two primary phenomena. The first was their identification of commonly used heuristics, or cognitive shortcuts (Kahneman & Tversky, 1972). The *representativeness heuristic* shows that people make decisions on the basis of appearances—that is, they judge whether new instances resemble typical, learned instances. For instance, in flipping a coin six times, most people believe that the more likely outcome is a mixed sequence such as HTHTTH, rather than a neat, orderly one, such as HHHTTT. But in fact that particular mixed sequence is no more likely than the “improbably” ordered one. Similar to representativeness is the *availability heuristic*, which demonstrates that examples or associations that easily come to mind tend to be disproportionately influential. Availability explains why, among other examples, people are irrationally more fearful of dying in a (very low-probability) plane crash than a (more probable) automobile accident. The *simulation heuristic* shows that people may make decisions based on how easily a hypothetical scenario comes to mind. This explains why, for instance, people generally get more angry if they miss a train by several seconds than several minutes; in the former case they can quite easily imagine (mentally simulate) catching the train, whereas in the latter it is not as apparent, since the train is already out of sight. A final important identified heuristic is *anchoring and adjustment*, whereby an initial reference point heavily influences people’s decisions. For example, when asked to guess how many African countries were part of the United Nations, participants who were asked “Is it more or less than 45%?” guessed a lower proportion than those who were asked the same question, substituting 65% (Tversky & Kahneman, 1974).

Tversky and Kahneman’s other influential line of work centered on *prospect theory* (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981). Prospect theory highlights the importance of framing in the presentation of choice alternatives that represent gains and losses. This comprises two notable

elements. The first, *frame of reference*, emphasizes how people compare the objective value of an option to some sort of internal standard, resulting in a positive or negative classification. A classic paradigm presents 600 people with a disease; when assessing a treatment option, framing a procedure as likely to save 200 people garners a positive judgment, because it presupposes a comparison that zero people will be saved. However, framing the same procedure as likely to sacrifice 400 people makes it sound less appealing because it implies comparison with a reference point that no one will die. The second important element of prospect theory centers on a *subjective value function*, which portrays how people are averse to risks when gauging potential gains, but risk-seeking when evaluating potential losses. This robust effect is expressed as an S-shaped curve, convex for losses but concave for gains (see Figure 4.1). As with their work on heuristics, Kahneman and Tversky’s prospect theory took the idea that people always make decisions deliberately and rationally and turned it upside down.

### **From cognitive (mis)judgment to social (mis)calculation: Biases in social inference**

Growing from this germinal research, social psychologists of the 1970s–1980s took the concepts of irrational biases and applied them to the ways in which people process inherently social information. It soon became apparent that in making social judgments, too, people are far from optimal. In other words, the social perceiver employs shortcuts when trying to make sense of an enormously intricate social world, in much the same way that Tversky and Kahneman’s decision-makers cut corners to simplify complex decision processes.

In interpersonal attribution, what would come to be the most frequently documented bias was the *fundamental attribution error* (also known as the *correspondence bias*) whereby people commit the error of accounting for other people’s behaviors with dispositional causes, and not enough with situational ones

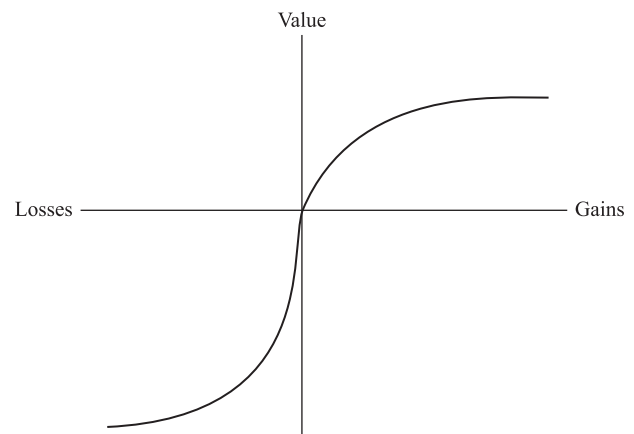


Figure 4.1 The subjective value function of prospect theory. Adapted from “Prospect theory: An analysis of decision under risk”, by D. Kahneman and A. Tversky, 1979, *Econometrica*, 47, p. 279.

(Heider, 1958; Jones & Davis, 1965; Ross, 1977). One suggested cause of the fundamental attribution error is that other people's behaviors are far more salient than "background" factors such as situations (Taylor & Fiske, 1975). The fundamental attribution error is indeed fundamental in social psychology, given the field's core tenet of *situationism*—the idea that people are heavily influenced by social situations (Fiske, 2010). However, current reviews suggest that the dispositional bias is most reliable for negative behavior (not my fault, just circumstances, when I do it; more your fault when you do it; see Malle, 2006, for other qualifications).

Another instance of people's irrationality in social judgments identified the *dilution effect*, which demonstrates that when diagnostic information about a person—that is, information relevant to forming a judgment—combines with nondiagnostic information (is diluted), inferences about that person become less extreme. For example, participants were more likely to label a target as a child abuser if they read that he was "quite short-tempered" and "has severe financial pressures and unpaid debts" than when they also knew that "he manages a hardware store" and that "his mother is a housewife" (Nisbett, Zukier, & Lemley, 1981). Although later investigations of the dilution effect found it does not apply to all situations (e.g., when the new nondiagnostic information is unrealistically extreme; Zukier & Jennings, 1983–4), the overall phenomenon demonstrated that people simplify predictions by using typicality judgments.

Yet another common error in social judgment is the *base-rate fallacy*—the tendency to make social decisions based on individual, anecdotal cases, while ignoring population base-rate information (Bar-Hillel, 1980; Kahneman & Tversky, 1973). Part of Ronald Reagan's 1976 presidential campaign utilized this bias, citing anecdotes of societally exploitative "welfare queens" in the hopes of fostering resentment toward welfare recipients as a whole. Soon after, social researchers demonstrated that colorful individual case histories do in fact lead people to think the anecdotes are representative of all members of a group (i.e., all welfare recipients), even when base-rate information about the entire population is provided (Hamill, Wilson, & Nisbett, 1980). A likely reason for the base-rate fallacy is that base-rate information seems abstract compared to vibrant, individuating examples (Ajzen, 1977; Taylor & Thompson, 1982). Whatever the explanation, ignoring base rates has significant consequences on social judgments, including the use of stereotypes (Locksley, Borgida, Brekke, & Hepburn, 1980; Locksley, Hepburn, & Ortiz, 1982).

Another important social consequence of ignoring base rates is the *conjunction error*: Despite the statistical fact that the probability of two or more events co-occurring is less than that of either happening on its own, people nevertheless tend to make the reverse prediction in social inferences. A classic demonstration involved participants reading about a woman named Linda, who was described, among other things, as "a philosophy major" and "deeply concerned with issues of discrimination and social justice." When asked which statement

was more probable, (a) "Linda is a bank teller" or (b) "Linda is a bank teller and is active in the feminist movement," 85% of participants chose the latter (Tversky & Kahneman, 1983). One possible explanation for the conjunction fallacy is the above-mentioned representativeness heuristic. When additional information is added to a human portrait in a way that logically jibes with pre-existing notions (such as an outspoken philosophy major with a social justice streak being a feminist), the portrait seems more subjectively likely, even at the expense of its overall objective probability.

Assessing *covariation*—judging how strongly two phenomena relate to one another—is another task that proves difficult for the social perceiver, despite the importance of covariation in making sense of the past and predicting the future (Crocker, 1981; Nisbett & Ross, 1980). One covariation paradigm is the dilemma of the departmental chair: Are meetings more productive in the morning than in the afternoon? In order to evaluate this question, she would need to systematically parcel out the relevant evidence, such as how many agenda items have been resolved in the morning versus the afternoon, and how many items remained unresolved during the two periods. Generally speaking, ascertaining the covariation between events involves five distinct steps: (1) deciding which data are relevant to gather, (2) drawing a random sample of cases from the population, (3) interpreting and coding the cases, (4) recalling evidence and estimating the frequencies of confirming and disconfirming cases, and (5) combining the evidence into a judgment. Errors can and often do occur at every step along the way, such as drawing a limited or biased sample (e.g., if the department chair surveys only a small fraction of the faculty who attend meetings), or forgetting disconfirming events (e.g., she overlooks the afternoon meetings during the past month that were actually the most productive). One likely cause for the prevalence of covariation errors is that people seek instances that confirm their preconceived ideas, rather than instances that deal with all sides of the issue (Arkes & Harkness, 1980; Fiske & Taylor, 2008).

### *Construal of time*

Other research on social heuristics centers on the effects of time on social judgment. In general, short-term decisions are typically made based on concrete details, whereas long-term ones hinge more on abstract features—a concept reflected in *temporal construal theory* (Trope & Liberman, 2003). Higher-level construals govern perception of future rewards, but such construals are simplistic compared to those regarding short-term benefits. For example, when viewing a college course description for next term, the topic might seem stimulating and a good topic in which to be knowledgeable (a rather high-level goal)—thus, a student might make the decision to sign up. However, once the class begins, the more immediate tasks of writing papers or waking up at an early hour put the class in a more complex, taxing, low-level light. Indeed, generally speaking, events envisioned in the future are regarded more

favorably than those generated for the present (Fiske & Taylor, 2008).

Aside from thinking and deciding about the future, people also constantly strive to interpret the past. Research during the cognitive-miser era provided empirical support for the cultural proverb that “hindsight is 20/20” (or, alternatively, the notion of the “Monday morning quarterback”). People’s construal of the past is often clouded by a *hindsight bias*—that is, people have a difficult time giving a truly objective interpretation of past events without being influenced by what they already know has occurred (Fischhoff, 1980; Fischhoff, Slovic, & Lichtenstein, 1977). Later meta-analyses demonstrated that the hindsight bias is stronger for events that happened than those that did not (Christensen-Szalanski & Willham, 1991). Moreover, depending on individual motivations, people may exaggerate either the consistency or the difference between the past and the present when recalling events in order to fit their desired “personal histories” (Ross, 1989).

### **Social attention**

In addition to theories of social inference and time construal, the notion of shortcuts extended to theories about attention use in social cognition. In other words, social psychologists took a cue from work on salience or “What things tend to capture our attention?” and sought to answer the question of *social salience*, or “Who captures our attention?” The causes of social salience, predictably, depend on context. For example, physical position shapes salience; the person sitting across from you is especially salient because of dominating your visual field (Taylor & Fiske, 1975). People can stand out for reasons based on Gestalt laws of figural emphasis in object perception, such as wearing a novel colored shirt (McArthur & Post, 1977), or they could be the solo member of their gender in a task-oriented group (Crocker & McGraw, 1984). Despite what lay people believe, others tend to notice the presence of an individual more frequently than the person’s absence (Savitsky, Gilovich, Berger, & Medvec, 2003).

Salience also extends to the broader social context, where the most novel or extreme (rather than moderate) stand out. For instance, supermodels and celebrities stand out due to their attractiveness or influence, but disabled people might stand out due to physical abnormality. Because people are generally optimistic to a degree, negative social stimuli are more salient than positive ones, because they are relatively unexpected (Fiske, 1980) and require more immediate coping to return to normal (Taylor, 1991). Salience also comes about via perceiver goals, especially if another person holds a high degree of outcome dependence. For instance, people pay greater attention to potential romantic partners or competitors than to people who are relatively outcome-neutral (Berscheid, Graziano, Monson, & Dermer, 1976; Ruscher & Fiske, 1990).

The consequences of social salience are widespread and striking. Studies showed that because they stand out, salient people are generally viewed as more prominent, influential, and

worthy of attention than other people. Additionally, they tend to be viewed more in extremes: If a salient solo is unpleasant, they are likely to face particular backlash, whereas if they are nice, people are likely to offer exaggerated praise (Taylor, Fiske, Close, Anderson, & Ruderman, 1977). Gender makes a difference too, as isolated men in a group are seen as leaders whereas solo women are not, and group members regard the group composition more favorably with a solo male than a solo female (Crocker & McGraw, 1984). More recent studies have demonstrated that the idea of weighty salience carries over into attributions for behavior—that is, one’s highly salient actions tend to be particularly attributed to dispositions over behavior, as is often the case in the courtroom (Lassiter, 2002).

Perhaps as a result of the widespread effects of social salience, these effects materialize within the solo person’s own self. The theory of *objective self-awareness* states that people may become inwardly salient if they focus their own attention toward their own consciousness (Duval & Wicklund, 1972). The result of this is that people automatically compare the self against a set of standards, or mental representations of what an ideal person should be like. When people act incongruently with their standards, self-awareness fosters lower levels of self-esteem (Ickes, Wicklund, & Ferris, 1973). Basic processes of attention result in socially significant errors and biases.

### **Social memory**

Particularly in the 1980s, basic cognitive models of memory representation shaped models of person memory. One of the most prominent of these was the Srull–Wyer model (Srull & Wyer, 1989), which predicts an *inconsistency advantage* for impression-inconsistent behaviours, due to being unexpected; this results in a greater number of associative linkages for such behavior, and therefore greater probability of recall. The model entailed four steps: (1) translating behavior into an accessible, trait-based “storage bin,” (2) evaluating the target person as essentially likeable or dislikeable, (3) interpreting behaviors with respect to the evaluation, taking note of any inconsistencies between the two, and finally (4) making a judgment, preferably by using the trait-based storage bins formed in the first step. Notably, the Srull–Wyer model demonstrated that first impressions are most important in impression formation.

Based on more common models of human memory, seen as including multiple nodes and links, another person memory theory to come out during this period was PM-1, a computer simulation of person memory (Hastie, 1988). PM-1 was similar to the Srull–Wyer model, in that it involved greater recall for inconsistent behaviors in interpreting a target’s behavior. Like the cognitive models of general memory on which it was based, PM-1 comprises a memory storage-and-retrieval process for social concepts. Most important, it posits a limited-capacity working memory, links between items, and long-term retrieval that depends on the pathways built by working memory at the time of encoding. As a social bonus, PM-1 also includes an

algorithm for impression formation, based on the heuristic of anchoring and adjustment.

### *Affect versus cognition*

The increasing emphasis on incorporating cognitive principles into interpretation of social phenomena prompted an inevitable question: Where do emotions fit in? After all, social psychology by definition emphasizes the impact of other people on one's feelings, in addition to thoughts and behaviors. To this day, the answer remains unclear, with equally compelling evidence for cognition and affect as intertwined as there is for their being distinct. The mainly-distinct view was prominently argued by Robert Zajonc in his *separate systems view* of cognition and affect as parallel and largely independent systems (Zajonc, 1980b). According to this perspective, affective processes operate at a more primary, basic level than cognitive ones: They are inescapable, virtually omnipresent; they are uncorrectable, in that there are no objectively "right" or "wrong" feelings; they are incredibly difficult to verbalize; and lastly they implicate the self in ways that cognitive judgments do not. Moreover, emotional reactions occur independently from conscious, cognitive, content knowledge—a phenomenon supported by research on *mere exposure* demonstrating that people grow to like a relatively neutral stimulus the more frequently it is encountered (Zajonc, 1968), as well as work on interpersonal impression formation showing that affective judgments often occur separately from recallable, relevant cognitions (e.g., Anderson & Hubert, 1963; Fiske, Kenny, & Taylor, 1982; Hastie & Park, 1986).

Not everyone agreed with Zajonc's view. Perhaps the most prominent dissenter was Richard Lazarus, who viewed cognition-based emotional appraisal as a prerequisite for emotion, rather than vice versa (Lazarus, 1982, 1984; Lazarus & Smith, 1988). In his view, the primitive, cognitive evaluation of a stimulus relative to one's own wellbeing (good-for-me versus bad-for-me) occurs automatically before the more deliberate, secondary analysis of identifying the specific emotional experience it may cause. For example, one might instantly like the looks of a person, but secondary analyses suggest that the person is off-limits, leading to a more complex set of emotions. Other appraisal theorists took a more explicitly cognitive approach, emphasizing how people's direct, cognitive appraisals of their circumstances influence emotion (Ellsworth & Smith, 1988; Smith & Ellsworth 1985, 1987). For example, appraising a frustration as illegitimately and intentionally caused by another person leads to anger. Still other dissenters from a separate-systems view pointed to the many similarities between cognition and affect, such as the fact that both are rapid, automatic, and sometimes irrational (Holyoak & Gordon, 1984).

Other affect appraisal theories that integrated cognition invoked the use of social schemas. One homed in on the idea that, based on prior experiences, certain people and situations elicit certain emotions. This *schema-triggered affect* (Fiske, 1981, 1982) idea proposed that schemas utilized in reacting to

new experiences carry both cognitive and affective components. This notion would later apply more broadly to comprise category- versus attribute-based responses to individuals (Fiske & Neuberg, 1990; see "Dual process models of person perception" section below).

Other theories focused on the features of the schema itself that help shape affective responses. The less complex a schema is, the more extreme the affective reactions will be (Linville, 1982; Linville, Fischer, & Salovey, 1989). For example, low-complexity outgroup members garner stronger affective responses (e.g., prejudice) than high-complexity ingroup members. Another theory addressed the integration of separate dimensions into a coherent whole, positing that the more one knows and thinks about a target, the more organized and internally consistent the schema is for the target (Tesser, 1978), generally yielding more polarized affective responses (as with favorite sports teams).

Still other perspectives focused on the reverse approach: how affect influences cognition. In helping behavior, for instance, one's mood will often determine whether or not one makes the decision to provide assistance to someone else. At least four mechanisms explain why: (1) good moods alter focus of attention away from the self toward other people; (2) good moods increase helping behavior if help requests are framed in terms of the rewards from helping rather than guilt-based obligation, (3) good moods improve one's social outlook, and (4) people in a good mood are motivated to maintain their elevated affect, so if helping behavior accomplishes this they will be more likely to help (Carlson, Charlin, & Miller, 1988).

Also brought to light were studies showing that affect influences memory, in two primary ways. The first was *mood congruence*, which stipulated that people remember things more easily when the items' valence fits the person's current mood state (Blaney, 1986). Simply put, people generally remember positive things when they are in good moods and negative things when in bad moods—a phenomenon that has considerable empirical support (Singer & Salovey, 1988). The second affect-memory linkage occurs in the phenomenon of *mood state dependence*, whereby people have better recall for learned material if their current mood states match that which they experienced during learning. For example, if one is sad while studying for the GRE, hypothetically one should better remember the material if one is in a similar mood on test-taking day. However, this notion remains relatively anecdotal, as empirical evidence for mood-state dependence is, on the whole, fairly weak (Fiske & Taylor, 2008).

A final line of research during this period revealed the consequences of mood on judgment. In general, happy people hold more positive judgments than unhappy ones; for instance, participants who watched videos of themselves interacting with someone else rated themselves more positively when they were happy (Forgas, Bower, & Krantz, 1984). Results were not as consistent for unhappy people, but at least one study found evidence that people in a bad mood tend to estimate future negative events to be more likely (Johnson & Tversky, 1983). More recent, nuanced studies of mood effects on judgment have



built on this early work and demonstrated the consequences of, respectively, fear (e.g., pessimistic exaggeration of risk), anger (increased automatic prejudice), and disgust (harsh moral judgments; Fischhoff, Gonzalez, Lerner, & Small, 2005; DeSteno, Dasgupta, Bartlett, & Cajdric, 2004; Schnall, Haidt, Clore, & Jordan, 2008).

### 1970s–1980s coda

Thus, the 1970s–1980s established a considerable research base on the cognitive underpinnings of processing social information, through investigations of heuristics, judgmental biases, temporal construals, social attention, social memory, and cognitive aspects of affect. The abundant list of errors and biases sometimes seemed gleeful, or at least snarky. The implication was that the researchers themselves and psychologists in general would never be so stupid. Indeed, training in statistics (as psychology requires) makes people less likely to commit some kinds of cognitive errors (Nisbett, Krantz, Jepson, & Kunda, 1983). But even lay people must manage well enough. Eventually, the view of people as incompetent idiots made social-cognition researchers wonder how people managed to get out the door in the morning, let alone fly to the moon. The more reasonable view emerged that maybe people are stupid only sometimes, in fact showing some flexibility, depending on their motivation and capacity to think harder.

### The 1990s: The cognitive miser matures into a motivated tactician

Beginning around the early 1990s, then, social cognition began to focus much more on the moderating effects of motivation. Research during this time fits the now well-known 19th-century William James quote, “My thinking is first and last and always for the sake of my doing” (1890/1983). Approximately one century later, social-cognition researchers took this statement to heart, and began to investigate the ways in which people’s social thinking was primarily motivated by their social doing (Fiske, 1992). Anticipated by the first edition of the *Handbook of Motivation and Cognition* (Sorrentino & Higgins, 1986), social-cognition researchers reclaimed motivation from the mid-level theories of mid-century, integrating it with the new late-century insights about cognitive processes. Departing somewhat from the mere energy-saving cognitive miser, this new *motivated tactician* selectively chose—depending on motivational and situational factors—whether to utilize automatic, efficient processes (potentially error-prone) or more conscious, effortful ones (potentially but not necessarily more accurate) when dealing with other people. Assessing the interplay between these two systems gave rise to a series of influential “dual-process” models of sociocognitive phenomena, astutely collected by Shelly Chaiken and Yaacov Trope (1999), nearly three dozen in all, of which we will illustrate just four central social-cognitive domains: person perception, attribution, stereotyping, and identifying behavior.

### Dual-process models of person perception

One dual-process model of person perception stated that people first identify others rather automatically; then, depending on their goals, they decide whether or not to make the conscious effort to personalize them (Brewer, 1988; Brewer & Harasty Feinstein, 1999). If perceivers do decide to individuate their targets, they may enact subtypes (more specific subcategories of a broader category, such as a shift from “older man” to “elder statesman”) or exemplars (familiar examples of a category, such as Bill Clinton). Each type of representation has a distinct format (e.g., propositions vs. picto-literal prototypes) and uses distinct decision rules. Another dual-process model of person perception launched during this period was the continuum model (Fiske & Neuberg, 1990; Fiske, Neuberg, Beattie, & Milberg, 1987). As its name suggests, rather than conceptualizing impression formation in terms of distinct branches, this model theorized that people form impressions on a continuum ranging from the most basic, automatic categories (age, sex, race) to the most specific, deliberate aspects (individuating data). Like the Brewer model, people start at the automatic end, and how far along the continuum they choose to go from there depends on the perceiver’s particular information and motivations. However, the Fiske model differs in that it comprises constantly evolving stages of processing, with each stage carrying over to the subsequent one, based on information and motivation (whereas the Brewer model involves separate branches of impression formation). The continuum model combines Gestalt configural processes (category-based impressions) and piecemeal, algebraic processes (individuating impressions).

### Dual-process models of attribution

Dual-process models also explain interpersonal attribution processes. Yaacov Trope’s model conceptualized attribution across two stages. First, people automatically identify others’ behavior; then, they more deliberately explain the behavior by making dispositional inferences, taking account of the effects of the situation if needed and desired (Trope, 1986; Trope & Gaunt, 1999). To illustrate, participants who viewed a series of ambiguous as well as unambiguous facial emotional reactions to positive or negative emotional situations were asked to infer either the target’s emotional disposition or what the face expressed. As predicted by the model, identification of unambiguous (e.g., clearly angry) faces was unaffected by the situation, but context helped make sense of the ambiguous faces (e.g., a face that could show anger or fear must be fear in a scary situation). However, the situation cut a different way at the second stage, inferring dispositions, because most people feel fear in a scary situation, so this person must not be a uniquely fearful person.

A related, stage-based attribution model divided perceivers’ automatic process of behavior identification into (a) categorizing behavior and (b) characterizing it in dispositional terms. After doing this, a controlled correction for situational factors follows, provided that that perceiver is sufficiently capable and

motivated to do so (Gilbert, 1991; Gilbert, Pelham, & Krull, 1988). Studies supporting this framework showed that cognitive load or “busyness” (e.g., distraction from expressing false affection toward a target) detracts from the controlled process of identifying situational causes of behavior, but not the automatic process of dispositional attributions (Gilbert, Krull, & Pelham, 1988). A similar model of attribution was George Quattrone’s (1982) model, which posited that people initially form impressions using dispositional *anchoring*, and proceed to make a situational *adjustment* later on. All three of these models separate an initial, relatively automatic identification of behavior’s trait relevance and a second, more effortful qualification by mitigating circumstances.

### **Dual-process models of identifying behavior**

Dual-process models emerged in other areas of social cognition, including how people label certain behaviors. One prevalent model was *action identification theory*, which posited that people may identify the same actions either based on low-level, mundane (often situational) goals or for more high-level, goal-directed reasons (Vallacher & Wegner, 1987). For example, putting one foot in front of the other might represent the low-level goal of walking, but walking to the jewelry store to buy a wedding ring might be part of a much higher-level goal of starting a family. By distinguishing between low-level and high-level bases for an action, action identification theory had numerous important implications for social cognition. Namely, it helps to understand attributions made for performance (low-level behaviors such as classroom obedience may be attributed to situational constraints, whereas high-level ones such as studying to dispositions), explain the limited success of personality theorists’ trait-based explanations of behavior (mainly high-level actions should be used to understand abstract dispositions), and resolve the debate between consistency versus malleability of self-concept (again, chiefly high-level goals should have stable implications for the enduring self-concept). The dual processes can also be neatly represented in an *action identity structure*, a hierarchy of multiple identities that can be assigned to a given action.

### **Dual-process models of stereotyping**

Dual-process frameworks figured heavily in the realm of stereotyping and prejudice, differentiating between blatant, controlled prejudice versus subtler, automatic forms. Though some of this work also ties to the 2000s model of the “activated actor” (see coming sections), note the cognitive, dual-process aspects of the model here. This work comprised both sides of the stereotyping spectrum: perpetrators and targets.

#### *Perpetrators*

One of the first stereotyping theories to incorporate dual components was the Dovidio-Gaertner notion of *aversive racism*

(Dovidio, Evans, & Tyler, 1986; Gaertner & Dovidio, 1986). Unlike the processes involved in blatant, old-fashioned racism (which in modern times people most often curb), aversive racism represents more common forms of prejudice that may go unnoticed even by the perpetrators. Aversive racism mixes negative feelings and beliefs toward the outgroup with paternalistic sympathy and denial of the negativity. Even if blatant racism is absent, the aversive side can have unfortunate consequences, such as limiting voluntary interracial conflict (Dovidio, Kawakami, & Gaertner, 2002) or fostering pro-White biased hiring decisions (Dovidio & Gaertner, 2000).

Part of the same dual-process movement, Devine’s *dissociation model* (1989) distinguished (dissociated) between automatic and controlled processes in stereotyping. The automatic side comprised *stereotype activation*, which did not require conscious attention. In fact, stereotype activation appeared virtually unavoidable whenever a White perceiver encountered a Black person or a symbolic representation of one, due to omnipresent, shared cultural knowledge of racial stereotypes. However, the other half of the model acknowledged differences in perceivers’ *personal beliefs*, and posited that perceivers could overcome stereotype activation if they were sufficiently motivated and able to do so.

#### *Targets*

Other dual-processes models emphasized the impacts on stereotyped targets. A widely supported theory in this vein was that of *stereotype threat*, which holds that members of a stereotyped group are negatively impacted when their group membership is made salient (see Steele, Spencer, & Aronson, 2002, for a review). Stereotype threat manifests itself across a variety of target groups and situations, including Blacks and standardized tests (Steele & Aronson, 1995), women and mathematical ability (Spencer, Steele, & Quinn, 1999), European Americans and sports (Stone, Lynch, Sjomeling, & Darley, 1999), and older people and memory performance (Chasteen, Bhattacharyya, Horhota, Tam, & Hasher, 2005). Stereotype threat is another illustration of dual processes in stereotyping, because it shows how stereotypes may be embodied unconsciously even if they are not made explicit (e.g., subtly reminding the target of race before a standardized exam). Only recently have stereotype-threat researchers discovered how more controlled processes can overcome these debilitating effects (Spencer, Logel, & Davies, 2011).

### **1990s Coda**

At the beginning of the decade, Fiske and Taylor (1991) finally revised their 1984 *Social Cognition*, which was rapidly becoming dated, given the sheer pace of research activity. One prominent change was including all the dual-process models and coining the term *motivated tactician* as a way to capture their perspectives on the flexible social perceiver who is thinking for doing. Another prominent change was in sheer

quantity: The new edition more than doubled the number of references in the first edition. The literature had indeed become encyclopedic. This exhausting prospect apparently daunted other would-be authors for a while. Two books with the same title finally appeared in the mid-to-late 1990s, one focused on integrating European outlooks (Augoustinos & Walker, 1995) and one emphasizing the human inference tradition (Kunda, 1999). A related historical approach also appeared (Barone, Maddux, & Snyder, 1997). The field was maturing to include a variety of viewpoints.

A 1998 Princeton conference on the future of social cognition resulted in an edited volume (Moskowitz, 2001) focused on researchers untenured at the time. Sections included the classic topic of representation and structure, but also motives driving social cognition, subjective perception, and motivated judgment, as well as control over cognition and action—all topics consistent with the motivated-tactician approach. The inclusion of action in the final section hinted at a projected return to predicting behavior.

### The 2000s: Priming the motivated tactician into an activated actor

As research in the 1990s showed, the “motivated tactician” is not necessarily motivated in the traditional sense. Motivation depends on the situation as much as the person. Moreover, the term did not catch on the way *cognitive miser* had. Perhaps the term “tactician” implied that the social perceiver’s goal-based actions are more deliberate than they actually are. Building on the idea that people have different cognitive strategies available (the motivated-tactician message) but that people may take shortcuts (the cognitive-miser message), social-cognitive research in the 2000s built off the idea that different goals can be provoked—or *primed*—in ways that do not reach conscious awareness. Thus, while the preceding cognitive-miser model theorized that we ignore much of what we encounter in our everyday social world to save cognitive energy, and the motivated tactician showed that we are flexible in thinking with more or less effort, research on the so-called *activated actor* shows that situations provide information and motivation that shape our responses more than we imagine. People may spontaneously take in much more than once believed because we are so attuned to the immediate and larger context. This sensitivity to the social environment drives our responses. The social environment ranges from the larger society to cumulative individual experiences to immediate situations, each of which can prime particular responses. The responses most often studied include stereotypes, trait inferences, evaluative associations, and behavioral tendencies.

### Society cues ambivalent stereotypes

Several models of societal stereotypes share the idea that society sends conflicting cues about various outgroups, and that the individual is left to reconcile them somehow. Ambivalence and suppression are common results.

### General models of ambivalent prejudice

The stereotype content model (SCM; Fiske, Cuddy, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002) indicates that the dimensions of *warmth* (“How friendly and trustworthy are this person’s intentions?”) and *competence* (“How well can this person enact those intentions?”) are fundamental in people’s perceptions of others, which in turn drive interpersonal emotional and behavioral reactions. Although this model operates at the individual level of person perception, it emphasizes societal structures. Status primes presumed competence, and competition undermines perceived warmth. In this sense, social structures activate trait inferences.

One novel result is mixed impressions and stereotypes. Groups considered high on one dimension but low on the other are generally targets of ambivalent prejudice. For instance, those apparently high in warmth but low in competence elicit the mixed emotion of *pity*, which yields a combination of well-intentioned active assistance, but passive harm or neglect—as is the case with the institutionalization of older people (Nelson, 2005). On the flip side, low-warmth, high-competence groups meet *envy*, a mixed emotion of resentment and respect. This generally fosters passive facilitation, but active harm—for instance, in people’s reactions toward successful minority groups, who are often scapegoated when things go awry (Cuddy, Fiske, & Glick, 2007). Other models of social cognition identify related dimensions of warmth–morality–communality–trustworthiness and competence–agency–dominance, suggesting that these dimensions are universal (see Fiske et al., 2007 for a review).

### Group-specific models of ambivalent prejudice

Some models of ambivalent prejudice specify discrimination toward particular social groups. An earlier theory of racism anticipated later situational priming of contrasting dimensions: In this view, *racial ambivalence* reflects the idea that Whites often view Blacks as disadvantaged due to external obstacles (discrimination) or responsible for their disadvantage (deficient in values, motivation; Katz & Hass, 1988; Katz, Wackenhut, & Hass, 1986). White perceivers can be swayed one way or another if primed with humanitarian or egalitarian values versus values consistent with a pure Protestant work ethic.

For gender, the mixed-valence prejudice model during this time is *ambivalent sexism*, which results from the tension between cues to male societal dominance but male–female intimate interdependence (Glick & Fiske, 1996). One side of the resulting ambivalent sexism emphasizes male dominance and female competition with it, resulting in traditionally *hostile* forms of sexism: restriction of women’s roles and prescribed lower social status compared to men, as well as backlash against them when they are perceived as acting too agentically or not conforming to prescriptive gender roles (Rudman & Glick, 2001). On the other hand, emphasizing the genders’ interdependence, but still male dominance, *benevolent* sexism reflects

well-intentioned, subjectively positive attitudes by the perceiver toward women that nevertheless paternalistically render women as inferior—such as chivalrous helping behavior toward them or compliments on physical attractiveness that subtly undermine their competence (e.g., in the workplace). Evidence for this benevolent sexism appears in the finding that despite women's lowered status people view women quite favorably on the whole—even more so than men (Eagly & Mladinic, 1994; Eagly, Mladinic, & Otto, 1991), but only on communal traits, not agentic ones.

Ambivalence within age-based stereotypes relates to SCM-based research on perceptions of older people. By default, older people are considered “doddering but dear”; that is, as high in warmth but low in competence (Cuddy & Fiske, 2004). This ambivalent stereotype is not only persistent, enduring in the face of stereotype-incongruent behavior, but also pervasive, spanning cultures once believed to hold their elders in higher esteem (Cuddy, Norton, & Fiske, 2005). Nevertheless, univally negative ageist stereotypes may arise as a way of pushing away older people, due to terror management—that is, people's efforts to cope with the anxiety of getting older and eventually dying (Greenberg, Schimel, & Mertens, 2004). Moreover, recent evidence suggests that older people can face more resentful forms of prejudice if they overstep their boundaries and do not peacefully transition from high-status middle age to relatively low-status older age (North & Fiske, under review). All these stereotypes result from societal structures that prime relationships of status and competition.

### ***Implicit associations***

Not all prejudices are ambivalent; indeed accumulated cultural experience can simply associate some groups with more negative evaluations, and the association of the self with certain groups can prime positive evaluations. Given the difficulty in the late 20th and early 21st century of people acknowledging prejudice, despite continuing evidence of its effects, measuring such covert associations became critical. Research on the activated actor thus has focused a great deal on the power of indirect measurement of stereotypes. A prominent method has been the *Implicit Association Test* (IAT; Greenwald et al., 2002; Greenwald, McGhee, & Schwartz, 1998; Nosek, Greenwald, & Banaji, 2007), which shows that people more rapidly associate certain social groups with positive words (e.g., Whites and “nice”) but other groups with negative words (e.g. Blacks and “hostile”). In that way, the groups and evaluations prime each other. IAT studies of implicit prejudice have spanned multitudes of social groups and targets of bias, including the elderly and homosexuals (Banse, Seise, & Zerbis, 2001; Levy & Banaji, 2004). While some have criticized the IAT as simply ascertaining widely known cultural beliefs and others have questioned whether it truly measures attitudes (as opposed to mere cognitive associations), arguably no other individual paradigm has spurred as much work on the unconscious underpinnings of the activated actor. The IAT captures the evaluative

associations cued by society and by own-group membership, and it also captures the tension between egalitarian norms that encourage tolerance versus spontaneous associations that suggest otherwise. The IAT illustrates priming both in the origins of the associations and in the method of measurement.

### ***Personality and situations create accessibility***

Besides societal and cultural primes, people respond to primes in the immediate situation. As noted, earlier social-cognition research demonstrated an important predictor of social attention to be the contextual salience of particular stimuli. However, with its emphasis on priming effects, the activated actor introduced another: *accessibility* of categories inside the minds of social perceivers, which influences the way they see others. Depending on the existing goals, needs, and expectations of perceivers, and the strength, frequency, and recency of category priming, the automatic activation of the 2000s social actor presented numerous, novel social ramifications.

Categories that are frequently or recently primed are *chronically accessible* in the mind of the social perceiver (Bargh, Bond, Lombardi, & Tota, 1986; Higgins, Rholes, & Jones, 1977). Categories can be chronically accessible for a variety of reasons. For instance, individuals differ in the traits they most often use to evaluate others—such as intelligence, attractiveness, or friendliness. People who chronically value these traits are more likely to remember and describe other people in those terms (Higgins & King, 1981). However, chronic accessibility is not limited to individual traits; social categories matter too. For instance, given limited information, people rely on existing, chronic gender schemas when judging advertisements for female political candidates (Chang & Hitchon, 2004).

Categories do not have to be omnipresent to influence perception—certain situations can subtly increase accessibility, with equally powerful impact. As with chronic accessibility, temporarily priming stereotypes about social categories influences perception. A study illustrating the power of racial primes showed that police and probation officers who were subliminally primed with Black, race-related words subsequently judged a race-unspecified adolescent as being more guilty and worthy of punishment (Graham & Lowery, 2004). Similarly, priming old-age-based stereotypes increased the accessibility of elderly stereotypes, causing young college students to leave the experiment room more slowly than other students who were not primed (Bargh, Chen, & Burrows, 1996).

### ***Assimilation and contrast in automatic behavior***

As demonstrated by situational accessibility paradigms, priming often leads targets to *assimilate* the prime into related accessible categories and enact related behaviors. However, sometimes primes can also have the reverse effect—that is, leading people to enact behaviors that *contrast* with the prime (Aarts & Dijksterhuis, 2002). Generally speaking, whether assimilation or contrast occurs following a prime depends on multiple

factors, including the perceiver's goals, the ambiguity of the stimulus, and the features of the stimuli (Mussweiler, 2003). Illustrating this last factor, being primed with behavior of a stereotyped group (e.g., elderly people) often leads to assimilation, but primes representing an individual exemplar (e.g., one elderly person) can lead to contrast. Moreover, the behavior of a single individual may lead to contrast, but being primed with the same exemplar under cognitive load may lead to assimilation (Dijksterhuis, Spears, & Lépinasse, 2001). Both findings suggested that contrast is likely when people have ample cognitive resources; otherwise, assimilation is likely to occur.

### *Spontaneous trait inferences and face research*

Another major area of priming research centers on the immediate, unconscious judgments we make about other people, or *spontaneous trait inferences*, primed by features of the individual. Such interpersonal inferences are not necessarily attached to explicit memories or encounters; rather, they can simply be gut feelings that have formed, either immediately or over time. Implicit impressions of others can form from a variety of sources, including diagnostic trait information (hearing someone briefly describe another as "cool"; Uleman, Blader, & Todorov, 2005), behavioral information (e.g., reading that "the babysitter lost track of the two-year-old"; Uleman, Hon, Roman, & Moskowitz, 1996) or thin slices of nonverbal behavior (e.g., briefly viewing a teacher in action; Ambady & Rosenthal, 1992). Among other things, work in this area presents a major take-home message for social cognition: Incidental encounters with other people can leave impressions that last long after the specific details of the encounter fade.

As it turns out, another source of spontaneous trait information is the human face. Even with extremely brief exposures to emotionally neutral faces (as little as 38 ms; Bar, Neta, & Linz, 2006), people automatically evaluate faces on multiple trait dimensions. These judgments break down into two overall, orthogonal dimensions: trustworthiness and dominance (Oosterhof & Todorov, 2008; see earlier discussion of universal dimensions). Spontaneous face judgments portend a variety of social ramifications, including predicting political elections with about 70% accuracy (Ballew & Todorov, 2007; Todorov, Mandisodza, Goren, & Hall, 2005) and guiding criminal-sentencing decisions (Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006).

Aside from traits, researchers have noted other facial characteristics that impact interpersonal judgments. C. Neil Macrae's work demonstrated that the direction of targets' eye gaze proves important in influencing judgments made about them. For instance, people more rapidly categorize targets with direct eye gaze (Macrae, Hood, Milne, Rowe, & Mason, 2005) as well as more accurately inferring their emotional states (Adams & Kleck, 2003). A potential cause of this effect is that people find direct gaze likeable and attractive (Mason, Tatkov, & Macrae, 2005).

### *2000s Coda*

The first decade of the new century saw more entrants into the social-cognition market: a concise European text (Bless, Fiedler, & Strack, 2004), a European–American edited volume (Brewer & Hewstone, 2004), and an American text (Moskowitz, 2005), as well as another version of the Fiske–Taylor volume (2008). What the second decade of the 21st century will bring is anybody's guess, but the next section speculates, based on some of the opportunities that started the field of modern social cognition, namely the prospect of social-cognitive theories that would have neural plausibility and social-cognitive work that would improve the world.

### **The present and beyond: Journeys of the activated actor**

By decades, social-cognition research moved from viewing the social perceiver as striving to be rational (consistency seeker, 1960s; naïve scientist, 1970s) to being fast and frugal (cognitive miser, 1980s), but only sometimes (motivated tactician, 1990s), and then faster still (activated actor, 2000s). The coming decades have firm foundations, and surely much will build on existing trends. Besides better versions of what we know now, two new directions offer themselves. One new direction journeys to the center of the head, and the other to the edges of the earth.

#### *Activated actors as brainiacs*

The social-neuro revolution resembles the social-cognitive revolution, introducing novel techniques, insights, and controversies, creating a new frontier. Like the cognitive revolutionaries, pioneers work in the new hyphenated boundary between social psychology and its micro neighbor (now neuroscience, then cognitive science). Neither side of the boundary necessarily adopts the border-dwellers, who seem not social enough for one side or rigorous enough for the other. For those boundary explorers who survive the volleys from both sides, the ride is exciting and reveals new territory.

Initially, social-cognitive neuroscience has revisited and extended social-cognition research, now ironically termed "behavioral" research (social cognition's founders, as well as the behaviorists they battled, all are likely spinning in their graves). Some social neuroscience contrasts neural correlates of already identified automatic and controlled processes (Lieberman, Gaunt, Gilbert, & Trope, 2002), giving converging evidence of these distinctions. Other work contrasts neural correlates of social cognition regarding people's interior predispositions versus exterior appearance, a new distinction resulting from social-neuroscience evidence (Lieberman, 2007).

Automaticity has garnered new support from social-cognitive neuroscience. Not only do people judge traits from another person's face in less than half a second, as noted, but evidence now implicates particular neural networks in some judgments. For example, the amygdala activates to the most

untrustworthy faces, but also to the most trusted (potentially intimate) faces. This curvilinear pattern fits the amygdala's role in emotional vigilance (Said, Baron, & Todorov, 2009).

Controlled processes likewise have gained new allies. The much-studied control over prejudiced responding turns out to implicate the brain's conflict monitoring processes, mediating between automatic biases and efforts to override them with more personally acceptable responses (Amodio, Devine, & Harmon-Jones, 2008). Another controlled process, the self-regulation of emotion, implicates the lateral prefrontal cortex (Kross, Davidson, Weber, & Ochsner, 2009).

Social-cognitive neuroscience regarding other people's exteriors and interiors is revealing social-cognitive processes in a new light. For an example of reacting to the exterior, the intensity of attitudes toward social objects corresponds with amygdala activity (Cunningham, Raye, & Johnson, 2004), just as it does with the evaluation of another's face, noted earlier. Both types of exterior judgments (attitudes toward, appearance judgments of) draw on systems that differ from those involved in judging another person's interior.

Exploring judgments of others' interiors, scores of studies consistently show that thinking about another person's mind (intent, traits, predispositions) reliably activates the medial prefrontal cortex (mPFC; Mitchell, Banaji, & Macrae, 2005; for a review, see Amodio & Frith, 2006). The variety of so-called mentalizing judgment that activates this region suggests overlapping processes of social cognition. At the same time, dissociation of processes for thinking about the minds of self and dissimilar others within the mPFC also advances ideas about processes of social cognition separable for ingroup (self, similar others) and outgroup (dissimilar others).

Finally, taking outgroups to an extreme, the lowest of the low (e.g., homeless people) fail to activate the otherwise reliable mPFC social-cognition response when perceivers encounter them. This apparently objectified thinking about extreme outgroups has sparked efforts to identify other social psychological indicators of dehumanization (Harris & Fiske, 2009). Predictions about the groups subject to this kind of dehumanization came from the stereotype content model, a social-cognition theory noted earlier. Thus promises that other clusters of outgroups will elicit identifiable neural signatures. For example, envied outgroups may garner especially ambivalent attention (Cikara, Botvinick, & Fiske, 2011). More generally, attention up and down the social hierarchy should produce reliable neural correlates (Ames & Fiske, 2010).

Social-cognitive neuroscience, like social-cognition research after the cognitive revolution, provides an integrative focus, but provokes simultaneous controversy. One psychometric truism had to be relearned in social and cognitive neuroscience: Never use the same sample to identify a novel response and to validate it; this holds in exploratory and confirmatory factor analysis of questionnaires, as much as in analyses of correlations between neural patterns and questionnaire responses (Vul, Harris, Winkielman, & Pashler, 2009). Altogether, though, with growing acceptance, activated actors have never been so brainy.

### *Activated actors as cultural creatures*

Along with the journey to the center of the head, social-cognition researchers are journeying to the edges of the earth. Sometimes these enterprises combine, as in the budding arena of cultural neuroscience (Ames & Fiske, 2010; Cacioppo & Zhou, 2010). More frequently, cultural social-cognition researchers identify ways that studies to date have focused on people who are, frankly, WEIRD (Western, educated, individualist, rational, and democratic; Henrich, Heine, & Norenzayan, 2010). For example, Westerners apply a more analytic perceptual style, focusing on individuals within a context, whereas Easterners apply a more holistic perceptual style, integrating the entire context and relationships among the elements (Chua, Boland, & Nisbett, 2005; Nisbett & Miyamoto, 2005). Context-sensitive versus context-independent processing (Ji, Peng & Nisbett, 2000; Kitayama, Duffy, Kawamura, & Larsen, 2003) has implications for social cognition. For example, Asians give more weight to situational explanations for another's behavior than Westerners do (Nisbett, 2003), undermining the apparent universality of the dispositional bias in attribution.

Eastern social cognition more often attributes causality to social groups than does Western social cognition (Menon, Morris, Chiu, & Hong, 1999). The group is often responsible for the behavior of individuals in more collectivist settings. Recent cultural social cognition examines potential mechanisms by supplementing cultural comparisons with manipulating the salient cultural context for bicultural individuals. For example, the perceived consensus provides a pathway for cultural influences on individual social cognition (Zou, Tam, Morris, Lee, Lau, & Chiu, 2009).

### **Future directions: Past as prologue**

Who are the next social-cognitive beings, after activated actors, whether brainiacs or cultural creatures? Besides more of the same, besides brains and cultures, social-cognition research may seek broader societal impact. Circling back to the 1970s crisis over social irrelevance, discontent with talking only to each other is leading social-cognition researchers to global relevance. First, more reader-friendly venues include online magazines to convey our sciences to the public (*In-Mind Magazine*, [www.in-mind.org](http://www.in-mind.org); *Greater Good Magazine*, [www.greatergoodmag.org](http://www.greatergoodmag.org)). Brief, catchy videos are not far behind. The occasional bestseller hooks the public with longer attention spans (e.g., Ariely, 2008; Gilbert, 2006; Gladwell, 2005; Thaler & Sunstein, 2008), explaining and mocking our social-cognitive foibles. These more public venues may shape social-cognition research to stick closer to what matters most to regular people: health, wealth, and happiness. Although the current crop of bestsellers tends to focus on judgment and decision-making or its cousin, behavioral economics, the most influential demonstration studies focus on happiness and wealth. These outlets affect the style of research, making it more fluent, transparent, clever, and appealing.

A second trend involves health relevance. Although social-cognition research has historically been shaped by its primary funding source, the National Institute of Mental Health, the funding scene has changed, and a broader landscape for funding and therefore research topics has emerged. Under NIMH auspices, prejudice research flourished (stigma being relevant to mental health; e.g., Crocker, Major, & Steele, 1998), as with social comparison, message-framing, and other health-related research also (e.g., Salovey, Rothman, & Rodin, 1998). Under current, broader demands for health relevance, new topics may emerge in exploring social-cognition processes relevant to other diseases (cancer, addiction, cardiovascular) and age cohorts (lifespan development). Funding policies affect research trends.

A third trend reflects the previous two: social policy relevance. After a decade in which science was suspect and faith foremost, science is back in power, at least in some places for some time. In the 1970s, the most relevant social-cognition research helped rescue the field, energizing research concerned with racism, media violence, health, and helping (e.g., for a contemporary review, see Fiske & Taylor, 1984). Now, 40 years later, the most relevant social-cognition research may address the demographically and politically current events of aging, immigration, terrorism, and global warming (e.g., aging: Boduroglu, Yoon, Luo, & Park, 2006; North & Fiske, under review; immigrants: Esses, Wagner, Wolf, Preiser, & Wilbur, 2006; Lee & Fiske, 2006; terrorism: Castano & Dechesne, 2005; Kruglanski & Fishman, 2006; Pyszczynski et al., 2006; global warming: Swim et al., 2009). Social psychologists have always tried to improve the world of their era, dating back to the origins of the field around topics related to the Second World War: anti-Semitism, propaganda and persuasion, military morale, submarine crew dynamics.

Tomorrow's forecast: Continued social cognition. Intervals of neuroscience, culture, public interest, health and social policy, with no chance of a dull moment.

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