

Social Psychology of Prejudice:

*Historical and
Contemporary Issues*

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The Substance of Prejudice: Biological- and Social-Evolutionary Perspectives on Cognition, Culture, and the Contents of Stereotypical Beliefs

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Open just about any introductory social psychology textbook and you'll read that "prejudice" is construed by psychologists to be a negative affective reaction to a group or social category. To some extent, of course, that's a sensible way of defining prejudice. But that definition offers a very simple and vague depiction of the psychological substance of prejudice. Prejudicial beliefs aren't merely negative; they are negative in some very specific ways. A white American man may experience negative affective reactions to African-Americans, to Korean immigrants, to gay men, and to people stricken with cerebral palsy. But these prejudices are not interchangeable. They are experienced differently, and they compel different sorts of cognitive and behavioral reactions. These prejudices are comprised of more than mere negative affect; each prejudice has a richer affective and connotative substance, and this substance matters.

The substance of prejudice matters not only in distinguishing between different prejudices against different groups of individuals, but also in understanding different prejudicial reactions to the same individual. Consider two prototypical examples of discriminatory treatment that might be experienced by an African-American man. He's passed over for promotion at work during the day; he's stopped by the cops while driving through his neighborhood at night. Both acts of discrimination might be taken as evidence of the negative affect directed toward Black men, but there's more to it than just that. One act surely results from some specific part of the rich stereotypical substance underlying anti-Black prejudice (e.g., Blacks are judged to be lazier and/or less intellectually competent than Whites), while the other results from some other specific part of that substance (e.g., Blacks are believed to be more inclined toward criminal activity than Whites).

This line of thinking necessarily blurs the convenient definitional boundary between 'prejudice' and 'stereotypes'. Psychologists have

commonly used these two terms to refer separately to affective reactions ('prejudice') and to connotative knowledge structures ('stereotypes'). But habit and convenience must take a back seat to psychological reality, and the reality is that affective and connotative reactions to groups are inextricably entangled. Just as stereotypes may be loaded with affect (Fiske, 1982), so too affective reactions can be loaded with meaning (Rozin, Lowery, Imada, & Haidt, 1999). Individuals experience substantially distinct negative affective reactions when they encounter members of different groups, and those different affective reactions—anger, contempt, fear, disgust, etc.—can have very different implications (Neuberg & Cottrell, 2002; Mackie, Devos, & Smith, 2000).

The point is simply this: To fully understand and predict the causes and consequences of prejudice, one must move beyond broad conceptualizations based merely on general negative affective valence. We must dig deeper into the richer, more detailed stuff that defines the psychological experience of prejudice.

This stuff, this substance of prejudice, can be examined in several different ways. One way is through a deeper examination of the affective reaction to groups—an attempt to elucidate the specific nature of the negative affect that defines different prejudices against different peoples (cf. Mackie & Smith, 2002). Another way—the approach we take here—is through a deeper examination of the contents of the stereotypic knowledge structures that are tangled up with the affective reactions to groups and group members. We discuss two meta-theoretical perspectives (both of which draw on the logic of evolutionary processes) that, when applied rigorously, lead to novel hypotheses about the substance of prejudices. One of these lines of inquiry addresses questions about the specific contents of culturally-shared stereotypes. The other line of inquiry addresses questions about specific evaluative reactions to specific groups. Together, they help map out the connotative terrain of prejudice, and in this way help us understand the causes and consequences of prejudicial beliefs.

New Answers to Old Questions

In doing so, these perspectives can help us answer questions about content and substance that, decades ago, used to be front and center in the study of stereotypes and prejudice, but which have been somewhat neglected over the last twenty or thirty years.

In the old days, before the cognitive revolution in psychology, inquiries into the contents of stereotypes and prejudices were common (e.g., Katz & Braly, 1933; Gilbert, 1951). But these studies were merely descriptive; they were neither generalizable nor predictive, and implied no theory of underlying psychological processes. In contrast, cognitive

approaches to stereotypes and prejudice—in which we consider the ways that individuals encode, organize, and recall information about social categories—has generated all sorts of hypotheses and theories that help to identify the common psychological processes underlying all kinds of different prejudices against different groups of people. But inquiry into these cognitive processes doesn't lend itself easily to questions about the specific contents of stereotypes and prejudices pertaining to specific groups (Schaller & Conway, 2001; Schneider, 1996). This isn't a necessary limitation of the contemporary cognitive perspective, however. As we'll describe below, a focus on cognitive processes can—when integrated into broader psychological perspectives—lead to some very specific and testable predictions about the contents of stereotypes and the substance of prejudice.

Overview

In the pages that follow, we'll talk about two broader psychological perspectives that have guided our recent research on stereotypes and prejudice. Each is a type of *evolutionary* perspective, but they are conceptually very different.

As will become obvious below, we use the term "evolutionary" fairly broadly, referring to some quite different sets of processes. But we don't use this term loosely. We apply the term strictly to processes that fit a common pattern defined by three necessary and sufficient conditions: (a) Within some population at some point in time there exists some diverse set of structures that have the potential to be transmitted to others; (b) There are selective pressures operating on this population such that some structures are more likely and some are less likely to be transmitted to others; (c) There exist some means of maintaining the successfully-transmitted structures such that they may be retransmitted again in the future.

These conditions are familiar to students of biology, as they are the conditions both necessary and sufficient for the evolution of species through natural selection. In the case of biological evolution, the structures that may or may not be transmitted are genes and the method of transmission is through sexual or asexual reproduction. Within this biological context, we know that there typically does exist considerable genetic diversity within a population, that there are typically are selective pressures operating on the transmission of those genes, and that there are biological mechanisms through which successfully-transmitted genes are maintained for possible retransmission in the future. And so we know that the conditions are usually met for biological evolution processes to slowly sculpt the phenotypic features that define biological populations.

These three fundamental conditions for evolution should be familiar to social scientists as well, because they describe human cultures. In this context, the structures of interest aren't genes, but are instead social entities and cognitive inventions: attitudes, norms, fads, fashions, and the many other sorts of human inventions that Richard Dawkins (1976) dubbed "memes." The method of transmission is not through sexual (or asexual) reproduction, but through the many modes of interpersonal communication and social influence. There typically does exist considerable diversity of belief and opinion within any human population; there typically are selective pressures operating on the extent to which beliefs and opinions are communicated to others within the population, and there are mechanisms (e.g., human memory processes) through which successfully-transmitted beliefs are maintained for possible retransmission in the future. And so the conditions are usually met for social-evolutionary processes to slowly sculpt the substance of widespread cultural beliefs.

These two sets of evolutionary processes—biological and social—have unique implications for understanding and predicting the substance of prejudice.

Biological-Evolutionary Processes: Selective Pressures on the Cognitive Apparati of Intergroup Perception

An evolutionary framework has informed much recent theorizing on intergroup cognition and behavior (Kurzban & Leary, 2001; Neuberg, Smith, & Asher, 2000; Neuberg & Cottrell, 2002; Schaller, 2003; Schaller, Park, & Faulkner, 2003). The underlying meta-theoretical assumption is that some of the psychological processes governing the formation and activation of contemporary prejudices evolved long ago in response to evolutionary pressures within ancestral environments.

Within this evolutionary meta-theoretical framework, psychological theories can be deduced by (a) specifying particular social and/or environmental conditions in ancestral environments that imposed evolutionary pressures on populations living within those environments, (b) specifying particular behavioral and cognitive responses that are likely to have been adaptive within those environments, and (c) specifying the residual implications of those adaptations for behavioral and cognitive responses in contemporary environments. When articulated with deductive rigor and with appropriate sensitivity to both the costs and benefits of adaptations, these theories not only identify plausible origins of contemporary psychological tendencies, but—more importantly—they yield specific predictions about contemporary domains and the contexts within which these tendencies are especially likely to occur (Conway & Schaller, 2002; Simpson & Gangestad, 2001).

Within this general framework, some recent work has tested one particular theory (we've called it "intergroup vigilance theory") that specifies the evolutionary origins and contemporary operation of prejudices. The theory begins with a consideration of specific risks that, in ancestral times were likely to be associated with encounters with outgroup members. This theory yields predictions about the emergence of very specific prejudices directed against specific target outgroups, and which are triggered especially under specific and predictable circumstances.

Briefly, the underlying evolutionary logic is as follows: During much of human evolutionary history, in which individuals lived within small hunter/gatherer tribal units, there are likely to have been real physical risks associated with unexpected interactions with tribal "outsiders"—strangers who were not part of the tribal ingroup. Consequently, vigilant behavioral avoidance of unexpected intergroup encounters would have been adaptive. Also adaptive would have been the affective and cognitive mechanisms motivating that vigilant avoidance. Thus, there may have evolved mechanisms through which individuals are 'prepared' to very quickly learn to be afraid of tribal outgroup members (see Ohman & Mineka, 2001, for a discussion of the evolution of fear-learning mechanisms), and to associate outgroup members with characteristics connoting physical danger—to develop stereotypes in which outgroup status is associated with hostility, untrustworthiness, and other danger-relevant traits.

Most contemporary intergroup contexts are very different from harsh ancestral environments in which these evolved mechanisms were forged, of course, but these evolved structures may still influence prejudicial reactions to outgroup members. This analysis has clear implications for the specific substance of negative prejudices against outgroups that fit a tribal "outsider" template, such as ethnic and national outgroups. Empirical research bears out this implication. Encounters with members of ethnic outgroups are associated with self-reported and physiological indicators of fear and anxiety (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001; Phelps et al., 2000), and these physiological reactions are strongest among those individuals who show the strongest tendency toward negative stereotyping and prejudice (Phelps et al., 2000; Stephan et al., 1998, 2000). Examinations of the trait contents of stereotypes about ethnic outgroups—especially those that are most ethnically foreign—also reveal a considerable presence of traits connoting hostility, untrustworthiness, and danger (Katz & Braly, 1933).

These results are consistent with the underlying evolutionary logic, but that is just the starting point. The primary value of this evolutionary approach is not that it explains broad tendencies to express prejudice

against ethnic outsiders, or even that it indicates a reason why these prejudices often have a specific danger-relevant substance; the primary value is that it predicts a number of circumstances under which these specific prejudices are especially likely or unlikely to be expressed.

These hypotheses emerge from a sort of cost/benefit analysis that is essential to rigorous evolutionary psychological theorizing (Simpson & Gangestad, 2001). The reasoning, briefly, is as follows: While there may be functional benefits associated with the inclusion of any adaptive tendency in one's cognitive or behavioral repertoire, there can also be functional costs associated with any specific enactment of that tendency. For instance, the capacity to experience fear clearly confers certain functional benefits (Ohman & Mineka, 2001), but each single fear experience comes at a cost (e.g., consumption of cognitive resources, constriction of attention, physiological stress). Consequently, it is pathological to be chronically afraid, and an individual is far more likely to survive and reproduce if the generally adaptive fear response is tactfully 'triggered' by cues indicating circumstances in which the functional benefits of fear outweigh the costs.

This same line of reasoning suggests that the tendency to express prejudice against tribal outgroups is likely to vary depending on the presence of cues indicating circumstances in which that prejudice—and the vigilant behavior it motivates—confers benefits that outweigh the inevitable costs of the prejudicial response.

There are two classes of ancestral conditions under which prejudicial beliefs about the dangerousness of outgroups would have been especially likely to be beneficial: Conditions in which unexpected interactions with those outgroup members were especially likely to occur, and in which those interactions were especially likely to be unpleasant. Thus, it seems likely that there evolved triggering mechanisms in which these prejudices kick in especially strongly whenever perceivers perceive cues indicating high likelihoods of intergroup interaction and intergroup hostility.

Some of these cues are obvious and straightforward, such as actual evidence of intergroup conflict. There's plenty of research showing that greater prejudice does indeed emerge under conditions of conflict (Brewer, 1979; Jackson, 1993; Hewstone, Rubin, & Willis, 2002), and that these prejudicial beliefs tend to coalesce around danger-relevant characteristics and images (Alexander, Brewer, & Herrmann, 1999).

Other cues are less obvious and rational, and probably operate at a heuristic level instead. One such cue is group size. At a probabilistic level, the more outgroup members there are (especially the more outgroup members there are relative to ingroup members) the more likely one is to have an encounter with outgroup members and the more likely it is that a

hostile encounter will have personally injurious consequences. Consequently, ingroup size and outgroup size may serve as cues heuristically triggering a sort of latent fearfulness and vigilance that is manifested in prejudicial beliefs about outgroups. There is evidence across many species—including humans—that group size does predict vigilance (Roberts, 1996; Wirtz & Wawra, 1986). And there is abundant evidence that, as the relative size of an outgroup increases, prejudicial beliefs about that outgroup become stronger (Mullen, Brown, & Smith, 1992).

Perhaps more interestingly, this conceptual reasoning implies that these same prejudices may also be triggered by additional cues that don't even pertain in any direct way to the features of an outgroup. Any cue indicating some increased vulnerability to danger may trigger the same sorts of prejudicial responses to outsiders.

One such cue is darkness—the absence of ambient light in the environment. The onset of darkness can make people anxious, a response that makes considerable adaptive sense for a species that has relied so heavily on vision to navigate physical landscapes. So, whereas ambient light may be reassuring, the onset of darkness may serve as a heuristic cue that triggers a wariness of the dangers in the world, including the dangers stereotypically posed by outgroup members. Consistent with this notion, the results of study reported by Schaller et al. (2003) revealed that ambient darkness amplified the tendency of Canadian students to judge an outgroup (Iraqis) more negatively than an ingroup (Canadians), and that this effect was content-specific: Darkness amplified prejudicial beliefs about danger-relevant traits (trustworthiness and hostility), but did not much affect beliefs about equally-derogatory traits that were less relevant to danger.

Similar prejudicial consequences may be precipitated by internal cues connoting vulnerability, such as individuals' chronic beliefs about their vulnerability or invulnerability to danger. Regardless of the underlying causes of these beliefs, they can have consequences on reactions to outgroups. Indeed, individual differences on a 12-item measure assessing "belief in a dangerous world" (BDW) do predict expressions of prejudice against outgroups (Altemeyer, 1988).

One additional implication of this conceptual framework is that there are likely to be interactive effects of these different danger-connoting cues. Functionally, the concern generated by the large size of an outgroup offers none of its potential benefits—vigilant avoidance of potentially-dangerous interaction—if other cues indicate that dangerous interactions are unlikely (if the outgroup is far away, for instance, or known to be friendly).

Following this logic, several recent studies have tested these interactive implications. Schaller, Park, and Mueller (2003) used two different methods to assess the joint effects of darkness and BDW on the activation of stereotypical beliefs about Blacks. The results of both studies revealed BDW X darkness interactions: BDW exerted its triggering effects in the dark, but not in the light. These triggering effects occurred most strongly on stereotypical beliefs linking Blacks with hostility, untrustworthiness, and danger. The effects on equally-derogatory but less danger-relevant beliefs (e.g., about laziness or lack of intelligence) were weaker and appeared to be an indirect consequence of the more direct effect on highly danger-relevant beliefs. Similar results were obtained in another study (summarized by Schaller et al., 2003) that more directly assessed prejudicial beliefs about a different outgroup: Iraqis. Again, darkness and BDW interacted in predicting expressions of prejudice against Iraqi's (these prejudices were especially exaggerated among high-BDW individuals in the dark). And again the effect was limited to very specific set of derogatory prejudices (beliefs about hostility and untrustworthiness). It seems that under conditions that heuristically connote vulnerability to harm, the prejudices that come to mind have a very specific substance.

This line of work offers just one example of the many ways in which the psychology of prejudice may have been shaped by biological evolutionary processes. Other conceptually distinct psychological mechanisms may have evolved in response to different adaptive problems, and may have different implications for contemporary prejudices against a variety of different kinds of peoples (Kurzban & Leary, 2001; Neuberg et al., 2000; Schaller et al., 2003). The evolutionary logic underlying all of these processes suggests implications that are specific to specific domains of judgment and behavior. The take-home message is this: The biological evolutionary processes that operated on human populations over tens of thousands of years may have some residual influence on the specific substances of contemporary prejudices.

Social-Evolutionary Processes: Selective Pressures on Culturally-Shared Stereotypic Beliefs

Whereas biological evolutionary processes exert their influence on populations very slowly, there is another sort of evolutionary process that occurs much more rapidly: A social-evolutionary process. Social-evolutionary processes operate on the characteristics of the cultural artifacts—objects, ideas, beliefs, and so forth—that are created and shared within human population. These processes, and the selective pressures that guide them, have direct influences on the specific contents of stereotypic beliefs.

The key question guiding research on these sorts of social-evolutionary processes is this: Why do some specific beliefs become and remain culturally widespread, while others do not? Answers to that question provide insights into the evolving contents of cultures, and are provided by hypotheses identifying psychological mechanisms through which beliefs become and remain part of a cultural belief system.

Some of these mechanisms pertain to intra-individual processes such as memory. The key insight is that those beliefs that are most memorable—or are otherwise liable to "stick" in individuals' minds—are most likely to become and remain culturally popular (Gladwell, 2000; Norenzayan & Atran, 2004).

Other social-evolutionary mechanisms pertain to the processes of interpersonal communication, and so can sensibly be discussed as a sort of "epidemiological" process (Sperber, 1990). Beliefs can be viewed as analogous to viruses that are sometimes communicated from one person to another. In order to explain and predict the evolution of beliefs within a culture, the trick is to figure out which of these many belief-viruses are most communicable—that is, which ones are most likely to be successfully transmitted from person to person. Doing so requires some analysis of the variables that influence the communicability of these different beliefs. Contemporary folktales—"urban legends"—offer one example: Those that are more disgusting are more communicable, and so are more likely to become widespread within cultural populations (Heath, Bell, & Sternberg, 2001).

Stereotypes are like folktales and other cultural beliefs. Like other beliefs, stereotypes are communicable, and there is abundant research on the many means through which people communicate their stereotypic beliefs to others (Ruscher, 2001). But not all possible stereotypical beliefs are equally likely to be successfully communicated from person to person. It is in pursuing hypotheses implied by this assumption—that different stereotypic perceptions are, like different genes, differentially 'communicable'—that a social evolutionary perspective yields novel answers to questions about the content and substance of prejudice.

An initial implication is simply this: Of the many different personality traits that have the potential to be central to culturally-shared stereotypes, the traits that are most likely to realize that potential are those that we are most inclined to talk about. Moreover, this implication should apply primarily to stereotypes of those groups that we actually talk about—those that are "conversationally visible"—but not to stereotypes of groups that are less likely to be objects of conversation.

To test these hypotheses, Schaller, Conway, and Tanchuk (2002) first obtained a rough measure of the communicability of dozens of

potentially-stereotypic traits (all of these traits had been found to be stereotypic of various American ethnic groups in the past). This was done by asking a set of participants several questions to rate the likelihood that they would convey trait-relevant information in interpersonal conversations (e.g., if you know someone who was, say, superstitious, how likely would you be to tell others about it?). A separate sample of participants rated the extent to which those same traits were culturally stereotypic of four different ethnic groups in the Vancouver, British Columbia area. These four groups differed in their population size and, consequently, their conversational visibility. Results revealed that trait communicability ratings were strongly positively related to trait stereotypicality for the most conversationally visible ethnic group, less positively related for two less visible groups, and essentially unrelated for the least visible group.

These results indicate that the contents of stereotypes at any single point in time are influenced by a social-evolutionary process in which the communicability of potentially-stereotypic beliefs is fundamentally important. The same logic can be applied more directly to the evolution of cultural stereotypes over time. Given any set of beliefs that are currently highly stereotypic of a group, those beliefs that are most communicable are most likely to remain highly stereotypic. This effect, of course, should apply primarily to groups that are most conversationally visible.

Schaller et al (2002) tested these hypotheses through an analysis of the results of five previously-published datasets describing the trait content of culturally-shared stereotypes within the United States. Three of these datasets were those resulting from the so-called "Princeton trilogy" (Gilbert, 1951; Katz & Braly, 1933; Karlins, Coffman, & Waters, 1969), and describe the extent to which various traits were common in the stereotypes of 10 different American ethnic groups at three different points in time. The two other datasets focus on stereotypes of African-Americans, and describe the extent to which various traits were stereotypic of African-Americans at two more recent points in time (Devine & Elliot, 1995; Dovidio & Gaertner, 1986). At a descriptive level, it's clear that the trait contents of these stereotypes changed substantially over the course of six decades. Surely some of these changes were due to specific historical events and circumstances (e.g., effects of World War II on Americans' stereotypes of Germans and Japanese). But some of these changes seem to reflect a subtler, social-evolutionary process driven by the engine of interpersonal communication. This effect is notable in the stereotypes of African-Americans and Jews—the two ethnic groups that were the most sizeable, most culturally influential, and presumably most

conversationally visible ethnic groups in the U.S. during this period of time. Persistence and change in the contents of stereotypes about these two groups were strongly and consistently predicted by trait communicability. The most communicable traits persisted in these cultural stereotypes over time, while less communicable traits tended to disappear. In contrast, there was no consistent positive relationship between a trait's communicability and its persistence in the stereotypes of other, less visible ethnic groups.

These studies reveal that the substance of culturally-shared stereotypes can be predicted more fully if one peers more deeply into the engine—interpersonal communication—that drives social-evolutionary processes. A key question is this: What makes some potentially-stereotypic beliefs more communicable than others? Schaller and Conway (1999) found that the communicability of beliefs was influenced by temporarily-salient impression management goals; those beliefs that helped individuals satisfy these goals were more likely to be the substance of interpersonal communication and so were consequently more likely to become the substance of shared stereotypes. Many other goals govern the dynamics of interpersonal communication as well. The epistemic goals that underlie the norms of communication—concerns with relevance and interest-value, for instance—are likely to influence the substance of culturally-shared stereotypes. So too are epistemic desires for simplicity: All else being equal, more simple stereotypes—those that are more easily and efficiently communicated to others—are likely to emerge and persist over time. Goals rooted in human biological evolutionary history—such as those pertaining to self-protection and mate-selection—may also govern the choices individuals make when deciding what to talk to others about (Kenrick, Maner, Butner, Li, Becker, & Schaller, 2002). And so traits that seem most functionally-relevant to these essential human goals may be especially likely to become and remain central to the substance of culturally-shared stereotypes.

Of course, communication involves both transmission and reception. Successful communication doesn't depend solely on the choices of individuals attempting to communicate to others; it also depends on the ability and willingness of those others to encode, remember and believe the contents of those communicated messages. Thus, the substance of culturally-shared stereotypes is likely to be influenced by the many variables that affect the reception of communicated messages. The comprehensibility of a stereotypic belief is important: Those beliefs that are more comprehensible—more easily understood and admitted into existing knowledge structures—are more likely to become and remain central to the substance of stereotypes. Here again the epistemic desire

for simplicity is likely to exert an influence: The stereotypic beliefs that persist over time are likely to be simple, not complex. Many other features of beliefs can also influence the extent to which they are easily 'copied' into new minds once they are communicated. Research on attitudes, for instance, reveals that those attitudes that are more highly heritable are less changeable, and so are less likely to become widespread simply as a product of communication (Bourgeois, 2002; Tesser, 1993). There may be similar diversity in the heritability of stereotypic beliefs, with consequences for the substance of culturally-shared stereotypes. Communication processes may play a larger role in the emergence and change of stereotypic beliefs that are less heritable; these processes may exert less influence on highly heritable stereotypic beliefs.

The reception of communicated messages depends too on the context within that message is transmitted. One part of that context involves the suspicion of ulterior motives. When we think others have ulterior motives for saying what they are saying, we are less likely to be persuaded by the contents of that communication (Eagly, Wood, & Chaiken, 1978). Recent evidence suggests that these considerations affect the extent to which stereotypic beliefs are successfully received once communicated: When listeners suspect that speakers have ulterior motives—such as the desire to ingratiate oneself—then the stereotypic beliefs that speakers express are less likely to be replicated in the minds of those listeners (Conway & Schaller, 2003).

In general, the evolving contents of culturally-shared stereotypic beliefs depend not just on the properties of the beliefs themselves, but also on the psychology of the individuals who traffic in those beliefs. There are many different ways in which stereotypic beliefs differ, and there are many different features of individuals—and their social contexts—that govern the communication process through which those beliefs do (or do not) become widespread. The variables subtly guide the social-evolutionary process that shapes the contents of culture, including the contents of culturally-shared stereotypes.

Envoi

The cognitive revolution in psychology ushered in an approach to stereotypes and prejudice that has yielded many intellectual and practical rewards. By understanding the psychological processes that operate within individuals' heads as they encounter group-relevant information, we are much better able to predict and explain—and not merely to describe—the many prejudices that influence our lives. But an exclusive focus on the moment-to-moment processes of human cognition has a cost as well, as it makes it difficult to address important questions about the specific substance of those prejudices. The two evolutionary

approaches that we've summarized offer ways of reaping those rewards while avoiding those costs. Both approaches locate the cognitive processes of individuals within broader conceptual structures, and in doing so they yield novel hypotheses and insights into the many ways that specific cognitive processes shape stereotypes and prejudices with specific contents.

Neither of these conceptual frameworks is particularly new. The process of biological evolution by natural selection has been a topic of serious scientific discussion since the mid-1800's, and social-evolutionary processes have been part of the scientific landscape for even longer (Hull, 1988). Nor are these meta-theoretical frameworks new to social psychology. Donald Campbell, for instance, wrote extensively about the implications of both biological and social-evolutionary processes in the 1960s (Campbell, 1965a, 1965b), at the same time that the cognitive revolution was taking root. But it is only in recent years that biological and social-evolutionary processes have been seriously integrated with the study of human social cognition, with promising implications for the study of stereotypes and prejudice. By more fully pursuing these integrative approaches, we may discover many new and useful facts about the ways in which subtle psychological processes shape the substance of prejudice.

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