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Social Categorization and the Perception of Social Groups

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The importance of social categories in everyday life is made woefully evident in daily world news. Consider the case of Sabbar Kashur, a Palestinian living in Jerusalem who by habit adopted a Jewish nickname, Dudu. People just assumed Dudu was Jewish; his life was easier that way. However, after his (consensual) Jewish lover discovered that he was an Arab rather than a Jew, Mr Kashur was accused, arrested, tried, and convicted of rape (Levy, 2010). In an instant, a loving act became a crime, based entirely on a change of social categories. Such is the power of social categories to shape our perceptions of others.

Over the last few decades, social psychologists have been extensively exploring the dynamics of social categorization, the process by which individuals are sorted into various social categories (e.g., women, men, Asian, student, musician, etc.). In the pages that follow, we will attempt to summarize the major conclusions that have been reached regarding the nature of social categories and their impact on the perception of social groups. We begin by considering the diverse psychological functions that social categories serve for perceivers, and then we examine how social categories are mentally represented in ways that facilitate these basic functions. In particular, we review research showing how the stereotypes about particular social groups are acquired and how stereotypic beliefs are organized. Next, we turn to the processes involved in using stereotypes. We summarize the factors that determine whether or not people end up thinking in primarily categorical ways about particular individuals as well as the factors that determine which specific categories are most likely to be used in a given context. We then discuss how perception, judgment, and behavior can be shaped by activated social categories, and we conclude by considering whether and how social perceivers can avoid relying on categorical stereotypes when they are motivated to do so. The overall picture of social categorization that emerges is of a process that is generally adaptive but also sometimes problematic.

STARTING POINTS: STRUCTURE AND FUNCTION OF SOCIAL CATEGORIES

Psychological functions of social categorization

Categorization is fundamental to human cognition because it serves a basic epistemic function: organizing and structuring our knowledge about the world. By identifying classes of stimuli that share important properties, categorization allows perceivers to bring order and coherence to the vast array of people, objects, and events that are encountered in daily life (e.g., Smith & Medin, 1981). Once a categorical structure is superimposed upon them, the immense diversity of individual entities that we encounter in daily life becomes manageable. General, portable concepts

become possible; for example, categorical representations allow us to speak of "horses," rather than having to separately name each equine individual and treat each one as a wholly unprecedented and hence unpredictable entity. Once perceptual rules for establishing category membership are acquired, generic knowledge derived from prior interactions with category members can provide a rich source of inferences about the properties of newly encountered individuals. With the help of categories, the mind transforms the world from chaotic complexity into predictable order.

Social categories are no different from other types of concepts in their capacity to serve these basic knowledge functions. Whether on the basis of demographic features, social roles, kinship networks, shared tasks, or other social cues, identifying an individual as belonging to a particular social category enables inferences about a range of relevant and important issues. We can infer, for example, what the person's goals and intentions might be, what skills and knowledge she might possess, and what general personality traits are likely to characterize her. These sorts of inferences can be exceptionally useful in determining whether and how to interact with other people, just as categorizing physical objects can direct our interactions with them (e.g., we know that "sitting on" is an appropriate interaction with a "chair"). However, categorizing people differs from categorizing objects in one critical respect. When we place an individual into a social category, we are likely to consider our own status with respect to that category (i.e., as a member or non-member). In this way, social categorization allows us to connect with those who share our group memberships (i.e., in-groups); however, it also has the potential to establish psychologically significant dividing lines between the perceiver and the target (i.e., out-groups), as was evident in the case of Sabbar Kashur described above. Thus, in addition to epistemic functions, social categories also serve an important identity function, shaping the perceiver's sense of belonging and connection to – or alienation from – others. Tajfel (1969, 1982) established a rich theoretical tradition exploring the implications of the epistemic and identity functions served by social categories (for a recent review, see Hornsey, 2008).

As the foregoing discussion makes clear, relying on categories when perceiving the social world is in principle functional and adaptive – even essential – although it sometimes can lead to unsavory consequences. Far from being the "rotten generalizations that smelled up the mental household" (Schneider, 2004, p. 562) that were assumed in early research, stereotypes about the general characteristics of social groups are often useful tools for constructing meaningful representations of others. However, to serve the epistemic functions that are ascribed to them in a truly adaptive way, these generalizations would need to possess a reasonable degree of accuracy. Are social stereotypes accurate? This turns out to be a rather complicated question to answer definitively. The best answer seems to be: yes and no. On the one hand, it certainly seems likely that, if groups differ systematically from one another in detectable ways, such differences would be noted by perceivers and reflected in their beliefs. Surely many stereotypes do reflect actual group differences (Lee, Jussim, & McCauley, 1995). The forces producing these differences, however, are not necessarily obvious to perceivers. A variety of social forces can work to produce and reinforce stereotypically expected differences between groups, whether or not they would have emerged spontaneously. For example, when individuals disconfirm stereotypes about their social group, they often face a backlash from others that operates to discourage this counter-stereotypic behavior in the future (e.g., Phelan & Rudman, 2010). Actual differences between social groups reflect not only the intrinsic characteristics of the groups' members but also the social situations they typically face (Eagly, Wood, & Diekman, 2000). For instance, if a group has limited access to high-quality education, it would not be surprising if group members scored lower on standardized tests of learning. In such cases, stereotypes may indeed reflect the social reality, if not the intrinsic character and potential, of the group. An accurate representation of group differences does not necessarily imply an accurate understanding of the reasons for their existence.

On the other hand, research indicates that the accuracy of particular stereotypic beliefs can be constrained by a variety of factors. Forming accurate stereotypes depends on exposure to relevant, unbiased samples of group members. From this standpoint, it is perhaps not surprising that some common gender stereotypes have been shown to be relatively accurate (Swim, 1994), given the extensive direct experience most people have with members of both sexes. However, when one has limited direct exposure to members of a particular group, then beliefs about the group must be mediated by how others communicate about the group; such communications are subject to systematic distortions (e.g., Allport & Postman, 1947). Systematic cognitive distortions can also be an issue when strong a priori expectations about a social group lead to biased perceptions of newly encountered group members (Cameron & Trope, 2004; Hamilton & Sherman, 1994). As we will show when we discuss how stereotypes operate in guiding social perception, the implicit

operation of stereotypic expectancies can transform non-stereotypic information into stereotype-congruent representations, creating an illusory sense that one's prior beliefs have been confirmed. Moreover, stereotypic expectancies can result in behavior that unwittingly elicits the expected characteristic, as in the case of self-fulfilling prophecies (Darley & Fazio, 1980; Jussim & Harber, 2005). More generally, pressing psychological needs can sometimes trump epistemic accuracy concerns, leading perceivers to seek motivationally satisfying conclusions, even if this requires parting company with a realistic view of the world (Kunda, 1990). For example, the desire to disparage groups that are perceived to be competing with one's own group (Esses, Jackson, Dovidio, & Hodson, 2005) could lead to unrealistically negative stereotypes of them. Additionally, the strong desire we hold for feeling that the world is fair and just may lead us to form negative stereotypes that can provide a seeming justification for a group's low social status (Jost, Banaji, & Nosek, 2004). Thus, generalizations about social groups can serve ego-gratifying and system-justifying functions as well as epistemic ones, and accurate beliefs are not at all necessary for the satisfaction of these motivational needs.

Cognitive representations of social categories

Cognitive representations of social groups play a key role in (a) determining which individuals belong in a given category, and then (b) generating inferences about these identified category members. The classical view of categories held that category membership is established by a set of features that are individually necessary and jointly sufficient to define the category (e.g., Katz, 1972). This perspective was largely abandoned in light of a variety of conceptual critiques and incompatible empirical findings and replaced with two rival alternatives. The first of these, the probabilistic view (e.g., Rosch, 1978), argued that categories are defined by a set of prototypic features, and perceptions of category membership are governed by the degree of similarity (or "family resemblance") between a particular instance and the category prototype. The second alternative, the exemplar view (e.g., Medin & Schaffer, 1978), rejected the notion of a stable, unitary category prototype and instead argued that a category is represented by the features that characterize its salient individual exemplars. From the exemplar perspective, there is little or no abstraction involved in representing the category; it is instead defined by the characteristics of specific instances. Most of the research testing the relative merits of these competing perspectives involved the study of non-social categories. What is known about the representation of social groups? Sherman (1996) made a case that both views are correct, but they apply at different points in the development of group representations. When initially encountering members of a novel group, an exemplar-based representation governs category judgments, but once enough experience with group members has occurred, a probabilistic, prototype-based representation appears to emerge.

Regardless of which representational format one presupposes, people clearly do hold consequential beliefs about the features and characteristics that are associated with social groups. Categories are fundamentally represented in terms of descriptive features, but the representations consist of more than just a "laundry list" of characteristics that are individually correlated with category membership. Instead, these features are embedded within causal theories that do more than merely describe the category – they provide explanations for why the category is the way it is (McGarty, Yzerbyt, & Spears, 2002; Murphy & Medin, 1985). Certain features have "causal status" (Ahn, Kim, Lassaline, & Dennis, 2000) in that they are involved in creating other category characteristics, known as effect features. For example, if a group is stereotypically viewed as hard-working, well-educated, and affluent, then "hard-working" might be a feature having causal status in the perceiver's mental model of the group, providing an explanation for the group's educational and financial success. Features having causal status assume greater importance in judgments about category membership and inductive inferences made about category members, compared to effect features (Rehder & Hastie, 2001).

Of course, one can also ask about a causal feature's cause. In the previous example, we could ask, "Why is the group hard-working?" Like a child who asks "Why?" in response to each successive level of a parental explanation, perceivers face a potentially infinite explanatory regress in formulating their category representations. Is there an *ultimate* causal feature that can produce the observed causal chains of features comprising a category representation? In the case of social categories (as well as other categories considered to be "natural kinds"), the ultimate cause of a category's features is typically assumed (whether implicitly or explicitly) to be a defining inner essence (Rothbart & Taylor, 1992; Yzerbyt & Rocher, 2002). This "psychological essentialism" (Medin & Ortony, 1989) emerges early in childhood (Gelman, 2003) and consists of the assumption that there is a deep, inner essence that defines a

category and produces its expressed characteristics. From this perspective, surface-feature similarity ("effect" similarity) is not the critical factor in category judgments; rather, the presence or absence of the category essence is determinative. Psychological essentialism provides an intuitive ontological framework for understanding the natural world that need not be taught or supported by explicit beliefs about exactly what the inner essence consists of, but advances in genetics research have provided a seemingly sophisticated basis for speculating about the ultimate inner cause (or essence) defining category membership: DNA. In the case of many kinds of social groups, psychological essentialism is now linked to genetic determinism, with genes providing the ultimate explanation for a group's characteristics (Dar-Nimrod & Heine, in press; Keller, 2005). Such a view is scientifically questionable, given the abundant evidence that gene expression is commonly environmentally regulated (Gilbert, 2005; Jaenisch & Bird, 2003) and the more general fact that phenotypes represent the interaction of nature and nurture (e.g., Bronfenbrenner & Ceci, 1994). Recognition of these forms of biological plasticity is absent in essentialist thinking, and as a result, representations of many social groups (e.g., gender and ethnic groups) consist of implicitly essentialist theories asserting the immutability of group characteristics (Haslam, Rothschild, & Ernst, 2000).

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A different aspect of social category representation is reflected in the nested, hierarchical arrangement of categories. A category such as "African Americans" is nested within more encompassing, superordinate categories (such as "Americans," "human beings," "carbon-based life forms," etc.). In turn, it can also be specified in terms of more and more constrained subcategories (such as "African American politicians" or "conservative African American politicians"). Categories in the middle range of this hierarchy are often considered to be "basic" (Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976), in that they are the first categories that are learned, named, and used in infancy, and they constitute the level at which most world knowledge is organized. Between-category differentiation is maximized at the basic level, making it the most generally useful place for making conceptual distinctions (Markman & Wisniewski, 1997), although people with extensive domain expertise may make greater use of more subordinate levels of a category (Tanaka & Taylor, 1991).

In the stereotyping literature, a great deal of work has investigated the hypothesis that representations of basic-level social categories, which seem so useful for everyday distinction-making, are protected from modification by a process of subtyping (e.g., Richards & Hewstone, 2001). When perceivers encounter group members who do not display group-typical qualities, they are likely to construct a specific subcategory that is regarded as a special case, an "exception that proves the rule" (see Kunda & Oleson, 1997). In this way, the original stereotype needs not be modified.

Moving in the other direction within the conceptual hierarchy, researchers have also investigated how broader, more inclusive social categories can provide a mechanism for remedying antagonistic intergroup relations that exist at a more basic level (e.g., Dovidio, Gaertner, & Saguy, 2009). Given the previously noted identity function served by social categories, it can be anticipated that recategorizing at a more inclusive level is likely to shift the dividing lines that determine feelings of connection vs alienation. Thus, for example, different ethnic subgroups within a given country might enjoy better interethnic relations under conditions in which their shared national identity is salient – although this identity would likely also highlight differences from other national groups, shifting the focus of intergroup boundaries. Research on the in-group projection model (Wenzel, Mummendey, & Waldzus, 2007) offers an important caveat to this rosy view of better inter(sub)group relations when a shared, superordinate identity is salient. Specifically, this research indicates that subgroups often represent a shared, superordinate category in ways that render members of their own subgroup more prototypic (and hence superior) exemplars of the superordinate than other subgroups. For example, Italians may represent the superordinate category "Europeans" in ways that privilege the positive characteristics of their own national subgroup. If members of each subgroup engage in this form of in-group projection, the meaning of the superordinate category can become a ground for contestation, rather than for the harmonious alignment of goals and interests. Research in this tradition holds that the way to achieve more agreeable intergroup relations is to develop a richer, more complex representation of the superordinate category, in which multiple prototypes coexist (e.g., a representation in which there are multiple valid ways to be a European).

When researchers speak of category representations being stored or retrieved, it implies a relatively enduring and fixed view of the social world. And indeed, if there were no stability to our representations of social categories, their value in serving our epistemic purposes would be completely undermined. At the same time, a major theme emerging from a variety of different research traditions, including research on the in-group projection model, is the idea that category representations

are likely to be tuned to the immediate context (Smith & Conrey, 2007), particularly the salient comparative context (e.g., Brown & Turner, 2002). Theoretical notions of category representation have become increasingly dynamic in recent thinking. As Smith and Conrey argue, it may be preferable to think of mental representations as being more like transitory states than enduring entities – although there is most assuredly a non-trivial degree of continuity in these representational states.

The contextualization of category representations has been documented in a number of studies showing that the automatic associations that are triggered by category members can change across different circumstances. For example, Wittenbrink, Judd, and Park (2001) showed that automatic evaluative associations triggered by African American targets varied as a function of the setting in which a target was encountered. The very same individuals elicited more positive evaluations when seen in church as compared to on an urban street corner. Along similar lines, Barden, Maddux, Petty, and Brewer (2004) showed that the social role occupied by an African American target moderated the degree of automatic prejudice that was elicited by exposure to the target; for example, a Black person elicited more favorable automatic evaluations when depicted as a lawyer than when depicted as a prisoner. As a final example, Correll, Park, Judd, and Wittenbrink (2007) showed that reading a newspaper story about a Black criminal made participants more likely to commit racially biased errors in a simulated police decision-making task requiring them to "shoot" individuals holding weapons (including being more likely to shoot a Black target holding an innocuous object such as a cell phone). These kinds of effects are typically understood to reflect the fact that some social categories, like "African Americans," are actually quite multifaceted and are likely to be represented in an evaluatively heterogeneous way; only a subset of the potential associations will be activated in any given circumstance, and the particular subset that does become activated is influenced by the salient context (see Gawronski & Bodenhausen, 2006, in press).

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A great deal remains to be learned about what is general and what is context-specific in representations of social groups. Gawronski, Rydell, Vervliet, and De Houwer (2010) have provided some very promising new insights about this issue in the domain of implicit attitudes. They focus on the role of attention to context cues in determining the generality of automatic evaluation. When individuals form a new evaluative representation of a given category, the surrounding context may or may not be salient. For example, if you meet some friendly Bosnians at a party, you may form a positive impression of Bosnians without particularly noting the context in which the positivity was experienced. This experience will thus lead to a relatively decontextualized positive automatic evaluation of the group. However, if you subsequently have a bad experience with a Bosnian, you are quite likely to be attentive to the context (because the unexpectedness of the event triggers greater analysis). By the logic of Gawronski et al.'s reasoning, this pattern of experiences would tend to produce automatic negative evaluations of Bosnians whenever they are encountered within the same context as the negative experience ("occasion setting" in their terminology), but automatic evaluations should be positive in all other situations, activating the decontextualized automatic evaluation that was initially formed (a "renewal effect"). The time is certainly ripe for more research on stable (default) vs context-driven perceptions of social groups.

Lay demography

Thus far, we have written about social categories in a very general manner, focusing on general functional and representational processes. We turn now to some particulars, in an attempt to address the following questions:

1. Which respects for social differentiation are chronically salient to social perceivers?
2. What specific stereotypic content is associated with these salient groups?
3. How is this content acquired?

As much as any object can be, people are infinitely categorizable. Imagine encountering an unknown individual at a cocktail party. As your interaction progresses, this same person might be categorized as a woman, a teacher, a brunette, a Liberal, an oenophile, and a person with detached earlobes. Of course, some of these categories are more useful and have more salient cues associated with them than others. As previously noted, research on category representation has established that some categories are more "basic" than others. In the case of people, researchers have noted that basic demographic distinctions – age, race, gender, and social class – seem to serve as the most chronically salient categories (Brewer, 1988; Fiske & Neuberg, 1990). The relative preeminence of these categories no doubt relates to the fact they are typically easily and immediately perceived.

Evidence that individuals spontaneously use sex and race to categorize others was provided by Stangor, Lynch, Duan, and Glass (1992), who

showed that memory for statements that had been made by a variety of individuals who differed on race and gender tended to be organized around the race and gender categories. Specifically, when memory errors occurred, it was more likely that a statement would be misattributed to a person having the same race or gender as the actual source, compared to cross-race or cross-sex memory errors. This tendency to group information by sex and race was generally evident, but it was more pronounced among individuals who were higher in prejudice. Using neuroscience methods, Ito and Urland (2003) showed that perceivers are attentive to the race and sex of a face within a fraction of a second of its presentation (within 100 ms for race and 150 ms for gender). Studies of this sort clearly show that certain basic demographic categories are immediately encoded in an automatic manner, although the focus of categorization can subsequently shift across longer time periods (e.g., Kunda & Spencer, 2003).

Stereotype content

The process of categorization initiates the activation of a variety of stereotypes associated with the category in question. Though the content of these stereotypes can be extremely varied (e.g., elderly people are slow; women are bad at math; homeless people are dangerous), over a decade of work on the stereotype content model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) has shown that the content of stereotypes can be understood in terms of two fundamental dimensions: warmth and competence. The dimension of warmth (which encompasses traits like tolerant, warm, good-natured, and sincere) is concerned with a group's goals in relation to the self or in-group. As perceivers, we want to know whether an individual or out-group is a friend or foe – whether the "other" intends to cooperate or compete (Fiske et al., 2002). In addition to knowledge about a target's intention to compete or cooperate, perceivers are also concerned with the target's ability to pursue that intent. This capability to pursue one's relatively positive or negative intentions is described by the second dimension: competence. Competence (which encompasses traits like competent, confident, independent, and intelligent) describes the degree to which a target individual or group will be effective at bringing about desired outcomes. In essence, the SCM asserts that perceivers differentiate individuals and groups according to their predicted impact on the self or in-group using judgments of their perceived intent (warmth) and their ability (competence) to pursue that intent (Cuddy, Fiske, & Glick, 2008). These same dimensions appear to organize social impression in general (e.g., Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Wiggins, 1991).

The SCM contends that social groups are often characterized by ambivalent stereotypes, specifically reflected in positive evaluation on one dimension but negative evaluation on the other. For example, in relation to one's in-group, a group could be characterized as warm but not competent (e.g., the elderly). Alternatively, a group could be characterized as competent but not warm (e.g., Asians). Unfortunately, positive evaluation along one dimension is not enough to overcome an overall negative evaluation. Members of ambivalently stereotyped groups are usually devalued and experience prejudice and discrimination relative to groups that are perceived as both warm and competent (e.g., Cuddy, Norton, & Fiske, 2005; Glick, 2005).

The SCM also outlines the emotional responses that are likely to be elicited by groups positioned at different points along the warmth and competence continua. Groups judged as high in both warmth and competence – usually only one's in-group and "societal prototype groups" like Whites, heterosexuals, and middle-class individuals (Cuddy et al., 2008) – elicit admiration. In contrast, groups judged as neither warm nor competent (e.g., poor people, welfare recipients) elicit feelings of contempt. These feelings of contempt are often associated with a host of related negative emotions like disgust, anger, and resentment. The two mixed quadrants also elicit relatively negative emotions. Groups stereotyped as warm but not competent (e.g., elderly people, disabled people) elicit feelings of pity, while groups stereotyped as competent but not warm (e.g., Asians, Jews, rich people) elicit feelings of envy.

A recent extension of the SCM, the "behaviors from intergroup affect and stereotypes (BIAS) map" framework (Cuddy, Fiske, & Glick, 2007), links the contents of stereotypes and associated emotions as identified by the SCM to actual discriminatory behaviors. The BIAS map proposes four distinct classes of out-group-related behaviors that fall along two dimensions: active vs passive and facilitative vs harmful. Active behaviors are those involving directed effort toward the target group (e.g., a targeted attack on a synagogue), while passive behaviors are defined as those having repercussions for an out-group but that involve less directed effort (e.g., failing to hire Jewish job applicants). In addition to the effort with which they are engaged, behaviors can also be differentiated according to their intended effect. This distinction is encompassed by the facilitative vs harmful dimension: facilitation refers to behaviors intended to bring about favorable outcomes or gains (e.g., donating money to an after-school program for inner-city youth),

whereas harm refers to behaviors intended to bring about detrimental outcomes or losses (e.g., discrimination in hiring). Linking these dimensions to the SCM, judgments of warmth predict active behaviors, while judgments of competence predict passive behaviors. Groups judged as warm elicit active facilitation (help; e.g., antidiscrimination policy); groups judged as lacking warmth elicit active harm (attack; e.g., legalized segregation). Groups judged as competent elicit passive facilitation (obligatory association, convenient cooperation; e.g., choosing to work with an Asian classmate on a math project); groups judged as lacking competence elicit passive harm (neglect, ignoring; e.g., avoiding eye contact with a homeless person). Much of the research on prejudice and stereotyping has been conducted on a "group-by-group" basis, with some researchers studying sexism, some racism, some ageism, etc. While there are undoubtedly important aspects of prejudice and stereotyping that are unique to these particular groups, it is also important to understand the more general principles that drive these phenomena. The SCM and the BIAS map represent theoretical approaches that can provide an integrative framework for understanding the different manifestations of bias that can emerge toward different social groups.

Acquiring stereotypes

The ability to categorize is a skill displayed very early in development. In the case of gender, for instance, babies are basically experts at recognizing the group's male and female, and categorizing individuals accordingly, by 12 months of age (e.g., Leinbach & Fagot, 1993;Quinn, Yahr, Kuhn, Slater, & Pascalis, 2002). Almost as quickly as these categories are learned, they also become attached to stereotypes. Between the ages of 3 and 6 years, and often much earlier, children acquire knowledge of and begin to apply stereotypes in a number of domains, including race (e.g., Bigler & Liben, 1993), gender (e.g., Eichstedt, Serbin, Poulin-Dubois, & Sen, 2002), and age (Seefeldt, Jantz, Galper, & Serock, 1977).

Much of what is known about the development of the ability to categorize and the formation of stereotyping and prejudice has been synthesized into the framework of Developmental Intergroup Theory (DIT; Bigler & Liben, 2006, 2007). DIT is concerned with how children establish the importance of some person attributes (and the relative unimportance of others), how they then categorize individuals based on these salient dimensions, and, finally, how children develop stereotypes and prejudices about these salient groups. We will focus on the first process. Importantly, DIT posits what children will only categorize based on dimensions that have been made psychologically salient.

Four factors are hypothesized to affect the establishment of the psychological salience of person attributes: perceptual discriminability; proportional group size; explicit labeling and use of social groups; and implicit use of social groups. Perceptual discriminability refers to the ease with which differences between groups can be seen. Children tend to note only perceptually salient attributes of people, so groups that can be readily distinguished by visible qualities (e.g., skin color, eye shape, hair style, clothing) are most likely to become bases for categorization (Bigler, 1995; Patterson & Bigler, 2006). Categories that are not readily distinguished (e.g., religion, nationality) are less likely to be noticed by children, and therefore children are unlikely to categorize individuals according to these groups (Rutland, 1999). Attributes like race, gender, age, and attractiveness all include perceptually salient features, and thus quickly become important for categorization among children. A second important factor in categorization is perceptual group size. Children are sensitive to numerical differences between groups, recognizing relative differences in proportions of various social groups. Smaller (minority) groups tend to be more salient than larger (majority) groups, and can thus more easily become targets of stereotypes and prejudice (Brown & Bigler, 2002).

A major tenet of DIT is that children's categorization closely follows the explicit and implicit use of categories evident in the adult world. Children pay close attention to characteristics that adults mark as important via various verbal and nonverbal (and often very subtle) cues. In contrast, children tend to ignore aspects of human variation which are not attended to by adults. It is important to note that DIT does not posit that children simply imitate adults; rather, DIT proposes that children construct their beliefs about various categories based on cues from adults. When authority figures use labels or some functional organization to distinguish individuals (e.g., boys in this line, girls in this line), children infer that the grouping criterion (e.g., gender, height, etc.) is an important category distinction (Patterson & Bigler, 2006). Category labeling has this effect even when the categories are used in a neutral manner (e.g., "Good morning boys and girls"). In addition, children make inferences about psychological salience based on the presence of social distinctions in the social world, in the absence of any explicit explanation (e.g., gender or racial segregation). Children are sensitive to perceptual similarities of those who are grouped together and, further, infer that these individuals

are segregated because they differ in important ways. For example, children tend to think that some jobs are "for Black people" and other jobs are "for White people" even in the absence of any external adult instruction (Bigler, Averhart, & Liben, 2003). According to DIT, this knowledge would be gained simply by observing differences in perceptually salient features that characterize individuals in various professions. In sum, DIT provides a useful framework for understanding how categories are first developed and conceptualized by children.

CATEGORIZATION IN ACTION

Having addressed basic questions about the representational structure, psychological function, and specific content of social categories, we now turn our attention to the processes whereby these categories influence our perceptions, judgments, and behaviors. Here, we address questions about when and how social categories become influential in perceptions of social groups and their individual members.

Categorization versus individuation

Influential models of impression formation portray our perceptions of others as emerging within a tension between viewing others categorically – as group members who are functionally interchangeable with other individuals in the group – vs perceiving them as individuals who are characterized by a unique constellation of personal qualities (Brewer, 1988; Fiske & Neuberg, 1990). One approach to analyzing the differences between categorization and individuation has been to focus on the type of content that is emphasized in impression formation: category cues vs trait cues (see Bodenhausen, Macrae, & Sherman, 1999). On this view, individuation relies on more extensive processing of trait (or behavior) cues, whereas such cues are de-emphasized in categorization in favor of cues indicating membership in some noteworthy social group. A key problem with this approach lies in the fact that the distinction between traits and categories is ultimately hard to defend on the basis of content. A "trait" like neurotic can easily define a category of (from the perceiver's perspective) functionally interchangeable people – i.e., neurotic people – while a "category" membership like Muslim can serve merely as one of many personal descriptors (and not as a basis for viewing the individual as interchangeable with other category members). There are, to be sure, noteworthy differences between demographically defined social categories vs trait-based ones (see Bodenhausen et al., 1999), but the key difference between categorization and individuation does not appear to be reducible to the type of content (e.g., traits vs demographic cues) emphasized in impression formation. A more promising approach is to build the distinction between categorization and individuation on processing differences (e.g., Fiske & Neuberg, 1990).

When social impressions are categorical, a particular group membership, trait, or other personal feature provides the overarching organizing theme for perception and judgment, and a priori, generic knowledge is used schematically to produce an impression in which the target is, for all intents and purposes, interchangeable with other members of the category defined by this feature. The particulars of the individual are not important; rather, the ways in which the individual typifies that general sort of person is of paramount concern. Individuation, in contrast, refers to a process in which no particular aspect of a person dominates impression formation. Instead, multiple characteristics are considered and their implications are integrated in a more piecemeal process. Its end result is an impression focused on how the target person differs from other persons, rather than on class equivalencies within a given group of persons.

A great deal of research has examined the moderators of categorization vs individuation. Social, motivational, attentional, and dispositional moderating variables have been identified. The importance of the social context is emphasized in self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which holds that in *interpersonal* contexts, it is the differences between *individuals* that are salient; the personal self is predominant and individuated identities are important. However, in *intergroup* contexts, differences between *groups* are salient; the interchangeable social self is predominant and social identities are important. This argument of course begs the question of what constitutes an interpersonal vs an intergroup context. Research has identified several relevant factors. First, when individuals' behavior maps onto distinct category norms (*normative fit*; e.g., Oakes, 1987), the situation is likely to become an intergroup context. For example, consider a conference where social psychologists are asserting the importance of situational factors in shaping behavior, while personality psychologists are arguing for the importance of dispositions. These patterns of behavior align with expected category characteristics, so the situation will seem to be an intergroup context, rather than one in which interpersonal distinctions are pre-eminent. Second, the degree to which

patterns of similarities and differences between individuals are aligned with category membership (*comparative fit*; e.g., Wegener & Klauer, 2004) also can trigger intergroup thinking. Consider a mixed-gender group of individuals serving on a jury in a criminal trial. If opinions about the case aligned in such a way that the men on the jury favored the defense while the women on the jury favored the prosecution, this high degree of "meta-contrast" would immediately draw attention to the gender distinction (even if there was nothing particularly gender-stereotypic about the trial content), creating an intergroup situation rather than an interpersonal one. Also important are variables that influence the general salience of categorical identities. For example, distinctiveness based on situational rarity (e.g., solo status; Biernat & Vescio, 1993) or low overall base-rate population frequency (Nelson & Miller, 1995) can make certain categories influential, as can the frequent or recent use of a potentially applicable category (e.g., Rutland & Cinnirella, 2000).

Eitam and Higgins (2010) developed the "relevance of a representation" (ROAR) framework for understanding when an accessible concept or category will be applied to a given target. From this perspective, a category may be available for use in orienting one's impression of another person, but whether or not this happens depends on whether the category has motivational relevance. Motivational relevance can consist of *value relevance* (strong positive or negative value is associated with a given category), *control relevance* (a categorical identity has relevance to the achievement or blockage of goal attainment or task completion), or *truth relevance* (a category is perceived to be meaningful and informative, rather than insignificant or obsolete). When one or more of these forms of motivational relevance is high with respect to a potentially applicable social category, the likelihood that the category will be used to organize a social impression is increased.

Given its schematic quality, categorical impression formation is typically more automatic than individuation, particularly in the senses of being more rapid and efficient (i.e., less dependent on attentional resources; for a review, see Amodio & Mendoza, 2010). Going beyond a stereotypic, categorical impression (i.e., individuation), in contrast, is commonly viewed as a more effortful and resource-dependent phenomenon (see Payne, 2005). Thus, the likelihood of categorical (vs individuated) social impressions also increases to the extent that any variable constrains the perceiver's attentional capacity, motivation for effortful processing, or opportunity to deliberate (for a review, see Macrae & Bodenhausen, 2000). A variety of dispositional variables have relevance here. For example, individuals who are high in the need for structure or closure (i.e., people who want to obtain a rapid, firm sense of the meaning of their experiences) are likely to rely on categorical thinking, which tends to provide rapid, clear, and well-structured impressions (e.g., Kruglanski & Fishman, 2009). Dogmatism (e.g., Rokeach, 1954; see Duckitt, 2009, for a recent review) is a closely related individual difference that has similar implications. On the other hand, openness to experience (one of the "Big 5" personality trait dimensions) is associated with less rigidly categorical social impressions (Flynn, 2005). Numerous situational factors also influence the motivation or opportunity to engage in individuation. Distraction (e.g., Pendry & Macrae, 1994) and time pressure (Kruglanski & Freund, 1983) can result in more category-based impressions by precluding effortful deliberation, while having one's own outcomes depend on the actions of a social target – and other factors triggering strong accuracy concerns – can trigger motivation for carefully individuated impressions (e.g., Neuberg & Fiske, 1987). Finally, situationally generated, incidental affective states (especially anger, anxiety, and happiness) can promote greater categorical thinking (for a review, see Bodenhausen, Mussweiler, Gabriel, & Moreno, 2001).

In sum, categorical thinking is often the most immediate response to social targets, but with ample motivation and opportunity, more deliberated, individuated impressions can arise. Although it is theoretically convenient to think of categorical and individuated impressions as distinct and mutually exclusive ways of thinking about others (and ourselves), researchers have recognized the shades of gray that exist between these two extremes (e.g., Fiske & Neuberg, 1990). Indeed, an important direction in recent research has been the examination of the ways personal/individuated and social/categorical identities can be interlinked (see, e.g., Amiot, de la Sablonnière, Terry, & Smith, 2007; Postmes & Jetten, 2006).

Category selection

Much of the early research on social categorization involved the manipulation of a single focal category (while holding all else constant), in order to determine how the presence or absence of that categorical cue might influence perceptions, evaluations, and behavior. However, in real life, perceivers typically encounter whole persons in their multifarious diversity. Thus, it becomes important to know how a particular category is selected as the focus for social perception, given that many possible bases for categorization are available (for recent reviews, see Bodenhausen, 2010; Bodenhausen & Peery, 2009), and the relevant

evaluative and descriptive implications can differ strikingly, depending on which category is salient. For example, Mitchell, Nosek, and Banaji (2003) showed that automatic evaluations of Black athletes were significantly more positive when their occupational category was in contextual focus, compared to when their racial category was salient.

As noted in the prior section, the relevance of particular categories can vary as a function of the comparative context, the behavior and other characteristics of the target, and the motivational states of the perceiver. Moreover, the recency and frequency of a category's prior use can determine its likelihood of being invoked again. But by what process does category selection unfold? Bodenhausen and Macrae (1998) provided a theoretical account of the selection process, based on studies in which perceivers were confronted with targets who could be stereotyped in terms of more than one commonly used social category (ethnicity vs sex; Macrae, Bodenhausen, & Milne, 1995). The central idea of their perspective is that social categorization is dynamic and involves simultaneous activation and inhibition processes that work to highlight or downplay the activation of potentially applicable categories. They propose that in circumstances that favor categorical responses (i.e., situations characterized by low motivation or opportunity for thoughtful individuation, which may characterize a great number of everyday life contexts), a single category will often come to dominate social impressions, depending on the unfolding of the relevant activation/inhibition processes. Initially, multiple categories are activated (e.g., Freeman, Ambady, Rule, & Johnson, 2008), but one or more of these categories is likely to have an activation advantage, accruing more rapid activation because of its contextual or motivational relevance. Once a particular category achieves a sufficient amount of activation, it effectively "wins" the dominance contest, and its rivals are actively inhibited, allowing a coherent focus on the dominant category (see, e.g., Dagenbach & Carr, 1994). As a result, social perceivers are able to cope effectively with this diversity by simplifying the identity-relevant information used in social categorization processes.

It is certainly also possible for perceivers to pay attention to more than one categorical identity at a time and, indeed, research on cross-categorization effects has examined exactly this sort of situation, in which the social perceiver's attention is directed simultaneously to more than one social category (Crisp & Hewstone, 2007; Kang & Chasteen, 2009). Research in this area has focused primarily on the evaluative consequences of cross-categorizations. Broadly speaking, when multiple categories are made salient, social evaluations tend to be affected by the number of category memberships shared by the perceiver and the target (Migdal, Hewstone, & Mullen, 1998); more shared category memberships translate into more positive evaluations. Other, less intuitive effects of cross-categorizations have also been documented. For example, one might expect that a person who belongs to two socially subordinated groups (e.g., "Black" and "gay") would simply be evaluated in a doubly negative way by majority (White, heterosexual) perceivers. However, work by Purdie-Vaughns and Eibach (2008) paints a more complicated picture: they argue that individuals whose identities involve intersection of more than one socially devalued group may experience social invisibility. For example, gay African Americans, because they are non-prototypical of both the respective social groups (i.e., the prototypical gay person is not Black, and the prototypical Black person is not gay), are not considered for true inclusion in either group. Non-prototypical group members are less likely to be noticed, heard, or to have influence over other group members (e.g., Hogg, 2001), thus making these individuals subject to multiple cultural, political, and legal disadvantages that are linked more to their relative invisibility rather than to double-strength animus.

Another way in which perceivers may accommodate multiple categories when perceiving others is to form specific subtypes. When encountered with sufficient frequency, particular category combinations (e.g., Black Republicans) may come to be represented in terms of a specific category of their own. Once established, such subtypes can function much the same as any other category does (e.g., Brewer, Dull, & Lui, 1981), competing with other bases for construal in the category selection process (see Bodenhausen & Macrae, 1998). The constellation of characteristics associated with the subgroup need not necessarily reflect typical features of either of the more inclusive "parent" categories; indeed, a novel set of typical features can emerge for the subtype (Hutter, Crisp, Humphreys, Waters, & Moffitt, 2009; Kunda, Miller, & Claire, 1990). Social perceivers thus seem adept at both highlighting singular, dominant social categories in the face of multiply categorizable individuals, as well as dealing with situations where multiple categories remain salient for a given individual. While these strategies are not necessarily all positive, particularly for the social targets who may find themselves subject to social invisibility, they are effective means for navigating a complex social world where perceivers regularly encounter individuals for whom multiple categories are visible and accessible to perceivers.

A different problem that can sometimes plague the process of category selection is ambiguous

category membership. It is clear that category members' prototypicality enhances the likelihood of the category being applied to them (e.g., Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Maddox, 2004). However, what happens when a target does not appear to be a clear match to any established category? How do perceivers deal with ambiguous social targets? As noted above, people often automatically categorize others based on their race and gender. When a person's race or gender cannot be readily ascertained, perceivers may try to assimilate the target into one of the conventional existing categories, but it is also possible that in certain circumstances, the typical demographic categories are not adequate and new categories are needed to represent these individuals (e.g., "multiracials" or "androgynous people"). It may be relatively uncommon to encounter individuals for whom determining gender is difficult. Research suggests that when these individuals are encountered, they are sometimes miscategorized by perceivers on the basis of gender-atypical features (e.g., long hair on a man, leading to his categorization as a woman; see Macrae & Martin, 2007). Research by Freeman, Rule, Adams, and Ambady (2010) indicates that, when judging the sex of faces, perceivers rely on gender-(a)typical traits to make concrete, categorical, and dichotomous gender determinations (although brain activity shows a more graded response to variations in gender-typical facial attributes on a full spectrum from extremely masculine to extremely feminine).

Very recently, there has been an explosion of interest in the question of how perceivers deal with racial/ethnic ambiguity. In one of the earliest studies on the categorization of racially ambiguous faces, South African participants categorized African, European, and mixed-race faces as European or African. White participants were more likely to categorize mixed-race (presumably racially ambiguous) faces as African than European (Pettigrew, Allport, & Barnett, 1958). Nearly half a century later, Castano et al. (2002) showed similar effects, demonstrating that northern Italians were generally likely to categorize ambiguous faces as southern rather than northern Italian. In addition, Pauker, Weisbuch, Ambady, Sommers, Adams, and Ivcevic (2009) demonstrated that both racially ambiguous and other-race faces are remembered less well than same-race faces, suggesting that the ambiguous faces were treated as if they belonged in the out-group, in accordance with the well-established own-race bias (e.g., Malpass & Kravitz, 1969; Meissner & Brigham, 2001; see Hugenberg, Young, Bernstein, & Sacco, 2010, for a review). All of these results comport with the in-group overexclusion effect, which is the tendency to be highly selective about who qualifies for inclusion in one's in-group (Leyens & Yzerbyt, 1992). These results highlight the fact that not only obvious out-group members but also ambiguous cases are likely to experience exclusion. Thus, for cases where it is not clear whether a target person belongs in one's own group, a primary strategy for resolving the ambiguity question is to assign the target to the out-group.

Just as category-based impressions of individuals holding clear category memberships can be dependent on characteristics of the perceiver, target, or context, so, too, is the categorization process for ambiguous targets affected by these different aspects of the social categorization situation. For example, research indicates that in-group overexclusion is particularly likely among perceivers who are highly identified with their in-group (Castano et al., 2002), among persons who feel psychologically vulnerable (Miller, Maner, & Becker, 2010), as well as among those who are prejudiced against the potential out-group in question (e.g., Blascovich, Wyer, Swart, & Kibler, 1997). Characteristics of ambiguous targets themselves may also play a role in how they are categorized. For example, MacLin and Malpass (2001) demonstrated that hair style and clothing choice can serve to disambiguate otherwise ambiguous targets, leading not only to categorization patterns reflecting conventional, disambiguated categories but also to subsequent, congruent perceptual consequences, such as perceptions of darker skin (on the same target) with a Black vs Hispanic hair style. Eberhardt, Dasgupta, and Banaszynski (2003) also demonstrated that racial labels, once applied, affect subsequent perception of previously ambiguous faces along clear racial lines. This research suggests that when ambiguous targets provide some information, via application of a racial label or choice of cues to category membership such as hair style or clothing style, social perceivers readily receive and use this information in their social judgments of the target.

What happens when ambiguous individuals do not disambiguate themselves and perceivers are not necessarily motivated to pigeonhole them into the out-group? For individuals who identify as multiracial, for example, the racial label they apply to themselves may not serve to disambiguate them to social perceivers. The research described above always relied on the use of conventional racial or ethnic labels provided by the researchers. In research by Peery and Bodenhausen (2008), perceivers were given an opportunity to (a) apply their own label(s) to racially ambiguous targets, and (b) use, if desired, a multiracial label (that either identified an ambiguous individual as a member of both possible categories or as a

separate category). In this study, mostly White (and always non-Black) participants were more likely to categorize a racially ambiguous person (resulting from a mixture of Black and White 'parent' faces) as Black and *not* White, but only when information was provided suggesting that this individual had one Black and one White parent. When no information was known about the ambiguous target, participants' category assignments were more variable, although monoracial forms of categorization were the most common (either Black and *not* White, or White and *not* Black). This pattern reflects a historical tradition of in-group overexclusion by Whites in the United States (specifically, the principle of hypodescent, which asserts that mixed-race individuals should be assigned to the racial category corresponding to that of the parent having the lowest social status), highlighting the role that cultural traditions may play in perceivers' categorizations of ambiguous targets (Peery & Bodenhausen, 2008). Thus, just as social perceivers are quite adept at negotiating the complexity of multiple potentially applicable social categories, they also seem to be relatively adept at handling target ambiguity as well. While the categorization patterns they exhibit may not always have desirable consequences for the social targets, they nonetheless demonstrate that social perceivers are effective at making social categorizations in complicated social situations with complex social targets.

Using – and avoiding the use of – selected categories

As just noted, when perceivers engage in a primarily categorical strategy for impression formation, the first problem is to identify which category to use. After a particular category is selected, its mental representation provides a schematic structure for organizing the impression. In particular, features associated with category membership are automatically activated (e.g., Devine, 1989; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Once these representational features are activated in working memory, they can influence a host of fundamental information-processing operations. For example, they can bias the perceiver's attention to stereotype-confirming aspects of the situation (e.g., Bodenhausen, 1988), particularly when perceivers have unconstrained attentional capacity (Allen, Sherman, Conrey, & Stroessner, 2009). They also produce assimilative interpretive biases, such that ambiguous information is given a stereotype-consistent meaning (e.g., Hill, Lewicki, Czyzewska, & Boss, 1989; Kunda & Sherman-Williams, 1993); a well-known example was provided by the news coverage of the aftermath of Hurricane Katrina, in which African Americans were said to be "looting" convenience stores while European Americans were "finding food." In addition, activated stereotypes can lead to the selective retrieval of stereotype-consistent information from long-term memory (Rothbart, Evans, & Fulero, 1979). Thus, when stereotypic associates of a social category are activated, they can unleash a number of mechanisms that produce a confirmation bias in social impressions. Because perceivers are unlikely to appreciate the constructive aspects of their impressions (i.e., naïve realism; Robinson, Keltner, Ward, & Ross, 1995), they are likely to view their initial stereotypes as having been "objectively" validated after the operation of these confirmatory biases.

The extent of assimilative stereotypic biases is moderated by a range of variables. For example, they are more evident among perceivers who possess stronger category-stereotype associations, as measured with indirect assessments such as the Implicit Association Test (e.g., Allen et al., 2009; Gawronski, Geschke, & Banse, 2003; Hugenberg & Bodenhausen, 2003). It is also important that perceivers feel entitled to make a judgment (Yzerbyt & Corneille, 2005); for example, if the evidence provided to perceivers for forming an impression seems too scant, they may withhold judgment. This kind of finding points to the fact that stereotypes often exert their influence on judgments primarily indirectly, through their impact on evidence processing, rather than in a more direct manner (see also Bodenhausen, 1988; Darley & Gross, 1983). Reality constraints are important too; when a target's behavior or characteristics unambiguously do *not* fit stereotypic expectations, perceptual contrast effects can lead to judgments that are more extreme in a counter-stereotypic direction, at least when the response scale is subjective (e.g., a woman being rated as more assertive than a man, given the identical assertive behavior; see Biernat, 2003).

The amount of deliberation that goes into forming an impression is also of great significance in shaping the degree of bias expressed in social judgments and behavior. Stereotype-based assimilation happens in a largely implicit, automatic manner and is likely to be evident in perceivers' initial reactions (Bodenhausen & Todd, 2010). With more thought, however, it becomes increasingly likely that perceivers will go beyond their most impulsive, stereotypic impressions, possibly considering less stereotypic factors before finalizing their impressions and judgments (Florack, Scarabis, & Bless, 2001). Following the seminal research of Devine (1989), a great deal of research has examined the possibility that, among individuals who are motivated to avoid prejudice, the

detection of categorical biases is likely to trigger effortful strategies that are specifically designed to counteract these biases (e.g., Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Monteith, 1993; for a review, see Bodenhausen, Todd, & Richeson, 2009). When such concerns are triggered, the additional, effortful processing that occurs is likely to "put the brakes on prejudice" (Monteith, Ashburn-Nardo, Voils, & Czopp, 2002). In addition to the desire to control prejudice per se, deliberative reasoning in the face of racial biases can also be triggered by a desire to restore cognitive consistency when the judgmental implications of automatic reactions clash with explicit beliefs about the group in question or about oneself (Gawronski, Peters, Brochu, & Strack, 2008). Thus, whether or not perceivers are motivated to go beyond their initial, stereotypic reactions to a target can be an important variable moderating the extent of categorical bias. Additionally, factors that impede the *ability* to deliberate, such as distraction and ego depletion, can also heighten the degree of bias in judgments and behavior (Govorun & Payne, 2006; Hofmann, Gschwendner, Castelli, & Schmitt, 2008), because these factors compromise more effortful forms of deliberation but spare the automatic processes responsible for bias.

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However, as Gawronski and Bodenhausen (2006, in press) point out, it is certainly also possible that additional deliberation can simply serve to reinforce initial association-based impressions; this is particularly likely to happen in circumstances where there are motivational forces leading the perceiver to prefer stereotypic interpretations (and thus to generate motivated reasoning strategies; Kunda, 1990). Thus, thoughtful analysis can attenuate or exacerbate categorical thinking, depending on the circumstances (see also Wegener, Clark, & Petty, 2006).

The fact that effortful processes for combating unwanted bias can be compromised by any factor that undermines the motivation or opportunity for deliberative thinking suggests that bias-reduction strategies focusing on attenuating or eliminating automatic biases online (rather than trying to correct for them after they have occurred) may be a more promising strategy. Interestingly, some recent research suggests that the subset of people who are *not* racially prejudiced consists largely of individuals who are not very susceptible to affective conditioning and are thus unlikely to have formed automatic prejudiced associations in the first place (Livingston & Drwecki, 2007). Fortunately, evidence is now accumulating that control of automatic bias is indeed possible (e.g., Sherman, Gawronski, Gonsalkorale, Hugenberg, Allen, & Groom, 2008). For example, fairly straightforward cognitive strategies, such as imagining or thinking about counter-stereotypic group members (Blair, Ma, & Lenton, 2001; Dasgupta & Greenwald, 2001) or taking the perspective of group members (Todd, Bodenhausen, Richeson, & Galinsky, in press), can effectively reduce implicit and automatic forms of racial bias. Moreover, there is evidence that effortful control of unwanted categorical biases can itself become relatively automatized (see Moskowitz, Li, & Kirk, 2004), increasing the perceiver's prospects of avoiding the pitfalls of distraction, depletion, and other factors that typically make thoughtful self-regulation less successful. Of course, the automatic pursuit of the goal to be more egalitarian is only likely to emerge among individuals who actually have a commitment to this goal.

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CONCLUSION

The importance of social categories in shaping social perception has long been recognized by social psychologists, but our understanding of when and how social categories matter continues to evolve as researchers uncover a wealth of new findings in this domain. New insights are emerging from neuroscientific investigations of social categorization (e.g., Kang, Inzlicht, & Derks, 2010). Behavioral techniques for uncovering the cognitive processes underlying group perceptions are being continually refined, and new ones are being created (e.g., De Houwer & Moors, 2010). New connections between emotions and social categories are being discovered (e.g., Yzerbyt & Kuppens, 2009). In this necessarily brief survey, we have tried to provide a representative sample of what social psychological research has revealed about social categorization. However, it is abundantly clear that, despite decades of research, exciting new directions are still emerging in research on social categorization. We look forward to these developments eagerly.

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