

15 More Human: Individuation in the 21st Century

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Introduction: Individuation in the 21st Century

One of us knows someone of multiracial origins whose T-shirt reads, “And what are YOU?” This is a 21st-century dilemma: Globalized, multicultural social interaction goes beyond the homogenized category-based models (I’m an X; you are a Y) that served well enough in the last half of the 20th century; in those days, people participated in more (literally) black-and-white encounters. As our collective group awareness becomes more complicated, people face the challenges of others’ identities that are more variable, uncertain, complex, and ambiguous (Bodenhausen & Peery, 2009). Making sense of people nowadays renders simple categories problematic.

Category-based issues are not solved now by any means; we are not beyond categories in any sense. But some progress has been made, and while we as people and as scientists continue to address these issues, we two as authors propose here looking beyond categorization to our putative ideal, individuation. This chapter examines the what, when, why, how, and who of individuating processes, and whether they are really a good ideal, anyway.

What Is Individuation?

Influential models of impression formation suggest that humans are relentless categorizers: when meeting new people, unless we are otherwise motivated, we fit them into a category and create expectations accordingly (Brewer, 1988; Fiske & Neuberg, 1990; Srull & Wyer, 1989). Following these models, a vast literature on social categorization has emerged, describing the motivations and processes involved in categorization and its numerous effects on behavior (Fiske & Taylor, in press; Macrae & Bodenhausen, 2000). However, since Asch’s pioneering work on forming unified individual impressions (e.g., Asch, 1946; Asch & Zukier, 1984), and work on how people attribute dispositions, described later in this chapter, relatively little work has addressed what happens when we proceed past categorization to individuate others. In this chapter, we aim to describe the current state of research about individuation, and we suggest that the individuation

process involves perceiving a person as more fully human than nonindividuated targets, to the extent that individuation involves considering another person's intentions, beliefs, and preferences. Individuating others links to perceiving them as more human: For example, a hypothetical other student was attributed relatively more human nature traits (compared to the self) when participants received even minimal individuating information about this person (Haslam & Bain, 2007).

Perhaps because the literature has devoted less attention to individuation than categorization, a prevalent definition of individuation seems to be along the lines of *what categorization is not*. Social cognition research has largely focused on categorization processes, and with good-enough reason: As cognitive misers who try to make the best of limited online mental resources, people often form impressions based on categorizing others and assume traits accordingly because it requires less effort than figuring out a person's individual traits firsthand (Fiske & Taylor, 1984). Because people rely so heavily on categorization in forming impressions, social categorization processes are critical to understand. However, this focus has left open the question of what processes happen when perceivers are motivated to proceed beyond the first-pass, category-based impression, acting instead as motivated tacticians who deploy more than one tactic for impression formation, depending on the situation (Fiske & Taylor, in press).

In their continuum model of impression formation, Fiske and Neuberg (1990) suggest that individuation requires *heightened attention to a person's individual attributes, and then interpreting them*. If motivation is strong enough, the perceiver individuates the target through *piecemeal, attribute-by-attribute integration* of all attributes into a general impression. This impression can still include category information, integrated together with noncategory-related attribute information. The continuum model suggests that individuating processes can occur either in a serial or parallel manner, and that perceivers may go through several iterations of categorization and individuation while forming an impression (Fiske, Lin, & Neuberg, 1999; Fiske & Neuberg, 1990).

Brewer's (1988; Brewer & Feinstein, 1999) dual-process model of impression formation also differentiates between category-based and person-based processing but conceives of these as separate impression formation processes: A particular trait can activate either knowledge about a category or knowledge about a person, but not both at the same time. In addition, Brewer's model states that individuation can occur in either the category-based or person-based processing mode; in this view, individuation means *more effortful, controlled processing* of either category-based or person-based information. Although not explicitly so, this model also tends to give preference to category-based over person-based processing.

In contrast to both of these models, Kunda and Thagard's (1996) parallel constraint-satisfaction model of impression formation argues that category and attribute information are processed simultaneously (i.e., in parallel).

Thus, in this model, *individuation is not its own separate process*. Rather, individuating information *and* category information are considered together within the same process, potentially along with information about the self and about the situation. Echoing other applications of parallel processing-type models (e.g., legal decision making; Thagard, 1989), Kunda and Thagard's model is based on computer simulations of how people maximize coherence in their impressions of others. Serial and parallel process accounts are not necessarily mutually exclusive: Evidence demonstrates that either model can account for impression formation processes, and future research may speak to which type of processing occurs when.

Various evidence supports each of these three models of impression formation, but most of this evidence details categorization processes, so it remains to be seen which model might best account for how we individuate others. Though clear theoretical differences emerge, the models all agree that perceivers' motivations play a role in the extent to which we integrate individual attribute information into coherent impressions of others. The next section explores why we sometimes put forth the extra effort.

Understanding Our Social Situation: Why We Individuate Others

Models of impression formation generally agree that for effortful processing at the individual level, a perceiver must find the target to be personally, motivationally relevant (Brewer, 1988; Fiske & Neuberg, 1990; Kunda & Thagard, 1996). This relevance can take many forms: A perceiver has various possible motivations for more deeply understanding a target's traits and behaviors. Core social motives help determine the extent to which we individuate a target person (Fiske, Lin, & Neuberg, 1999): belonging, understanding, controlling, self-enhancing, and trusting. Research on outcome dependency, for example, has found consistently that when another person has control over what will happen to us, we are more likely to form individuated impressions in order to understand that person's intentions (e.g., Erber & Fiske, 1984; Neuberg & Fiske, 1987). When another person controls our outcomes, it is in our best interest to be (or at least feel) accurate when forming impressions about this person, in order to understand what those outcomes might be.

Individuating another person may help us on the way to fulfilling other types of social goals: Better understanding a person might help us in our attempt to belong to a group, to control what will happen to us, to maintain self-esteem or improve ourselves within the current social context, or to trust someone (Fiske, Lin, & Neuberg, 1999). In any of these cases, when our outcome depends on another person, we are likely to expend more effort integrating their individual attributes in order to better understand the reasons for their actions and intentions. Accordingly, research to date seems largely to focus on motives to control and to understand, as opposed to other core motives.

Research on understanding goals that motivate effortful impression formation dates back at least as far as the early theorists, who wrote about impression formation in terms of a human drive to resolve inconsistency and create coherence. As part of his field theory, Kurt Lewin (1935) argued that when people have goals (such as an understanding goal), a tension is produced, and people are driven to reduce tension by achieving the goal. Furthermore, our entire experience of a social situation may be shaped by our current goals, including understanding goals (Lewin, 1951/1997). In this view, a goal to understand someone, if interrupted (e.g., by a target person doing something unexpected), results in an effort to resolve this apparent inconsistency and form a coherent impression (cf. Mandler, 1975). Lewin himself may not have applied field theory to the specific instance of forming impressions about individuals, but other attribution theorists did comment directly on the role of an understanding motive in figuring out others' behaviors and traits.

In his writings that founded and inspired attribution theory, Heider (1958) observed that although our subjective experience may not reveal as much, people persist at putting social information together and explaining it, often by producing dispositional inferences about individuals. According to Heider's theory, when we are trying to understand others, we look for invariance, or constancy, in their behavior. Specifically, looking for information about others' stable intentions, or what they would like to do, and their capacities, or what they are able to do, can help us understand and explain their behavior in a coherent manner. This focus on inferring others' intents and capacities has continued to present-day investigations of impression formation.

Jones's (1979) correspondent inference theory builds on Heider's attribution theory, adding that we are more likely to form individual impressions of others' intent in the first place if their behavior has one specific consequence (as opposed to many consequences) and if their behavior is socially undesirable (counternormative). Focusing more on the causes of behavior than on its consequences, Kelley's (1967) covariation theory posited that when forming individual impressions based on several observations of someone's behavior, we look for information about consistency, consensus, and distinctiveness in order to attribute individual dispositions. Notably, each of these attribution theories focuses entirely on effortful processes in forming coherent individual impressions, bypassing any stage of inferring traits from categories (for that, see Quattrone, Gilbert, Trope, all reviewed in Gilbert, 1998), and largely assumes that we do try to infer information about individual others' traits.

Later theories look less closely at the process of how we come to understand others' traits but suggest that we do spontaneously try to form individual impressions of others for the purposes of forming coherent explanations, evaluations, and narratives based on others' behaviors and traits. Commenting directly on Jones (1979) and Kelley (1967), Read (1987) suggests that

people actually form impressions based on extended sequences of behaviors, and that we do this because of an inclination to form a coherent explanation of a person's various behaviors. Read's model recalls other models, in which perceivers first draw on relevant category information, but then suggests that our aim is to create a scenario by evaluating others' plans and goals in causal terms. Read and Miller (1993) elaborate on this model while drawing on Thagard's (1989) model of explanatory coherence, suggesting that we automatically try to form coherent explanations of individual others' traits and behaviors by forming an impression that simultaneously satisfies certain principles, such as breadth, simplicity, and unification. Lastly, in their model that mostly focuses on social memory but also includes some details of impression formation, Srull and Wyer (1989) agree that "the primary goal in forming an impression of a person is to extract a coherent evaluative representation" (p. 61), suggesting that different behaviors are encoded in clusters based on which common traits explain them.

As these models have all hinted, attaining a greater understanding of another person is more of a challenge when that person is inconsistent. Indeed, various models of impression formation suggest we are more likely to individuate others whose traits or behaviors do not fit with the first category that occurs to us. In one study (Fiske, Neuberg, Beattie, & Milberg, 1987), participants saw targets described by occupations and stereotype-consistent or stereotype-inconsistent traits; when categorization was difficult, participants relied more heavily on the individuating attribute information, but when categorizing was easier, affective responses to targets depended more on category information. In other words, participants individuated the targets only when given a need to create coherence: When the traits matched the category, the impression was already coherent, but when the traits mismatched, participants created more elaborated but coherent impressions.

Using an idiographic approach in which participants pre-rated the likeability of different traits and categories, another study (Pavelchak, 1989) further supported the idea that evaluation can depend alternatively on category-based versus attribute-based impression formation. When asked to categorize targets before evaluating them, participants' evaluations related to their previous category ratings, but when participants evaluated targets before categorizing them, their evaluations more closely matched their previous trait ratings. Again, when categorizing is convenient, it can shortcut our goals to create coherence by the more labored process of individuating others. Relatedly, unexpected behaviors result in more thorough attributional processing (Pyszczynski & Greenberg, 1981) and more thorough causal reasoning (Kunda, Miller, & Claire, 1990). Sometimes perceivers create coherence by subtyping, a compromise between categorizing and individuating processes (e.g., Johnston & Hewstone, 1992; Kunda & Oleson, 1995). Overall, perceivers can meet coherence goals easily via categories for stereotype-consistent targets or, given inconsistent targets, effortfully via individuating processes.

Recent social neuroscience investigations also support the idea that inconsistent targets prompt coherence-seeking goals and, thus, further individual-level processing. Neural activity in response to social-expectancy violations, created by behaviors that were inconsistent with their targets, closely resembled activity in areas that have been observed in reinforcement learning paradigms (caudate and putamen, respectively; Harris & Fiske, 2010). Possibly, further learning is prompted by stereotypic mismatches between behaviors and social categories. Providing additional evidence that inconsistency may elicit coherence-seeking impression formation, trait inconsistencies recruit activity in the medial prefrontal cortex (mPFC), which is often implicated in social cognition, and also in areas implicated in domain-general conflict monitoring (posterior medial frontal cortex and right prefrontal cortex; Ma et al., 2011). While these studies provide still-preliminary evidence based largely on reverse inferences of psychological processes from brain activity, they may serve as a prelude to future studies of what processes may be involved in the integration of individuating attribute information.

Understanding our social situation is critically important to us and may hold a privileged status among the core motives because sometimes understanding is needed as a prerequisite to achieving other social goals: For example, better understanding a group member may help our efforts to belong to the group. Theories of reducing tension, attributing behaviors to traits, and forming coherent explanations all suggest that we might individuate others because we are motivated to try to understand them better. This happens in a variety of settings, and the next section will discuss the situations in which individuation is most likely to occur.

When Does Individuation Occur?

So far, this chapter has argued that people individuate others largely because of an understanding motive, but do certain situations prompt people to individuate? Generally people tend to individuate others when it benefits the self, when it benefits a relationship with the potential target person, or when it benefits standing with a third party, a person other than the potential target person (Fiske, 1998; Fiske, Lin, & Neuberg, 1999). This section summarizes recent findings on each of these situations.

In certain cases, we put more effort into getting to know others because it benefits us: understanding these others better or enhancing our standing in a group to which we wish to belong. Unfortunately, but perhaps not surprisingly, people are generally more likely to seek out potentially individuating attribute information about others who belong to groups they regard highly, as opposed to others who belong to groups against whom they are prejudiced. For example, participants' attitudes toward women's societal roles predict how much they individuate female versus male targets, as demonstrated by their ability to remember accurately some facts about target women versus target men (Stewart, Vassar, Sanchez, & David, 2000);

both female and male participants with more progressive attitudes toward women, as opposed to more traditional attitudes, made fewer within-group errors (i.e., were less likely to confuse one woman with another) in recalling target women's versus men's traits.

In related research, men's tendency to form individuating mental state inferences about women, and to perceive sexualized women as agents instead of as objects, depended on their level of hostile sexism (Cikara, Eberhardt, & Fiske, 2010). Thinking about a person as an agentic individual may reduce reliance on broad category-based expectancies.

Relatedly, we are more likely to individuate others if we do not hold strong negative stereotyped associations about their groups (Gawronski, Ehrenberg, Banse, Zukova, & Klauer, 2003) and if we have low prejudice against their groups (Sherman, Stroessner, Conrey, & Azam, 2005). In one study (Gawronski et al., 2003), participants interacted with a male or female interviewer who had to leave the interview early due to either work or family constraints; participants who showed greater implicit gender-based stereotype associations were more likely to ascribe stereotype-related traits (i.e., communal versus agentic traits) to their interviewer.

Showing that prejudice, and not only stereotypes, can impact how much perceivers individuate targets (Sherman et al., 2005), participants who scored high versus low on prejudice formed impressions of targets in relevant groups; high-prejudice participants displayed more attention to, and better recall for, stereotype-*inconsistent* versus stereotype-consistent information, compared to low- and moderate-prejudice participants when allowed sufficient processing capacity. Though this finding may seem counterintuitive in the context of other research about attention to counterstereotypic information as individuation, the authors suggest that these high-prejudice participants apparently paid greater attention to stereotype-violating information in order to discount it and *avoid* individuating: High-prejudice participants were more likely to ascribe that stereotype-inconsistent information to situational factors (cf. Kulik, 1983). These experiments demonstrated that while low- and moderate-prejudice participants had similarly high recall for stereotypic and nonstereotypic information, high-prejudice participants paid more attention to the nonstereotypic information because it did not fit with their prejudiced views, and they sought to explain it away with situational factors. Ultimately, then, despite greater attention to expectancy-disconfirming information, the high-prejudice participants apparently individuated targets less than did the other participants. Future research might look further into how high- and low-prejudiced participants take information into account when placed under more closely aligned social-cognitive goals (e.g., if participants in both groups were motivated to form impressions because of a need to predict targets' future behavior). Both these findings fit the continuum model (Fiske & Neuberg, 1990), suggesting that indeed we proceed past the initial categorization to recategorize (and sometimes further, to individuate)

only when a trait or behavior fails to fit our current categorization, provided we are not motivated simply to maintain our expectancies.

People may be unmotivated to individuate familiar (but not close) others because they think they already know them. Given initial impressions, people tend to individuate less when target others are familiar (already known) because familiarity can increase stereotypic associations, increasing category-related processing (Smith et al., 2006). Removing impression formation from real-life scenarios in which friendship and interdependence might predict increased motivation and ability to individuate, participants first saw photos of target people and then saw both familiar and new photos paired with occupation information: Participants made more stereotypic (occupation-based) judgments of familiar than unfamiliar targets. Potentially, familiarity gives us a sense that we need not expend additional effort on further processing. This work shows that perhaps our goals to understand others can be derailed by a false sense of already-acquired knowledge in the case of at least superficial familiarity.

So far, studies give an idea of how we might individuate others for our own purposes—namely, bolstering our understanding of socially relevant others. We also tend to individuate another person when it may benefit a relationship with that person; much of this evidence comes from studies of outcome dependency, or the extent to which another person controls our own fate. When working well with another person will produce positive outcomes, people aim to have a thorough understanding of that other person's attributes. Accordingly, under task-oriented outcome dependency, participants pay more attention to individuating, expectancy-inconsistent information about targets (Erber & Fiske, 1984; Neuberg & Fiske, 1987). People will also attend more to expectancy-inconsistent information about potential competitors (inversely outcome dependent; Ruscher & Fiske, 1990) and about powerful superiors, while superiors tend to be more likely to rely on category-related processing and stereotypes (for a review, see Fiske, 1993), all as predicted by whose outcomes depend on whom.

Providing further evidence that outcome dependency fundamentally changes how we form impressions of others, recent data from our lab suggests that under outcome dependency, participants show greater mPFC activity in response to expectancy-inconsistent than expectancy-consistent information about the person (i.e., forming impressions based on the most individual attributes), but when not dependent on the target person, participants showed greater mPFC activity to expectancy-consistent than to expectancy-inconsistent information (Ames & Fiske, 2013). This study supports the idea that we generally form impressions of others in ways that suit our prior conceptions of them, but that when we depend on others for something, unexpected information becomes critical in forming coherent individuating impressions. Outcome dependency is (a)symmetrical power, not necessarily status (e.g., prestigious role), as in one paper, using a role-playing paradigm, different measures, and no opportunity for

category-based processing found that sometimes those high in role-played power have better memory for individuating information than those low in power (Overbeck & Park, 2001). These differences likely reflect different concepts of power (Fiske & Berdahl, 2007), and further research might clarify these different findings.

In any case, recent work has continued to support the idea that we individuate others on whom we depend. Effectively clarifying the effects of “outcome” versus “dependency,” by independently manipulating the desirability of the potential reward and the extent to which perceivers depended on targets, greater dependency did indeed increase individuation, but adding that a more desirable reward resulted in positively biased evaluations of the target (Clark & Wegener, 2008; cf. Goodwin, Fiske, Rosen, & Rosenthal, 2002; Stevens & Fiske, 2000). Effects of social power on individuation translate to greater cross-race recognition (i.e., reduced cross-race bias) of socially powerful versus nonpowerful targets, based on targets’ occupations or behaviors (Shriver & Hugenberg, 2010). Participants showed the typical pattern of better recognition for same-race versus cross-race targets when those targets were mechanics or plumbers but showed reduced bias in recognizing same-race versus cross-race doctors and CEOs, who are higher status.

In other cases, we tend to individuate others when it affects how a third party, who is not the target of impression formation, evaluates us. For example, when participants watching a video of a businesswoman were told they were accountable to a third party in that they would need to justify their impression to a member of the research staff, they formed impressions that were less category-based than participants who were told to estimate the height of the woman or to inspect the quality of the video (Pendry & Macrae, 1996; for reviews of work on accountability, see Lerner & Tetlock, 1999). Closer to real life, MBA students who were motivated by third-party evaluation (i.e., an instructor’s course grade) were more likely to individuate members of their four- to six-person study groups; this was only true if their group actually was diverse and as long as they held positive impressions of their group members (Swann, Kwan, Polzer, & Milton, 2003).

Clearly, certain situations encourage people to individuate others, and notably, not necessarily just when we do “not categorize” them. We tend to seek individuating information when we have positive attitudes toward a person’s group, when people are not familiar in appearance, when people appear inconsistent, or when our own outcomes depend on someone else. More broadly, some situations—involving a potential personal benefit, a relationship with another person, or our standing with a third party—apparently motivate us to gather more individual-level information about others. But does individuation actually confer any of these sought-after benefits? The next section will address some of the possible outcomes of individual-level processing and, therefore, why we would bother.

Positive Consequences of Individuation

A previous section described why people are motivated to individuate others, and this section details some reasons why investigators might be motivated to study individuation—namely, its potential benefits to targets and perceivers. As one might imagine, most research that has investigated possible benefits of individuation tends to posit individuating others as a possible way to reduce prejudice and discrimination, by pressing participants to move beyond automatic category-based impression formation (see reviews: Brewer, 1988; Brewer & Feinstein, 1999; Brewer & Miller, 1984; Fiske, Lin, & Neuberg, 1999; Fiske & Neuberg, 1990). Our relationships with others about whom we might otherwise form category-based impressions would presumably benefit, and indeed most of the recent research on this topic shows that being asked to individuate another person can reduce a wide range of biases and prejudiced responses, which are likely to be inaccurate as well.

In a series of studies (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995), the pervasive better-than-average effect, in which people tend to evaluate themselves more favorably than others, attenuates when participants compare themselves to an individuated target person as opposed to “the average college student”; personal contact (as opposed to watching a video or reading a transcript of the individuated target) further attenuates this persistent downward comparison. Though the mechanism is unclear, given that categorization does not seem especially likely in the case of an abstract comparison to an average college student, the authors nonetheless make a case for individuation and contact as possible ways to reduce this commonly observed bias in self and social judgment.

More recently, researchers have begun to explore the impact of individuation on more interpersonally hurtful biases, such as prejudice and stereotyping. Individuation, in the form of alerting participants to categorization tendencies and instructing them to pay close attention to how individual faces differ from each other, especially other-race faces, helps to reduce the cross-race recognition deficit, in which participants typically show greater recognition for same-race versus other-race faces (Hugenberg, Miller, & Claypool, 2007). Such findings have clear practical applications to the use of eyewitness identification in our judicial system. Showing bias at an earlier perceptual stage, participants merely judging target age or detecting the presence of a dot on the face showed neural and behavioral indicators of implicit racial bias, but they individuated more when asked to judge the stereotype-irrelevant vegetable preferences of unfamiliar White and Black target people (Wheeler & Fiske, 2005). Both findings suggest that inducing individual-level processing by altering participants’ task goals may go a long way toward reducing different aspects of racial prejudice and stereotyping.

Reaching further, neural evidence suggested dehumanized default responses to members of extreme out-groups, but instructing participants

to individuate these lowest of the low targets helps to reduce such dehumanized responses. During neuroimaging, participants rated their emotional responses to images of target people from the four quadrants identified in the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002) low versus high on dimensions of competence and warmth (Harris & Fiske, 2006). Compared to individuals from the other three quadrants, members of low-warmth, low-competence groups—such as people apparently addicted to drugs or homeless—did not elicit the typical mPFC social-cognition response but did elicit responses in amygdala and insula, similar to the response pattern elicited by disgusting objects. Replicating and extending these findings (Harris & Fiske, 2007), participants considering the vegetable preferences of dehumanized out-group individuals, as opposed to judging their age, did elicit mPFC activity in response to these targets. These results show some promise that other methods of individuating may even help people rehumanize members of extreme out-groups.

On the other side of the perceiver-target relationship, individuating the self reduces the harmful effects of stereotype threat on performance (Ambady, Paik, Steele, Owen-Smith, & Mitchell, 2004). After being primed with gender-related words, women who wrote about their own positive and negative individual attributes performed significantly better on a math test than did gender-primed women who did not complete the self-individuation exercise, and they performed just as well as women who were not primed before taking the test. Benefits of individuating the self may vary by culture: Among Chinese participants (Kwan, Bond, Boucher, Maslach & Gan, 2002), a two-factor model of individuation based on “taking the lead” and “seeking attention” may fit better than a one-factor individuation model, though the positive social consequences of individuation were more limited in Chinese participants, compared with past findings in American participants (Whitney, Sagrestano, & Maslach, 1994). Possibly, individuating the self is beneficial for the same reason that individuating others is helpful: Judgments based on attributes are likely to be more accurate and fair than category judgments, especially when category judgments bring negative stereotypic associations. However, the overlap in processes of individuating the self versus individuating others has not yet been fully explored. From research thus far, we know that not only can there be positive benefits to the self attained by keeping one’s individual attributes in mind, but individuation can have measurable positive effects on the target person and not just on a relationship between perceiver and target.

In studies that measure individuation, participants are usually asked outright to take notice of certain attribute information or to pay extra attention to certain faces. Future related work could investigate whether similar positive outcomes result from different types of individuation prompts. Future work may also benefit from further considering how individuation occurs in the absence of specific instructions to do so; the next section will address briefly how individuation is currently thought to take place.

How Does Individuation Occur?

The continuum model (Fiske & Neuberg, 1990) was devised largely to reconcile two different types of approaches to the study of impression formation: the Gestalt approach, in which the whole can be more than the sum of its parts (e.g., Asch, 1946), and a more piecemeal, trait-averaging approach (e.g., Anderson, 1981). In the continuum model, a range of impression formation processes can occur, depending first on the information available about the target person and motivations of the perceiver. In turn, motivation and available information determine the extent to which perceivers pay attention to target attributes and interpret category and attribute information, resulting in relatively more category-based or individual-based impressions. Within these parameters, variables such as how accessible categories are (Srull & Wyer, 1979) or the type of relationship between traits and behaviors (Reeder & Brewer, 1979) may also help explain how far a perceiver proceeds in the individuation process.

Related (though not equivalent) to the Gestalt-versus-piecemeal debate in impression formation, some discuss whether impression formation occurs in a parallel- versus serial-type process (e.g., Kunda & Thagard, 1996). As mentioned, theories that assume parallel processes suggest that category information has no advantage over attribute information in our impressions of others. Following Kunda and Thagard's parallel constraint satisfaction model, alternate accounts suggest other ways by which we might integrate many types of information at once and, further, how integrating new information might change our expectancies for future interactions. In the connectionist model of impression formation (Van Overwalle & Labiouse, 2004), perceivers simultaneously integrate different types of information about targets and then update their impressions through consolidation in long-term memory when new information is inconsistent with the perceiver's impressions. Also applying a parallel processing approach, the tensor product model (Kashima, Woolcock, & Kashima, 2000) uses a computational model to describe how people integrate different types of information in forming impressions of groups, allowing stereotype-based expectancies to be updated. Though the continuum model has largely been understood as a model of serial processes, it allows for either serial or parallel (or both) types of processing, and evidence supports both types of processes across various different types of paradigms and measures.

We believe the "how" of individuation still merits future research. A wide range of different paradigms and measures appear in experiments that investigate individuation. Different studies support different accounts of process, and a consensus has yet to emerge about the circumstances under which individuation is relatively more holistic versus algebraic (i.e., can a unified impression of another person's traits suggest something more than the sum of its parts, or not?) and also the circumstances under which individuating processes occur in parallel or in sequence.

Individual Differences: Who Individuates Others?

The evidence for individual differences in individuating processes is more preliminary, but a brief discussion highlights some possible areas of exploration. Because perceiver motivation centrally determines impression formation processes, some chronic goals might influence how people form impressions, in addition to situational goals described earlier. Fiske, Lin, and Neuberg (1999) proposed possible roles of personal need for structure (Thompson, Naccarato, & Parker, 1989), desire for control (Burger, 1992), and need for cognition (Cacioppo & Petty, 1982) as shaping how perceivers tend to form impressions toward the category—versus individual—ends of the continuum. People high in the need for structure may prefer to form more category-based impressions, while people high in desire for control and need for cognition might prefer to gather relatively more individuating information about others (given that others are socially relevant). Few if any studies have investigated these as trait variables related to the degree of individuation so far, and this is a possible area of future investigation.

In addition, we suggest that the Interpersonal Orientation Scale (IOS; Hill, 1987) and Person-Thing Orientation Scale (PTOS; Graziano, Habashi, & Woodcock, 2011) may hint at individual differences that would tend toward the individuation end of the continuum. The IOS describes a general motivation to affiliate with others, which would seem to make persistent individuation more likely. IOS also divides into four subscales that describe trait tendencies toward social comparison, emotional support, positive stimulation, and attention; some might impact individuation more than others. The PTOS measures, as its name suggests, whether people orient relatively more toward other people versus things; on average, men tend to orient toward things, and women toward people. Perhaps women on average individuate more, though this awaits research. These two scales also have yet to be fully implemented in the impression formation literature. If, in fact, some individuals tended to individuate to a greater extent generally, perhaps these people experience different social consequences as a result. In our view, a tendency to individuate would go further than a tendency to form finer-grained subtypes: Individuation involves considering another person's intentions in ways not typically elicited by a request to consider subtypes. For example, subclassifying members of extreme out-groups seems unlikely to make these people seem much more human, but asking participants to consider out-group members' preferences did (Harris & Fiske, 2006, 2007).

Whither Individuation?

This chapter has reviewed the current state of research about how people individuate others. Starting with models of impression formation and dispositional attribution, the chapter has discussed the theoretical background

behind studies of individual-based impression formation and has brought us to the latest social neuroscience investigations of how individuation may help people be able to rehumanize members of scorned out-groups.

We see humanization as a central, if remote, goal in individuation research. For example, future research may further explain the relationship between individuating and humanizing different targets. Many programs of research have been devoted to reducing the harmful effects of prejudice and stereotyping; research about the motivations and processes involved in individuation may reveal how people might humanize others who would otherwise be ignored, or worse.

Current research in our laboratory is investigating some of the aforementioned motivations to individuate others. Inspired by the Gestalt approach taken by Asch and Zukier (1984), we are currently exploring whether targets with apparently inconsistent traits motivate a greater depth of individual processing, possibly leading to humanization. Based on Mandler's (1975) theories, such an inconsistency may interrupt the normal course of forming an impression, and if so, then this interruption may lead to an information-seeking tension that must be resolved by individuating processes. Asch and Zukier (1984) noticed in the course of their study that participants seemed readily able to describe hypothetical target individuals who had inconsistent traits, such as "sociable and lonely," by forming an overarching individual impression that included both traits; for example, this target may truly be lonely but may appear sociable through efforts to hide the loneliness. Such trait inconsistency might actually act as a contextual motivator, activating perceivers' information-seeking needs and prompting further individuation. Furthermore, a target with mixed traits may actually be perceived as more human than one with uniformly positive or negative traits: The process of considering what common elements might unify two apparently inconsistent traits may give people a fuller understanding of that person's thoughts and preferences. To be sure, humanizing others may not be an entirely positive exercise: People's integration of different attributes may itself be biased by categorical associations, some reconciliations might simply be bad inferences, and some combinations of traits may be impossible to reconcile in a logical way. However, we believe the possible benefits merit further research.

Future research in these areas may tell us that individuating others shares various outcomes with seeing others as more human. Beyond greater liking, if indeed seen as more human, as hinted at by Harris and Fiske's (2006, 2007) studies, individuated others should elicit greater attribution of secondary emotions (e.g., Leyens et al., 2000) and mind perception (e.g., Waytz, Gray, Epley, & Wegner, 2010). In this view, people might individuate others for some of the same reasons why they perceive humanness in nonhuman objects: a drive to connect with others and to make sense of uncertainty (Epley, Waytz, Akalis, & Cacioppo, 2008; Waytz, Morewedge, et al., 2010). Investigating how we individuate others, and possibly come to

see them as more human, may help us understand what motivates us to seek out individual-level information about some people but not others and may eventually inform efforts to reduce the harmful effects of prejudice through rehumanization.

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