Social Categorization and Stereotyping In vivo: The VUCA Challenge

Galen V. Bodenhausen* and Destiny Peery
Northwestern University

Abstract
A substantial literature has examined the nature of social categorization, a fundamental process having important implications for a wide variety of social phenomena. The great majority of this research has focused on the role of particular, clearly identified social categories (e.g. race, nationality, etc.) while ignoring or holding constant other identity dimensions. This approach has afforded considerable leverage for understanding how salient social identities influence perception, judgment, and behavior. However, it leaves unaddressed many questions about how particular social identities become salient and how (and whether) identities might be inferred when category membership is ambiguous or unknown.

Everyday social perception often occurs under conditions of volatility (dynamic contexts), uncertainty (missing information), complexity (multiple bases for categorization), and ambiguity (unclear meaning of available cues). As a consequence, research must address how these factors might qualify basic processes of social categorization. Available evidence is reviewed, and directions for future research are discussed.

The central importance of social categorization in shaping perception, judgment, and behavior has long been recognized. The writings of seminal theorists such as Allport (1954), Sherif (1948), and Tajfel (1974) emphasized the significance of the psychological borderlines that define membership in particular social groups, and countless studies have examined the consequences of salient category memberships on social functioning (for reviews, see Brewer & Brown, 1985; Macrae & Bodenhausen, 2000). In this article, we focus on research examining the role played by social categories in basic processes of social perception and cognition. The dominant research strategy in this domain has been straightforward and powerful: manipulate the identity of a target in a manner that makes membership in a given category salient and clear, while holding constant all else that is known about the target. Goldberg’s (1968) classic study of sex discrimination provides a prototypic example. In this research, participants evaluated the quality of written essays; essay content was held constant, but the name of the ostensible author was manipulated in a manner clearly
conveying the sex of the author (e.g. John versus Joan). Although the results of that particular study have been challenged (Swim, Borgida, Maruyama, & Myers, 1989), the basic methodology has remained popular and has even been refined. Kasof (1993) pointed out that particular names can signal other social category memberships besides gender (e.g. age group or ethnicity), and they may also have personality connotations. Consequently, he provided pretested sets of names that differed in terms of gender but no other salient associations, so that researchers could more cleanly manipulate gender identities and nothing else.

This basic method of using salient cues to manipulate a target's social category has been widely adopted in studies of stereotyping and discrimination, both in the realm of gender bias and beyond, and it is not difficult to understand why. The logic is straightforward and the results provide a compelling picture of just how much one's membership in particular social categories can modify how one is perceived by others. However, in everyday life, it is relatively rare that others are encountered in such neatly pre-packaged ways. The real social environment is much messier, an idea embodied in the military acronym used to describe the complicated real-world circumstances in which strategic decisions must be made: VUCA (e.g. Johansen, 2007). VUCA stands for Volatility (a dynamically changing social context), Uncertainty (missing information), Complexity (multiple potentially relevant dimensions), and Ambiguity (multiple possible interpretations of available information). For example, upon encountering an actual person, rather than a carefully constructed laboratory stimulus person, there will inevitably be multiple potential bases for categorization, confronting the social perceiver with the problem of complexity. Recent research has tackled many aspects of these complicating realities of real-world social perception, and our goal in the present article is to begin to outline the richer picture of social categorization and stereotyping that emerges from this research. We begin our review by summarizing recent theoretical and empirical approaches to the complexity problem, which in many respects provides the foundation for each of the subsequently considered aspects of the ‘VUCA challenge’.

The Problem of Complexity

Although scholars have periodically called for research examining the full multidimensionality of a given individual's social identities, by and large, researchers have tended to examine social identities one at a time (Frable, 1997). As just noted, prominent research strategies often explicitly attempt to insure that only one focal identity category is salient to social perceivers. This approach necessarily involves impoverished, artificial stimulus persons, because when actual persons are encountered, multiple identities can be readily detected from visual cues alone. How do perceivers deal with this complexity? Do they simultaneously categorize the target in all
available ways, or do they only activate a subset of the possibilities? The consequences of focusing on one particular social category, rather than other equally applicable ones, can be considerable. For example, Mitchell, Nosek, and Banaji (2003) showed that exposure to the same set of Black athletes resulted in relatively negative automatic associations when the individuals were categorized on the basis of their race, but relatively positive automatic associations when they were categorized by their (admired) occupation. Of course, in this research, participants were instructed to focus on a particular category. What happens when perceivers have the freedom to spontaneously categorize a multifaceted social target?

Bodenhausen and Macrae (1998) proposed a theoretical perspective on the complexity problem that is built on the assumption that social categorization is dynamic and involves the activation of some aspects of a target's identity and the inhibition of other aspects. The central idea is that in many circumstances, a single basis for categorization will come to dominate social cognition, organizing perception and guiding inferences. To the extent that other category cues are noticed, they are likely to be treated as circumscribed personal attributes rather than identity-defining social categories (see Bodenhausen, Macrae, & Sherman, 1999); as a result, the various kinds of stereotypic associations that would normally come to mind regarding these other identities will tend to be actively inhibited (Macrae, Bodenhausen, & Milne, 1995). For example, Macrae et al. showed that when a target’s ethnic identity was dominant, stereotypes associated with her gender were actively inhibited, whereas when a target’s gender identity was dominant, stereotypes associated with her ethnicity were actively inhibited. Quinn and Macrae (2005) also showed that, upon seeing a multiply-categorizable target, category activation is limited to task-relevant dimensions of identity; equally applicable but task-irrelevant categories were not activated. The functional argument is that particularly meaningful identities are the ones that get activated, while inhibitory processes help to keep distracting or competing information out of working memory, where it could interfere with ongoing functions of the cognitive system (see Dagenbach & Carr, 1994). In this way, a complicated and potentially contradictory set of informational cues can be organized into a coherent, well-structured impression that is guided by the dominant social categorization framework.

Of course, this perspective immediately invites the question: which category becomes dominant in any given instance? Properties of the stimulus, the perceiver, and the setting can all be important in determining the salience of a potential basis for categorization (for a review, see Bodenhausen, Todd, & Becker, 2007). For example, on the stimulus side, several studies have shown that the prototypicality of a given individual with respect to a particular category strongly moderates the likelihood that (s)he will become the target of categorical bias (e.g. Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Maddox, 2004). When a target is not
particularly prototypical of a given identity (e.g. race), then alternative bases for categorization may be pursued for which greater prototypicality exists (e.g. gender or occupation), or the target may be individuated (Fiske & Neuberg, 1990). Eberhardt et al. (2006) provided a particularly compelling demonstration of this prototypicality effect, by showing that the likelihood of a Black defendant receiving a death sentence is an increasing function of his racial prototypicality. On the perceiver side, the perceiver’s goals may direct attention toward goal-relevant bases for categorization (see Bodenhausen & Hugenberg, forthcoming), and chronic prejudices held by perceivers may make prejudice-relevant identities more salient (Allport & Kramer, 1946; Stangor, Lynch, Duan, & Glass, 1992). The main point of Bodenhausen and Macrae’s (1998) analysis is that in a variety of circumstances, a particular social category will come to dominate the social perception process in a manner that solves the complexity problem quite efficiently, by activating concepts stereotypically associated with this dominant identity while simultaneously inhibiting competing organizational frameworks.

However, it is clearly the case that perceivers also sometimes pay attention to more than one category at a time. This phenomenon has been extensively investigated in research on crossed-categorization effects (for a review, see Crisp & Hewstone, 2007). As emphasized in the common ingroup identity model (Dovidio, Gaertner, & Saguy, 2009), some categories exist within a nested structure, such that a member of any subordinate category is also necessarily a member of more inclusive, superordinate identities (e.g. a German is necessarily also a European), and it is possible that categories at more than one level of inclusiveness may be simultaneously considered by social perceivers. However, many social categories are not hierarchically nested; rather, they are orthogonal to one another (e.g. sex and race) or correlated to an unknown degree (e.g. sex and occupation). Research on crossed-categorizations has focused primarily on the consequences of these kinds of multiple-category memberships. Multiple categories can become simultaneously activated in the minds of social perceivers in a variety of circumstances, including (a) when there is no clear basis for category dominance, (b) when perceivers possess the motivation to think more deeply about a social target and thus go beyond the most salient social category, and (c) when the situation explicitly draws attention to more than one basis for categorization. Research in which two identity dimensions are made simultaneously salient for participants has shown that the number of category memberships shared between perceiver and target (i.e. 0, 1, or 2) typically influences evaluations of and behavior toward the target in an additive fashion (Crisp & Hewstone, 1999). Particularly noteworthy is the comparison between a case where only a single diverging categorization is salient (e.g. the perceiver is White and the target is Black) versus a case where this diverging categorization is crossed with a different, shared categorization (e.g. the White perceiver
and the Black target are both Christians). The addition of a shared categorical identity tends to markedly reduce intergroup bias (in this example, racial bias); by the same token, the addition of a second non-shared categorical identity (e.g. Christian versus Muslim) tends to exacerbate intergroup bias (for a review, see Migdal, Hewstone, & Mullen, 1998).

Research has also sometimes revealed more complex evaluative tendencies toward cross-categorized targets than the additive pattern just described (Crisp & Hewstone, 2007; Vescio, Judd, & Chua, 2006). For example, a social-inclusion pattern is said to occur when a target who shares any categorical identity with the perceiver is viewed equivalently favorably (irrespective of whether just one or two or more identities are shared). Research on crossed-categorization effects has shed considerable light on the evaluative outcomes that emerge when targets’ identities are more than one-dimensional, but much less is known about the patterns of stereotype activation and application that might characterize perceptions of these complex targets. If a perceiver encounters an Asian woman under conditions in which both identities are salient, the existing literature would provide a firm basis for hypothesizing about how this person will be globally evaluated, depending on the ethnicity and gender of the perceiver. However, what if the perceiver wants to make a specific inductive inference about the target, such as whether she will be a good candidate for graduate training in engineering? Here, descriptive as well as evaluative considerations are important, and in this case the two categories produce conflicting stereotypes (i.e. women are stereotypically seen as less well-suited for engineering than men, whereas Asians are stereotypically seen as more well-suited for engineering than many other ethnic groups are). Evidence bearing on this question is limited, but one relevant study was conducted by Pittinsky, Shih, and Trahan (2006), who showed that subtle situational cues oriented perceivers to stereotype multiply-categorizable targets either on the basis of their gender or their ethnicity, but not both; Klauer, Ehrenberg, and Wegener (2003) provided converging evidence. More research is required to understand how stereotyping unfolds when perceivers are confronted with realistically multidimensional social targets.

Certain kinds of categorical conjunctures, or intersectional identities, may even render a person less likely to be noticed or considered at all. Purdie-Vaughns and Eibach (2008) argue that when individuals possess two or more subordinated social identities (e.g. gay African Americans), they are subject to ‘intersectional invisibility’, because they are not prototypic of either of their respective identity groups (i.e. the prototypical gay person is not African American, and the prototypical African American is not gay). This perspective offers an interesting counterpoint to the notion of double jeopardy, which asserts that each additional subordinated identity a person possesses is likely to magnify the disadvantage (s)he experiences (e.g. Berdahl & Moore, 2006; Davis, 1981). Specifically, members of multiple subordinate groups may be susceptible to an arguably
even more insidious form of discrimination – social invisibility. This invisibility may possibly result in individuals experiencing less of the discrimination and oppression targeted at their respective identity groups, given that non-prototypical members of stigmatized groups are less likely to be targets of bias (e.g. Eberhardt et al., 2006; Maddox, 2004). However, invisibility subjects people to different forms of unfair treatment – or non-treatment, as the case may be. Non-prototypical members of groups are less likely to be noticed, to be heard, or to have influence over other members of their groups (e.g. Hogg, 2001). Purdie-Vaughns and Eibach (2008) review a variety of cultural, political, and legal disadvantages that are likely to be associated with intersectional invisibility of this sort. Thus, it seems that the multiple-category problem can sometimes be more problematic for the target than for the perceiver.

Beyond constructing ad hoc, hybrid representations of targets for whom two (or more) categories are salient, perceivers also develop more enduring subtypes. When a particular combination of social categories is encountered with sufficient regularity, perceivers can construct a representation of this particular conjunction of identities that comes to function much like one-dimensional categories do (Brewer, Dull, & Lui, 1981). That is, typical features become associated with the category conjunction, and these stereotypic features may be activated automatically once a target is identified as a member of the subtype. It is clear that the content of such stereotypes is not necessarily simply inherited from the ‘parent’ categories (Kunda, Miller, & Claire, 1990); rather, emergent properties can come to characterize the conjunction that would not be viewed as typical of either parent category. The fact that the content of subtypes can be so distinctly different from that of the separate constituent identities raises the interesting possibility that the latter categories may compete with the subtype as a basis for organizing social perception, resulting in their active inhibition when the deviating subtype becomes dominant (see Macrae, Bodenhausen, Milne, & Castelli, 1999).

When perceivers encounter a social target who displays a substantial number of salient category cues, it is also possible that categorical processing of the target will be abandoned, so long as the identified categories do not converge in their implications (Hall & Crisp, 2005). This process is known as decategorization (Crisp & Hewstone, 2007) or personalization (Brewer, 1988). Any attribute a person possesses is a potential basis for social categorization (e.g. introverts, opera fans, etc.; see Bodenhausen et al., 1999). However, when personalization occurs, the individual’s characteristics operate as more circumscribed personal descriptors (rather than as global organizing frameworks) that serve to differentiate him or her from other individuals. In order to arrive at an evaluation of the personalized target, the implications of identified attributes must be integrated in an impression-formation process that is often assumed to be effortful and resource-consuming (e.g. Fiske & Neuberg, 1990; but see
Kunda & Thagard, 1996). In this sense, social perceivers’ multiple-category problem is transformed into a multiple-attribute problem (e.g. Edwards & Newman, 1982) when personalization occurs.

It is thus apparent that the complexity problem facing social perceivers in everyday life has produced multiple coping strategies, including (a) focusing attention on a dominant category and neglecting or inhibiting alternative categories; (b) constructing ad hoc, hybrid representations that rely on more than one category to define another’s identity; (c) constructing stable subtype representations that capture the characteristics of frequently encountered category conjunctions; (d) ignoring or overlooking individuals who do not fit neatly into preconceived categories (i.e. intersectional invisibility); and (e) abandoning social categorization in favor of personalized impressions.

The Problem of Volatility

The inherent complexity of social targets sets the stage for the possibility of dynamic cross-temporal and cross-situational variations in how a given individual is categorized, producing the volatility problem. As targets move into and out of social roles (e.g. Stryker & Serpe, 1982), pursue goals and enact habits associated with particular environmental cues (Aarts, 2007), and generally respond to the affordances and constraints imposed by the social situation (Reis, 2008), perceivers may categorize them in different ways. The idea that social categorization is responsive to situational contingencies is a central element of self-categorization theory (SCT; Turner, Oakes, Haslam, & McGarty, 1994). According to SCT, situational features often provide strong cues to the relevance of particular social identities. One type of cue is normative fit, or the extent to which a target’s behavior aligns with the norms and stereotypes associated with a particular category to which (s)he belongs (Oakes, 1987). In keeping with this idea, Macrae et al. (1995) found that when a Chinese woman was seen applying make-up, gender stereotypes were activated but ethnic stereotypes were inhibited, whereas when the same target was seen eating rice with chopsticks, ethnic stereotypes were activated but gender stereotypes were inhibited.

Comparative fit can also cue particular categorical identities, to the extent that these identities can account for patterns of similarities and differences observed in a given situation (e.g., Wegener & Klauer, 2004). Identities can also ‘pop out’ simply by virtue of being statistically rare, either in general or in a given context, such as being the only woman in a room full of men (e.g. Biernat & Vescio, 1993). All of these findings suggest that a crucially important property of social situations that influences how perceivers categorize others is the comparative context that is made salient in the situation, in addition to the baseline salience or accessibility of the candidate categories (e.g. Rutland & Cinnirella, 2000).
In the case of hierarchically nested social categories, context can signal which level of the hierarchy is most relevant to ongoing behavior. For example, Nicolas Sarkozy might alternately be categorized as Parisian, French, or European, depending on whether the context makes regional, national, or continental concerns salient. Shifts to more inclusive types of categorizations can have noteworthy effects on social evaluation, particularly when they result in the target being included in a category to which the perceiver also belongs. A German might evaluate Sarkozy more favorably when thinking of him as a European (a shared ingroup) rather than as a Frenchman (an outgroup), as emphasized in the common ingroup identity model (e.g. Dovidio, Gaertner, & Taguy, forthcoming). However, research has also shown that shifting comparative contexts can modify the characteristics that are seen as most prototypic or defining of shared superordinate categories, in ways that overvalue the assumed characteristics of one’s own subordinate category (e.g. Waldzus, Mummendey, & Wenzel, 2005; Wenzel, Mummendey, Weber, & Waldzus, 2003). Thus, although the hypothetical German may categorize Sarkozy as European when the context promotes that level of abstraction, Sarkozy may nevertheless be seen as a less prototypic European than, for example, Angela Merkel, and therefore still be subjected to devaluation. In other words, the basic-level categories that are most commonly used in construing the social world – in particular the ones in which the perceiver holds membership – may continue to exert an influence on social perception, even when a shared superordinate category is activated by the comparative context.

Just as some contexts can push perceivers to categorize at a level superordinate to basic-level categories, other contexts can make subtypes salient. Wittenbrink, Judd, and Park (2001) showed that White participants’ automatic reactions to a Black target varied as a function of whether he was depicted on an urban street corner or inside a church, with more positive automatic reactions being evident in the latter context. When targets are seen in particular social roles (churchgoer, prisoner, lawyer; see Barden, Maddux, Petty, & Brewer, 2004), it is likely that the basic-level categories will be abandoned in favor of more circumscribed subtypes that vary considerably in their evaluative connotations (Devine & Baker, 1991). Findings such as these emphasize the situational malleability of social categorization and document that even perceivers’ most automatic responses to the social world shift according to context. Moreover, even when a given category remains constant, the stereotypes relevant to that category may shift when category members are encountered in different contexts. Mendoza-Denton, Park, and O’Connor (2008) demonstrated that gender stereotypes are situationally moderated; specifically, they showed that men were expected to be more assertive than women in work and sport situations, but women were expected to be more assertive than men in ‘hearth and home’ situations. Thus, like the categories with which they are associated, stereotypes are dynamic and context sensitive (Garcia-Marques, Santos, & Mackie, 2006).
Different social environments can also change the priorities and momentary biases of the social perceiver in ways that influence how others are categorized. For instance, situational contexts can influence the epistemic motives of the perceiver and thereby influence the type of categorization process that unfolds. Situations that impose time constraints increase the need for closure (Kruglanski & Webster, 1996), making it less likely that multiple bases for categorization will be considered; under such circumstances, impressions may be particularly likely to focus on a single dominant category. Conversely, situations that increase motivation for accuracy, such as when one’s outcomes depend on the veracity of one’s judgments (Erber & Fiske, 1984) or when one will be held to account for one’s judgments (Tetlock, Skitka, & Boettger, 1989), may increase the extent to which perceivers attend to multiple possible bases for social categorization. For example, Pendry and Macrae (1996) showed that, whereas both accountable and unaccountable participants automatically categorized a visually presented target at the level of her gender, only accountable participants also categorized her at the subtype level (i.e. businesswoman). Additionally, situationally salient motives can direct perceivers toward particular kinds of social categorizations. When perceivers’ self-esteem is momentarily threatened, it may motivate them to perceive others in terms of relatively devalued social categories, so that ensuing feelings of superiority can assuage their bruised egos (e.g. Fein & Spencer, 1997; Kunda & Spencer, 2003).

It is thus apparent that social categorization of any given target can be quite volatile and subject to rapid situational modulation. Situations can directly influence social categorizations by (a) presenting a pattern of behavioral cues that can be easily accounted for by a particular category, as emphasized by self-categorization theory, (b) inviting comparisons that privilege a particular level of abstraction in the social categorization process, or (c) signaling the relevance of specific subtypes. Situations can also indirectly influence social categorization by activating particular goals and motives within the perceiver that then bear on the process and outcomes of social categorization. In everyday life, social targets are moving targets.

The Problems of Uncertainty and Ambiguity

Uncertainty and ambiguity are closely related concepts. For our purposes, the primary distinction concerns the availability versus the clarity of relevant information. Uncertainty exists when relevant information is unavailable and thus unknown, whereas ambiguity exists when relevant information is available, but its meaning is unclear. Because there can be some blurring between these cases, we will consider both problems together.

Do people engage in social categorization on the basis of unavailable information? At first blush this seems rather unlikely, but in fact, the literature suggests that there are indeed certain default categories that tend
to be assumed in the absence of any clear data to the contrary. Silveira (1980) proposed that, by default, people = male, an assertion that has subsequently been supported empirically (e.g. Hamilton, 1991; Merritt & Harrison, 2006). That is, when a person’s gender is not known, the individual is assumed to be male. One argument about why this may be the case is that in a traditionally sexist culture, the category ‘male’ is regarded as the central and important one; deviations from this valued identity are thus psychologically marked and will tend to be explicitly noted. Unless membership in the relatively devalued category is explicitly noted, then membership in the culturally dominant category is assumed. A similar argument could be made regarding ethnicity, and at least among White people, there is indeed a tendency for a ‘people = White’ default assumption (Merritt & Harrison, 2006). Research looking at the amount of time taken to categorize multiply categorizable targets has also pointed toward a ‘white male default’ representation of persons (e.g. Richeson & Trawalter, 2005; Zárate & Sandoval, 1995).

Pratto, Korchmaros, and Hegarty (2007) further postulated the existence of more fine-tuned default assumptions based on stereotypic gender–occupation and race–occupation combinations. For example, professional basketball player = Black, while professional golf player = White. Pratto et al. showed that gender and race tend to be explicitly mentioned only when people deviate from what is typical for their occupation. Other kinds of categories also carry racial and gender connotations. For example, Wirth and Bodenhausen (forthcoming) showed that different types of mental illnesses carry gender-based expectations that have a systematic influence on the stigmatizing reactions elicited by persons experiencing mental health problems (e.g. depression is associated with women, while alcoholism is associated with men). In this sense, even when information about race or gender is not explicitly available, default assumptions nevertheless can provide an unspoken background on which more focal qualities of the target are evaluated. It is thus apparent that many social categories have racial and gender elements folded into them, sometimes in a quite implicit way – and these elements carry status-related connotations that can be quite consequential.

Another context in which categorization can proceed in the absence of explicit information is the case of concealable identities. Sexual orientation provides one example. Unless a person discloses his or her sexual orientation or engages in relevant public displays of affection, there is uncertainty about category membership. Undoubtedly, there is a ‘people = heterosexual’ default assumption, but there is also an implicit lay ‘inversion theory’ of homosexuality that holds that gay men have feminine qualities and lesbians have masculine qualities (Kite & Deaux, 1987). As a consequence, feminine men may often be categorized as gay, and masculine women categorized as lesbians, in the absence of any definitive information about the target’s sexual orientation (e.g. Deaux & Lewis, 1984; McCreary, 1994).
Such categorizations can happen rapidly and on the basis of very limited samples of behavior (Ambady, Hallahan, & Conner, 1999; Johnson, Gill, Reichman, & Tassinary, 2007). Moreover, these categorizations can have noteworthy effects on subsequent information processing, regardless of whether they are accurate or erroneous (Rule, Ambady, Adams, & Macrae, 2007). Collectively, this research suggests that social perceivers readily categorize targets in ways that are not supported by definitive explicit evidence, suggesting that the problem of uncertainty is not particularly troubling to perceivers in many circumstances.

The ambiguity problem arises when perceivers are uncertain which of two (or more) ostensibly mutually exclusive categories applies to a target. For example, we may occasionally encounter people who are sufficiently androgynous to make it difficult to ascertain their gender, and at least one study suggests that with brief exposure, androgynous individuals can sometimes be miscategorized on the basis of gender-atypical features (very long hair, for a man, or very short hair, for a woman; see Macrae & Martin, 2007).

In contrast to gender ambiguity, ethnic ambiguity may be a much more common phenomenon, and one for which more relevant research is available. Ethnic ambiguity, in terms of visual appearance, can exist simply because of phenotypic variability within ethnic groups. In one of the earliest studies on the categorization of racially ambiguous faces, Pettigrew, Allport, and Barnett (1958) had South African subjects categorize facial pictures as European or African. Included in the stimulus set were racially mixed faces, and the results showed that White participants were quite unlikely to categorize these faces as Europeans, a finding consistent with the ‘ingroup overexclusion effect’ (Leyens & Yzerbyt, 1992), the tendency to be quite careful and conservative regarding who is admitted to membership in one’s ingroup categories. More recent evidence also supports the operation of this phenomenon in the domain of racial categorization and links it especially to individuals who have a strong allegiance to the ingroup. For example, Blascovich, Wyer, Swart, and Kibler (1997) showed that high-prejudice White participants took significantly longer to categorize racially ambiguous faces, apparently out of a more acute concern to ‘get it right.’ Castano, Yzerbyt, Bourguignon, and Seron (2002) also showed that highly identified northern Italians were generally more likely to categorize ambiguous the faces as southern rather than northern Italians, compared to low identifiers. These studies collectively suggest that ethnic ambiguity is typically resolved by placing targets into outgroups rather than ingroups.

Hugenberg and Bodenhausen (2004) reported studies showing that the ambiguity and volatility problems can sometimes intersect. In their research, White participants were asked to categorize racially ambiguous faces as Black or White. The central hypothesis was that categorizations would be influenced by momentary features of the faces that either did...
or did not align with stereotypic expectations for a given ethnic category. A social target’s affective state is one volatile situational factor that may relate to stereotypic expectations. Specifically, because cultural stereotypes portray African-American men as hostile, it was hypothesized that angry racially ambiguous faces would be more likely to be categorized as Black, whereas happy racially ambiguous faces would be more likely to be categorized as White. This pattern was in fact observed, but only for individuals who were relatively high in implicit racial prejudice and therefore more likely to hold a stereotypic view of African Americans. Hutchings and Haddock (forthcoming) replicated these findings and further showed that the angry expression evident on the face of a racially ambiguous target was judged to be more intense among participants who were high in implicit racial prejudice (see also Hugenberg & Bodenhausen, 2003).

In the bulk of the research on ethnic ambiguity discussed above, faces were intentionally created or selected by researchers to be ambiguous. In everyday life, individuals who happen to have ambiguous facial physiognomies have various options for altering their appearance to more closely approximate a particular racial or ethnic identity prototype. For example, hairstyles and clothing choices can increase an otherwise ambiguous target’s fit to an ethnic category prototype. MacLin and Malpass (2001) examined categorizations of faces that were ambiguous as to whether they were African American or Hispanic. By adding either a Black or Hispanic hair style to the same face, racial categorizations markedly diverged. Moreover, associated perceptual distortions were observed, such that the same face was judged to be darker and to have a wider mouth when it was depicted with an African American, rather than a Hispanic, hairstyle, a phenomenon dubbed the ambiguous-race face illusion.

Of course, many individuals appear to be ambiguous with respect to traditional racial or ethnic groups because they are in fact multiracial. As such, the expectation that they can or should be categorized in terms of historically distinct racial categories deserves to be examined. When perceivers are forced to choose, for example, either ‘Black’ or ‘White’ as the suitable category for a particular ambiguous target, the choice may not necessarily reflect how they would spontaneously categorize a potentially multiracial individual. It may be the case that perceivers attempt to pigeonhole ambiguous targets into one conventional monoracial category or another, but it may also be the case that they view more than one category is being applicable to the target (e.g. both Black and White), or they may categorize the individual in terms of a more novel category conjunction that has its own characteristics and is not merely the conjunction of the two monoracial ‘parent’ categories.

Peery and Bodenhausen (2008) investigated this very question by having participants categorize racially ambiguous targets who had been identified as biracial via pictures of a Black/White interracial couple representing the parents of the target. By using a speeded dual-categorization task,
which required Black/not Black and White/not White judgments for the same targets, Peery and Bodenhausen were able to more definitively determine whether participants tended to apply monoracial or multiple categories. In the dual-categorization task, there are four possible categorization patterns: Black (and not White), White (and not Black), both Black and White (reflecting the conjunction of the parent categories), or neither Black nor White (reflecting a special subtype). The ingroup overexclusion effect described above suggests that White participants would tend to select ‘not White’ responses for biracial targets, but it does not provide a firm basis for deciding whether they will select the ‘Black’ or ‘not Black’ category for these targets. Historically in the United States, racially mixed persons were defined as belonging to the racial group of their ‘socially subordinate’ (i.e. minority) parent. This rule, termed the principle of hypodescent, characterized legal as well as lay definitions of racial group membership in earlier times. If this rule still influences racial categorizations, it would lead to the prediction that many perceivers will categorize biracial targets as Black (and not White). Indeed, in a speeded categorization task, the racially ambiguous faces were significantly more likely to be categorized as monoracially Black when the target was explicitly known to be biracial, compared to when the ancestry of the same person was unspecified. These results suggest that cultural traditions specifying the rules of category membership provide another basis for resolving ambiguity concerning a target’s social identity. An important direction for future research will be to examine how stereotyping unfolds in the case of biracial targets. Even though they may commonly be categorized as Black, they may nevertheless be seen as relatively non-prototypic of that category and thus be less prone to stereotyping and discrimination on the basis of race (e.g., Maddux, 2004).

Thus, categorization of social targets can be complicated by missing or ambiguous information pertaining to commonly referenced social identities such as race and gender. This uncertainty or ambiguity may be resolved by (a) relying on default category assumptions (e.g., people = White) or theories about cues to category membership (e.g., feminine man = gay man), (b) avoiding inclusion of ambiguous persons in one’s ingroup (i.e., ingroup overexclusion), unless it is somehow beneficial to do so, or (c) looking for alignment with existing stereotypes that might suggest a particular category membership. Coping with uncertainty or ambiguity may not always require adherence to strict categories though, as an increasingly complex and heterogeneous world may lead to the formation of new categories (e.g., categorizing multiracial people as such rather than relying on existing monoracial categories).

Conclusion

‘Remember this: VUCA is where history happens’
This quote, attributed to Col. Will Gunn in Brenner (2007), drives home the point that in the real world, choices have to be made under informationally complicated conditions that are characterized by volatility, uncertainty, complexity, and ambiguity. We have argued that we commonly face these same challenges as we attempt to navigate the everyday social world; in other words, VUCA is also where social perception happens. Social categorization has long been viewed as a key cognitive strategy for organizing social perception in a manner that confers both efficiency (e.g. Macrae, Milne, & Bodenhausen, 1994) and coherent meaningfulness (e.g. Oakes, 1996). We have argued that in much of the past research on the role of social categories in cognition and behavior, experimental procedures have greatly constrained the process of categorization by limiting the category cues that are available or constructing experimental situations so that they render one particular basis for categorization highly salient. Such an approach is certainly illuminating, and it will no doubt continue to be used. Yet, perceivers routinely encounter others who are richly multifaceted, dynamically changing, and at least partially ambiguous or unknown. How social categorization unfolds in such circumstances has increasingly become the focus of social psychological investigation, and we have attempted to highlight a number of conceptual and empirical perspectives emerging from this work.

Upon reflection, it is apparent that the different elements of the VUCA challenge are often interlocking in nature. Situational volatility directly bears on how complex, multifaceted targets are categorized, and it modulates the availability of information about a target, thus creating differing degrees of uncertainty and ambiguity. To explore these interconnected aspects of social perception, it is essential to examine categorization and stereotyping in response to multidimensional targets who are encountered in different kinds of contexts, and this is exactly the kind of research that is becoming more common in the recent literature. One theme emerging from the work we have reviewed is that social categorization processes are quite robust to the potential perturbations posed by the VUCA challenge. Perceivers seem to manage to find effective, if not entirely unbiased, ways of coping with complicated, incomplete, ambiguous, and changing identity cues. This, of course, makes a good deal of sense, as categorization would have little value to the social perceiver if it were easily defeated by the complexities of the actual contexts in which social perception typically occurs. Still, much remains to be learned about how categories and stereotypes shape our reactions to the fascinatingly complicated and potentially enigmatic people we deal with on a daily basis.

Acknowledgment

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Social Categorization in vivo

Short Biography

Galen Bodenhausen is the Lawyer Taylor Professor of Psychology and Marketing at Northwestern University, where he also serves as co-director of the Center on the Science of Diversity. He earned his PhD in social psychology at the University of Illinois at Urbana-Champaign. His research addresses the cognitive functions of social attitudes and stereotypes, particularly their roles in influencing attention, perception, memory, judgment, and behavior. A frequent focus of his recent research is on the relatively automatic and implicit aspects of prejudice and stereotyping. Bodenhausen is a fellow of the Association for Psychological Science, the American Psychological Association, the Society for Personality and Social Psychology, and the Society for the Psychological Study of Social Issues. He currently serves as editor-in-chief of Personality and Social Psychology Review.

Destiny Peery is a PhD student in the Department of Psychology at Northwestern University. Her research interests include the perception and categorization of ambiguous targets (e.g., racially ambiguous or multiracial people), as well as other issues of social cognition and stereotyping/prejudice more broadly. Destiny received her BA in psychology from the University of Minnesota.

Endnote

* Correspondence address: Galen V. Bodenhausen, Department of Psychology, Northwestern University, 2029 Sheridan Rd., Evanston, IL 60208–2710, USA. Email: galen@northwestern.edu

References


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