Reports

Motivated social memory: Belonging needs moderate the own-group bias in face recognition

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ABSTRACT

The current research examines why people have superior recognition memory for own-group members compared to other-group members. In two studies, we provide evidence for one motivational mechanism underlying own-group bias—social belonging needs. In Study 1, participants assigned to a minimal group had superior memory for own-group compared to other-group faces, replicating previous research on the own-group bias. This pattern was moderated by participants' need to belong: participants who reported a higher (versus lower) need to belong showed greater own-group memory bias. In Study 2, participants who were socially excluded had superior memory for own-university compared to other-university faces than participants who were selected to work alone by a computer. Together, these studies suggest that chronic belonging needs and social exclusion motivate own-group bias. (124 words)

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Introduction

People are better at remembering members of their own race than another race, an effect termed the own-race bias (ORB; also known as the cross-race effect or same-race bias; Brigham & Malpass, 1985; Malpass & Kravitz, 1969; Meissner & Brigham, 2001; Ng & Lindsay, 1994). Misidentifying people from another race can have harmful implications, including wrongful convictions based on eyewitness testimony (Brigham & Ready, 1985). Researchers have demonstrated this bias across a wide variety of paradigms and groups, including experimentally-created minimal groups, suggesting that own-group bias persists even when group distinctions are newly learned and exposure to own-group and other-group members is equivalent and brief (Bernstein, Young, & Hugenberg, 2007; Van Bavel, Packer, & Cunningham, 2008). Although there is extensive research on the contributions of perceptual expertise and social categorization to this bias, there has been very little research on the specific goals that motivate people to differentially encode own-group versus other-group members as individuals. In the current paper, we present two studies examining social belonging needs, one possible motivational mechanism underlying own-group memory bias.

Theoretical models of own-group bias

Two dominant models have been proposed to account for own-race (or own-group) memory bias (see Hugenberg, Young, Bernstein, & Sacco, 2010 for a recent review). For the past forty years, *perceptual expertise* has been widely accepted as the primary psychological mechanism underlying own-race bias (Malpass & Kravitz, 1969). According to this perspective, people become expert at distinguishing the physiognomic features of own-race faces because people tend to have extensive contact with members of their own-race relative to members of other races (Malpass & Kravitz, 1969; Sangrigoli, Pallier, Argenti, Ventureyra, & de Schonen, 2005; Valentine & Endo, 1992). The evidence for expertise has been mixed (Ng & Lindsay, 1994): although some studies have found a correlation between own-race expertise/contact and own-race bias (Sangrigoli et al., 2005), interracial contact accounts for only 2% of the total variance in own-race bias (Meissner & Brigham, 2001).

More recently, *social categorization* has been proposed to account for own-race bias (Hugenberg & Sacco, 2008; Levin, 1996; Sporer, 2001). According to this perspective, when people see a face, they immediately categorize the target as an in-group or out-group member, which subsequently influences the depth and type of processing engaged: own-race faces are processed as individuals and other-race faces as members of a social category (Sporer, 2001). The mere categorizing of faces as in-group or out-group members is sufficient to create an own-group bias in face memory—even when the social categories are completely arbitrary (Bernstein

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et al., 2007). Several studies have also shown that cognitive factors that enhance social categorization, such as stereotypic context (Shriver, Young, Hugenberg, Bernstein, & Lanter, 2008) and category salience (Hehman, Maniab, & Gaertner, 2010; Rule, Garrett, & Ambady, 2010), moderate own-group bias. The current research examines the possibility that motivational factors may also influence own-group bias.

As noted above, there is considerable research on the role of perceptual expertise and social categorization on own-group bias, but relatively little research examining whether goals motivate people to differentially encode own-group members as individuals. According to the *Categorization-Individuation Model* (CIM), however, own-race and own-group bias are influenced by perceptual expertise, social categorization, *and* motivated individuation (Hugenberg et al., 2010). Consistent with the CIM, recent research has shown that it is possible to attenuate the own-race bias by telling perceivers about the bias before encoding and instructing them either to individuate other-race faces (Hugenberg, Miller, & Claypool, 2007), or to pay attention to how they categorize biracial faces (Pauker et al., 2009). Nevertheless, it remains unclear whether these manipulations altered perceivers' goals (e.g., to successfully complete the memory task, comply with the experimenter, avoid appearing biased, etc.) or simply the means by which they pursued their pre-existing goals (Nuttin, 1980). The current research directly examines the role of motivation proposed by the CIM using a well established social motivation: social belonging needs (Baumeister & Leary, 1995; Maslow, 1968). Specifically, we examine whether social belonging needs increase bias in recognition memory for own-group relative to other-group faces.

Social belonging needs

Humans are social animals and form groups in virtually every culture (Brown, 1991). Social groups help fulfill a wide variety of psychological needs and help us cope with stressors (Correll & Park, 2005; Taylor et al., 2000). As a consequence, status and belonging needs are central to human well-being and may be secondary only to fundamental physical survival needs, such as food and shelter (Baumeister & Leary, 1995). Threatening these core social needs in the form of social exclusion or ostracism is a remarkably effective brand of punishment (Williams, 2007), and leads to psychological stress and numerous physiological maladies, including cardiovascular disease and immune system dysfunction (see Cacioppo & Hawkley, 2009). Given the adaptive nature of living in social groups and the dire consequences of expulsion, individuals are motivated to encode information relevant to belonging needs (Brewer & Caporael, 1995). As a consequence, we reasoned that people might be motivated to attend to and encode own-group members relatively more than other-group members, because own-group members afford an opportunity to fulfill belonging needs (Gibson, 1977).

Just as physical hunger directs attention toward and biases memory for food over nonfood cues (Atkinson & McClelland, 1948), the need to belong directs attention toward and biases memory for social over nonsocial cues (see Gardner, Pickett, & Brewer, 2000). For example, participants who were rejected in an ostensible computer chat room later had superior memory for social (versus non-social) events they read in a diary (Gardner et al., 2000; see also Pickett, Gardner, & Knowles, 2004). We sought to extend this work by showing that chronic need to belong or contextual social exclusion would motivate attention toward and memory for certain social cues over others, namely increased relative memory for own-group versus other-group members.

If people are socially motivated to belong, and a social category affords the opportunity for social affiliation (e.g., one's own-group), then people may experience differential motivation to individuate and encode faces that belong to that social category (Van Bavel & Cunningham, 2011b). This motivational approach to the own-group

bias recalls classic models of social cognition and person perception in which perceivers individuate motivationally relevant targets (Brewer, 1988; Fiske & Neuberg, 1990). It is therefore likely that various social motives influence social memory, leading to the individuation of own-group or other-group members under different circumstances (e.g., Ruscher & Fiske, 1990; Ruscher, Fiske, Miki, & Van Manen, 1991). In the current research, we examine whether belonging needs act as one such motivating factor. We propose that participants with higher chronic belonging needs or participants who have been socially excluded will be motivated to differentially encode own-group compared to other-group members, thus revealing a motivational mechanism underlying own-group memory bias.

Overview

In two studies, we sought to replicate previous research showing an own-group memory bias – defined as greater memory for own-group relative to other-group members – with minimal and real groups, and to establish social belonging needs as a motivational mechanism to account for this bias. We predicted that people with a high need to belong would show greater own-group bias. We examined the role of motivation both with minimal groups, to ensure that previous expertise with own-group and other-group faces was equivalent and could not account for any observed effects, and with real groups, to investigate the role of this social motive in the context of pre-existing social identities. Additionally, we tested this motivational account using both chronic, trait-related individual differences in the need to belong, and experimentally heightened, state-related experiences of social exclusion designed to increase contextual belonging needs.

In Study 1, participants were assigned to a team either before or after studying own-group and other-group faces (Young, Bernstein, & Hugenberg, 2010). Participants also completed individual difference measures of need to belong, loneliness, and self-esteem. Including these three measures also allowed us to distinguish the motivational effects of the need to belong from a mere absence of social contact (i.e., loneliness) and self-esteem. *Sociometer Theory* argues that self-esteem acts as an index of the successful fulfillment of belonging needs (Leary & Baumeister, 2000), and including a measure of self-esteem allowed us to determine whether the relationship between the need to belong and own-group bias could be explained by self-esteem. In Study 2, we manipulated social exclusion by having people or a computer ostensibly exclude participants from a group task. Research suggests that social exclusion may motivate people to repair and maintain connections to others (Cacioppo & Hawkley, 2009). In both studies, we predicted that belonging needs would enhance relative memory for members of social categories who afford the richest opportunity for affiliation – own-group members – over members of other social categories.

Study 1: chronic need to belong predicts own-group memory bias

Study 1 sought to replicate the own-group bias in face recognition within a minimal group paradigm (Tajfel, Billig, Bundy, & Flament, 1971), and to establish whether belonging needs might predict the own-group bias. To this end, we assigned participants to a minimal group either before or after learning the members of both teams. We also asked participants to complete individual difference measures of need to belong, loneliness and self-esteem. In addition, we examined whether the need to belong would exert a stronger influence on own-group bias during learning or recognition (Young et al., 2010). We hypothesized that individual differences in the need to belong would predict the own-group memory bias.