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Reports

Guilty by mere similarity: Assimilative effects of facial resemblance on automatic evaluation ☆

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HIGHLIGHTS

- Unknown faces elicited the same automatic evaluations as known faces they resembled.
- Valence-congruent resemblance effects emerged for positive and negative known faces.
- Results suggest assimilation of unknown faces to existing representations of known faces.
- Similarity-based activation of evaluative knowledge can override fluency effects.

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ABSTRACT

Drawing on previous evidence for affective generalization in face perception, the current research investigated the effects of facial similarity on automatic evaluations of unknown individuals who resemble a known person of positive or negative valence. Using 50% morphs that combined a known face of positive or negative valence with an unknown face of neutral valence, the morphed faces elicited the same automatic evaluations as the known faces they resembled. Automatic evaluations of known faces were indistinguishable from responses to perceptually similar unknown faces, suggesting that resemblance effects on automatic evaluations involve an assimilation of unknown faces to existing representations of known faces. Moreover, valence-congruent resemblance effects emerged for both positive and negative targets, suggesting that similarity-based activation of evaluative knowledge can override the affective positivity resulting from the higher fluency of processing familiar faces. Implications for research on face perception, transference, and processing fluency are discussed.

Introduction

Imagine a situation in which you encounter an unfamiliar passer-by somewhere on a crowded street. You have never met this person before, but you notice an immediate positive (negative) reaction toward that person. You have no idea where your reaction is coming from until you realize that this person has a strong resemblance to an old friend (foe) from college. Although this scenario is merely hypothetical, we suspect that many readers can recall experiences that are similar to our introductory example. The central point of this example is that our reactions to unknown individuals are often influenced by their resemblance to people we know, and these influences may occur even when we fail to consciously recognize their resemblance as a source of our reaction.

Expanding on previous evidence for the impact of facial resemblance on responses to unknown individuals (e.g., Günaydin, Zayas, Selcuk, & Hazan, 2012; Kraus & Chen, 2010; Verosky & Todorov, 2010), the main goal of the current research was to investigate facial-resemblance effects on automatic evaluations. Specifically, we investigated whether affective generalization resulting from facial resemblance occurs rapidly without perceivers' intention to evaluate the target person. In addition, we were interested in whether such effects reflect the objective degree of similarity between known and unknown faces or if they instead involve an assimilation of unknown faces to existing representations of known faces. Whereas the former account implies a linear increase in facial-resemblance effects as a function of increasing similarity, the latter account suggests that unknown faces may elicit the same automatic evaluations as the known faces they resemble.

Resemblance effects in impression formation

The notion that evaluative responses to unfamiliar people can be influenced by their resemblance to known individuals has considerable support in the literature on impression formation. A classic study by Lewicki (1985) demonstrated that participants' choice of interaction

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partners was influenced by the quality of their preceding experience with another person that resembled one of the two potential partners (i.e., short hair, glasses vs. long hair, no glasses). When the preceding interaction was pleasant, participants were more likely to choose the person that resembled the previous interaction partner. If, however, the preceding interaction was unpleasant, participants were more likely to choose the person that looked dissimilar to the previous interaction partner. Interestingly, participants did not seem to be aware of this influence, but instead perceived their choice as completely random and unaffected by the perceptual similarity of the interaction partners.

A more systematic investigation by Verosky and Todorov (2010) provided further support for resemblance effects in face perception. In their study, participants formed impressions of various faces on the basis of positive or negative descriptions, and then rated the trustworthiness of morphed faces that combined novel faces with the familiar faces of the impression formation task. Although the morphed faces were created to be more similar to the novel faces compared with the familiar faces (65% and 80% novel faces vs. 35% and 20% familiar faces, respectively), participants evaluated the morphs more favorably when they resembled a face that was presented with positive descriptions than when they resembled a face that was presented with negative descriptions. Moreover, affective generalization from familiar to unfamiliar faces increased as a function of similarity, in that resemblance effects were stronger for morphed faces that showed higher similarity to the familiar faces.

Resemblance effects in transference

Resemblance effects also play a major role in research on transference in romantic relationships (Andersen & Chen, 2002; Chen & Andersen, 1999). The concept of *transference* is defined as the spontaneous activation of the representation of a significant other in response to another person as a result of shared attributes of the two individuals. A central determinant of transference effects is perceptual resemblance, which has been shown to produce representation-consistent trait inferences (Andersen & Cole, 1990) and representation-consistent evaluations (Andersen & Baum, 1994) of unknown individuals. In addition, transference has been shown to involve shifts in the working self-concept, such that people who resemble a significant other elicit thoughts, feelings, goals, and behaviors that are typical for one's interactions with the significant other (Andersen & Chen, 2002).

A recent study by Kraus and Chen (2010) showed that the three hallmark effects of transference can also occur as a result of facial resemblance. In their study, participants initially identified a positively evaluated significant other and were asked to rate this person on various characteristics and their own characteristics when they are with that person. In addition, participants were asked to rate a large set of faces in terms of their resemblance to their significant other. Approximately two weeks later, participants returned for an ostensibly unrelated study in which they were shown one of the faces that had to be rated during the first session. Participants were told that they would later interact with this person as part of a buddy program being implemented at the university. Using the facial resemblance ratings obtained during the first session, the target face was selected to be either highly similar or highly dissimilar to a participant's significant other. After familiarizing themselves with their ostensible interaction partner, participants were asked to rate the target on the various characteristics and their own characteristics at that moment. Results showed that participants' responses were consistent with their previous ratings when the target face was similar to their significant other, but not when the target face was dissimilar to their significant other.

Expanding on Kraus and Chen's (2010) research, Günaydin et al. (2012) provided evidence for transference effects on trait judgments resulting from objective facial resemblance to a significant other. Instead of using subjective ratings of similarity provided by the participants, Günyadin et al. created several 50% morphs that combined an unfamiliar face with the face of a participant's romantic partner. The results showed that the morphed faces were rated more favorably compared with novel faces that did not resemble participants' romantic partner. This effect was positively related to relationship satisfaction and unrelated to measures of subjective awareness (i.e., self-reported resemblance of the target to the significant other) and objective awareness (i.e., forced-choice discrimination between faces that do versus do not resemble the romantic partner) of the resemblance.

The current research

Drawing on the reviewed evidence for facial-resemblance effects on responses to unknown individuals (e.g., Günaydin et al., 2012; Kraus & Chen, 2010; Lewicki, 1985; Verosky & Todorov, 2010), the current research had three goals. Our first goal was to investigate whether facial resemblance influences automatic evaluations of unknown faces. Although some studies have used relatively short exposure times for the presentation of the target faces (e.g., 500 ms in Günaydin et al., 2012), previous research has exclusively relied on self-report measures of evaluation. Evaluative responses assessed by these measures are "controlled" in the sense that they involve the intention to evaluate the target and unlimited time to make the relevant judgment (see De Houwer, Teige-Mocigemba, Spruyt, & Moors, 2009). To investigate facial-resemblance effects on automatic evaluations, the current research used an evaluative priming task (Fazio, Jackson, Dunton, & Williams, 1995). Evaluations captured by this task are "automatic" in the sense that they occur without participants' intention to evaluate the relevant target object (see De Houwer et al., 2009). In addition, responses on evaluative priming tasks have to be made quickly and the exposure times tend to be even lower compared to those in previous research in facial-resemblance effects (200 ms in the current research).

An important aspect in this regard is the difference between automatic features of the cause of an evaluative response and automatic features of the evaluative response itself (Gawronski & Bodenhausen, 2012). Previous research has shown that facial resemblance can influence self-reported evaluations even when perceivers fail to recognize the resemblance between known and unknown faces (e.g., Günaydin et al., 2012). On the basis of these findings, one could argue that causal effects of facial resemblance are "automatic" in the sense that facial resemblance influences self-reported evaluations outside of conscious awareness. Moreover, because intentional use of facial resemblance as a judgment-relevant cue requires conscious awareness of the resemblance, its causal effect could be argued to be unintentional if perceivers fail to recognize the resemblance (Bargh, 1994). However, these considerations speak only to the automatic nature of the cause of an evaluative response; they do not speak to the automatic nature of the evaluative response itself. Thus, it is possible that facial-resemblance effects are limited to conditions when perceivers have the intention to evaluate the target person and when they have enough time to think about their response, as is the case for controlled evaluations captured by self-report measures (Ferguson & Zayas, 2009). For example, although facial resemblance may influence deliberate responses in personal interactions that involve the goal to form an impression of the target and sufficient time to do so, spontaneous responses to a random passerby on a crowded street might be unaffected by facial resemblance. A stringent test of the latter assumption requires alternative measures, such as the evaluative priming task employed in the current study. Evaluative responses captured by this measure are "automatic" in the sense that they occur rapidly without the intention to evaluate the target object (De Houwer et al., 2009).

Granted that our study shows evidence for facial-resemblance effects on automatic evaluations, a second goal was to investigate whether these effects reflect the objective degree of similarity between known and unknown faces or if they instead involve an assimilation of unknown faces to existing representations of known faces. According to the