

Familiar eyes are smiling: On the role of familiarity in the perception of facial affect

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Abstract

Quickly and accurately perceiving others' facial affect is paramount for successful social interaction. This work investigates the role of familiarity in helping us to interpret others' facial emotions. In Experiments 1 and 2, participants viewed several faces, some familiar and some novel, and judged how happy each face appeared. As predicted, results showed that familiar faces were perceived as happier than were novel faces. In Experiment 3, participants again viewed several faces, some familiar and some not, and rated the perceived anger or happiness of these faces. As expected, familiar faces were perceived as happier and less angry than were novel faces. Thus, these results suggest that familiarity is one cue we use to interpret the facial affect of others. Copyright © 2007 John Wiley & Sons, Ltd.

'And when Irish eyes are smiling, sure, they steal your heart away'. Chauncey Olcott and George Graff, Jr.

Humans need social contact. It is what we crave and motivates much of our behavior. Without it, we can suffer profound deficits in almost all aspects of life, including increased chances of illness and even death. Thus, deciding with whom in our social environment to affiliate is a perennial human problem (Harcourt & De Waal, 1992). Fortunately, we have available an invaluable asset to assist us, the human face.

The musculature of the human face can transmit a multitude of non-verbal signals; and perhaps its most important signals relay the emotions of the communicator. Quickly ascertaining another's emotional state from facial cues guides us through the complex social world, helping us determine with whom we should and should not affiliate. Faces that appear happy may encourage us to approach, whereas faces that appear angry may encourage us to stay away. Given our reliance on the perceptions of others' facial affect to direct social interaction, an important question concerns how such perceptions are shaped. How do we, for instance, determine if another's 'eyes are smiling?'

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We propose that mere familiarity with another person may be one factor that influences how his or her facial expressions are perceived; specifically, we hypothesize that familiar faces will be perceived as expressing more positive emotions than will unfamiliar faces. This hypothesis flows effortlessly from the vast mere-exposure literature. This literature shows that familiar stimuli trigger a variety of positive reactions (e.g., Zajonc, 1968; for a review see Bornstein, 1989). Familiar objects and people are liked more (e.g., Moreland & Zajonc, 1982) and found more attractive (e.g., Moreland & Beach, 1992) than are unfamiliar stimuli; familiar names are more likely to be categorized as famous (Jacoby, Kelley, Brown, & Jasechko, 1989) and so forth. Our hypothesis that familiar faces will be perceived as displaying more positive affect is based upon just this logic: to the extent that familiar faces evoke positive feelings, we may detect feeling-congruent expressions (i.e., happy smiles) in them, especially if those expressions are ambiguous.

FAMILIARITY, FLUENCY, AND AFFECT

The prevailing explanation for why familiar stimuli trigger positive reactions concerns processing fluency, or the ease with which a stimulus is perceived. Making a stimulus familiar is one way to increase its fluency. Processing novel stimuli is relatively effortful. When first encountering a particular unknown stimulus, one must decipher all its important features and create a new mental representation of the object. By comparison, a previously-seen (familiar) stimulus is much easier to process. The current visual input of a familiar stimulus matches an already-existing mental representation of the object, which facilitates its subsequent processing, because the already-stored information about it merely comes to mind. This easy, speeded processing we feel when encountering a familiar object is experienced as perceptual fluency (e.g., Bornstein & D'Agostino, 1994; Jacoby & Dallas, 1981).

Importantly, numerous scholars have argued that this sensation itself is positive (e.g., Garcia-Marques & Mackie, 2000; Reber, Schwarz, & Winkielman, 2004). The most direct evidence for this notion was provided by Winkielman and Cacioppo (2001), who showed that the processing of high-fluency stimuli was associated with activation of the zygomaticus ('smiling') muscles but had no effect on the corrugator ('frowning') muscles. Because processing high-fluency stimuli creates a positive feeling, but the source of this positivity is rather subtle, fluency-induced positivity can often be misattributed to other positive reactions to a stimulus. That is, perceivers may believe that the positive sensation they are experiencing, which is actually caused by perceptual fluency, is emanating from some inherent positive quality of the stimulus (Reber et al., 2004).¹ This is why familiar (fluent) stimuli are perceived as more likeable, attractive, famous, etc. Given this logic, we believe that a familiar face might be perceived as displaying more positive affect because of a misattribution of positivity from processing fluency.

FACIAL AFFECT AND PERCEIVED FAMILIARITY

Another line of work that bolsters our hypothesis examines the perceived familiarity and actual recognition of emotional faces. Scholars in this area have shown that smiling, happy faces are perceived as more familiar than are faces with neutral expressions. For example, Garcia-Marques, Mackie,

¹This process is similar to others that propose that affect (mood) can be misattributed to stimuli. For example, Schwarz and Clore's Mood as Information model (see 1996 for a review) suggests that we use our current mood state to guide judgments. If we are in a good mood, we may take this as information that the stimulus we are processing is positive. These mood-congruency effects can be eliminated when the source of one's mood becomes apparent (e.g., Schwarz & Clore, 1983). Under these conditions, the informative value of one's mood state to judging the stimulus at hand is undermined.

Claypool, and Garcia-Marques (Experiment 1, 2004) showed participants a set of faces, some of which were smiling and some of which were emotionless. Later in the experiment, participants were tasked with deciding which of a series of familiar and novel faces were previously seen. Results showed that participants were more likely to mistakenly believe a novel face was familiar if it was smiling than if it displayed no emotion. In related work, Baudouin, Gilibert, Sansone, and Tiberghien (Experiment 1, 2000) exposed participants to smiling and neutral-expression faces of both famous and unknown individuals and asked participants to categorize each face as familiar or unfamiliar. Similar to Garcia-Marques et al. (2004), participants mistakenly labeled more of the smiling unknown faces as familiar than the neutral unknown faces. And in a second experiment, participants were asked to rate the perceived familiarity of smiling and neutral-expression famous and unknown individuals on a continuous scale. Results showed that smiling faces were perceived as more familiar than were neutral faces (Baudouin et al., 2000).

In these studies, the manipulated affect displayed on faces led to different perceptions of familiarity. Given the intimate connection between familiarity and positive affect and the bi-directional nature of this relation (Garcia-Marques et al., 2004; Monin, 2003), we predict that manipulations of facial familiarity will trigger differential perceptions of facial affect.

PERCEIVING AMBIGUOUS FACIAL AFFECT

Though seminal work by Ekman (1989, 1993) and Ekman and Friesen (1971) has shown that humans are universally adept at labeling the emotions conveyed by unambiguous expressions, such displays are fairly rare in everyday social interaction (Wehrle & Kaiser, 2000). Consequently, despite this facility for decoding unambiguous expressions, understanding factors that influence the perception of ambiguous facial expressions is of increasing interest. For example, work by Niedenthal, Brauer, Halberstadt, and Innes-Ker (2001) has found that perceivers' current affective states can influence the perception of ambiguous expressions, sensitizing us to expressions that differ from our own emotional experience. In related work, Hugenberg and Bodenhausen (2003) found that prejudiced social attitudes may influence how facial affect is interpreted, finding that as perceivers' levels of prejudice increase, so too do their tendencies to perceive anger lingering on Black (but not White) faces. Also, an individual's developmental history has a powerful influence on how ambiguous expressions are perceived. Pollak and Sinha (2002) found that physically abused children could identify anger in faces with less perceptual input than could non-abused children.

Given the increasing evidence that the perception of facial emotion can be influenced by the affect, attitudes, and experience of the *perceiver*, it seemed plausible that a sense of fluency in the perceiver (induced via familiarity with a face) might also bias perceptions of others' facial affect. Thus, three experiments tested the hypothesis that ambiguous facial expressions on familiar faces will seem happier (Experiments 1–3) and less angry (Experiment 3) than matched expressions on unfamiliar faces.

EXPERIMENT 1

Method

Participants and Design

One-hundred sixty-seven undergraduate students (50 females) participated in this 2 (status of face: old, new) \times 2 (set of photos repeated: A, B) mixed-design experiment for course credit. Status of face was

manipulated within-subjects and set of photos repeated was manipulated between-subjects as a counterbalancing factor.

Materials

Stimuli were 48 color photographs of Caucasian males displaying slight smiling expressions (photos courtesy of Computer Vision Laboratory (CVL), University of Ljubljana, Slovenia, <http://lrv.fri.uni-lj.si/facedb.html>). Photos were 5.5 × 7.75 inches in size. Half (24) of these photos were randomly assigned to Set A and half to Set B.

Procedure

Participants were greeted by an experimenter and seated at desks with Dell PCs, separated from other participants by partitions. Instructions informed participants that the experiment concerned ‘perceptions of faces’ and that they would be shown several faces throughout the experiment and be asked to make various judgments about each face. Participants were informed that they would see each face in a series multiple times and would be asked to render a different type of judgment of each face each time.

Participants then saw the 24 faces in Set A or B, one at a time, in a different random order for each participant. Accompanying each face was the question, ‘How wide is this person’s nose?’ [1 (Very Narrow)–7 (Very Wide)]. After rendering these 24 judgments, participants saw the same set of faces again, in a different random order, but this time were asked to judge how far apart each individual’s eyes were set [1 (Very Close Together)–7 (Very Far Apart)]. This process repeated itself three additional times, with participants next rating roundness of face [1 (Not Very Round)–7 (Very Round)], width of mouth [1 (Very Narrow)–7 (Very Wide)], and finally ‘pointiness’ of nose [1 (Not Very Pointy)–7 (Very Pointy)]. Each stimulus appeared at the center of the computer screen and remained there until the participant responded, at which point the next stimulus was displayed. The true purpose of asking participants to render these five different ratings was merely to familiarize them with one set of photos.²

After rendering the five different types of ratings of the faces, participants engaged in an approximately 8-minute long filler task in which they were asked to identify each of the 50 US states on a map. After completing the filler task, participants were instructed of the final phase of the experiment.

In the final phase, participants were informed that the researchers were interested in perceptions of emotions on faces. They were then shown 48 photographs of individuals, the 24 made familiar by the previous ratings, as well as 24 novel faces, displayed in a different random order for each participant. The set of 24 faces that was familiar versus novel was counterbalanced on a between-subjects basis. As each face appeared on the screen, participants were asked the following question, ‘How happy is this person’s facial expression?’ Participants responded using a 7-point Likert scale [1 (Not at all Happy)–7 (Very Happy)]. Participants were given unlimited time to make the judgments. At the conclusion of these ratings, participants were thanked, debriefed, and excused.

Results and Discussion

For each participant, we averaged the happiness ratings rendered for the 24 familiar (old) and the 24 unfamiliar (new) faces separately, and subjected these ratings to a 2 (status of face: old, new) × 2 (set of

²The data from these ratings were not actually recorded by the computer, and thus no statistical analyses were performed on them.

photos repeated: A, B) mixed ANOVA. As predicted, we observed a main effect of status of face, $F(1,165) = 24.33$, $p < .001$, $d = 0.41$, such that expressions on old (familiar) faces were perceived as happier ($M = 4.08$, $SD = 0.57$) than expressions on new (unfamiliar) faces ($M = 3.98$, $SD = 0.57$). No other significant effects emerged. Therefore, Experiment 1 provided initial evidence that familiarity plays a role in the perception of facial affect.

Results from Experiment 1 confirmed our hypothesis that familiar faces are perceived as expressing more happiness than are unfamiliar faces. In Experiment 2, we sought to replicate this finding and test its robustness. In Experiment 1, we used five repetitions to make one set of faces familiar to participants, and in addition, participants actively engaged with the familiar photos by examining them carefully to render different types of judgments of them. In Experiment 2, we wanted to determine if our results would replicate under more subtle circumstances, when familiarity was less obvious and exposure to the stimuli was more passive.

EXPERIMENT 2

Method

Participants and Design

Forty undergraduate students (21 females) participated in this 2 (status of face: old, new) \times 2 (set of photos repeated: A, B) mixed-design experiment for course credit. As in Experiment 1, status of face was manipulated within-subjects and set of photos repeated was manipulated between-subjects as a counterbalancing factor.

Procedure

Participants were greeted by an experimenter and seated at desks with Dell PCs, separated from other participants by partitions. Instructions informed participants that the experiment concerned 'perceptions of faces' and that they should keep their eyes fixated on the computer screen to view a series of photos. They were told that they would be shown numerous faces in a series and that this was intended to simulate seeing several faces in a crowd.

Participants then completed the exposure phase, designed to familiarize them with half of the faces, in which they saw the 24 faces in Set A or B (the same faces used in Experiment 1). Each face was shown for 1 second in the center of the screen, and the faces were presented in a different random order for each participant. After viewing the faces, participants engaged in the same filler task used in Experiment 1. Upon completion, participants were instructed on the final phase of the experiment.

In this phase, participants were instructed that the researchers were interested in perceptions of facial emotion. They were then shown 48 photographs of individuals, the 24 to which they were previously exposed, as well as the 24 novel stimuli. The set of 24 faces that was familiar versus novel was counterbalanced on a between-subjects basis. As each face appeared on the screen, participants were asked to rate the facial happiness of each stimulus, just as in Experiment 1. Each stimulus appeared at the center of the computer screen, and remained there until the participant responded, at which point the next stimulus was displayed.

Results and Discussion

Happiness ratings were analyzed via a 2 (status of face: old, new) \times 2 (set of photos repeated: A, B) mixed ANOVA. As predicted, we observed a main effect of status of face, $F(1,38) = 14.15$, $p < .001$, $d = 0.57$, such that expressions on old (familiar) faces were perceived as happier ($M = 3.87$, $SD = 0.66$) than expressions on new (unfamiliar) faces ($M = 3.73$, $SD = 0.65$).³ Thus, Experiment 2 replicated the findings of Experiment 1 and again supported our hypothesis that familiarity plays a role in the perception of facial affect, specifically, that familiar faces seem to convey more happiness than do unfamiliar faces. Interestingly, we obtained these results even though familiarity was rather subtle and was induced in a fairly passive manner. Unlike in Experiment 1 when participants saw the familiar faces on five separate occasions and made ratings about them each time, in this experiment, participants saw the familiar faces just once, for only one second, with instructions to simply observe the faces. Yet, even under these quite minimal conditions, familiarity still made faces seem happier.

Although the results of Experiments 1 and 2 provided good initial evidence for the notion that familiarity increases the positivity of affect perceived on others' faces, these data have shown the effect on only one emotion and in but one direction: familiarity increased perceptions of happiness. If a sense of perceptual fluency is triggered by repeated exposure to a face and this sensation is positive, then familiarity with a face should not only increase perceptions of positive emotions (like happiness), but should also decrease perceptions of negative emotions (like anger) in the face. A third experiment was conducted to test these hypotheses.

EXPERIMENT 3

The goals of Experiment 3 were threefold. First, we sought to replicate our original finding that familiar faces seem happier than unfamiliar faces. Second, we attempted to extend this finding to ratings of a different emotion, namely anger. Our hypothesis suggests that familiarity facilitates the perception of positive emotions in faces. Therefore, familiar faces should be rated higher on positive (e.g., happiness) and lower on negative (e.g., anger) emotions. Third, this experimental design served to rule out the possibility that familiarity merely increases the perceived intensity on any relevant dimension of judgment (Mandler, Nakamura, & Van Zandt, 1987, but see Seamon, McKenna, & Binder, 1998). If our hypothesis is correct, familiar faces should seem both happier and less angry than unfamiliar faces. If, however, familiarity simply intensifies the judgment at hand, familiar faces should seem angrier when making anger judgments.

Method

Participants and Design

Ninety-seven undergraduate students (50 females) participated in this 2 (status of face: old, new) \times 2 (rated emotion: anger, happiness) \times 2 (set of photos repeated: A, B) mixed-design experiment for course credit or \$8. Status of face was manipulated within-subjects, whereas rated emotion and set of photos repeated were manipulated between-subjects, the latter as a counterbalancing factor.

³A status of face \times set of photos repeated interaction emerged showing the predicted main effect was stronger when Set A was repeated.

Materials and Procedure

Stimuli were 36 color photographs of Caucasian males displaying neutral expressions, acquired from the same face database used in Experiments 1 and 2. Half (18) of these photos were randomly assigned to Set A and half to Set B. Unlike Experiments 1 and 2, the faces in Experiment 3 displayed neutral (ambiguous) expressions so that either happiness or anger could plausibly be discerned on them.

The procedure for Experiment 3 was identical to that used in Experiment 2 except where noted. In the exposure phase, participants viewed the 18 photos in Set A or B, counterbalanced on a between-subjects basis. Then, after the filler task, participants were told that they would be shown numerous photos of individuals displaying neutral facial expressions. They were then instructed that even when individuals display neutral expressions, we can often detect slight hints of emotion. Specifically, participants were told that they might be able to detect a glimmer of happiness or anger, depending on condition, in the neutral expressions. Participants were then shown a series of 36 photographs of individuals, the 18 from Set A intermingled with the 18 from Set B, in a different random order for each participant. Participants in the happiness condition were asked to rate how happy each face appeared; whereas those in the anger condition were asked to rate how angry each face appeared. Ratings were rendered using a 7-point scale, 1 (Not at all)–7 (Very).⁴

Results and Discussion

Emotion ratings were analyzed via a 2 (status of face: old, new) \times 2 (rated emotion: anger, happiness) \times 2 (set of photos repeated: A, B) mixed ANOVA. As predicted by our hypothesis, we observed an interaction between status of face and rated emotion, $F(1,93) = 9.21, p = 0.003$. As shown in Figure 1, a simple-effects test revealed that expressions on familiar faces were perceived as happier ($M = 3.75, SD = 0.44$) than were expressions on unfamiliar faces ($M = 3.67, SD = 0.47$), $F(1,93) = 5.34, p = .023, d = 0.25$, replicating Experiments 1 and 2. However, a simple-effects test also showed that expressions on familiar faces were perceived as less angry ($M = 3.44, SD = 0.63$) than were expressions on unfamiliar faces ($M = 3.55, SD = 0.61$), $F(1,93) = 4.44, p = .038, d = 0.36$. Like those of Experiments 1 and 2, these results suggest that familiar faces are perceived as expressing more positive emotions than are unfamiliar faces.⁵

GENERAL DISCUSSION

Three experiments provided clear support for our hypothesis that familiarity can be an important determinant of how facial affect is perceived. Familiar faces were perceived as displaying stronger positive (i.e., happy) and less intense negative (i.e., angry) expressions than were unfamiliar faces. Specifically, all three experiments showed that familiar faces seem happier than unfamiliar faces, and the third experiment showed that familiar faces also seem less angry than unfamiliar faces.

⁴We manipulated rated emotion on a between-subjects basis because we were concerned that if participants made both happiness and anger ratings for each face, that ratings of one emotion would contaminate ratings of the other emotion. Manipulating rated emotion on a between-subjects basis, we thought, was the cleanest way to determine the effect of familiarity on perceptions of different emotions.

⁵We observed a main effect of rated emotion; faces received higher ratings when judged on happiness than on anger. Additionally, we observed an interaction between status of face and set of photos repeated. When Set A was repeated, old faces received stronger emotional ratings than did novel faces. This pattern reversed when Set B was repeated. Importantly, none of these findings compromise interpretation of our predicted interaction between status of face and rated emotion.

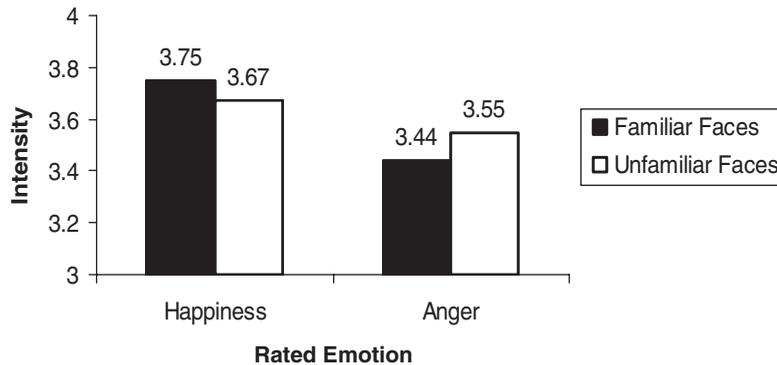


Figure 1. Mean emotion intensity as a function of rated emotion and familiarity of face

These findings are quite consistent with those in the mere-exposure literature. Quite reliably, familiar stimuli are rated favorably on a variety of dimensions (see Bornstein, 1989). In this case, the favorable reaction was to perceive familiar facial expressions as happier and less angry than unfamiliar ones. Like other mere-exposure findings, we believe our results occurred because of the sense of perceptual fluency that ensues upon processing a familiar stimulus. Perceptual fluency triggers a positive sensation which may be misattributed to a valence-consistent reaction to a stimulus, in this instance, that the familiar person's expression is happy and not angry.

Our hypothesis was that familiarity leads to perceptions of stronger positive facial affect. To that end, we showed that familiar faces seem happier and less angry than do unfamiliar faces. An interesting question concerns how familiarity would influence perceptions of other negative emotions. Anger, fear, and sadness, though all negative emotions, are quite unique. For example, fear (Marsh, Ambady, & Kleck, 2005) and sadness (e.g., Huebner & Izard, 1988), unlike anger, tend to elicit affiliation rather than aversion. Moreover, findings across topics and paradigms have shown that not all negative emotions trigger the same processes or responses (e.g., Bodenhausen, Sheppard, & Kramer, 1994; Mackie, Devos, & Smith, 2000; Mitchell, Brown, Morris-Villagran, & Villagran, 2001). Thus, future work in this domain should investigate if familiarity influences the perception of fear and sadness in others' facial expressions.

Another important question concerns the initial valence of targets' expressions. In all three experiments, the facial emotions displayed were rather subdued and fairly neutral. In Experiments 1 and 2, the stimulus persons displayed slight (subtle) smiles and in Experiment 3, displayed completely neutral expressions. Under these ambiguous conditions, familiarity was able to influence perceived facial affect. However, imagine that a target is displaying an unambiguously negative expression (like anger). Would a familiar, but obviously angry, face be perceived as less angry than an unfamiliar angry face? Surprisingly, little work has examined how initial negative valence of a stimulus affects mere-exposure effects. The few studies examining this issue have yielded mixed findings, with some work showing that additional exposure to negative stimuli makes them more negative, (e.g., Brickman, Redfield, Harrison, & Crandall, 1972; Grush, 1976) and some work showing the opposite (e.g., Bornstein, 1993; Brockner & Swap, 1976; Zajonc, Markus, & Wilson, 1974). Similarly, what might happen if a face was displaying unambiguous happiness? Would making such a face familiar still increase its perceived happiness? Future research should investigate these questions.

In these studies, we purposefully focused on ambiguous expressions, as these are the ones most frequently encountered in everyday interaction and the ones that pose the most challenge to perceivers. Given that perceivers are quite good at accurately identifying unambiguous displays of emotion, mistakes should be rare in these circumstances, and we therefore do not need to rely on other situational features to decode them. Ambiguous displays, by their very nature, are fraught with uncertainty and interpreting them

is not easy. Under these conditions, we likely need to rely on factors other than facial configuration for clues to understand the affect being conveyed. We believe that it is under these circumstances that familiarity will likely have its most pronounced effect on shaping the perceptions of others' facial affect.

As discussed earlier, we believe our findings occurred because of the perceptual fluency triggered by familiarity. But we also noted that familiarity is but one method to induce fluency. Displaying a stimulus for a longer period of time or on a higher figure-ground contrast are other ways to induce fluency, and both have been shown to induce positive reactions to stimuli (Reber, Winkielman, & Schwarz, 1998). It would be interesting to determine if these types of manipulations would also lead to perceptions of more positive affect on faces. Given our findings, we suspect this would be the case; more processing fluency, induced either via familiarity or perceptual means, should make ambiguous expressions appear more positive.

In this work, we have examined the effects of mere familiarity (exposure) on perceptions of facial affect. However, future work might also benefit by examining the effects of a more 'social' type of familiarity on perceptions of facial affect. Another person's face may be familiar because we once saw a photograph of that person in a newspaper article (which is akin to mere-exposure) or because it is the face of a known acquaintance. That is, in many cases, we have familiarity with a social target because we have engaged in previous social interaction with that person. Through these interactions, we undoubtedly gain actual knowledge of the person's characteristics, which could affect perceptions of his or her facial affect. If two perceivers view a social target and one perceiver knows the target to be dispositionally 'grumpy,' whereas the other perceiver has no knowledge of (familiarity with) the target, the first might perceive more anger on that target's face. Thus social familiarity, unlike mere-exposure familiarity, may not universally lead to perceptions of more positive facial affect. Indeed, there is good reason to think that negative experiences with, evaluations of, or beliefs about a target will lead ambiguous expressions to be interpreted in line with those expectations (Hugenberg & Bodenhausen, 2003).

Understanding the factors that shape perceptions of facial affect is important, as such perceptions likely have implications for social behavior. In fact, one interesting implication of these findings concerns what they might tell us about how familiarity influences social attraction. Berscheid and Reis (1998) argue that 'the most basic principle of attraction is familiarity,' and that familiarity is likely at least partially the cause for why proximity is a reliable predictor of relationship formation (p. 205). Of course, those in close proximity have more opportunities to interact and possibly form a bond, but the mere-exposure literature suggests that even passive, unreinforced exposure influences perceptions of attractiveness and liking (e.g., Moreland & Beach, 1992; Saegert, Swap, & Zajonc, 1973). Thus, mere familiarity might influence relationship initiation via liking or attractiveness. But our work suggests that perceptions of facial affect may also play a role. That is, mere familiarity may make us believe another's face is happy, which may invite approach behavior that could lead to the formation of a relationship. Such a possibility warrants further investigation.

Overall, these findings add to the literatures on perceptions of facial affect and mere-exposure. Although more research is certainly needed to clarify the extent to which perceiver characteristics can influence the interpretation of ambiguous expressions, the current research suggests that familiarity is one cue that shapes our perceptions of others' facial happiness. It appears that familiar eyes are indeed smiling.

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