Emotional mimicry

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DOI
10.1007/978-3-031-62634-0_3
Publication date
2025
Document Version
Final published version
Published in
Automatic imitation
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Chapter 3
Emotional Mimicry

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The present chapter will focus on emotional mimicry, that is, the imitation of nonverbal behaviors that signal emotions. Emotional mimicry has been a focus of research and theorizing about empathy and mutual understanding since Lipps (1907) proposed a role for imitation for the understanding of others. Lipps suggested that people automatically adopt the behavior of others and that this imitation leads—via a feedback process—to shared mental states, thereby facilitating the recognition of these mental states in others. For Lipps, the mediating process was introspection. This general notion was taken up by Freud (1921) and entered the psychotherapy literature, where it was referred to as the role of empathy in the therapeutic process (e.g., Haase & Tepper, 1972). Given the focus on empathy and understanding, as well as the prevalent research interests of the time, emotional mimicry was referred to mainly in the clinical context.

In this vein, the importance of mimicry for therapy (for a detailed review, see Chap. 15; this volume) was also underlined by Carl Rogers and others (Rogers, 1957; Scheflen, 1964). They focused, however, more on the notion that the adoption of congruent nonverbal behaviors leads to increased rapport, because it signals rather than causes understanding à la Lipps. As such, these early views already laid the groundwork for two of the theoretical approaches to mimicry that are still relevant today: mimicry as a means to recognize the emotions of others and mimicry as a social signal of understanding and affiliation.

Much of the research discussed in this chapter will focus on the mimicry of emotions via facial expressions (Hess & Fischer, 2013), but we expect similar processes

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O. Genschow, E. Cracco (eds.), *Automatic Imitation*,
https://doi.org/10.1007/978-3-031-62634-0_3

for other nonverbal channels, such as vocal expressions (Neumann & Strack, 2000) or emotional postures (Magnée et al., 2007). It is important to note that many behaviors, such as posture changes (Feese et al., 2012) and gestures (e.g., face touching; Chartrand & Bargh, 1999), can be mimicked, but not all carry emotional meaning. This is why we distinguish between behavioral mimicry and emotional mimicry. Although the antecedents and consequences of behavioral and emotional mimicry tend to overlap to some degree (Hess & Fischer, 2017), these two forms of mimicry also show considerable differences, which will be our focus in the present chapter.

In humans, emotional mimicry is a ubiquitous phenomenon that can be readily observed in everyday life. Interestingly, though, emotional mimicry is not restricted to humans. Primates also mimic facial expressions. For example, play-face mimicry has been observed in orangutans (Davila Ross et al., 2008) and in more egalitarian, but not in more "despotic," macaque species (Scopa & Palagi, 2016), suggesting a social context moderator. Mimicry of play signals has also been found in dogs (Palagi et al., 2015) and meerkats (Palagi et al., 2019). This common occurrence of mimicry in different species suggests that mimicry is a basic element of communication in species that overtly show emotions.

Because mimicry is defined as imitation or matching, the main criterion for the presence of mimicry implies that two (or more) individuals show the same behavior at (roughly) the same time. In emotional mimicry, there is usually a 300- to 500-ms delay between the visibility of the stimulus expression and the mimicry of that expression (Dimberg et al., 2002) although slightly longer lag times can also be observed. Yet, there are in fact many reasons why two people may show the same behavior, which we would not define as mimicry (Elfenbein, 2014). One example is when two people observe the same emotion-eliciting event and react in the same manner, without seeing each other's emotional expression (parallel emotional induction). In what follows, we will therefore first differentiate mimicry from other phenomena that may also result in matched behaviors. We will then briefly outline different theories of mimicry. Finally, we will discuss more recent theoretical approaches that focus on top-down effects on mimicry.

Theories of Mimicry

What Is Emotional Mimicry?

As noted above, both emotional and non-emotional behaviors are mimicked. The important difference between mimicry of emotional and non-emotional expressions, such as foot-tapping or face touching, is that the latter are not intrinsically meaningful. They tell us little about the person or their intentions, unless they are interpreted as an emotional signal, for example, as a sign of anxiousness.

Emotional signals are defined as behaviors that are perceived by an observer as signaling an emotional state. Although there is an ongoing debate about the degree to which emotional expressions are actually related to internal emotional states

(e.g., Crivelli & Fridlund, 2019; Hassin et al., 2013; Hess, 2017), we argue that there is ample evidence based on the use of these expressions in the arts, films, and literature as well as scientific evidence that people infer emotions from such expressions and that they react in function of this understanding (see Niedenthal & Brauer, 2012). A given expression does not have to be perceived as emotional. For example, a frown can signal both concentration and irritation. When a nonverbal expression is appraised as an *emotional* signal, it carries information about the expresser's intentions toward the perceiver (or some other person), such as to back away, approach, attack, or ignore (see Scarantino et al., 2022, on the attributed meanings of emotional expressions). As we will outline below, only when this emotional signal is perceived as affiliative, will emotional mimicry be a likely consequence.

Furthermore, these signals have to be considered in context. For example, in general, happy expressions are considered affiliative and people who show happiness are judged positively; however, showing happiness at a funeral is not an affiliative signal and leads to a negative judgment and the reduction or absence of mimicry (Kastendieck et al., 2020). By contrast, some emotional expressions such as disgust are generally not considered to signal affiliation (Knutson, 1996) and these are not typically mimicked (see Hess & Fischer, 2013). Mauersberger et al. (2015) found that only a small group of participants in their study mimicked disgust and that this effect was moderated by individual differences such that participants higher in neuroticism were more likely to mimic disgust. Similarly to disgust, anger can be antagonistic (Knutson, 1996) and result in reduced mimicry, but this effect depends on the context—for example, when anger seems to be directed at a common foe it may support closeness rather than reduce it and hence be mimicked (Bourgeois & Hess, 2008).

Non-emotional signals do not have the property to foster affiliation, and even though emotionally meaningless behaviors such as face touching are mimicked, some of the interpersonal sequalae of emotional mimicry we discuss here do not apply.

Related Phenomena That Are Not Emotional Mimicry

A number of phenomena have been conceptualized as either causally linked to emotional mimicry or as forms of mimicry (with the associated overlapping terminology). We argue, however, that these phenomena should not be conflated with emotional mimicry.

Emotional Contagion

A phenomenon that is often confused with mimicry is emotional contagion, and in this vein, mimicry has sometimes been referred to as motor contagion (e.g., Becchio et al., 2007; Blakemore & Frith, 2005). Hatfield, Cacioppo, and Rapson (1993)

define emotional contagion as the "catching" of someone else's emotional state, and they consider mimicry a causal antecedent to contagion. Yet, emotional contagion refers to a feeling state, whereas emotional mimicry refers to a (nonverbal) behavior. Hence, conceptually, the two are independent. In fact, whereas both mimicry and emotional contagion have been found in the same studies, they do not necessarily co-occur (e.g., Hess & Blairy, 2001; Lundqvist & Dimberg, 1995).

Synchrony

Another concept, which has especially been used in group contexts, is interpersonal synchrony. This is typically defined as the matching of behaviors and the coordination of movement between individuals in a temporally organized fashion during interpersonal communication (Bernieri et al., 1988; Miles et al., 2010; Vacharkulksemsuk & Fredrickson, 2012; Valdesolo & DeSteno, 2011). However, whereas in mimicry there is an initiator of the behavior—the mimicked person—followed by a time-locked response by the mimicker, synchrony can also refer to behaviors that occur simultaneously and does not depend on the time-locked matching of specific behaviors.

Automatic Imitation

Heyes (2011, p. 463) defines automatic imitation as "a type of stimulus-response compatibility effect in which the topographical features of task-irrelevant action stimuli facilitate similar, and interfere with dissimilar responses." A typical paradigm involves participants making a hand movement in response to a cue while at the same time observing another hand making the same or a different movement (Cracco et al., 2018). Notably, the mechanisms underlying automatic imitation (which focuses on the automatic effects of observing a movement on an intentional movement effectuated by the observer) and mimicry (which is an automatic reaction to an observed movement) are not the same. Specifically, mimicry is a direct automatic reaction to the movement, whereas automatic imitation is the modulation of an intentional movement. In addition, as mentioned above, the signal in automatic imitation does not carry emotional meaning. That said, there is nonetheless some overlap between these phenomena, as some moderators seem to operate similarly. For example, both phenomena can be found when the observed behavior is effectuated by an avatar (Pan & Hamilton, 2015; Weyers et al., 2006) and both are facilitated by social priming (Leighton et al., 2010; van Baaren et al., 2003). Mutual gaze can facilitate both emotional mimicry (Mauersberger et al., 2022a; Rychlowska et al., 2012) and automatic imitation (Wang et al., 2010), but this effect has not been consistently found (Carr et al., 2021). By contrast, whereas emotional mimicry is facilitated for in-groups (Bourgeois & Hess, 2008; van der Schalk et al., 2011), the same effect does not seem to be present for automatic imitation (Genschow et al., 2022a, b). As such, the degree of overlap between these phenomena remains uncertain.

Reactive Emotions

Finally, two people may show the same emotional expression in a time-locked manner, because one person reacts emotionally to the expression of the other. Thus, when person A shows an angry expression and person B feels insulted and reacts with anger as well, this is not an example of emotional mimicry, even though the expressions and timing might be very similar.

In sum, although the phenomena discussed so far all refer to matched behaviors, they differ in whether they constitute emotional signals, occur in reaction to one another, or result from an automatic tendency to synchronize. These differences are important, because they may imply different underlying processes and may therefore also occur in different contexts and have different boundary conditions.

Different Accounts of Mimicry

Over the years, a number of different accounts of the role and function, as well as the underlying processes related to mimicry, have been proposed. It is important to emphasize that these accounts are generally not contradictory. Rather, we argue that they focus on different aspects of mimicry.

Mimicry as Embodiment

The early account by Lipps (1907) proposed a model according to which individuals tend to imitate the emotional displays of their interaction partners, which induces a corresponding state that in turn informs, via introspection, the interaction partner about the other's emotional state. Modern-day accounts of embodied emotion recognition via mimicry (Niedenthal et al., 2017) focus on the action of mirror neurons rather than introspection. These accounts do not necessarily stipulate overt mimicry as a necessary component, but allow for a mediation via efferent copies (Goldman & Sripada, 2005). The basic notion is that when people make social judgments they simulate relevant aspects of the stimulus in a form of embodied cognition (Niedenthal et al., 2005). That is, when judging emotional expressions, such as a smile, people simulate this expression in sensorimotor cortex. If this simulation results in a motor output, this output would then be (facial) mimicry (for more detail, see Wood et al., 2016).

The notion of a simulation process that underpins social perception, in particular with regard to emotions, has been more recently supported by research on EEG mu responses. Specifically, the mu frequency band of the EEG, measured over sensorimotor cortex, is suppressed not only when a person performs a motor act but also when the person observes motor acts performed by someone else (Oberman et al., 2007a; Pineda, 2005). Based on this finding, the mu response has been linked to

mirror neuron activity. A more recent study found a distinct mu suppression response during the observation of positively and negatively valenced emotional faces (Moore et al., 2012). These findings suggest a role for mirror neurons for the interpretation of social stimuli. However, there is some controversy as to whether mu suppression is indeed a reliable indicator of mirror neuron activity (Hobson & Bishop, 2017). In addition, mu suppression does not imply an actual motor output. Hence, the question of how mimicry is linked to these simulation processes and whether blocking mimicry can in fact hinder simulations remains open.

Mimicry as a Matched Motor Response

The standard view on behavioral mimicry is compatible with the mirror neuron account above (which, however, does not require an overt mimicry response). From this account, mimicry is an automatic, matched motor response, based on a perception-behavior link (Chartrand & Bargh, 1999; Preston & de Waal, 2002). Hess and Fischer (2013) refer to this idea as the Matched Motor Hypothesis, which assumes that merely perceiving a specific nonverbal display automatically entrains the same expression in the perceiver.

Various mechanisms have been proposed to underlie this link between perception and behavior, which include, in addition to mirror neurons, shared schemas (Barresi & Moore, 1996), shared representations (Prinz, 1997), or spreading activation (see Chartrand & Dalton, 2009). In either case, the perceptual activity is presumed to spread to behavioral representations, which in turn increases the probability of imitating that same behavior, without conscious awareness, control, or intent (Chartrand & Bargh, 1999). Emotional mimicry would then just be one instantiation of such motor behavior. Following the original Matched Motor Hypothesis, the movements in the face are thus spontaneously copied, independent of the intentions of the observer or expresser (see Chartrand & Bargh, 1999). More recent theorizing allows for some level of top-down social perception processes as a moderator (e.g., Chartrand & Lakin, 2013).

Mimicry as a Social Regulator

The Mimicry as Social Regulator view (Fischer & Hess, 2017; Hess, 2021; Hess & Fischer, 2013, 2014, 2017, 2022) is different from the Matched Motor Hypothesis in that it is based on the observation that the motivation to develop social bonds to fulfill our universal need to belong is one of the most powerful drivers of human behavior (Baumeister & Leary, 1995). Emotional mimicry is the unconscious process that serves this need by supporting our aim to establish social and emotional connections and to fulfill our basic need for shared understanding (Fischer & Hess, 2017). The core assumption of this view is that emotional mimicry has the function

to foster affiliative interactions and is dependent on the goal to affiliate and to communicate with others that we understand them (see also Rogers, 1957; Bavelas et al., 1986).

This view implies that the mimicry of emotional signals requires a (rapid and usually automatic) appraisal of an emotional expression in the social context in which it occurs before it will be imitated. Is this an angry frown or concentration? Is this happy or malicious laughter? Whether mimicry follows or not will depend on this appraisal. This view is fundamentally different from the embodiment perspective (see Wood et al., 2016), which assumes that mimicry contributes to emotion decoding (see Wood et al., 2016), because the Mimicry as Social Regulator view sees mimicry as based on emotion understanding.

According to this view, emotional mimicry is not merely based on the perception of a facial display, but on the interpretation of the motives underlying this display in a specific context, and thus on understanding the emotion and its meaning in context (Hess & Fischer, 2013, 2014). Rather than merely seeing a movement of the corner of the lips, people may understand this movement to be playful amusement, or schadenfreude (the pleasure in the misfortune of others) or even sadistic pleasure, depending on the context, and whereas they mimic the perceived amusement, they do not mimic the identical expression when the movement is interpreted as sadistic pleasure (Mauersberger et al., 2022b). In other words, emotional mimicry requires the interpretation of signals as emotions, conveying emotional intentions in a specific context (Hess & Fischer, 2022). This is in line with one of the main functions of mimicry, namely smoothing social interactions and establishing or maintaining social bonds.

The Functions of Emotional Mimicry

Four different functions of emotional mimicry have been discussed in the literature, which are associated with the different theoretical accounts described above. Overall, these functions are not necessarily mutually exclusive. Rather, different theories focus more on the one or the other function.

Facilitating Emotion Understanding

The evidence on whether mimicry facilitates emotion understanding as proposed by embodiment theories of mimicry (see Wood et al., 2016) is complex. A number of well-controlled studies in which participants saw a series of standardized facial expressions found no relationship between mimicry and emotion recognition accuracy (Blairy et al., 1999; Bogart & Matsumoto, 2010; Hess & Blairy, 2001). There is some evidence that mimicry can speed up the emotion recognition process

(Niedenthal et al., 2001; Stel & van Knippenberg, 2008), but the reverse effect has also been found (Hawk et al., 2011).

The most consistent evidence on the facilitating role of mimicry on emotion recognition regards studies that demand subtle judgments regarding smiles, either because the smiles are weak (Oberman et al., 2007b) or because more difficult judgments are required, such as genuineness (Ipser & Cook, 2015; Maringer et al., 2011; Rychlowska et al., 2014). However, other studies found conflicting results (Hess et al., 1998; Stel et al., 2009). Most of these studies aimed to block mimicry by a variety of means and then compared accuracy in blocked versus unblocked trials. Interestingly, however, some of the methods used to block mimicry (such as holding a pen with puckered lips) do not actually block mimicry efficiently (Hess & Blaison, 2016; Hess et al., 2018), but block subvocalization. In this context, it is interesting that Ipser and Cook (2015) found that smile decoding accuracy was reduced when participants produced a vowel—a very efficient way to block subvocalization—but not necessarily one that would impede smiling. In short, the evidence favors no general effect of mimicry on emotion recognition, but points to the possibility that mimicry might be helpful for smile-related judgments in difficult decoding tasks.

Yet, there is evidence for the notion that mimicry may nonetheless contribute to a feeling of emotion understanding. For example, Yabar and Hess (2007) found that an interaction partner who shows congruent sad affect during an interaction is perceived as more understanding—even when the person is an out-group member. More recently, Mauersberger et al. (2015) found that the tendency to mimic sadness (an affiliative emotion) in a laboratory task predicted the positivity of daily interactions in a following diary task over 7 days. Conversely, the tendency to mimic disgust (which was much rarer) predicted negative interactions. These data suggest that indeed, one positive function of some forms of mimicry may be to create an atmosphere of mutual understanding, which then may well result in actual better understanding as suggested by Rogers (1957).

Mimicry Promotes Human Affiliation

Both motor mimicry (Chartrand & Lakin, 2013) and emotional mimicry (Hess & Fischer, 2013, 2014) have been shown to not only depend on affiliation but also foster affiliation. Hess and Fischer (2013, 2014) reviewed evidence that people mimic others' emotions more in contexts where participants have positive rather than negative attitudes toward each other (Likowski et al., 2008), or when they are similar rather than dissimilar (Olszanowski et al., 2022), or when they belong to the same group rather than a different group (Bourgeois & Hess, 2008; van der Schalk et al., 2011), or want to cooperate rather than compete with each other (Weyers et al., 2009). This is not only the case for emotional mimicry; Lakin and Chartrand (2013) also reported more behavioral mimicry when participants have a goal to affiliate. Thus, both behavioral mimicry and emotional mimicry are sensitive to the nature of the relationship with the mimickee. Whether, or at least the extent to

which, people mimic emotional expressions depends on the perceived intentions of the expresser and on the observer's goals and values. These intentions can be inferred from the direction and type of the emotional signal, the relationship between observer and target, and the emotional state or disposition of the observer. Moreover, the relationship is not uni-directional, because emotional mimicry also serves to increase perceived similarity and liking (Hess et al., 1999; Stel et al., 2008; van der Schalk et al., 2011; Yabar & Hess, 2007).

Mimicry Enhances Social Standing

The STORM (social top-down response modulation) model (Wang & Hamilton, 2012) takes up the notions expressed above, in that it emphasizes the social function of mimicry and its dependence on social context. However, STORM sets a different emphasis for the function of mimicry. Here, mimicry is a Machiavellian strategy for enhancing one's social standing or a strategic intervention to change the social world for self-advancement. Wang and Hamilton base their model on the observation that people increase mimicry toward those who are important for their social welfare. Some of the evidence for this notion has also been adduced by the affiliation theories mentioned above, such that people preferentially mimic others who are nice (Likowski et al., 2008) or those who are in-group members (Bourgeois & Hess, 2008; van der Schalk et al., 2011). They also note that people increase mimicry when they feel that their social relationship is endangered such as when they fail to affiliate with other individuals (Lakin & Chartrand, 2003) or when they are ostracized by their group members (Brandenburg et al., 2022; Lakin et al., 2008).

However, much of the evidence for the model does not stem from research on mimicry (i.e., the imitation of nonverbal behaviors), but rather is based on a variant of the standard paradigm used in automatic imitation research (see above). In this variant, participants first learn social information about a hand, which then shows a finger movement that is either congruent or incongruent with one that the participant is required to perform. The degree of interference with the participant's movement is then a sign of imitation. Given the differences in mechanisms between automatic imitation and emotional mimicry, these findings offer at best circumstantial evidence. A later study on emotional mimicry by contrast (Carr et al., 2014) is more in line with Wang and Hamilton's argument in that they found emotion-specific effects of both observer and target power, congruent with the notion that social hierarchy influences mimicry in meaningful ways.

In essence, however, the main message of the model is that mimicry processes (and these include in this case automatic imitation) serve to regulate the social distance to socially attractive versus unattractive targets. As such, despite many differences in conceptualization, the model is surprisingly compatible with the Mimicry as Social Regulator model.

Mimicry Supports Implicit (Social) Learning

Another important potential function of mimicry regards (social) learning. This aspect is emphasized by Kavanagh and Winkielman (2016). In fact, one of the first reviews on mimicry by Hess et al. (1999) noted an older developmental literature that conceptualized mimicry as a "primitive motor code," which might be a primary cognitive medium for learning about other people during early development. That is, children imitate the behavior of adults and thereby learn the effects of that behavior on others. Similarly, Kavanagh and Winkielman (2016) consider mimicry as a tool for implicit social learning, because it leads to the acquisition of culturally appropriate bodily and emotional behaviors (see also Fischer, 2019). They emphasize that this learning process and the resulting knowledge are implicit. Thus, it cannot easily be rejected, criticized, revised, or employed by the learner in a deliberative or deceptive manner. The function of mimicry as a mechanism for social learning also explains why people generally preferentially mimic in-group members who by definition are more trusted to have the proper knowledge. As such, they conclude that mimicry can be considered an honest signal of group affiliation.

According to Kavanagh and Winkielman (2016), spontaneous mimicry can be costly when there is no focus on the in-group, because it would imply the learning of maladaptive behaviors. Given that the in-group is the group with the same values and priorities, it is likely that humans also share their feelings with this group and in-group members' feelings are thus considered more informative than that of out-group members. A child's fear of strangers emphasizes this point. Mimicry of in-group members therefore is beneficial to the mimickee and to the mimicker, because it supports not only mutual bonds but also the learning of culturally appropriate behaviors by the mimicker and the observation by the mimickee that new and appropriate behaviors are being learned. They further point out that mimicry that is too precise may become blatantly obvious to the mimickee and thus appear strategic and that the actual subtle and approximate expressions that are typically shown are more likely to serve as an honest signal. From this view, the fostering of affiliation is more of a side effect to the learning of appropriate group signals.

In sum, different theories of mimicry converge by highlighting two functions—mutual understanding and social affiliation. They differ in the emphasis given to each and in the exact processes that are presumed. For example, whereas embodiment theories consider mimicry a means for understanding via emotion recognition, the Mimicry as Social Regulator view presumes that emotion understanding precedes mimicry, but because mimicry signals understanding it invites a more open emotion communication.

Top-Down Influences

According to all theories described above, facial mimicry is an automatic process (Dimberg & Thunberg, 1998) that is difficult to suppress (Dimberg et al., 2002) and does not necessarily require explicit awareness of the stimulus (Dimberg et al., 2000). Theories that assume a matched motor response, based on a perception-behavior link (Chartrand & Bargh, 1999; Preston & de Waal, 2002), originally posited that merely perceiving a specific nonverbal display automatically entrains the same display in the perceiver. Nonetheless, there is mounting evidence for the influence of social context on both emotional mimicry and behavioral mimicry (for a review, see Chartrand & Lakin, 2013; Fischer & Hess, 2017; Hess & Fischer, 2013).

In line with this evidence, the Mimicry as Social Regulator model considers mimicry a social act that is influenced by the social context of the interaction and the social goals of the mimicker (Fischer & Hess, 2017; Hess, 2021; Hess & Fischer, 2013, 2014, 2017, 2022). It posits that mimicry is automatic but goal dependent. The goals that are served by mimicry are to communicate with others to foster affiliation and to regulate interpersonal closeness. Because of this, we do not mimic our enemies, people we do not like, or competitors. From this view, it is not the expression per se but the social interpretation of the expression in its context that drives mimicry. This strongly implies that emotional mimicry is shaped by top-down processes as well.

Specifically, there is increasing evidence that the meaning of a given expression in a given context impacts on mimicry. As noted above, smiles are generally considered to be affiliative and therefore smile mimicry often is preserved in contexts where other types of mimicry would be reduced or absent, for example, when the other is an out-group member or a disliked other (e.g., Bourgeois & Hess, 2008; Hess et al., 2017; Seibt et al., 2013; van der Schalk et al., 2011). However, there are many types of smiles (Niedenthal et al., 2010) that are not affiliative in nature (Hess et al., 2002). Thus, people may smile as an expression of schadenfreude—the pleasure in the misfortune of others—or as an expression of sadistic pleasure in another's pain (Mauersberger et al., 2022b). These smiles are malicious rather than affiliative, and the Mimicry as Social Regulator model predicts that such smiles would be mimicked to a lesser degree or not at all.

This notion was studied by Kastendieck et al. (2020), who showed participants videos of individuals who were embedded in an iconic social context associated with clear social norms regarding the prescribed emotional expressions: weddings and funerals. As expected, participants who smiled at weddings were mimicked, but those who smiled at funerals were mimicked less or not at all. The level of mimicry was mediated by perceived closeness, which in turn was mediated by the perceived appropriateness of the expression. To the degree that participants considered the expression inappropriate to the context, they felt more distant toward the expresser

and mimicked their smiles to a lesser extent. Similarly, Mauersberger et al. (2022b) found that participants mimicked individuals who laughed at funny scenes more than those who laughed at schadenfreude scenes or disgusting scenes. Again, the level of mimicry was mediated by perceived closeness and appropriateness of the expression.

For the mimicry of sadness, the results seem less consistent. For example, Kastendieck et al. (2020) and Kastendieck et al. (2022b) found that mimicry of sad expressions does not depend on perceived closeness. This could be explained by the strong appeal to show empathy that is signaled by sad expressions (Scarantino et al., 2022). Still, another study has found an effect of context, showing that sad expressions are not mimicked when shown by disliked others (Likowski et al., 2008).

Also, some studies found that perceived contextual appropriateness may play a role for sadness expressions as well. For example, Fischer and Hess (2018) found that a sad face not showing tears was mimicked, but not when showing tears. This suggests that sad expressions that are too intense might not be mimicked (probably because they were deemed inappropriate as well). These findings also suggest an effect of contextual appropriateness, if we consider that the social signal conveyed by a sad expression is an appeal to empathize and to help (Scarantino et al., 2022). Tears, however, are often perceived as difficult to control or overwhelming. As such, a person who cries at a funeral may be forgiven for the "fault pas" and still liked, yet the sadness may reduce perceived closeness as people shy away from the social cost of helping that closeness may require of them.

In sum, there is evidence for top-down effects on emotional mimicry that depend on the perceived motives of the expresser and the resulting meaning that is attributed to the expression in a particular context. In fact, some of the studies referred to above, in which mimicry is reduced or absent, can be similarly interpreted even though these authors did not measure the mediating variables. For example, in a study by Lanzetta and Englis (1989) participants mimicked another person's smile only when they expected a collaboration with this person, but not when they expected competition. One explanation for the lack of mimicry in the competition condition could be that the smile of a competing other was interpreted as maliciousness or schadenfreude rather than as a signal of affiliation.

Future Perspectives

The conceptualization of mimicry has changed over time, from a view that understood mimicry of all behaviors—including emotional ones—as a process whereby "one's behavior passively and unintentionally changes to match that of others in one's current social environment" (Chartrand & Bargh, 1999, p. 893) to a process that heavily depends on the social context and the social motives of the interaction partners. Both emotional mimicry and behavioral mimicry act as "social glue" (Lakin et al., 2003), but for the most part only in contexts that are affiliative (Hess & Fischer, 2022; Lakin & Chartrand, 2013). Fortunately, for most interactions it seems that the default stance is one where affiliation is assumed. Only when there

are clear signals of potential non-affiliation, such as the dislike or hostile intentions of an interaction partner (Likowski et al., 2008) or emotional deviance (Kastendieck et al., 2020), does mimicry fail.

Notably, as noted in the introduction, the effects of affiliation and social context on mimicry are most clearly evidenced for emotional mimicry, in comparison with behavioral mimicry, and even though some effects observed for mimicry—such as eye-gaze effects (Wang & Hamilton, 2014) or task relevance of the mimicked behavior (Hemed et al., 2022)—apply also to automatic imitation, others such as the effect of in-group status do not (Genschow et al., 2022a, b). Such differences may be expected, given the different degrees of social engagement afforded by emotional expressions versus hand movements and the differences in social signal value between the two. This further supports the notion that these are different processes even though they do share some common ground.

What is an important lesson from the research and theorizing on emotional mimicry is that we should acknowledge that perceivers are not passive. People are not emotion readout machines who look at a face and attach a suitable label independent of the context and of whom the face belongs to. They also are not automatons who move the muscle they see someone else move regardless of circumstance. Rather, they engage in active sensemaking that takes into account the context and the presumed goals of the interaction partner (Hess & Hareli, 2019). Thus, people do not simply look at a face and label an expression as a smile and move the corners of their mouth in imitation, but they judge the expression in light of the context and what they know about the expresser. Thus, the same smile may be considered pleasant or malicious and evoke divergent reactions.

However, this does not mean that facial expressions do not have any intrinsic meaning. Rather, both context and expression contribute to the social judgment by the perceiver (Hess & Hareli, 2018). In fact, emotional expressions can actually provide information about context as well. In one study, participants were able to deduce the rules of a made-up ball game based on the facial responses of the "spectators" (Hareli et al., 2019). Instead of trying to decide whether facial expressions or context dominate the judgments of perceivers, it is more realistic to propose that observers engage in active sensemaking based on the available information. If information about the expression is available, perceivers may use this to draw conclusions about the situation, and when information about the situation is available, it can be used to predict the likely expression. When both are available, the information is integrated in a way that makes sense to the perceiver (Hess & Hareli, 2019).

This notion of an active perceiver—what for visual stimuli is referred to as social vision (Adams et al., 2010)—is central to emotion communication. This can be seen in parallel to the understanding of 4E cognition (see, e.g., Newen et al., 2018). That is, emotion perception is a process that is embodied, embedded, enacted, and extended. Of these 4 Es, emotion research has addressed most explicitly embodiment (Niedenthal et al., 2017). Calls to understand emotions from the context in which they occur address the notions of the importance of extrabodily processes that underlie the notions of embeddedness and extendedness. With regard to mimicry, research such as by Kastendieck and colleagues (Kastendieck et al., 2020, 2022a; Mauersberger et al., 2022b) that aims to study mimicry with stimuli that are embedded in a specific (and meaningful) context is the first step in that direction.

However, it is just as important to keep in mind that emotions are enacted as well—we decode the emotions of others not just for the sake of applying a label, but in order to successfully interact (Hess & Kafetsios, 2022). Future research should investigate the presumed motives of the expresser and the goals of the interaction.

Finally, mimicry research to date has, except for research on out-group mimicry, paid little attention to the question of who interacts with whom. This is in part a heritage of the notion that mimicry is a simple reflex-like automatism. Yet, when we consider the importance of context and the social knowledge that we have about our interaction partners, the situation becomes more complex. Only more recently have researchers started to be more explicitly concerned with the intersection of social group identities. Specifically, many social processes play out differently for members of different groups and people tend to be members of more than one group. This implies that the combination of groups that people belong to may result in very specific effects. This in turn limits generalization across groups. For example, emotion stereotypes suggest that Black men are aggressive, but this does not apply in the same way to black women (for a review, see Hedgecoth et al., 2023). On the perceptual level, the wrinkles and folds of old age reduce perceived attractiveness disproportionally for women compared to men. Attractiveness in turn correlates positively with liking and perceived closeness (Sutherland & Young, 2023). As such, it will be important for future research to consider not only the social identities of mimicker and mimickee but also their intersection.

Summary

The present chapter focuses on emotional mimicry, that is, the mimicry of nonverbal behaviors that signal emotions. Emotional mimicry differs from behavioral mimicry and automatic imitation in that the actual signal—the emotional expression—carries meaning that is relevant for the relationship between expresser and mimicker. This is important because emotional mimicry depends crucially on perceived closeness or affiliation. We reviewed different functions of emotional mimicry that have been proposed in the literature, such as facilitating affiliation, emotion recognition when signals are ambiguous, social standing, and more broadly social-cultural learning. In addition, we summarized research on top-down effects on emotional mimicry showing how social judgments and the interpretation of emotional signals in a given context influence perceived closeness and affiliation and in turn support emotional mimicry.

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