

# Chapter 1

## The Emotion-Based Inferences in Context (EBIC) Model



Ursula Hess and Shlomo Hareli

In everyday life, we are surrounded by people who experience and express emotions. In fact, even trivial interactions such as paying for purchases in a store often involve some level of social exchange and it is rare that an interaction is bereft of emotional exchanges. Accuracy in emotion perception helps coordinate and facilitate interpersonal communication and provides the necessary “affective glue” between people (Feldman et al. 1991). In line with this view, traditionally, emotion researchers have focused on emotion perception in terms of the ability to “accurately” label an expression. Chapter 2 of this book outlines possible fallacies involved with the notion of accuracy in this context. In this chapter, Fischer, Paw and Manstead elaborate the processes involved in recognizing emotions and propose to treat emotion perception as a social act. In Chap. 3, Albohn, Brandenburg, & Adams extend the process of emotion perception to neutral faces, which are often processed by observers in the same way as are emotional faces.

In recent years, research on emotion expressions has changed from studies that presented carefully curated facial expressions from which all context information has been removed (sometimes to the point of only showing ovals with the facial interior) to acknowledging that emotion recognition is a social act (e.g., Fischer, Paw & Manstead, this book) which occurs in social contexts (Barrett et al. 2011; Hess and Hareli 2016).

In fact, constructivist theories of emotion consider context to be of preeminent importance when it comes to constructing meaning from emotional exchanges (for an overview see e.g., Faucher 2013). From this perspective, facial expressions are described as inherently ambiguous and their interpretation as strongly dependent on

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U. Hess (✉)

Department of Psychology, Humboldt-University of Berlin, Berlin, Berlin, Germany

e-mail: [Ursula.Hess@hu-berlin.de](mailto:Ursula.Hess@hu-berlin.de)

S. Hareli

Department of Business Administration, University of Haifa, Haifa, Israel

e-mail: [shareli@univ.haifa.ac.il](mailto:shareli@univ.haifa.ac.il)

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U. Hess, S. Hareli (eds.), *The Social Nature of Emotion Expression*,

[https://doi.org/10.1007/978-3-030-32968-6\\_1](https://doi.org/10.1007/978-3-030-32968-6_1)

the context in which they are shown (Hassin et al. 2013). From this view then, the interpretation of a particular type of emotion expression is defined primarily by the kind of situation (i.e., context) in which the expression is observed (Clore and Ortony 2013).

Recently, we proposed that this influence is bidirectional (Hess et al. 2017). That is, just as the context influences the interpretation of facial expressions, these expressions have sufficient intrinsic meaning to conversely influence the interpretation of the situation that elicited them.

This notion – that both emotion expressions and context provide valid and complementary information — can be derived from appraisal theories of emotion. According to appraisal theories of emotion, emotions are elicited and differentiated through a series of appraisals of (internal or external) stimulus events based on the perceived nature of the event (e.g., Frijda 1986; Scherer 1987). Importantly in this context, facial expressive behavior has been posited to be a direct readout of appraisal outcomes (Kaiser and Wehrle 2001; Scherer 1992; Smith and Scott 1997).

Further, participants can reconstruct both their own appraisals (Robinson and Clore 2002) and those of the protagonist of a story (e.g., Hareli and Hess 2010; Roseman 1991; Scherer and Grandjean 2008). This information can then be used to deduce unknown information about the expresser or the situation from the expresser's behavior. We have called this process reverse engineering (Hareli and Hess 2010, see also Chap. 6, this book). More generally, any information that is relevant to appraisals can be used to predict emotional reactions when the appraisals are known and conversely to deduce the appraisals when the reaction is known. In Chap. 8, de Melo & Gratch, provide examples for this process, which they call reverse appraisal. In Chap. 7, Parkinson describes the informative value of third party expressions in social referencing. In Chap. 11, Hareli and Hess outline the way that emotion expressions can inform about norms and standards in a situation.

What these three processes, that is, reverse engineering of appraisals, reverse appraisals, and social referencing, have in common, is the notion that both emotion expressions and the context in which they occur have interpretable meaning. In this book, three types of meaning will be considered. First, the communicative signal that is inherent in the expression and refers to the expresser's communicative intent. Specifically, in Chap. 4, Scarantino outlines his view that emotion expressions *manifest* what's inside, *represent* what the world is like, *direct* other people's behavior, and *commit the expresser* to future courses of action. In Chap. 5, Knothe and Walle, describe the different types of relational information signaled by different discrete emotions.

Second, emotion expressions serve as input for inferences about the expresser, specifically the expresser's character. That is, whereas the previously outlined line of research asked the question "what emotion does this person feel" we are now turning to the question "what type of person would show this emotion." In Chap. 9, Parrot outlines how emotional states and emotional roles function as signals of moral character. In Chap. 10, Palese and Schmid Mast showcase research on emotions as signals of power.

Two final chapters focus on specific facial expressions. In Chap. 12, MacArthur and Shields discuss the inferences that people draw when they see others' cry, whereas in Chap. 13, Rychlowska, Manstead, and van der Schalk focus on smiles.

Together these chapters outline the different processes involved in the processing of emotion expressions. These processes are detailed in the **Emotion-based Inferences in Context (EBIC) model**. At the core of this model is reverse engineering (Chap. 6, this book, and see also Chap. 9, this book). In this model, emotion communication is understood to be informed by both the immediate situational context and the wider socio-cultural context in which the observer is embedded. Importantly, emotion communication is considered an active process – a social act in fact (see Chap. 2, this book) (Fig. 1.1).

In this model, an individual A emits an emotion expression in a given context. Individual B perceives this expression and the context. Both sources of information are processed. If the two sources of information are congruent (e.g., a person smiles at a cute cat sitting on a sofa) information is drawn from the expression, for example, that the person likes cats (inference about the person) or that the cat is cute (inference about the situation) or even that the cat is allowed to sit on the sofa (inferences about norms). By contrast, if the context matching process reveals an inconsistency, inferences change. For example, if the person shows fear while looking at the same cute cat, the observer may deduce that the expresser is afraid of cats (inference about the person) or maybe that the cat's claws are a danger to the soft leather of the sofa (inference about the situation) and that the cat was definitely not allowed to be there (inferences about norms). Importantly, all sources of information will be

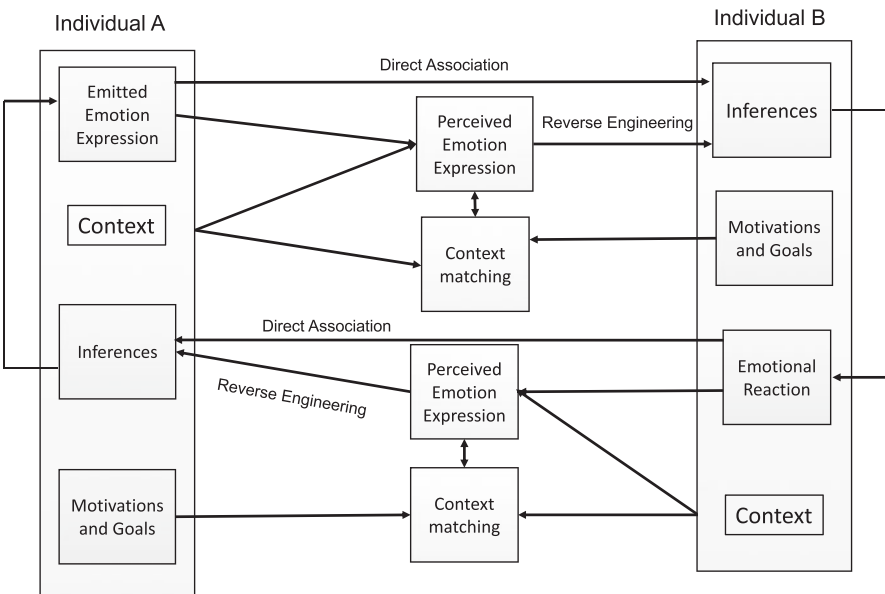


Fig. 1.1 EBIC model

processed and there is no overall dominance of one type of information above the other. For example, a fear expression in reaction to a cute cat will still be processed as fear – not as a strange reaction to cuteness.

The model does assume that these processes are typically fairly automatic and do not require elaborate processing. In fact, we explicitly assume that some associations (for example, cute animal – smiling) are so common, that inferences are available in the form of overlearned direct associations. However, especially in cases of emotion – content mismatch, which is defined as an unusual co-occurrence of situation and expression, more elaborated person perception processes can be expected.

In sum, the present book outlines advances and new approaches in our understanding of emotion communication. The overarching themes in this book are the notion that emotion expressions communicate more than simply an internal state that can be labelled and that the social signals transmitted through emotion expressions play an important role in social interactions. Further, emotions are understood as occurring in (social) contexts. In fact, arguably even when we show emotions while alone on a walk or at home, these emotions still address imagined others whose behavior elicited this emotion or whose reactions to events are relevant to us, and this imagined presence impacts on our expressions (Fridlund 1989; Hess et al. 1995). Finally, emotion communication is not based on a single source of information. Observers perceive emotions in the same rich social context in which they occur and use this (as well as any other useful information, for example, on the observed person's past behavior) to draw conclusions from emotions. And in most cases they do this rapidly and automatically.

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