APPROACHES TO BLUSHING: CONTEXT MATTERS[1]

Abordagens Para o Blushing: Questões de Contexto

Gen Eickers[2]

ABSTRACT

This paper offers a systematic treatment of the social and cultural context of the blush. The paper looks into how different emotion theories approach blushing and does so by differentiating between basic emotion theories, which consider contextual factors but do not make them central to understanding emotional expressions, and contextual emotion theories, which make contextual factors central to understanding emotional expressions. The paper argues that blushing might be best explained by theories that make context central to understanding emotional expression.

Key-words: Blushing; Social Context; Emotional Expression; Basic Emotion Theory; Contextual Emotion Theory

RESUMO

Este artigo oferece um tratamento sistemático do contexto social e cultural do blush. O documento examina como diferentes teorias emocionais abordam o rubor e o faz diferenciando entre teorias emocionais básicas, que consideram fatores contextuais mas não os tornam centrais para a compreensão das expressões emocionais, e teorias emocionais contextuais, que tornam fatores contextuais centrais para a compreensão das expressões emocionais. O texto argumenta que o rubor pode ser melhor explicado por teorias que tornam o contexto central para a compreensão das expressões emocionais.

Palavras-chave: Blushing; Contexto Social; Expressão Emocional; Teoria Básica da Emoção; Teoria Contextual da Emoção.

INTRODUCTION

Typically, when you see someone blush, you will probably infer that the person is embarrassed or is feeling some kind of discomfort around re-

[1] DOI: https://doi.org/10.51359/2357-9986.2022.256756

[2] University of Bayreuth Germany. E-mail: g.eickers@fu-berlin.de. ORCID: https://orcid.org/0000-0001-5980-0019. Gen Eickers is a Postdoc/Assistant Professor at the University of Bayreuth, Germany. After finishing their PhD in philosophy in 2019 at the Berlin School of Mind and Brain, Humboldt-Universität zu Berlin, and Freie Universität Berlin, they continue to work at the intersections of philosophy of mind, social epistemology, and social psychology. Specifically, their research addresses questions around social interaction, emotion, social norms, and gender.

ceiving attention. Blushing is often referred to as the facial expression of embarrassment in emotion theory (Leary & Toner, 2013). But it has also been recognized in emotion research that there is more to understanding a blush and that its association with embarrassment is not that simple (Castelfranchi & Poggi 1990, Keltner & Buswell 1997). Social and contextual factors, like the culture and situation we are in, play an important role for the occurrence and interpretation of blushing (e.g., De Jong et al. 2003). Such contextual factors might influence when we blush, how intensely we blush, and how we react to blushing. Contextual approaches to emotional expression, I argue here, provide us with a better framework to understand the nuances of blushing.

In this paper, I explore the role contextual factors play for blushing. In order to do so, I differentiate between basic emotion theories and contextual emotion theories. Basic emotion theories consider contextual factors but do not make them central to understanding emotional expressions, and contextual emotion theories have contextual factors at their center. The main claim of this paper is that blushing is best explained by theories that make context central to understanding emotional expression. This chapter will not ask whether blushing is a basic emotional expression, whether the blush is the primary facial expression for embarrassment, or whether emotions typically associated with the blush (such as embarrassment) are basic or social.[3] However one comes down on the basicness question, I want to show that an adequate theory must allow for context sensitivity.

First, I will briefly explain what blushing is. I will then proceed to look at basic emotion theories, while explaining some background history of basic emotion theory that is relevant to understanding how expressions are conceived of in BET, and with a focus on Ekman (Ekman & Friesen 1978, Ekmanm 1999, Ekman & Cordaro 2011). After exploring BET, I will delineate what contextual emotion theories are and look more closely at different contextual factors – cultural, situational, individual – that play a role for explaining blushing.

[3] These questions are addressed in different papers across the literature on blushing; for example: Keltner & Buswell 1997.

2. What is blushing?

First of all, let us (re)consider what a blush is. The physiological explanation of blushing is as follows: "The blush involves the spontaneous reddening of the face, ears, neck, and upper chest and is produced by increases in blood volume in the subcutaneous surface capillaries in those regions (Cutlip & Leary, 1993; Leary et al., 1992)." (Keltner & Buswell 1997). That is, vasodilatation of cutaneous blood vessels in the blush region leads to an increase in blood volume, which leads to warmth. Due to the increase in temperature, the blusher experiences the blush. Blushing is considered to be an automatic reaction that cannot be controlled, it is immediately linked to social situations, and humans are the only animals capable of blushing (Drummond, 2013).

There is a large number of possible scenarios in which someone might blush. This variability will be looked at in section 4 in greater detail. For now, let me quickly portray some factors that might influence the variability of blushing scenarios: First, there are people who tend to blush more frequently or more intensely than others. Socially anxious people tend to be blushers, for example. This is due to people with social anxiety being worried about visible markers of their anxiety (Drummond, 2013). Second, a blush may be accompanied by different feelings: embarrassment, shame, pride, or any combination of those (Dijk & De Jong, 2009). When empirically examining the emotions accompanying a blush (blushing correlates) people give different statements about what they feel when they blush (Crozier, 2006; Dijk & De Jong, 2009). Some even say that they blush when they are surprised or happy.

Blushing has been mentioned in the basic emotions debate – that is, blushing has been considered to be a basic emotional expression, i.e., an expression of a basic emotion, on and off. Ekman & Cordaro (2011), for example, note that the emotions mainly associated with blushing – embarrassment and shame – fulfill many but not all of the relevant conditions for basic emotions and thus are considered to be "special cases". They mention that blushing can't be considered to be a universally recognizable signal because it is not visible in all people (e.g., dark-skinned people). Other versi-

ons of BET, such as Keltner's, take gaze direction and head movements to be the primary expression of embarrassment, while the blush is only a secondary signal, that arrives later both synchronically (in the temporal sequence of an episode of embarrassment) and diachronically (in ontogeny) (Keltner & Buswell 1997). According to some versions of basic emotion theory, the blush is elicited when feeling embarrassed (e.g., Ekman & Cordaro 2011). In order to provide an understanding of this claim, I will look at one of the first explanations of blushing that basic emotion theories have built on. Darwin is one of the first researchers known to have studied the blush (and emotional expressions in general).

I will remain neutral on the discussion around how embarrassment and blushing are being considered by basic emotion theories. In this paper, I will merely examine whether a contextual approach to blushing has more explanatory power than a theory that takes facial expressions to be universal signals of basic emotions.

3. Explaining Emotional Expressions

3.1 The Origins: Darwin

A standard strategy to naturalize norms of emotional expressions is to refer to Darwin's theory of innate emotional expressions (Darwin, 1872/1998). Often, Darwin is understood to be one of the first to defend the claim that each (basic) emotion has their very own and distinct emotional expression. Darwin's account has been challenged by Russell (1994); Darwin's influence on BET persists, however.

Darwin's aim in *The Expression of the Emotions in Man and Animal* (1872) is to analyze the phylogenetic origins of emotional expressions. The ontogenetic development of emotions and how they are linked to emotional expression is touched in his work as well. Darwin studied a variety of cultures, children, nonhuman animals, and blind people.

One of Darwin's central aims is to establish that facial expressions are innate. He gives several lines of evidence. First, he argues that emotional expressions are cross-culturally the same. Another line of evidence, accor-

ding to Darwin, is that children do not seem to be able to control their emotions or their emotional expressions. That speaks for the conclusion that emotions and their expressions are automatic responses present early in life, and thus probably innate. In a third line of argument, which runs throughout his book, Darwin compares the emotional expressions of humans to other animals. Hess and Thibault describe how Darwin looked at similarities between expressions of humans and of non-human animals: "For Darwin, if physiological and morphological traits were phylogenetically continuous in man and animals, the same must apply to mental and psychological states" (Hess & Thibault, 2009, p. 125). That is, seeing the similarities between human and non-human expressions was enough for Darwin to conclude that the emotional states underlying those expressions must be similar too.

Summarizing Darwin's account of emotional expressions, we can say: First, for Darwin, facial expressions came to be associated with emotion states in a number of ways: some are adaptive (for example, an angry grimace can reveal one's teeth) but others are the accidental result of excessive activity in the nervous system and still others are acquired through habitual associations and then passed on to subsequent generations. Expressions are reliably correlated with emotions, but they are not components of emotions, and they are not all evolved for some adaptive of communicative function. Second, there is a close mapping, perhaps one-to-one, between emotions and expressions. Darwin analyzes many expressions and never describes the full context or suggests that context could matter for the constitution of expressions. Third, Darwin implies that emotional expressions are automatic, and not controlled. We can think of this as a natural norm account. If there is a one-to-one mapping between emotions and expressions, and that relationship is causal, then those who see the expression, will be entitled to see the expression as a natural sign of the emotion that causes it. If emotions themselves have functional meaning, then one can also use the natural relation to infer that the observed individual is representing that meaning. For example, a fear expression naturally indicates, for the Darwinian, that the expresser is scared and that they represent themselves as in danger.

Let us now look at the impact Darwin's research has had on contemporary accounts of emotional expression.

3.2 Ekman et. al: Basic Emotion Theory

One contemporary theoretical strand that is largely based on Darwin's theory has been especially influential in emotion research and research on emotional expressions. The theoretical strand is called Basic Emotion Theory (BET) by its most persistent defenders, Ekman and Izard, who I will focus on here. Ekman is held to be the main defender of the claim that basic emotions are universal. Even though there is no central discussion of blushing in Ekman and Izard, both agree that blushing is a basic emotional expression, and consider it to express shame or humiliation

Ekman and Izard claim that: (1) Some facial expressions express emotions; (2) Facial expressions have developed in phylogenesis; (3) Emotional expressions are still adaptive; (4) Emotional expressions evolved due to natural selection (cf. Ekman, 1972, 1999, Ekman & Friesen, 1978, Izard, 1994, 2011).[4] Those claims are then translated into the following characteristics of basic emotions: basic emotions are distinct universal signals (that is, visible expressions with distinctive physiology), they are automatic appraisals (that is, the mechanism that causes an emotion to occur selectively attends to certain stimuli; i.e., appraises those), they are present in other primates, they are short-lived and occur quickly (sometimes referred to as: automatically), their subjective experience is distinctive as well (Ekman, 1999).

Strong versions of BET rely on a specific reading of Darwin: that is, they embrace the claim that each basic emotion has a specific physiological pattern. This is also linked to the claim that universality in emotional expression is explained by hardwired basic emotions and one-to-one mapped circuits. It is debatable, however, whether and how strongly Darwin embraced the claims researchers now refer to as Darwinian (Barrett, 2011). For modern followers of Darwin, such as defenders of BET, all emotional ex-

[4] Ironically, Darwin's account is not a natural selection account, since expressions are not replicated in virtue of being adaptive. Instead, Darwin stated that emotional expressions are "once-useful habitual gestures that were long ago performed willingly and voluntarily; (…) they continue to occur with emotion even when those expressions are *no longer functional*" (Barrett, 2011, p. 400).

pressions are also adaptive (e.g., Shariff & Tracy 2011). They are said to serve communicative functions.

Ekman's list of basic emotions originally included happiness, sadness, surprise, fear, anger, and disgust, and he debated others to be basic emotions later on (Ekman & Cordaro 2011). It is sometimes suggested that Ekman also allows for considerable cultural influence (Lutz & White, 1986), but this is debatable. Ekman primarily focuses on the universality of basic emotions and their expressions, and thereby downplays the influence of culture. On the other hand, he acknowledges that there are cross-cultural differences in basic emotions and their expressions. However, it remains unclear to date how strong Ekman deems this influence to be. One might argue that he still thinks basic emotions are universal and have one specific emotional expression each, and the cultural influence only contributes to how these emotions and their expressions are managed. He grants that, in some cultures, people try to conceal or suppress their expressions, but the expressions themselves are fixed (Ekman & Friesen 1978, Ekman & Cordaro, 2011).

Even if Ekman and other basic emotion theorists acknowledge that cultural and social aspects influence emotional expressions, their acknowledgement does not offer an explanation that makes context central to explaining emotional expression. In order to consider that context does not only play a contributory role but a central and perhaps the defining role for emotional expressions, and thus also for blushing, we need to look at emotion theories that make context more central. In the following, let us look at contextual emotion theories.

3.3 Contextual Emotion Theories

In their analysis of cultural factors and basic emotion, Lutz & White point out that Darwin's proposal and the approaches taken by his followers (e.g., Izard, Ekman) tend to focus too narrowly on expressions themselves and on trying to find one cause for any given expression. This, however, leads these approaches to ignore important social and contextual factors that are important to analyze when trying to understand emotional expressions

(Lutz & White 1986). This section will briefly present different general approaches to contextual understandings of emotions and their expressions. Later on these approaches will be applied to blushing specifically. The contextual emotion theories depicted here are based on criticisms of (some versions of) BET; I will thus proceed to point out the criticisms made as well as any positive claims made about a contextual approach to emotion and emotional expression.

Jack et. al (2012) argue that basic emotions are not universal but culturally different. According to their study, the "six clusters are optimal to characterize the Western Caucasian facial expression models, thus supporting the view that human emotion is composed of six basic categories," however: "this organization of emotions does not extend to East Asians, questioning the notion that these six basic emotion categories are universal" (Jack et al., 2012, p. 7242). The results of this study suggest that Ekman's version of BET is applicable to Western cultural contexts but fails to be significant in other cultural contexts: "the six basic emotions (i.e., happy, surprise, fear, disgust, anger, and sad) are inadequate to accurately represent the conceptual space of emotions in East Asian culture and likely neglect fundamental emotions such as shame (…)" (Jack et al., 2012, p. 7242).[5]

James Russell's work also criticizes BET by way of looking at the role cultural context plays for emotions and their expressions. Russell provides a review of studies testing the universality thesis, testing for cultural differences, and formulating objections against Ekman's basic emotion approach (Russell, 1994). Russell's main criticism revolves around Ekman's methods. For example, Ekman used a forced choice method to test his subjects' emotion recognition, presenting subjects with a limited number of emotions to choose from in the first place, thus greatly limiting the possible replies that subjects could give to questions about which emotion they're recognizing (Russell 1994). When picking from, say, three faces to accompany a vignette, a subject might pick the one that seems best of the bunch, even if it is not a great fit, and, even then, there is no guarantee that the subject assigns the exact same meaning to the face (see Russell, 2015, and

[5] Re. cultural differences in emotional expression: Russell (1994) provides an extensive review of studies testing the universality thesis and testing for cultural differences.

Eickers & Prinz, 2020, for further discussion). All in all, Russell suggests that the evidence for emotion recognition of basic emotions Ekman presents is largely due to design flaws in Ekman's studies:

> No single design problem need be fatal, but cumulatively they combine to push scores in the predicted direction: within-subjects designs, posed exaggerated facial expressions (devoid of voice, motion, body, and information about the expresser's context), and the use of forced-choice response format (Russell, 2015: 4).

Russell's critique has also been backed by Barrett, who points out that a particular facial expression can mean different things (Barrett et al. 2007; Barrett 2012). Smiling, for example, doesn't necessarily mean happiness, it might also signal embarrassment, pride, or nervousness. Russell summarizes this research as follows:

> In brief, happy people do not always smile, and smiles occur without happiness. Smiles are easily posed, do not always correlate with the smiler's emotional state (…) and can be caused by negative experiences such as losing a game (…), being embarrassed (…),or being in pain (…). Similar problems arise for other emotion-face associations (Russell, 2015: 3).

Russell and colleagues have also looked into other contextual factors contributing to emotional expressions (Carroll & Russell 1996; Kayyal et al. 2015). BET argues that facial expressions are automatic signals of specific emotions and thus, "implies that the facial expression is more powerful for 'recognition' of emotion than is its context (…) whereas context can provide only probabilistic information because different individuals respond differently to the same situation" (Russell 2015: 5). However, studies researching that very question have found the opposite to be true. Carroll and Russell (1996) examined emotion recognition by pairing emotions with situations and presenting those to subjects. They found that, "in determining the emotion seen by the observer, context is more powerful than the face (Carroll & Russell, 1996): a person in an anger-inducing situation who showed BET's 'fear face' was interpreted as angry rather than afraid" (Russell 2015: 5). Context was also the central determining factor in a further study on whether we rely on context or the face when observing an emotion's valence (Kayyal, Widen, & Russell, 2015). In Kayyal et al.'s study, participants were

asked to observe "spontaneously produced facial expressions of athletes in the 2012 Olympics", "15 facial expressions (…), 12 of whom had just won and 3 of whom had just lost their event" (Kayyal, Widen, & Russell, 2015, p. 287). There were three conditions that differed in context, which was provided via written informations: one correct context (correct about the result of the event: win or no win), one incorrect context, one without context. "For each athlete, observers judged the athlete's emotion, specifically the degree to which the athlete felt each of seven emotions: happy, sad, angry, afraid, disgusted, proud, and excited" (Kayyal, Widen, & Russell, 2015, p. 288). The results showed that the emotion judgments varied with context. While the face alone communicates valence but only weakly so, context about the event and situation provided for a more reliable judgment of an emotion.

These findings point to the importance of situational context for emotional expressions. An important name to mention in this regard is Alan Fridlund. According to Fridlund (1991) expressions do not indicate emotions but actions (see also Scarantino, 2017). Griffiths and Scarantino draw on Fridlund but suggest a more nuanced contextual approach, arguing that expressions can point to actions arising from emotions, goals, and situational contexts. According to their model, emotions are designed to function in social contexts, i.e., they are socially situated goal-oriented responses. Within that framework, emotional expressions communicate specific things in interactions. They present evidence for their claim by examining audience effects and animal behavior. Some emotional expressions occur only in the presence of other people – e.g., gold medalists producing Duchenne smiles when in front of an audience (Griffiths & Scarantino, 2005; Fernández-Dols & Ruiz-Belda, 1995). That is, emotional expressions are not an automatic effect (or byproduct) of a felt emotion but rather "strategic moves in the context of a social transaction" (Griffiths & Scarantino, 2005, 439). According to this situationist approach, emotions are ultimately defined via the situations in which they occur. Without being embedded in a situation, an emotion, and thus also possible accompanying expressions of that emotion, are deprived of meaning. This understanding of emotions makes context, i.e., situational context, central.

Now, one might ask whether embracing contextual information means denying the existence of discrete emotions and embracing an open-ended many-to-many matching between facial expressions and emotions? I think, ultimately, the answer is no. Emotional expressions are not random symbols but indicate how the expresser will probably behave or (re)act. Certain ambiguity might come from the fact that physiological and bodily patterns of emotional expressions overlap. However, the studies cited provide us with sufficient evidence to think that context can serve as our guide in dealing with emotional expressions. Contextual factors do not make phenomena ambiguous, rather: they equip seemingly randomly occurring phenomena (such as facial expressions) with information that is used to determine the discrete meaning of said phenomena. Elsewhere, I argue, together with Loaiza and Prinz (2017), that emotions are both embodied and socially constructed. On this approach, an emotion can be realized differently in different contexts. Emotions are elicited by different events or situations in different cultures. Context is crucial for if and how we perceive *and* express an emotion. An example is anger: there may be cultural differences as to what is an offense eliciting an anger response. This difference does not only influence the subjective experience of the emotion but also how the emotion is expressed (Eickers et al., 2017). "When a person in a Western culture is insulted, standing responses include various forms of symbolic aggression (shouting, profanity, and bodily responses that prepare the body for a violent altercation), and various forms of withdrawal (storming away, sulking, and brooding)" (Eickers et al., 2017, 35). In other cultures, there might be different contextual cues of anger (see e.g., Russell 1991). Matsumoto et al. (2009) point to a difference in anger expressions between collectivistic and individualistic cultures. According to them, „embedded, hierarchical, and more collectivistic cultures encourage regulating angry expressions by neutralizing or concealing the anger; individualistic, autonomous, and egalitarian cultures encourage regulating their angry expressions by toning it down, but not eliminating it or misdirecting others by showing something else" (Matsumoto et al., 2009, 8).

In my view, an emotional expression is a non-random but fairly ambiguous signal that indicates how the expresser will behave or (re)act. The

ambiguity is partly due to overlapping physiological and bodily patterns of emotional expression. However, this does not mean that in situations where expressions occur (which happens very frequently), we are left to open-ended ambiguity, to confusion and to guessing in order to make sense of the ambiguity. Rather, contextual factors equip us with the necessary tools to make sense of the ambiguous expressions. What's more, the expression itself is restricted in its expressiveness, i.e., in how strongly it is displayed and/or how exactly it is displayed, by the social context.

In the following, I examine whether and how exactly context matters for blushing and if contextual emotion theories are better equipped at explaining the blush.

4. Does Context Matter for Blushing?

In the last section, by looking at contextual emotion theories, we have seen how important context is for understanding emotional expressions and how under-considered context has been in basic emotion theories. Now, it's time to ask whether context is also important for blushing.

Contextual factors bear on emotional expressions on different levels. Those might be distinguished as follows: there is the context of occurrence of an emotional expression (how does context influence whether, which, and how an emotional expression occurs?), there's the context of recognition and interpretation (how does context influence if and how observers recognize and interpret an emotional expression?), and there's the context of evaluating someone having a certain emotional expression (how does context influence how observers evaluate the emoter?). All of these levels on which contextual factors may operate are considered in this discussion. More work will have to be done on distinguishing these levels in order to examine how contextual factors play a role on a specific level. Here, all levels of contextual influence are considered, as all shed light on the importance of context for emotional expressions.

As for blushing, this means that this section considers context on different levels: How does context influence whether someone blushes? How does context influence how observers interpret a blush? How does

context influence how observers evaluate the blusher? However, for structural purposes, the section will be divided by differentiating between different kinds of context, not by asking general questions regarding how context influences expressions.

In order to address the different contextual emotion theories and the specific objections they have towards basic emotion theories, I will divide context into three different categories: individual context, situational context, and cultural context. Individual context addresses aspects of identity that might have an influence on emotion and emotion perception, such as gender, race, and disability. Situational context concerns the situations one is embedded in while experiencing and performing an emotion. Cultural context describes the culture one is embedded in a specific situation but also the particular cultural backgrounds of the people involved in the specific situation.

4.1 Individual context

Individual context refers to the notion that people's biographies, personalities, experiences are all unique and influence the way we emote (i.e., the way we experience and express emotion). Individual differences can make us more or less likely to engage with others emotionally based on things such as attention span, willingness to collaborate, communication patterns, and so on. Consider also examples such as introversion and extroversion. The interactions between two introverts will likely differ from the interactions between two extroverts. The interactions between two queer people will likely differ from the interaction between a queer and a non-queer person. These differences are not to be explained via reference to innateness but via reference to individual context. Let me take a closer look at how individual context plays a role for blushing.

Individual context might play a role for blushing at the occurrence level. That is, factors such as gender, race, or social status seem to influence if and how frequently and intensely a blush occurs (Lewis 2016). According to some studies, women tend to blush more often than men, are more likely to be frequent blushers, and are more likely to develop fear of blushing (ery-

throphobia) (Drummond, 2013, Mulkens et al., 1999).[6] These factors, of course, are not to be mistaken for innate facts. Rather, we can consider these facts to be constructed but real. That is, it is not the case that there are certain blushing genders and other non-blushing genders. Instead of arguing for an innate gender difference with regards to blushing, it is more plausible to argue that we learn from an early age that there are specific emotional expressions that are appropriate and others that are not appropriate for specific genders. We might have been taught that blushing, an expression associated with shyness and sensitivity, is an appropriate expression to display for women, for example, but not for men. This, in turn, results in gender differences in emotional expression in general, and blushing – as discussed here – in particular.

An important point to consider in the specific case of blushing is the following: blushing has been considered to be an automatic and uncontrollable expression by some theorists (e.g., Darwin 1872). Now, one might say that the automaticity claim entails that that people cannot learn about the appropriateness of a blush. This ignores that learning takes place on multiple levels. Even if blushing is an automatic and uncontrollable expression – meaning: I can't voluntarily suppress a blush in a given instance –, learning about appropriateness conditions and norms surrounding the blush is possible and can impact how and when a blush occurs. Consider how a violation of "stereotypic display rules can lead to negative social consequences, such as social rejection and discrimination (Brody, 1999). For example, depressed men were rated as 'unmanly' and evaluated more negatively than depressed women (Brody, 1999)" (Brody et al. 2016, 372). As implicated, such evaluations do not occur in a neutral space but in a social space, bringing about real-life consequences. Let us also take into account the studies on gender differences in blushing mentioned above. If you expect to be punished for displaying a certain emotion due to embodying a certain gender, this will ultimately impact the way you (can) display this emotion. That is, if (gende-

[6] The research referred makes no mention of genders other than women or men. The research results for women might as well apply to people who were considered to be women a certain amount of time in their lives but who are not women (e.g., trans non-binary people or trans men) but this has yet to be researched.

red) expectations around display rules exist and are generally followed, surely they will influence the way we display emotions.

In addition, the case of blushing might not be so specific after all when we consider that all emotional expressions are automatic to a certain extent. That is, the emotional expressions in our repertoire (von Maur, 2021) are typically not exhibited voluntarily but rather automatically depending on contextual factors. Another point we need to consider here is that self-reports about emotional experience and expressions may differ in different genders due to stereotypes surrounding gender and emotion (see Brody et al. 2016). Also, interpretation of emotions may be biased due to stereotypes about how certain genders express emotions (see Brody et al. 2016). Brody et al. (2016) as well as Edelmann (2001) point to the importance of the intersections of different contextual factors. "It is possible that cultural expectations about the desirability or unacceptability of blushing for women and men influence blushing propensity scores" (Edelmann 2001, 312).

Drawing on the research done on gender and blushing, we can make a case for other individual factors that have social significance having an impact on blushing, such as social status. Consider a professor blushing in front of their class versus a student blushing while giving a presentation. Stakes are much higher for the professor since an emotional expression like blushing is considered to display shyness, sensitivity, or weakness. Someone in a high-status job, like a professor – especially when in front of their class – is thus not expected to blush since they are expected to not display sensitivity or weakness. This does not always save any professor from blushing in front of their class. However, these are societal constructions that contribute in real ways to how we learn which emotional expressions are appropriate for whom.

More research needs to be done on gender (and individual) differences in blushing in order to establish claims around such differences. However, all considerations mentioned in this section taken together lend strong support to the claim that individual context impacts blushing.

As pointed to previously, the influence of individual context on blushing may hinge on other contextual factors such as cultural and situational context. Let me look into these factors in what follows.

4.2 Cultural context

There is not much research to be found on cultural differences in blushing and thus the influence of cultural context on blushing remains understudied. However, we can rely on the research done on emotional expressions in general and a few studies that point to cultural differences in blushing.

Edelmann rightly points out that, "A number of studies have evaluated self-reported recall of blushing in different cultures (Edelmann et al., 1989; Edelmann & Iwawaki, 1987; Edelmann & Neto, 1989; Simon & Shields, 1996)" (Edelmann 2001, 313). In his 1990 study, he found that, considering "symptoms that respondents recalled in relation to experienced embarrassment, the reported frequency of blushing was, in general, similar in the countries studied 35% in Japan, 25% in Greece, 29% in Italy, 21% in Spain, and 34% in Germany recalled a blush. The exception was the United Kingdom where 55% of the respondents recalled blushing" (Edelmann 2001, 313). That is, there seem to be subtle cultural differences surrounding the blush. These may have to do with the occurrence of blushing, or feelings and norms around blushing; the present studies do not provide us with enough material to argue for a specific locus of impact, however.

We may learn something about how cultural context impacts blushing by looking at the phenomenon of fear of blushing. Studies indicate that individuals with a fear of blushing (erytherophobia) blush more easily and more intensely than individuals without a fear of blushing (Dijk & de Jong 2013; Bögels et al. 2002; Dijk et al. 2009). In another study, "individuals from collectivistic countries reported more social anxiety and more fear of blushing than individuals from individualistic countries" (Heinrichs et al. 2006). This, in turn, could mean that blushing is more common in collectivistic countries than it is in individualistic countries.

Another study suggests that infrequent blushers are more likely to have pleasant feelings while blushing (Rot et al., 2015). This suggests that in cultures that are supposedly more prone to unpleasant feelings (i.e., feelings with negative valence such as shame or embarrassment), there may be

a higher number of frequent blushers. That is, culture may have an impact on the way we feel while we blush and on how we experience blushing.

Data on the influence of cultural context on blushing is patchy; however, the research presented here is to be considered in the context of the research on cultural influences on emotional expressions in general. Having the bigger picture in mind when looking at cultural data on blushing provides us with reason to think that cultural context does have an impact on blushing. This may show in cultural differences regarding the events and situations that evoke a blush, the feelings accompanying or surrounding a blush, and the way blushing is evaluated by observers.

4.3 Situational context

The final contextual factor I want to consider in this paper is situational context. What does "situational context" imply? Situational context refers to factors that are present in a situation but that are external to the subjects involved. Situational contexts are made up of various sub-aspects: The temporal aspect (When does the interaction take place and how long does it last?), the spatial aspect (Where is the scene located? What is the environment like?), the relational or interpersonal aspect (Who are the other agents participating in the interaction? How many are there in total? How are the subjects connected?). Some aspects of situational context may overlap with other contextual factors, such as culture and individual factors.

Apart from general research on the role of context for emotional expression where it is argued that different contextual factors are at play and need to be taken into account (for example Brody et al. 2016) and studies that look at the role of situational context for emotional expressions specifically (for example Carroll & Russell 1996 and Kayyal et al. 2015), there are a few studies looking at situational influences on blushing in particular.

Dijk and de Jong (2009) and de Jong (1999) looked at the social dynamics and feelings surrounding a blush; that is, they looked at how blushing and blushers are evaluated by observers. Dijk and de Jong (2009) and de Jong (1999) found that observers often tend to feel sympathy with

blushers, and that observers will evaluate those who blush after a mishap more positively:

> Results confirming the remedial effect of social blushing are reported (…). Participants who evaluated scripts describing an actor following a mishap, viewed the actor less negatively, as being less responsible for the incident, and as more trustworthy when the actor was described as blushing than when he or she was described as showing no overt signs of shame or embarrassment (Edelmann 2001, 309).

But the effect is limited by situational context: "However, blushing does not always improve observers' impressions of the blusher. Whereas blushing seems to have remedial effects following an obvious transgression, it can backfire in ambiguous situations" (Crozier & de Jong, 2013, p. 66). Ambiguity here refers to a subject's intentions. That is, in situations where a "mishap" happens and the subject responsible for the mishap blushes, this might be interpreted by observers as a confession of guilt. De Jong et al. (2003) summarize this as follows: "in the absence of clear-cut predicaments or straightforward information with respect to the intentionality of a transgression, blushing did not result in a more positive evaluation of the actor as was found in the context of a mishap" (de Jong et al. 2003, 243). Following their studies on the influence of situational context on blushing and its evaluation, de Jong et al. (2003) conclude that blushing is context-dependent:

> The present pattern of findings sustains the idea that the functional properties of blushing are context dependent. In the case of clear-cut deviant behaviors, blushing has face-saving qualities, but in the context of more ambiguous social situations or situations that are ambiguous with respect to the actor's intentionality, blushing may serve a revealing rather than an appeasing function (de Jong et al. 2003, 244).

Other studies look at how observation of one side of the face might evoke functional asymmetry in sympathetic vasodilator discharge. Blood flow in the face can be increased by observation (Drummond, 2004), and staring at one side of the face increases blood flow on that side (Drummond, 2004). This suggests the crucial role of situational context such as the gaze of others for the occurrence of a blush. It has not been investigated whether this finding also makes a difference on a phenomenal level; that is, whether

someone experiences a blush differently when being directly observed. However, the effect staring has on blushing intensity shows how deep the influence of social context runs. This is not to be written off as a "mere physiological effect"; rather, as an example for how context influences the occurrence of blushing, and more generally speaking for how context can influence the occurrence of emotional expressions. As Edelmann (2001, 304) summarizes the literature, "Many authors have noted that the mere presence of others can be sufficient to evoke blushing, (…) As Leary and Meadows (1991) note, some people blush (…) simply when they are stared at by another person."

Earlier in this paper we have learned that contextual emotion theories argue that it is close to impossible to make proper sense of an emotional expression without looking at the situation the expression is embedded in. Research on the influence of situational context on blushing backs this argument.

CONCLUSION

According to contextual emotion theories, contextual factors are necessary for understanding an emotion – both in a real-life situations and in scientific analysis and research. Given the data on context and blushing presented in this paper, we can confidently conclude that context is central to understanding the blush as well. Without situational context, for example, we wouldn't know how to evaluate a blush; and, in turn, likely wouldn't know how to proceed with the given social situation. Ignoring situational context in scientific analysis would leave specific aspects of blushing unexplained and would thus hinder scientific progress in terms of understanding emotional expressions. BET recognizes that different situations can elicit different emotions and corresponding expressions, but it neglects the way situations can alter emotion/expression relationships, such that the same expression can take on different emotional significance (situational context). BET also neglects the role of learning and is thus inadequately equipped to explain, the impact of social roles (individual context) and culture (cultural context) on expression. Context equips us with necessary information to

come to a better understanding of blushing, and of emotional expressions in general.

In conclusion, relying on basic emotion approaches seems insufficient to explain the phenomenon of blushing. Contextual factors play a role for the occurrence and interpretation of the blush – including situations, individual differences, cultural specifics. These factors are better accounted for by contextual emotion theories since they indicate a role for learning, suggest a one-to-many mapping between expressions and emotions, and draw attention to the importance of context in the elicitation and interpretation of expressions.

Recebido em 14/10/2021

Aprovado em 21/02/2022

REFERÊNCIAS

Barrett, L. (2011). Was Darwin Wrong About Emotional Expressions? *Current Directions in Psychological Science, 20(6)*, 400-406.

Bögels, S.M. & Rijsemus, ‘W. & de Jong, P.J. (2002). Self-focused attention and social anxiety: the effects of experimentally heightened self-awareness on fear, blushing, cognitions, and social skills. *Cognitive Therapy and Research,* 26, 461-472.

Brody, L.R. & Hall, J.A. & Stokes, L.R. (2016). Gender and Emotion: Theory, Findings, and Context. In L.F. Barrett & M. Lewis & J.M. Haviland-Jones (Eds.), *Handbook of Emotions, Fourth Edition,* 369-392, New York: The Guilford Press.

Castelfranchi, C., & Poggi, I. (1990). Blushing as a discourse: Was Darwin wrong? In W.R. Crozier (Ed.), Shyness and embarrassment: Perspectives from social psychology (pp. 230–251). Cambridge, UK: Cambridge University Press.

Ekman, P., & Cordaro, D. (2011). What Is Meant By Calling Emotions Basic? Emotion Review, 3, 364–370.

Crozier, W.R. (2006). *Blushing and the Social Emotions. The Self Unmasked.* Palgrave Macmillan.

Crozier, W.R. & de Jong, P.J. (2013). The study of the blush: Darwin and after. In W.R. Crozier & P. J. de Jong (Eds.), *The psychological significance of the blush*, 1-11, Cambridge, England: Cambridge University Press.

Cutlip, W. D., II, & Leary, M. R. (1993). Anatomic and physiological bases of social blushing: Speculations from neurology and psychology. *Behavioral Neurology*, 6, 181–185.

Darwin, C. (1872/1998). *The Expression of the Emotions in Man and Animals* (1872). New York: Philosophical Library. 3rd ed. (1998) with Introduction. Afterword and Commentary by Paul Ekman: London: Harper Collins New York: Oxford University Press.

De Jong, P.J. (1999). Communicative and remedial effects of social blushing. *Journal of Nonverbal Behavior*, 23, 197–217.

De Jong, P.J. & Peters, M.L. & DeCremer, D. (2003). Blushing May Signify Guilt: Revealing Effects of Blushing in Ambiguous Social Situations, *Motivation and Emotion*, 27 (3), 225-249.

De Jong, P.J., & Dijk, C. (2013). Social effects of facial blushing: Influence of context and actor versus observer perspective. *Social and Personality Psychology Compass, 7*, 13-26.

Dijk, C. & de Jong (2009). The remedial value of blushing in the context of clear-cut predicaments. *Emotion (2009), 9(2),* 287-91.

Dijk, C. & Voncken, M. & de Jong, P.J. (2009). I blush, therefore I will be judged negatively: influence of false blush feedback on anticipated others' judgments and facial coloration in high and low blushing-fearfuls. *Behaviour Research and Therapy,* 47, 541-547.

Drummond, P.D., Mirco, N. (2004). Staring at one side of the face increases blood flow on that side of the face. *Psychophysiology, 41*, 281-287.

Drummond, P. D. (2013). Psychophysiology of the blush. In W.R. Crozier & P. J. de Jong (Eds.), *The psychological significance of the blush,* 15-38, Cambridge, England: Cambridge University Press.

Edelmann, R. (2001). Blushing. In W. R. Crozier & L. E. Alden (Eds.), *International handbook of social anxiety: Concepts, research and interventions relating to the self and shyness* (pp. 301–323). John Wiley & Sons Ltd.

Edelmann, R. (1990). Embarrassment and blushing: A component-process model, some initial descriptive and cross-cultural data., In W. R. Crozier (Ed.), Shyness and embarrassment: Perspectives from social psychology (pp. 205–229). Cambridge University Press.

Edelmann, R. J., Asendorpf, J., Contarello, A., Zammuner, V., Georgas, J., & Villanueva, C. (1989). Self-reported expression of embarrassment in five European cultures. *Journal of Cross Cultural Psychology*, 20, 357—371.

Edelmann, R. J., & Iwawaki, S. (1987). Self-reported expression and consequences of embarrassment in the U.K. and Japan. *Psychologia*, 30, 205-216.

Edelmann, R. J. & Neto, E (1989). Self-reported expression and consequences of embarrassment in Portugal and the U.K. International Journal of Psychology, 24,351- 366.

Eickers, G. & Loaiza, J. & Prinz, J. (2017). Embodiment, context-sensitivity, and discrete emotion. Psychological Inquiry, Vol. 28, No. 1, 31-38.

Eickers, G. & Prinz, J. (2020). Emotion Recognition as a Social Skill. In *The Routledge Handbook of Philosophy of Skill and Expertise,* Fridland, Ellen & Pavese, Carlotta (Eds.). Routledge, 347-362.

Ekman, P. (1972). *Emotions in the Human Face*. New York: Pergamon Press.

Ekman, P. & Davidson, R.J. (Eds.). (1994). *The Nature of Emotion: Fundamental Questions.* New York: Oxford University Press.

Ekman, P. (1998). Introduction to the Third Edition. In Darwin, C. (1872/1998). *The Expression of the Emotions in Man and Animals* (1872). New York: Philosophical Library. 3rd edn (1998) with Introduction. Afterword and Commentary by Paul Ekman: London: Harper Collins New York: Oxford University Press.

Ekman, P. (1999). Basic emotions. In T. Dalgleish & T. Power (Eds.), *The Handbook of Cognition and Emotion*, 45– 60. Sussex, UK: John Wiley & Sons.

Ekman, P. & Friesen, W.V. (1978). *Facial Action Coding System: A technique for the measurement of facial movement.* Palo Alto, CA: Consulting Psychologists Press.

Ekman P. & Cordaro D. (2011). What is meant by calling emotions basic. *Emotion Review, 3*, 364– 370.

Fernández-Dols, J-M. & Ruiz-Belda, M.A. (1995). Are smiles a sign of happiness? Gold medal winners at the Olympic Games. *Journal of Personality and Social Psychology, 69,* 1113–1119.

Griffiths, P.E., Scarantino, A. (2009). Emotions in the wild: The situated perspective on emotion. In P. Robbins & Murat Ayede (Eds.), *Handbook of situated cognition*, 437-454, Cambridge: Cambridge University Press.

Heinrichs, N. & Rapeeb, R.N. & Aldenc, L.A. & Bogelsd, S. & Hofmanne, S.G. & Ohf, K.J. & Sakanog, Y. (2006). Cultural differences in perceived social norms and social anxiety , *Behaviour Research and Therapy*, 44, 1187–1197.

Hess, U. & Thibault, P. (2009). Darwin and Emotion Expression. *American Psychologist, 64 (2)*, 120-128.

Izard, C.E. (1994). Innate and universal facial expressions: Evidence from developmental and cross- cultural research. *Psychological Bulletin, 115,* 288– 299.

Izard, C.E. (2011). Forms and functions of emotions: Matters of emotion–cognition interactions. *Emotion Review, 3,* 371–378.

Jack, R.E., Garrod, O.G.B., Yu, H., Caldara, R., & Schyns, P. (2012). Facial expressions of emotion are not culturally universal. *Proceedings of the National Academy of Sciences USA, 109,* 7241– 7244.

Keltner, D. & Buswell, B. (1997). Embarrassment: Its distinct form and appeasement functions, *Psychological Bulletin,* 122, 250–270.

Leary, M. R., Britt, T.W., Cutlip,W. D., II, & Templeton, J. L. (1992). Social blushing. *Psychological Bulletin*, 112, 446–460.

Leary, M.R. & Toner, K. (2013). Psychological theories of blushing. . In W.R. Crozier & P. J. de Jong (Eds.), *The psychological significance of the blush*, 63-76, Cambridge, England: Cambridge University Press.

Lewis, M. (2016). Self-Conscious Emotions: Embarrassment, Pride, Shame, Guilt, and Hubris. In L.F. Barrett & M. Lewis & J.M. Haviland-Jones (Eds.), *Handbook of Emotions, Fourth Edition,* 792-814, New York: The Guilford Press.

Lutz, C., White, G.M. (1986). The anthropology of emotions. *Annual Review of Anthropology, 15*, 405-436.

Matsumoto, D. & Yoo, S.H. & Chung, J. (2009). The Expression of Anger across Cultures. In M. Potegal & G. Stemmler & C. Spielberger (Eds.), *International Handbook of Anger. Constituent and Concomitant Biological, Psychological, and Social Processes*, 125-137, Springer.

Mulkens, S., de Jong, P.J., Dobbelaar, A., Bögels, S.M. (1999). Fear of blushing: fearful preoccupation irrespective of facial coloration. *Behaviour Research and Therapy, 37 (11),* 1119-1128.

Rot, M.a.h., Moskowitz, D.S., & de Jong, P.J. (2015). Intrapersonal and interpersonal concomitants of facial blushing during every day social encounters. *PLoS ONE, 10 (2)*: e0118243. doi: 10.1371.journal.pone.0118243.

Russell, J. A. (1994). Is there universal recognition of emotion from facial expression: A review of the cross-cultural studies. *Psychological Bulletin, 115*, 102-141.

Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review, 110*, 145-172.

Russell, J. (2015). Moving on from the basic emotion theory of facial expressions. In A. Scarantino (Ed.), Emotion researcher, ISRE's Sourcebook for research on emotion and affect. Retrieved from https://emotionresearcher.com/moving-on-from-the-basic-emotion-theory-of-facial-expressions/

Scarantino, A. (2015). Basic Emotions, Psychological Construction, and the Problem of Variability. In *The Psychological Construction of Emotion* (Edt.) Barrett, L.F. & Russell, J.A., 334-376.

Shariff, A.F. & Tracy, J.L. (2011). What are emotion expressions for? *Current Directions in Psychological Science,* 20: 395

Simon, A. & Shields, S. A. (1996). Does complexion color affect the experience of blushing? *Journal of Social Behavior and Personality,* 11,177-188.

Von Maur, I. (2021). The Epistemic Value of Affective Disruptability. Topoi. S.I.: Emotions in epistemic practice (eds. Laura Candiotto & Jan Slaby).