Emotion Universals:**The Foundation from which Cultural Variability of Emotion Emerges**

Kunalan Manokara¹ & Disa A. Sauter¹

1. University of Amsterdam, The Netherlands

Correspondence concerning this article should be addressed to Kunalan Manokara or Disa Sauter, Department of Social Psychology, University of Amsterdam, Postbus 15900, 1001 NK Amsterdam, the Netherlands, k.manokara@uva.nl or d.a.sauter@uva.nl

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“I think we use emotion words - anger, fear, disgust, sadness, and so on - as a shorthand, an abbreviated way to refer to the various events and processes that make up the phenomenon of emotion.”

As the above quote from Ekman (1997, pp. 334 – 335) highlights, emotions are complex constructs that comprise several different components. These include felt experience, cognitive appraisals, nonverbal expressions, and physiological changes (Moors, 2017). When considering questions relating to emotions, their multifaceted nature must be taken seriously. In this chapter, we argue that the question of whether emotions are universal or not must consider different components of emotions separately, and should recognise the possibility that the answers may not be consistent across components. Put differently, the degree to which cross-cultural similarities and differences are observed may depend on which component of that emotion is being examined (e.g., Levenson et al., 2007). We build on this notion and propose that universality for different components of emotions can be most usefully understood within a framework that differentiates between different *degrees* of universality.

We first provide an overview of two dominant approaches in affective science: the basic emotions approach and the psychological constructionist approach. We focus on these approaches as they clearly diverge on the *extent* to which cultural learning is deemed central for emotion; basic emotion theorists postulate culture as an added layer of complexity to specialized evolved adaptations (Ekman & Cordaro, 2011), while constructionists posit that

emotions arise as a function of socialization (Barrett, 2013). This distinction is key given the long-running debate surrounding the universality of emotion (e.g., Russell, 1994; Ekman, 1994). Next, we introduce Norenzayan and Heine's (2005) hierarchical system of cultural universals, a framework that allows for a nuanced understanding of how, when, and why culture shapes emotions. We then discuss representative sets of findings on two key components of emotion, felt experience and nonverbal expressions, in relation to this framework.

Emotions: how they have come to be (defined)

Contemporary empirical study of emotion has been dominated by two major schools of thought, which primarily diverge in terms of how they propose *emotion(s)* should be defined (Scarantino, 2012). One framework, the basic emotions approach, argues that emotions are specialised evolved adaptations (Keltner et al., 2019). The other framework, psychological constructionism, postulates that some human perception, cognition, and behaviour are referred to as emotions, but that those are shaped by proximal socio-contextual factors rather than specialised adaptations (Russell, 2009). In our overview, we present a prototypical version of each broad research program though each framework comprises multiple related theories, and we draw out the differences of the two overarching views.

In the basic emotions framework, emotions are viewed as specialised evolutionary adaptations to recurring challenges and opportunities that were important for the survival and reproduction of our ancestors (Tooby & Cosmides, 2008). All humans are posited to have biologically based, innate latent affect programs, one for each basic emotion. Although which emotions are considered basic varies across theorists (Levenson, 2011), emotions frequently

cited as basic are *fear*, *anger*, *disgust*, *sadness*, and *joy*. In recent years, a variety of emotions have been postulated to be basic, including *amusement*, *relief*, *excitement*, *embarrassment*, and *shame* (Ekman & Cordaro, 2011), suggesting a richer basic emotion space and finer granularity of emotion categories than initially proposed (Cowen et al., 2019a).

A central proposition is that each basic emotion evolved separately to facilitate survival (Ekman, 1992), likely at different time points in evolution. Basic emotions can be elicited by distinct universal antecedents, such as snakes in the case of fear and rotten food in the case of disgust, as well as by learned elicitors. They are characterised by quick onset and brief duration, and the output of activation of a basic emotion is a combination of components that are typical of that discrete emotion (Ekman & Cordaro, 2011). These emotions are postulated to have distinctive physiological signatures and cross-culturally consistent behavioural expressions (Scarantino & Griffiths, 2011) that can be observed in nonhuman animals (Adolphs, 2008). Notably, subjective experience is lacking from the set of central features described as constituting basic emotions; arguably, the central component for basic emotion theory is nonverbal expressions.

Already in early formulations of the basic emotions approach (Neurocultural Theory: Ekman et al., 1969), culture and socialisation were incorporated as added layers of complexity. In the basic emotion framework, emotions are seen as shaped by social learning and as interacting with higher order cognition in producing the outcomes observed in the real world (Izard, 2007). For example, cultural differences in emotional expressions can emerge from small but consistent differences between learning environments (Marsh et al., 2003), and group level differences can reflect social norms that govern emotional expressions, known as cultural

display rules (Matsumoto et al., 2008). Basic emotion theory thus postulates specialised preparedness for individual emotions, with cultural learning modulating emotion processes.

In contrast, psychological constructionism considers subjective experience (i.e., feelings) a key feature of emotions, and cultural learning is deemed central for acquiring and experiencing emotions (Mesquita et al., 2017). Emotions are theorised to be dynamically constructed, that is, made sense of by individuals with regards to specific situations (Russell, 2009). Labels such as *anger* or *disgust* are hence studied as folk categories rather than scientific concepts (Lindquist, 2009), and are not used to taxonomize emotions. The components of an emotion episode are theorised to be coordinated in a domain-general fashion, not reflecting discrete emotions or even being specific to emotions (Barrett, 2013), and are seen as highly variable internal mental states. In a particularly strong version of constructionism (Conceptual Act Theory: Barrett, 2014), emotions are defined as the interplay between core affect and conceptualisation: Core affect reflects representations of bodily sensations, which are proposed to vary along the dimensions of arousal and valence, and then interpreted according to the available concepts. In this school of thought, *fear* can only exist if people think they are afraid, much like how a banknote is considered currency only because society accepts its monetary value (Barrett, 2009). To summarise, psychological constructionism posits that emotions are mental representations that occur as a function of cultural learning, with the domain-general processes of core affect and conceptualisation thought to be innate and universal (Russell, 2017).

While at first glance the above accounts may seem contradictory, both posit some innate features and some learning processes. A major point of contention, however, is the contribution of cultural learning to emotion processes (Lindquist et al., 2013). We propose

that the question of whether emotions are universal can be more fruitfully addressed by evaluating each component of emotion separately (Scherer & Moors, 2019). In this chapter, we use the term ‘emotion’ as an overarching concept that reflects the amalgam of components (see Figure 1). Probing different emotion components separately can allow us to critically examine the extent to which cultural learning plays a role for each component of emotion. But first we turn to the question of how universality can be understood.

A framework for universality

While affective science may be divided on the issue of the universality of emotions, such debate is in no way specific to this domain. Similar disagreements exist on the universality of a range of functions, including numerical literacy (see Gelman & Gallistel, 2004), mating preferences (Buss, 1989), and colour perception (Regier & Kay, 2009). Although universality is sometimes presented as a binary matter, the human mind and human behaviour are dependent on processes that are shared across groups – including species constant learning – as well as ones that are culture-specific (Sasaki & Kim, 2017). Hence all theories attempting to systematically document psychological processes should acknowledge the interplay between shared evolution and culture-specific processes. Nature and nurture are not either or; they work in concert to shape emotions.

An example illustrating how nature and nurture together shape human emotional behaviour is laughter. Empirical findings clearly point to an evolutionary origin for laughter: human babies emit laughter when tickled within the first months of life (Srofe & Waters, 1976), a phenomenon present across species (Davila Ross et al., 2009). In humans, the association between laughter and mirth is observed across cultures (Sauter et al., 2015, Bryant et al.,

2018). Laughter has been theorized to function as a prepared signal for social play in social mammals including humans (Dezecache & Dunbar, 2012). However, cultural learning also shapes human laughter. Laughter vocalisations are shaped by cultural forces to become socially functional for individuals when navigating group life (see Kret et al., 2021), as evidenced by how laughter sounds are more easily recognized by members *within* a cultural group (Sauter & Scott, 2007). Laughter hence serves as an example for how biological preparedness and cultural learning interact in shaping some aspects of emotions.

It is thus clear that biological preparedness does not preclude a role of culture-specific learning on emotion processes. Rather than whether or not cultural learning affects emotions, then, a more fruitful question may be to what extent different components of emotions differ between people in divergent sociocultural contexts. A framework used in cross-cultural psychology to explain how, when and why culture shapes psychological processes can help inform this debate in affective science. Norenzayan and Heine (2005) have formulated a hierarchical system of organising cultural universals, outlining four different levels.

Processes can differ from one another in the extent to which they are universally existent, functionally similar, and equally accessible. To discern which level of universality a process could be classified into, three questions need to be answered in a sequential order. Given the prerequisite-based nature of this framework, evidence in favour of each preceding question is a necessary antecedent for the next level of universality to be evaluated (see Figure 1). We here list these three questions in turn and provide concrete examples for each.

First, is the psychological process cognitively available to people of most cultures, that is, does the construct exist for people of most cultures? If the answer is *no*, then the psychological process is labelled a *non-universal*, or a cultural invention. While few

psychological processes meet the threshold for non-universals, one candidate is numerical reasoning that is tied to a specific cultural product, such as the ability to apply abacus-based arithmetic strategies (Miller & Paredes, 1996). With regards to emotion, some theorists argue that lexical categories denoting emotions are non-universals. According to this view, many of the labels used to describe emotions are postulated to be purely culturally constructed (Russell, 1991), although accounts that argue for some degree of universality in lexical emotion categories also exist (Shiota & Keltner, 2005).

If the answer to the first question is *yes*, meaning that the construct exists in some form for people of most cultures, then this psychological process is considered at least an *existential universal*. This is the weakest level of universality, and most psychological processes fall into this category. (This includes emotional experiences, as we discuss later in this chapter). One example is the need for self-esteem and the ability to report this in surveys (Pyszczynski et al., 2004). While most people in most cultures have been found to have a basic drive to see themselves in a positive light, the degree to which this need is acted upon and how self-esteem is achieved and maintained, differs according to cultural context (Heine et al., 1999).

If the criterion for existential universality is met, then a second question is asked. Is the psychological process functionally similar across the compared cultures? This concerns whether the construct has the same use across cultures. If the answer is *yes*, then the process is assumed to be at least a *functional universal*. Such evidence, if found, would denote moderate levels of universality. Going back to the concept of self-esteem: its function differs across cultures, which makes it an unsuitable candidate for qualifying as a functional universal. However, one potential example for a functional universal are human relations around the world, which have been proposed to share common elements, including authority

ranking and communal sharing (Fiske, 1992). With regards to emotion, emotional expressions may be a candidate for functional universals, based on evidence from both production and perception studies (discussed later in this chapter).

If the criterion for functional universality is met, then a third question is asked. Is the psychological process equally accessible to people of all cultures? In other words, does the construct come to mind to a similar degree for people in divergent cultures? If the answer is yes, then the process is thought of as an *accessibility universal*. This is the strongest level of universality, and statistical evidence should include effect sizes that are cross-culturally equivalent (e.g., evidence against cultural moderation). Hence, merely demonstrating cross-cultural presence of a process cannot be taken as evidence for an accessibility universal. Even for human relationships that are postulated to be cross-culturally available, their accessibility differs according to chronically salient cultural features in the environment: collectivism is associated with a preference for communal sharing, and individualism linked to authority ranking (Vodosek, 2009). Few processes have been found to constitute accessibility universals. To date, evidence for this level of universality is largely speculative.

Applying this hierarchical framework of cultural universals to a multi-componential approach to emotions, we present a schematic for understanding cross-cultural similarities and differences for emotion components (Figure 1). Note that this set of questioning could also be applied to components as they relate to individual emotions (e.g., *anger*, *fear*, *gratitude*, *pride*), rather than to the superordinate concept of emotion.

--- INSERT FIGURE 1 ABOUT HERE ---

We next turn to discussing two components of emotion that paint different pictures of the role that culture plays in shaping emotion. We start with the component where the greatest cultural differences have thus far been found: subjective experience. We then discuss a component of emotion for which the role of culture has been fiercely debated, namely nonverbal expressions. For both components, we review representative sets of empirical evidence and evaluate them in relation to Norenzayan and Heine's different levels of universality.

Felt emotional experience across cultures

Cross-cultural comparisons have uncovered considerable differences in the subjective experiences that people across the world report feeling (Mesquita, 2001; Fischer et al., 2004). Much of this work approaches emotions from the perspective of constructionism. Findings demonstrate an influential role of culture and language in shaping self-reported experience of emotion, both at the intrapersonal and interpersonal levels (Mesquita et al., 2017; Lindquist, 2009).

Within the domain of subjective experience, emotions may be existential universals in that, in most cultures, people have a conceptually similar idea of what joy, pride, or anger may entail (Mesquita & Frijda, 1992). The content of those ideas may diverge, such that what causes pride in Michigan may be quite different from antecedents of pride in Singapore (Tong, 2015; see chapter 4), yet similarities exist in that people in these divergent cultures have a concept of pride available in their cognitive toolboxes. This is nicely illustrated by a classic study by Scherer (1997), which surveyed respondents from three divergent cultures on what made them feel angry. The results showed systematic cross-cultural differences: while others with

whom one was in a close relationship caused the most intense experiences of anger for Europeans and North Americans, strangers were the most potent source of anger experiences for the Japanese. At the same time, a shared underlying theme emerged for anger across these cultural groups: goal obstruction. Being unable to attain one's intended outcomes was a recurrent theme in anger causation and is arguably definitional to anger (Fischer & Evers, 2011). Members of all three cultural groups had a concept for this category of event, yet the type of obstacle depended on the specific cultural context. Across cultures, there is thus evidence for partly common notions of what different emotions entail, which can be taken as evidence for an existential universal. In the following section, we review evidence on emotional experience across cultures that points to it constituting an existential universal. The primary question we ask is this: do people of different cultures have similar subjective experiences when encountering equivalent situations?

Subjective experience as an existential universal

We organise the empirical evidence around three main methodological approaches that are frequently employed to measure subjective emotion experience. The most common method is *retrospective* self-report, in which participants are asked to recollect emotional situations from their past and rate the intensity of their subjective experience on Likert-type scales (Fischer et al., 2004). Using this method, researchers have tested the notion of cultural affordances: that social environments have the potential to modulate people's emotional experiences by guiding their emotional experiences to be in line with the values, ideas, and norms that are sanctioned within their culture (Kitayama & Markus, 1999; see chapter 3). It has been postulated that people in collectivist cultures that value an interdependent self-view (see chapter 1) should favour socially engaging emotions that bring them closer to other

people (e.g., *gratitude*), while people in individualistic cultures that value an independent self-view should experience more socially disengaging emotions that allow for a focus on the unique self (e.g., *pride*). Empirical work has established that members of collectivistic cultures like Japan report experiencing socially engaging emotions more intensely – and as more pleasant – than disengaging emotions, while members of individualist cultures like the U.S. report the opposite pattern (Kitayama et al., 2006; Napa Scollon et al., 2005). Research on cultural affordances thus demonstrates that the degree to which specific emotions are reported to be experienced and valued by members of a group tends to be in line with the cultural values of that group. While an emotional experience may exist in a similar form across groups, the functions these feelings serve may thus diverge depending on the cultural environment of the experiencer. An example of how the same subjective feelings can predict divergent outcomes depending on cultural context is the finding that the link between experiencing negative emotions frequently and lowered life satisfaction is stronger in individualistic than collectivistic societies (Kuppens et al., 2008).

A second method, which is gaining in popularity, is the *momentary* reporting of emotions (Mesquita et al., 2017). Using experience sampling methods, participants indicate their subjective feelings on Likert-type scales at specific points in time (Napa Scollon et al., 2005). In some experimental paradigms, participants also provide momentary ratings of their emotions while in the lab (Boiger, 2019; see chapter 8). A key finding in this line of work relates to how similar types of situations can elicit divergent emotional responding across cultures (Mesquita & Boiger, 2014). Dyadic cross-cultural research comparing pairs of romantic partners has found that similar interaction situations can elicit different emotional experiences across cultures. For example, in situations of disagreement, Belgian couples were forthcoming in reporting anger towards their interaction partner, a response pattern that was

rarely reported in Japanese dyads (Boiger et al., 2020). Research with mother-child dyads has yielded similar findings: German mothers more openly expressed their anger towards their children as compared to their Japanese counterparts (Trommsdorff & Kornadt, 2003). In essence, similar situational antecedents predict divergent emotional responses across cultures, in terms of how people from these groups report feeling.

A third method for measuring emotional experience is *prospective* self-report. Here, respondents imagine being in a fictitious situation and are then asked how they think they would feel in that situation (Batson et al., 1997). With this method, researchers have investigated the concept of ideal affect: that is, the emotional experiences that people value and would ideally like to feel (Tsai, 2007; see chapter 3). Cultural differences in ideal affect have been found when comparing between European American, Asian American and Hong Kong Chinese respondents, with the influence of culture more pronounced for ideal affect than for actual experienced affect (Tsai et al., 2006). Participants from collectivistic backgrounds have been found to value low arousal positive states that serve to maintain harmonious relationships (e.g., *calm*), while participants from individualistic cultures prefer high arousal positive states that focus on activating the self (e.g., *excitement*). To sum up, a growing literature is finding cultural differences in which emotions people would prefer to experience.

A substantial body of work thus makes the case that cultural learning plays an important role in shaping subjective experience: retrospectively, momentarily, and prospectively. Can this evidence for cross-cultural differences be interpreted to mean that emotional experiences are cultural inventions that differ fundamentally across groups? Based on Norenzayan and Heine's (2005) hierarchical system of cultural universals, the very fact that participants are

able to recognize, discern, and respond to the same emotion concepts suggests the presence of existential universals. Individuals across cultures seem to have the ability to comprehend and answer questions about how they feel in ways that are partly shared, yet emotional feelings are also conceptualised in culturally specific ways. The considerable differences in response patterns of emotional experience found in cross-cultural comparisons suggest that they do not constitute functional universals. While an emotional experience may exist across groups, the function it serves may well differ depending on the cultural environment of the individual (e.g., Kuppens et al., 2008). It is worth noting that this general claim about the broad construct of emotional experience may not apply to all emotional experiences; it does not preclude the possibility that there may be some emotional experiences that are unique to a given cultural group (e.g., fear of demons, reverence for deities), or that there are stronger cross-cultural consistencies for some emotional experiences, perhaps those tied to prototypical triggers (e.g., rotten food, urgent threats). In general, the available evidence points to emotional experience as an existential, but not functional, universal.

Measuring experience: Advances and considerations

Cross-cultural research on emotional experience has made considerable progress in terms of methodology, as can be seen from the range of approaches represented in this volume. Two new tools are likely to be useful for this field in years to come. Firstly, supplementing comparisons between selected cultural groups, opportunities are offered by big data to sample a large number of cultural groups, including datasets scraped from social media sites (Park et al., 2012). Big data has the potential to provide a richer understanding of how cultural variables shape emotional experiences, and may even lead to the emergence of new explanatory constructs (Rychlowska et al., 2015). Secondly, there has been an increasing

effort in recent years to study culture in tandem with context (Barrett et al., 2011).

Incorporating dynamic time-series modelling methods, cross-cultural psychologists have begun to unpack how and why culture influences emotional responses within the context of everyday interactions (Mesquita et al., 2017). With deeper insight into the *processes* that drive cultural differences in subjective experience, we stand to gain a more nuanced understanding for why emotional experience qualifies as an existential – but not functional – universal.

Nevertheless, much work in this area of research relies on self-report methods, which is associated with some limitations that may be particularly important for how we understand findings on cultural differences in emotional experience. Self-report measures are typically presented to participants in their respective native languages, which is the preferred approach for reaching diverse populations (Harkness et al., 2003). However, the translation process in and of itself is a potential source of systematic error (Dorer, 2015). Cross-cultural psychologists have also demonstrated that language accounts for systematic variance found between cultures (Ji et al., 2004). Hence, in considering the factors that shape cultural differences in self-reported emotions, language is a potentially important facet. Advances in the field of linguistics offers new approaches that may help alleviate this issue. Team translation (Douglas & Craig, 2007) has been found to be more than the back-translation approach that is predominantly used in the field at present. The team translation approach consistently references the source language in which the original items were constructed, thereby ensuring that all terms used in a survey are understood by participants of varied cultures in an equivalent manner rather than only focusing on word-for-word similarities.

A second methodological point concerns the use of rating scales. A growing body of work is demonstrating that cultural norms affect response patterns for Likert-type items (Van Hemert et al., 2002). For example, extreme responses are more common amongst Latin American samples (Marin et al., 1992), while mid-range responses are observed in East Asian samples (Chen et al., 1995). In some cultures where deference to authority is highly valued, acquiescence bias is also frequent, leading participants to consistently agree with scale items (Smith, 2004). Culturally dependent response biases can undermine the conclusions emotion researchers draw about cross-cultural differences based on self-report measures, because it conflates general response biases with the differences of interest. Here, advances in statistics offers potential solutions: it is possible to account for response biases using within-culture standardization techniques (Fischer, 2004). Some scholars also advocate the use of invariance testing methods, which allow researchers to distinguish systematic error from cultural variance (see Boer et al., 2018). Addressing these concerns relate to our understanding of universality; the degree of divergence in emotional experiences across cultures can arguably be better understood by incorporating these techniques.

Nonverbal expressions: Production and perception across cultures

Seminal work by Darwin (1872) documented human-primate similarities in nonverbal behaviours associated with human emotions, ranging from tears (tender sympathy) to humbling kneeling posture (devotion). The nearly 150 years since the publication of Darwin's work has seen a great deal of research on the topic of nonverbal communication of emotions. Most contemporary theorists consider the two component parts of emotion communication, production and perception, to be two separate processes. We therefore review representative findings on studies of production and perception separately. Much of

the early research was conducted within a basic emotions framework and this remains the case for most production studies (see Keltner et al., 2019). Nevertheless, recent years have seen an increase in the study of nonverbal expressions from a constructionist point of view, particularly in terms of studies of perception (see Crivelli et al., 2017).

Production: Evidence for functional universals

Production studies seek to examine how people express emotions using nonverbal cues like facial expressions, bodily postures or movements, and vocalisations, often described using classification schemes that taxonomize physical changes. For facial expressions, muscle movements are systematically documented with the Facial Action Coding System (FACS: Ekman et al., 2002), considered the gold-standard in the field of emotional expressions. More recently, automated tools to detect facial muscle movements are also available (e.g., Krumhuber et al., 2019). Contemporary work is also increasingly going beyond facial expressions. Standardized tools have since been developed for the systematic analyses of vocalizations (Eyben et al., 2015) and postural cues (Dael et al., 2012).

Unlike the evidence on emotional experience, research on the production of emotional expressions may indicate the presence of functional universals (Noranzeyan & Heine, 2005). The primary question we ask is this: do people of different cultures produce similar nonverbal expressions when encountering the same situation? As we outline below, prototypical expressions of emotions yield some consistencies in the patterns of facial, bodily and vocal responses in divergent cultural groups. Notably, the degree of cross-cultural overlap is greater for some emotional expressions than for others. We here differentiate

between two main methodological approaches that have been employed for production studies: the spontaneous approach and the encoding approach.

In the spontaneous approach, researchers evaluate the expressive behaviours produced in ecologically valid situations where a given emotion is assumed to have been elicited.

Research on spontaneous expressions in Olympic athletes has documented cross-culturally consistent expressions of pride and shame (Matsumoto & Willingham, 2006; but see also Aviezer et al., 2015). Across athletes from multiple cultures, pride associated with victory was characterised by an expanded chest and raised arms, while shame elicited by losing was reflected by slumped shoulders and a narrowed chest (Tracy & Matsumoto, 2008). These behaviours were observed in congenitally blind athletes in the same contexts. These findings led the researchers to conclude that spontaneous facial displays of emotion are not dependent on observational learning alone, and potentially reflect a shared genetic source across humans (Matsumoto & Willingham, 2009). Culture, however, was found to moderate these expressions. For example, shame was less visibly displayed by sighted athletes from individualistic cultures (Tracy & Matsumoto, 2008). A potential explanation could be that the athletes were suppressing their expressions, as they may have learned that defeated postures are not considered appropriate in individualistic cultural contexts, which stigmatize shame displays (Wong & Tsai, 2007). Cultural differences were found to set in over the course of the expressions. While the initial post-match reactions were similar for athletes across cultures, those from collectivistic backgrounds were quick to mask their expressions, which resulted in pride displays that were different across cultural groups a few moments later (Matsumoto et al., 2009). These findings highlight the complementary roles of evolutionary factors and culture-specific features in shaping emotional expressions.

In the encoding approach, participants are asked to pose expressions of specific emotions, often based on descriptions of prototypical emotion eliciting situations (Levenson et al., 1991). In one study, participants from Quebec and Gabon posed facial expressions of 10 emotional states (Elfenbein et al., 2007). Although systematic cultural differences emerged for the facial expressions of most of the emotions, the expressions were characterized as variants of cross-culturally shared expressions, particularly for anger, sadness, surprise, and happiness, and robust cross-cultural similarities were also found for expressions of fear, disgust, and embarrassment. In a similar study, participants from China, India, Japan, South Korea and the United States posed emotional expressions of 22 different emotions, prompted by emotion labels and example situations (Cordaro et al., 2018). While unique culture-specific patterns emerged, those complemented cross-cultural similarities that were identified for a majority of the positive emotions and most of the negative emotions.

In sum, production studies of both spontaneous and posed expressions support the notion that culture influences emotional expressions to a certain degree, while clear cross-cultural similarities appear to exist for at least some emotional expressions. Although culture-specific patterns of expression have been found for some emotions, these often co-occur with consistencies that are observed across groups, pointing to quantitative rather than qualitative distinctions between cultures (Keltner & Cordaro, 2017). The cross-cultural consistencies found in the production of nonverbal expressions thus provides evidence for functional universals for at least some emotional expressions.

However, the degree to which these expressions are equally accessible across cultures is an open empirical question which merits further investigation, a point we elaborate on below. There is also some evidence suggesting that the frequency of emotional expressions differ

across cultures (Floyd et al., 2018). Based on the available empirical evidence then, emotional expressions do not qualify as accessibility universals.

Measuring production: Key considerations

A growing body of work is detailing distinct expressions for a wide variety of emotions. Researchers have made genuine attempts to sample broadly across cultures, and probe multiple modalities of expression. However, these findings are typically more descriptive than explanatory. It may be useful for researchers to leverage three lines of work that can suggest potential reasons for *why* culture matters for nonverbal communication of emotion.

One potential factor is the role of socialisation. Cross-cultural developmental work has examined the impact of early parent-child interactions in shaping emotion displays (Halberstadt, 1986). This work has shown that some complex expressive patterns are acquired as a function of cultural learning that occurs within embedded family contexts (Wormann et al., 2014; see chapter 7). More work of this kind is needed, and incorporating concepts from the developmental literature might also provide emotion researchers with insights as to why cultures systematically diverge in their expressions.

A second source that may provide clues to the origins of cultural differences in emotional expressions is a closer reading of cultural histories and ethnographies that particularly refer to emotion. Just as the *Natyashastra* (a text describing emotional expressions in classical Indian dance: Chaudhury, 1965), provided theoretical grounding for a study on the perception of emotional facial expressions (Haidt & Keltner, 1999), a wider reading of cultural artefacts in

a wide range of languages could provide further insight into why culture-specific production patterns are observed for some emotions (Frijda & Sundararajan, 2007).

Thirdly, the literature on emotion display rules delineates the roles of culture, context, and learning (Zeman & Garber, 1996; Manokara et al., 2021) in shaping expression norms, with the underlying principle being that cultures diverge on how acceptable different emotional displays are considered to be. Collectivistic values (Matsumoto et al., 2008) and groups characterised by greater cultural homogeneity (Rychlowska et al., 2015) have been found to have stronger display rules. There is a lack of empirical work directly testing the hypothesised relationship between display rules and cross-cultural differences in emotion production (Ekman et al., 1987). This may be a fruitful avenue for further research, that will seek to better quantify the degree to which emotional expressions are more or less accessible in some cultures.

Perception: Evidence for functional universals

The universality of the perception of emotional expressions remains the subject of ongoing debate (e.g., see Sauter et al., 2010; 2015; Gendron et al., 2014). While a variety of approaches have been used to examine the perception of emotional expressions across cultures, participants are typically presented with expressions of emotions, such as static images (Cordaro et al., 2019), dynamic full-body movements (Gross et al., 2010), or vocalisations (Sauter et al., 2010). In some paradigms, the stimuli are presented first, and participants are then required to evaluate them either by categorical labelling (Ekman, 1994) or free response (Haidt & Keltner, 1999). In other paradigms, an emotion label or story is presented first, and respondents are then asked to choose from a set of stimuli that best

matches the given description (Cordaro et al., 2019). The presented expressions may come from a single culture or from multiple groups, and perceivers may also be from a single or several different cultural groups. The main question we pose here is this: do people across cultures map particular configurations of nonverbal expressions to equivalent emotion concepts?

Initial studies used categorical labelling tasks accompanied by stories, and found evidence supporting the notion that static facial expressions of *happiness*, *sadness*, *anger*, *fear*, *surprise*, and *disgust* could be reliably mapped to emotion concepts across cultures, including by members of culturally isolated groups (Ekman et al., 1969). Subsequent work has expanded on those early findings to include body postures and dynamic movements as well. The inclusion of expressions that include features other than facial cues has stimulated the study of a wider variety of emotions. For example, expressions of pride, characterised by a straightened back and pursed-lip smile, have been found to be reliably identified across cultural groups (Tracy & Robins, 2008). Similar findings have also emerged for other emotions. In one recent study, participants from nine cultures were presented with facial-bodily configurations of 18 emotional states (Cordaro et al., 2019). Above chance recognition accuracy was found for all emotions measured, including expressions of confusion (tilted head and furrowed brows) and boredom (slouched posture and head resting on hand).

Moving beyond visual cues, cross-cultural consistencies have also been found for nonverbal vocalisations of emotions (Sauter et al., 2010). Participants, including culturally isolated people in Namibia, consistently mapped several kinds of vocalisations to specific emotion concepts, regardless of the cultural background of the person who produced the vocalisation. At the same time, some expressions, such as vocalisations of triumph, were reliably

recognized only within but not across cultural groups. Several more recent cross-cultural studies of nonverbal vocalisations have yielded similar results, with moderate to strong cross-cultural recognition rates found for some (e.g., *interest*, *awe*, *embarrassment*) but not all emotions (Cordaro et al., 2016; Cowen et al., 2019b). In sum, considerable evidence demonstrates cross-cultural consistencies in visual and auditory perception of emotions. Notably, recognition rates vary greatly across emotions, but strong cross-cultural consistencies have been found for a range of different emotions.

However, there is far from a consensus on the degree of cross-cultural similarities in the perception of emotions (see Jack et al., 2012; 2013; Sauter & Eisner, 2013). Most notably, scholars have argued that emotional expressions are better understood as a function of domain-general features like arousal and valence, and that specific expressions are adaptive only in terms of proximal features (Russell 2003; Barrett, 2013). In this view, perceivers across cultures should be able to infer the degree to which an expresser is feeling energized, as well as good or bad, but such inferences would not necessarily map onto emotion labels (i.e., minimal universality, Russell, 2009). Furthermore, some researchers have attempted to replicate the findings from the earliest emotion perception studies in Papua New Guinea and found recognition rates much lower than in the original study (Crivelli et al., 2017). Hence, there is empirical research that argues against strong cross-cultural similarities in the perception of non-verbal emotional expressions.

How can these contradictory sets of findings (see Lench et al., 2011, 2013; Linnquist et al., 2013) be reconciled? One useful approach is to test competing explanations directly against each other. One recent study on emotional vocalisations empirically evaluated whether perceivers' recognition of emotions across cultures would be better explained by categories

or appraisal dimensions including valence and arousal (Cowen et al., 2019a; see also Sauter et al., 2015). Greater support was found in favour of judgements being based on categories rather than arousal and valence dimensions in both cultures. For example, 12 distinct categories of emotion (e.g., *desire*, *adoration*, and *amusement*) better encapsulated participants' judgments of semantic and acoustic features than did perceptions of valence. Similar results have emerged from studies of the perception of spontaneous facial-bodily emotional expressions (Cowen & Keltner, 2019) and music (Cowen et al., 2020). These findings lend support to the notion that some emotion concepts are consistently mapped to nonverbal expressions across cultures, and that consistencies of categories seem to be more stable across cultures than perceptions of valence and arousal.

Based on the available evidence, we postulate that perception studies on nonverbal expressions point to the presence of functional universals. Cultures tend to converge on mapping nonverbal expressions to a wide array of emotions, with three caveats applied. Firstly, evidence for cross-cultural consistency is more robustly observed in production studies than in perception research. Secondly, it is important to acknowledge that some emotional expressions do not translate across cultural boundaries. For example, while a tongue bite may be perceived as an indication of amusement or happiness in an American sample, Indians may view the same expression as denoting guilt, embarrassment, or shame (see Keltner & Haidt, 1999). Thirdly, even for emotions where cross-cultural consistencies have been found, perceivers are better able to recognise the expressive signals of those from within their own culture as compared to those from a different group (the in-group advantage: Elfenbein & Ambady, 2002). Hence, while cross-cultural consistencies in judgment accuracy have been found, the culture of the target plays a moderating role in recognition, indicating

that the perception of emotional expressions can maximally constitute a functional, but not accessibility, universal.

Measuring perception: Advances and considerations

Early methods used to study the perception of emotional expressions have been targets of considerable criticism. In recognition studies, one main concern is that imposing forced-choice categorical labelling upon participants may inflate recognition rates because participants can give accurate responses by using a method of elimination (Russell, 1994). In response to such criticism, some researchers have employed free labelling paradigms (Keltner & Haidt, 1999), and multi-scalar ratings of emotions (e.g., Fang et al., 2018). The use of different methods has led to somewhat similar conclusions with regards to the level of universality; in so far that evidence points to significant overlap between cultures in expressive patterns, thereby indicative of functional universals.

Another criticism, as rightly pointed out by Carroll and Russell (1996), is that most perception experiments have focused on posed expressions of emotions, which are limited in terms of ecological validity. Although capturing spontaneous expressions ‘in the wild’ is methodologically challenging, doing so is necessary to gain a richer understanding of how people produce and perceive emotions in the real world (see Anderson et al., 2018 for a good example). Freely available online sources have been useful to address this point. Nonverbal expressions scraped from the internet have the advantage of including spontaneous expressions that are ecologically valid (Sauter & Fischer, 2018), and may include multiple modalities of expression (Aviezer et al., 2012). The availability of large-scale datasets from online sources is increasingly also allowing the field to examine emotional expressions at

finer levels of granularity and to move beyond models of merely a handful of categories (Cordaro et al., 2019).

Contextual factors have been found to influence the perception of emotional expressions as well (Greenaway et al., 2018). Pertinent to the present discussion, the role of context in the perception of emotional expressions has been found to differ across cultures. For example, East Asian participants base their emotion judgments more on contextual cues rather than on a focal target, while the inverse is true for westerners (e.g., Fang et al., 2021; Masuda et al., 2008). Hence, future research on perception may benefit from considering culturally varying degrees of contextual influence in the perception of emotional expressions, thereby allowing for a richer understanding of why expressions may not qualify as accessibility universals.

To conclude: Caveats and future directions

In this chapter, we have outlined the view that questions about the universality of emotion are better conceptualised as separate questions for different emotion components. Moreover, we argue that these questions can be considered in relation to which level of universality is being postulated. Applying the hierarchical framework of universals by Norenzayan and Heine (2005), we discussed typical sets of findings for two components of emotion, emotional experience and emotional expressions. Our review led us to propose that emotional experience may be considered an existential universal, while emotional expressions may be considered functional universals, though the degree of universality appears to be highly variable across different emotional expressions.

Our suggestions are subject to continued review and debate. Each of these literatures is extensive and though we have attempted to review representative sets of findings, others would no doubt emphasise different work and considerations than we have, and may come to different conclusions. Nevertheless, we believe that the specifications for different kinds of universals posited by Norenzayan and Heine (2005) can help nuance the discussion on universality of emotions. The questions from the hierarchical framework of universals could of course also be applied to probe the degree of universality of emotion components that we have not touched on here, like physiological changes and appraisals.

An added layer of complexity emerges when examining the relationship between different components of emotion, the strength of which is the subject of further contention (Cowen et al., 2019a; Fernández-Dols & Crivelli, 2013). Pending the outcome of that debate, it would be unwise to assume that evidence from one component generalises to another. One example of research examining associations between components is the work on whether emotion labels are necessary for feelings. Even with regards to a putatively culture-specific emotion, *Amae* (loosely translated as attachment love in English; Niiya et al., 2006), evidence suggests that the feeling aspect may be an existential universal even though the label is specific to Japanese. North American respondents reported feelings that were similar to those of Japanese participants in prototypical *Amae* eliciting situations (for similar findings with *guilt* and *shame*, see Breugelmans & Poortinga, 2006). Of course, we do not suggest that the links between all sets of components are likely to be classified as existential universals. Just as one level of universality does not apply to all components of emotion, associations between components likely also differ in cross-cultural consistency. We do, however, propose that when theorising about the relationships between components across cultures, it may be

helpful to evaluate such associations through the lens of our suggested universality framework.

In closing, we propose the application of Norenzayan and Heine's (2005) levels of universals to different components of emotion as a way to nuance discussions on the universality of emotion. By providing a common set of criteria against which to evaluate the empirical evidence, we hope that this approach may facilitate communication between scholars who hold differing perspectives on the role of culture on human emotion.

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Figure 1. Schematic for evaluating levels of universality within each component of emotion