



ELSEVIER

Contents lists available at ScienceDirect

Journal of Experimental Child Psychology

journal homepage: www.elsevier.com/locate/jecp



Children's perception and understanding of (dis)similarities among dynamic bodily/facial expressions of happiness, pleasure, anger, and irritation

Sandrine Vieillard*, Michèle Guidetti

Université Toulouse II–Le Mirail, Unité de Recherche Interdisciplinaire OCTOGONE, Laboratoire Cognition, Communication, et Développement (ECCD), 31058 Toulouse Cedex 9, France

ARTICLE INFO

Article history:

Received 31 October 2007

Revised 22 April 2008

Available online 12 June 2008

Keywords:

Emotions

Dynamic expressions

Free classification

Free labeling

Multidimensional scaling

Cluster analysis

ABSTRACT

The current study examined the abilities of children (6 and 8 years of age) and adults to freely categorize and label dynamic bodily/facial expressions designed to portray happiness, pleasure, anger, irritation, and neutrality and controlled for their level of valence, arousal, intensity, and authenticity. Multidimensional scaling and cluster analyses showed that children ($n = 52$) and adults ($n = 33$) structured expressions in systematic and broadly similar ways. Between 6 and 8 years of age, there was a quantitative, but not a qualitative, improvement in labeling. When exposed to rich and dynamic emotional cues, children as young as 6 years can successfully perceive differences between close expressions (e.g., happiness, pleasure), and can categorize them with clear boundaries between them, with the exception of irritation, which had fuzziest borders. Children's classifications were not reliant on lexical semantic abilities and were consistent with a model of emotion categories based on their degree of valence and arousal.

© 2008 Elsevier Inc. All rights reserved.

Introduction

One of the critical issues in emotional development is the decoding of emotions to assess the social environment quickly and modify behavior accordingly, thereby ensuring successful social communication. The human face has a special status because it can be processed faster and more efficiently than any other class of objects (Farah, Wilson, Drain, & Tanaka, 1998; Kanwisher, 2000). This status

* Corresponding author. Fax: +33 5 61 50 39 19.

E-mail address: sandrine.vieillard@univ-tlse2.fr (S. Vieillard).

endows the human face with greater significance in social communication. Thus, it is not surprising that most early studies of emotional development focused on facial expressions. This widespread interest overshadowed research on emotional body movements, which have remained a neglected area ever since. Although it is well known that nonverbal emotional communication depends on both bodily and facial expressions, up to now these two media have been considered separately for research purposes.

Previous research on children's ability to decode emotion in expressive body movements had suggested that this ability did not emerge until 8 years of age (Custrini & Feldman, 1989; Van Meel, Verburgh, & DeMeijer, 1993). More recently, however, research has shown that children as young as 4 years can nonverbally identify discrete emotional meaning in expressive body movements at above-chance levels and that children as young as 5 years display an increased ability to identify these emotional meanings (Boone & Cunningham, 1998). These data demonstrate the success of kinesic displays in communicating emotional meaning even to young children.

Regarding the development of facial emotion processing, research has shown that the ability to use specific facial muscle configurations to discriminate facial expressions is present at birth (e.g., Field, Woodson, Greenberg, & Cohen, 1982) and that emotion perception skills develop during the first year of life. Although 4- to 6-month-olds are able to discriminate facial expressions of anger, fear, surprise, and sadness (e.g., Serrano, Iglesias, & Loeches, 1992; Walker-Andrews, 1998), the ability to abstract facial expressions from different people does not emerge until approximately 7 months of age (e.g., Caron, Caron, & Myers, 1982). The ability to perceive differences in facial expressions develops early in human ontogeny, but the ability to recognize emotion *per se* follows a slower developmental course, lasting from 3 to 10 years of age (e.g., Camras & Allison, 1985; De Sonnevile et al., 2002; Durand, Gallay, Seigneure, Robichon, & Baudouin, 2007; Gosselin, 1995, 2005; Herba, Landau, Russell, Ecker, & Phillips, 2006; Vicari, Reilly, Pasqualetti, Vizzotto, & Caltagirone, 2000). Recently, however, promising findings have provided evidence that 4-month-olds may have a rudimentary understanding of expressions of sadness, anger, and fear (Montague & Walker-Andrews, 2001), suggesting that the ability to recognize emotion *per se* may emerge before 3 years of age.

Although these studies have used different methodologies and produced conflicting findings on the developmental course of facial emotion recognition, they nevertheless indicate that emotion recognition processing does not emerge as a complete package and that the developmental pattern is not uniform across all emotions. Typically, happiness is the earliest and most accurately recognized emotion, followed by sadness, with less clear patterns for anger, fear, surprise, and disgust (e.g., Boyatzis, Chazan, & Ting, 1993; Camras & Allison, 1985; Durand et al., 2007; Gosselin, 1995, 2005; Vicari et al., 2000). There are several explanations as to why happiness is recognized so early and so accurately. It has been suggested that the lower part of the face—a smile—is sufficient to identify happiness, whereas other emotions—such as fear, anger, and sadness—require a combination of both the upper and the lower parts of the face (Vicari et al., 2000). Other authors have pointed out that there are no other positive emotions in the set of basic emotions with which happiness must compete (e.g., De Sonnevile et al., 2002) and that happy faces are those most frequently seen by most children and, thus, are the most familiar and readily processed faces (Batty & Taylor, 2006).

A common feature of these studies has been the investigation of emotional responses to facial emotions using basic expressions—happiness, sadness, anger, fear, disgust, and surprise. This choice of basic emotions is based on the traditional discrete approach, according to which these emotions correspond to a limited number of innate and universal emotion categories from which all other emotions can be derived (Ekman, 1982; Izard, 1997). In this approach, happiness, fear, sadness, anger, and disgust are considered as discrete emotions in that they are assumed to be unique emotional states that stem from distinct causes (e.g., Izard, 1997). These emotions are viewed as triggering basic and distinct adaptive behaviors. Support for this approach can be found in neuropsychological and functional brain imaging studies. For example, the recognition of facial expressions of fear may be linked to specific neural substrates such as the amygdala (Adolphs, Tranel, Damasio, & Damasio, 1994; Calder et al., 1996; Morris et al., 1996; Phillips et al., 1998), whereas the recognition of facial expressions of disgust may be related to the basal ganglia and the anterior insula (Gray, Young, Barker, Curtis, & Gibson, 1997; Phillips et al., 1998; Sprengelmeyer et al., 1996). However, the discrete emotions approach does not account for the possibility of strong degrees of co-occurrence between discrete emotional

Download English Version:

<https://daneshyari.com/en/article/918721>

Download Persian Version:

<https://daneshyari.com/article/918721>

[Daneshyari.com](https://daneshyari.com)