

Abstract concept acquisition across domains: the development of emotion and colour categories in 2-year-olds.

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Abstract

Early theoretical approaches hypothesized innate emotion categories based on facial expressions (Izard, 1971; Ekman, 1972), which in development would only need to be matched to the relevant labels (Harris, 1989; Wellman et al., 1995). However, experimental findings suggest that, while children start using emotion labels around age 2, their emotion categories develop gradually, well into the school years (Widen & Russell, 2003). Therefore, more recent approaches view the acquisition of emotion categories as an ongoing process of conceptual refinement, emphasising the role of language and links with other abstract concept development - whether as an analogous (Ruba & Repacholi, 2020; Widen & Russell, 2008) or interdependent process (Lindquist & Gendron, 2013; Hoemann et al., 2020). However, to our knowledge, these links have not been directly investigated.

The current study examines the relationship between the acquisition of two types of abstract categories: colours and emotions. These categories emerge around the same time, involve the same problem of abstracting a property across superficially dissimilar exemplars, and show gradual differentiation in development, supported by linguistic labels (Sandhofer & Smith, 2001; Roberson, Davidoff, Davies, Shapiro, 2004; Widen & Russell, 2008), but it remains to be seen whether they are directly related. Fifty 2-year-olds completed 2 sets of analogous tasks (based on Sandhofer & Smith, 2001) involving four colours (red, blue, yellow, orange) and four emotions (happy, angry, sad, scared):

1. Comprehension ('show me the red/angry one')
2. Production ('what colour is this?'/ 'what is he feeling?')
3. Abstraction ('what matches this?')

Examining these two domains within subjects will provide answers to the following questions:

1. Is the mechanism of acquisition the same for emotion and colour concepts? If so, we expect to see the same performance patterns across tasks.
2. Is there transfer between the domains? If so, we expect to see the same performance levels across domains.

The findings will contribute to our understanding of the relationship between emotion and other abstract concept development. The implications will be discussed with reference to current theories of emotion acquisition.