

Title: Cross-cultural differences in perceptual learning
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Abstract

Cross-cultural studies have shown that independence in individualistic societies is associated with analytic systems of thoughts, whereas collectivistic societies which place greater emphasis on interdependence are generally predisposed to holistic thinking (Masuda & Nisbett, 2011; Bang, 2015). Further, cultural identity has been shown to effect picture perception and cognitive processes (Nisbett & Miyamoto, 2005). For example, Asians were shown to be more sensitive to contextual rather than focal information compared to Americans in a change-blindness task in which observers had to detect either a focal or contextual change within pairs of images (Masuda & Nisbett, 2006). Here, we build on previous work on perceptual learning (Mayhew, Li, & Kourtzi, 2012) and test the role of individualistic vs. collectivistic influences on learning ability. Eighty-three participants of different cultural backgrounds – consisting of Asian (collectivistic) and European (individualistic) students – were asked to discriminate between radial and concentric Glass patterns embedded in background noise. We employed the Singelis' (1994) self-construal scale (SCS) to examine whether differences in task performance due to training were influenced by independent or interdependent cultural values. Visual perceptual learning was evident in both groups; that is, all participants improved in accuracy and reaction times through training. Importantly, Asian participants showed higher performance before and during training than European participants, suggesting an advantage in learning to extract global shapes embedded in cluttered backgrounds. This is consistent with the previously reported tendency of collectivists for global processing under perceptual uncertainty. Our findings provide evidence for the role of cross-cultural influences on visual processes that relate to our ability to improve in making perceptual judgements through training and experience.

Keywords: visual perception, learning, self-construal,

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