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Reconciling Competing Accounts of Picture Perception from Art Theory and Perceptual Psychology via the Dual Route Hypothesis

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Abstract: The fine and applied visual arts and perceptual psychology use conflicting accounts of picture perception. In the arts, the human ability to perceive pictured objects is characterized as learned, or conventionalized, like a "visual language" (Gombrich, 1960; Goodman, 1976; Kulvicki, 2010). In perceptual psychology, picture perception is characterized as an unlearned, biologically grounded, ability. In this account, optical properties of light produced by pictures make use of biologically evolved capabilities to perceive surfaces and edges in actual environments (J. J. Gibson, 1978; Kennedy, 1974; Lee et al., 1980; Hammad et al., 2008). The purpose of this paper is to reconcile these competing claims through Goodale et al.'s (2005) dual route hypothesis. It includes a role for learning and memory in visual processing via the ventrally located "what/how" stream, in addition to a role for visual processes that rely less on memory and learning, via the dorsally located "what" stream.