

Do Pictures Afford Action?

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Abstract

Here is the most important question in picture perception:

Q: what perceptual state are we in when we see an object in a picture?

Or, in other words, what kinds of properties does our visual system attribute to the depicted object? In order to answer to Q, philosophers (Matthen 2005; Nanay 2011, 2015) followed the results of the two visual systems model, according to which our visual system can be divided into two streams, a ventral stream for object recognition, allowing one to perceive from an allocentric frame of reference, and a dorsal stream for visually guided motor interaction, allowing one to perceive from an egocentric frame of reference (Milner and Goodale 2006) – the account of picture perception that follows the two visual systems model is called the dorsal/ventral account of picture perception (henceforth DVAPP), see (Nanay 2015; Ferretti 2016a, 2016c, 2017). Following this model, the DVAPP denied that we can be in a dorsal perceptual state when perceiving a depicted object. This is because a depicted object is not physically graspable or manipulable and, in turn, it cannot be egocentrically localized, as a normal object, by the dorsal stream. The impossibility of manipulating depicted objects and of localizing them from an egocentric frame of reference has led some people to be sceptical about the possibility of an attribution of action properties - which is mediated by the dorsal processing - to depicted objects, which pertains to the dorsal visual system.

This paper shows that dorsal perception can represent depicted objects and, thus, that we can ascribe action properties to depicted objects as well. This is a genuinely brand new claim, never defended before and opens to the possibility of the presence, in perception, of pictorial action properties and, thus, of a pictorial motor world. This claim also offers one of the possible answers to the question – which is the most important question in the current philosophy of perception - about which are the properties of the world that are represented in perception (Siegel 2010).

I first report the argument by the DVAPP about the impossibility of dorsally attributing action properties to depicted objects. Then, I introduce evidence on a particular bifurcation of the dorsal stream, the ventro-dorsal stream, which contains a cortical circuit, the parieto-premotor network AIP-F5, which is the cortical circuit most involved in detecting action properties (Ferretti 2016a, 2016b, 2016c; Zipoli Caiani and Ferretti 2016; Ferretti and Chinellato, in press). Thus, I report evidence concerning the sensorimotor activation of the dorsal stream, the ventro-dorsal stream and, in particular, the parietopremotor network AIP-F5 during the perception of depicted objects. This implicitly suggests that dorsal perception is active during the perception of depicted objects. Finally, by offering a careful philosophical analysis of this evidence, I suggest that action properties are not properties that we can attribute only to normal objects, but also to depicted objects. The implications of my proposal for the literature on picture perception is that picture perception and face-to-face perception are perceptual situations more similar than previously thought; if we do not endorse my account, our best philosophical theory of picture perception is deeply incomplete.

References

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