

# **The Enactive Torch: Promoting first-person phenomenology in the study of enactive perception<sup>1</sup>**

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Since its inception in the early 1990s the enactive approach to perception has been generating an extensive amount of interest and debate in the cognitive sciences. The original idea behind this approach can be summarized by the claim that perceiving is not about the recovery of a perceiver-independent world, but rather consists in perceptually guided, embodied action. More recently, the approach has contributed to perception being conceptualized as a skillful mode of exploring the environment, which draws on bodily know-how of sensorimotor regularities.

The enactive approach is empirically supported by research using perceptual supplementation (PS) devices, in particular because it highlights the importance of embodied action for perception. The process of acquiring skillful mastery of a PS device is a valuable case study of the development of perceptual awareness; blind or blindfolded subjects report the constitution of a perceptual modality which discloses objects located in 3D space. One contentious issue in this regard has been how best to characterize this modality. Should it be seen as an extension to an existing modality such as touch or vision, or as an entirely new modality? So far this theoretical debate has only been informed by the behavioral capabilities and verbal reports of experimental participants. This paper argues that the dispute cannot be resolved with the use of such third-person methods alone; it additionally requires the establishment of a phenomenological pragmatics. In particular, it is necessary that those involved in the debate become skillful in the use of PS devices themselves.

We designed the Enactive Torch (ET), a PS device which is cheap, non-intrusive and easy to replicate, so as to enable researchers to corroborate reported experiences with their own first-person experience more easily (cf. Froese & Spiers 2007). The ET provides one continuous channel of vibro-tactile feedback to the hand, where the strength of stimulation depends on the distance to the object at which it is pointed. Almost immediately a subject can use the ET to detect obstacles, and after a little training (ca. 10 minutes) has no problem of locating relatively 'invisible' objects, such as a lamppost, in space. Moreover, after around 1 hour of practice certain salient features of the environment, such as corners and open doors, take on a distinctive perceptual pattern. At this stage the experience of perceiving obstacles can be described as 'touching resistant, viscously permeable objects located "out there"'.

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However, the experience is unlike touch and more like vision in that it enables a detached scanning of the environment that does not commit the subject to direct interaction with the objects of its perception.

More phenomenological research is clearly needed, but our own initial first-person experience indicates that the perceptual modality constituted by mastery of the ET, while similar in some respects to touch and vision, nevertheless constitutes a unique modality which is dependent on the particular sensorimotor affordances of the device.

**References:**

Froese, T. & Spiers, A. (2007), "Toward a Phenomenological Pragmatics of Enactive Perception", Cognitive Science Research Paper, **593**, COGS, University of Sussex, Brighton, UK