

Enacted Representations

How we make our experience by acting in the world

We are visual creatures, but...

- Consider how touch works
 - active exploration produces a sense of shapes and positions that is not created by static contact
- Could it be the case that vision really works like that too?
- “Perception is not something that happens to us or in us, it is something we do.”

Enacted perception

- “*What we perceive* is determined by *what we do* (or what we know how to do); it is determined by what we are *ready* to do... we enact our perceptual experience: we act it out.” Noe 2004

- “Different sense modalities also display different action-to-stimulation signatures.” (p. 171)
- “Perception is an activity that requires the exercise of knowledge of the ways action affects sensory stimulation.” (Noe, 2007)

Three virtues of the Strong Sensorimotor Model (SSM)

1. Emphasis on skills rather than qualia as determinants of the content of perception.
 1. Tactile Visual Substitution System
2. The fit with predictive learning
 1. motor anticipation
3. Simultaneously do justice to “the idea of an objective mind-independent reality and to the sense in which the world as perceived is the world of a specific type of embodied agent.” p.176
 1. Different bodies imply different perceptual experience

Sensorimotor (Hyper)sensitivity

- SSM is tied too tightly to the specifics of our senses.
- Many (enacted) representations “are geared, tweaked, nuanced to inform reason, selection, comparison, and choice. They thus reflect only the broad outlines of possible kinds of sensorimotor engagements.” (p. 191)

- “... conscious perceptual experience reflects the activation of representations that have less to do with the fine details of world-engaging sensorimotor loops and more to do with the need to assign inputs to categories, types and relative locations so as better to sift sort, select, identify, compare, recall, imagine, and reason.” (p. 192)

- “... the perceptual experience of differently embodied animals could, in principle, be identical, not merely similar, to our own.”

but similarly enculturated!

- “We have seen that the own-world of animals is constitutively shaped by the particularities of their means of structural coupling. It is the same for human beings with the enormous difference that the means of structural coupling of humans includes their technical inventions” (Havelange V., Lenay C. & Stewart J. (2003). Les représentations: mémoire externe et objets techniques. *Intellectica* 35, 115-131.)

Pause and Breathe

A lot remains to be learned about Enacted Representations

- Additional investigations
 - more ethnography
 - developmental processes
 - behavioral experiments
 - eye tracking
 - computational modeling
 - brain imaging
 - philosophical implications

But enough is known to start...

- Exercise 5: Enacted representation
 - Go forth into your world of experience
 - Find an instance of an enacted representation
 - Document it
 - report only what can be directly observed or could be captured on a video recording
 - Analyze it
 - describe the cognitive ecosystem
 - show what is represented
 - show how the representation is enacted