

# Inferential Isolation Is a Barrier to Understanding Cognitive Development

Stephen A. Butterfill  
< s.butterfill@warwick.ac.uk >

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## 1. Introduction: Core Systems and Knowledge

*The recording is from a rough rehearsal to check the timing. Some updates to slides and script happened after that.*

## 2. Evidence for Inferential Isolation

*The recording is from a rough rehearsal to check the timing. Some updates to slides and script happened after that.*

### 2.1. X

#### 2.1.1. Vertical Motion

The trajectories implied by representational momentum reveal that the effect reflects impetus mechanics rather than Newtonian principles (Freyd & Jones 1994; Kozhevnikov & Hegarty 2001; Hubbard et al. 2001; Hubbard 2013). And these trajectories are independent of subjects' scientific knowledge (Freyd & Jones 1994; Kozhevnikov & Hegarty 2001). Representational momentum therefore reflects judgement-independent expectations about objects' movements which track momentum in accordance with a principle of impetus.<sup>1</sup>

## 3. How Do Core Systems Support Learning?

*The recording is from a rough rehearsal to check the timing. Some updates to slides and script happened after that.*

## References

- Freyd, J. J. & Jones, K. T. (1994). Representational momentum for a spiral path. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 20(4), 968–976.
- Hubbard, T. L. (2005). Representational momentum and related displacements in spatial memory: A review of the findings. *Psychonomic Bulletin & Review*, 12(5), 822–851.

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<sup>1</sup> Note that momentum is only one of several factors which may influence mistakes about the location at which a moving object disappears (Hubbard 2005, p. 842).

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