

Cognitive Extension and the Web

Neurocentrism and the Extended Mind



The conventional view in cognitive science is that the human brain constitutes the sole mechanistic substrate for human mental phenomena. All human thought is deemed to result from the operation of the biological brain.

In contrast to this view, the extended mind perspective argues that mental states and processes are not necessarily tied to the biological brain; rather, the physical mechanisms that support these phenomena can extend into the external environment to incorporate a variety of props, aids and artefacts.

Cognition in the Real-World

Extended mind accounts typically emphasize the way in which much real-world cognitive processing depends on the exploitation of both bodily contingencies and aspects of the local external environment. Thus, in solving long multiplication problems, human agents typically resort to using pen and paper to store intermediate solutions as well as structure the overall sequence of problem-solving steps. Other tools and technologies have also been the focus of extended mind accounts.



The Web-Extended Mind?

Could the technological and informational elements of the Web constitute part of the material supervenience base for some aspects of the (future) human mind?

Criteria for Cognitive Extension

In order to evaluate claims about cognitive extension, Clark and Chalmers (1998) propose a number of evaluative criteria. These criteria focus on the **availability**, **accessibility** and **trustworthiness** of information content. How does the Web fare with respect to such criteria?

Availability. Mobile devices are continuously enhancing the availability of online resources.

Accessibility. Improvements are required in our access to online information content. A move from resource-centric to data-centric modes of information representation is probably crucial.

Trustworthiness. Further research is required to improve the trustworthiness of online information content.

Conclusion

The Web is most suited to act as an environmentally-extended store of long-term knowledge and dispositional beliefs.

Improvements in the accessibility of information content, as well as the trust infrastructure of the Web, are probably required in order to enable Web-based information content to guide thought and action in the manner typically associated with cases of purely internal (in-the-head) processing

Further Reading

Clark, A. (2008) *Supersizing the Mind: Embodiment, Action, and Cognitive Extension* Oxford University Press, USA.