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How Things Shape the Mind
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1 Introduction
Chronesthesia

<http://en.wikipedia.org/wiki/Chronesthesia>

Chronesthesia, or **mental time travel**, is a mental ability first hypothesized by [Endel Tulving](#) in the 80s. This refers to **the ability to be aware of one's past or future**. While many may describe it as uniquely human, others now argue that this ability can transcend to include non-human animals as well as birds. The mechanisms of mental time travel are not yet fully understood since there is a level of obscurity and complexity when trying to measure if or when someone underwent mental time travel or not. However, studies have been conducted to map out areas of the brain that may be responsible for mental time travel.

Chronesthesia is defined as a hypothetical ability that allows humans to be constantly aware of the past and the future.^[1] Endel Tulving, one of the pioneers in this field, explained that **humans adapted chronesthesia as a way to advance their survival**.

Some people may go further as to say that it is a crucial ability for humans.^[2] There seems to be some confusion about the definitions of [episodic memory](#), [memory for the future](#), and mental time travel.

Episodic memory involves projecting oneself back in time and recollecting many aspects of previous experiences.^[3] Mental time travel is more robust when planning for the future than for re-experiencing past events. This makes sense since it is the present and the future, and not how the past is represented, that matter. Therefore, mental time travel involves both past and future thinking, while episodic memory only deals with mentally traveling to the past. With regards to memory for the future, this is actually a subcategory of mental time travel.

1 **Cognitive archeology** provides a memory path for reconstructing the autobiography, and thus the identity, of our species - who we are and how we got here. In a certain way, then, one could see the **archaeology of mind** as a form of consciousness as much as a philosophy, and anthropology, and the prehistory of human becoming.

2 Theory of material engagement

the new theoretical framework of material engagement (is) raising an unexpected but extremely important question: **where does the mind stop and the rest of the world begin?**

This question, which hardly received any explicit attention, recently became popular in the context of philosophical discussions of **the embodied, extended, enacted, and distributed nature of the mind**.

Boe: Gregory Bateson Steps to an Ecology of Mind, Granada, 1973, pg. 318: Consider a blind man with a stick. Where does the blind man's self beginning? At the tip of the stick? As the handle of the stick? Or at some point halfway up the stick?

Answering the question seems easy enough at first, which explains why the question may sound odd to some people: **the mind is the sort of thing that thinks, and thinking is the sort of activity that takes place inside people's brains**. Mainstream philosophy and cognitive science appeared to be in agreement about where we should be looking for the mind's stuff: inside the head. I think this well entrenched view is quite mistaken. Drawing on recent work on inactive, distributed, and extended cognition, I will suggest that contrary to what classical **cognitive science** believes and cognitive archeology often implicitly reiterates, **what is outside the head may not necessarily be outside the mind**.

3 I contend that it appears to be so only because of our learnt convictions about what counts as a thinking process and about where one should be looking for constitutive ingredients of such a process. It is epistemological contingency, rather than metaphysical necessity, that makes you see, in the various objects, marks, gestures, and lines of human prehistory, merely external products of human thought rather than integral parts of it.

4 Although **neuroscience** indeed offers the best guide we have for discerning the intricate pathways and wiring of the neural structures and networks that support human cognitive operations, I see no reason why it should be trusted to reveal the location and the provenance of the stuff of which human minds and selves are made. Where do we look for the mind, then? **How can we stop thinking about the mind-world relationship in a dualist way?**

5 In this book I seek to encourage the reader to pay attention to the **complex cognitive ecologies of material engagement** inside which, “all of the elements and relations potentially interact with one another... Each is part of the environment for all the others” (Hutchins).

With this remark in mind, let me turn to the reason why I have chosen the example of the blind man stick to introduce the overarching hypothesis of this book: I believe this example provides one of the best diachronic exemplars of what I call the grey zone of material engagement, i.e., *the zone in which brains, bodies, and things conflict, mutually catalysing and constituting one another.*

6 **Mind**, as the anthropologist Gregory Bateson pointed out, “is not limited by the skin”, and that is why Bateson was able to **recognize the stick as a pathway instead of a boundary.**

Differentiating between “inside” and “outside” makes no real sense for the blind man. As Bateson notes, “the mental characteristics of the system are immanent, not in some part, but in the system as a whole”. Yet for the external observer the question of the ontological status of the stick remains vague. How can a thing made of wood, plastic, or metal ever be seen as part of the machinery of human thought?

On what grounds should we conceive of the stick as a component part of the blind man's living body? Are we here not contemplating conscious kinds and material kinds - agents and tools? The problem is complicated further if one considers that for the archaeology of mind **the stick is not simply a “pathway along which differences are transmitted under transformation” but a difference in itself. Often the stick is, to use Marshall McLuhan's formulation, not the media but the message.**

Boe: vgl. Fuchs Referenz – Tiefe Null – Deleuze: abstract machine – Barkow: condensating machine (LoF)

6 Most of the **grounding assumptions that define what we know about the human mind**, but also the ways by which we have come to know what we know about the human mind, have been premised and nurtured in the absence of materiality. Perhaps a look at the history of Western thought can teach us that **the study of nous always favoured the order of platonic essences and ideas over the messiness and fluidity of pre-Socratic becoming.**

7 Turning our back on the spirit of hylozoism, we became prisoners of our own **purified categories of thought.** Either things are altogether missing from the human noetic field or, at best, they are seen as epiphenomenal to the study of mind proper.

In a way, then, things seem to exist in a state of ontological deprivation. This is strange in view of the way materiality conceals clear envelopes around our everyday thinking and sensory experience.

7 Perhaps things are very good to think with, or through, but not so good to think about.

8 This book sets out to investigate the changing nature, and the different aspects, of the **relationship between persons and things** - that is, how they respond to and participate in each other's coming into being. In other words, it asks **why we humans, more than any**

other species, make things, and how those things in return, makers who or what we are.

One potential problems stemming from such a conception is that things, like minds, become very hard to define. “Thingness” and “mindness” are highly unsettled and ontologically fluid states. They remain formless and plastic, waiting to take the shape of our embodied projections, which inevitably vary in different times and places. But our inability to define what things and minds are does not mean that we cannot recognize them if we come across them.

The problem is that **common sense** may not be the best guide to those issues. Should we then feel obliged to define an essence of what minds and things are? Take, for instance, the **concept of “mind”**. Exactly **what is it for a process to be cognitive?** Without knowing what we mean by cognition, we are left clueless - or so it seems - about where we should look for it.

9 The goal of this book, which is to **redefine our conceptual vocabulary** by shifting attention away from the sphere of closed categories of persons and things and towards the sphere of the **fluid and relational transactions** between them...

Minds and things are continuous and interdefinable processes rather than isolated and independent entities. I argue that by knowing what things are, and how they were made what they are, you gain an understanding about what minds are and how they become what they are - and vice versa. Of course, simply to speak about relationality is not, nowadays, saying or assuming much. Phenomenology, ecological psychology, and anthropology offer a number of different ways of articulating the idea that **mind is relational**. Instead of asking what the concepts of minds and things **mean**, it might be more useful to ask about what kind of concepts they are. This surprisingly difficult question poses unprecedented challenges. I hope this book will make some important steps toward an answer.

14 It should be made clear, then, that the transformation that we are after (social, bodily, cultural, or material) are essentially **inseparable parts of the ontological compound we call the human mind**. Choosing to speak about the cognitive rather than the social life of things, or about the cognitive rather than the social aspects of human evolution, does not mean in any way that I wish to demarcate one domain of phenomena from the other, or to differentiate between two distinctive realms of experience, one psychological and one social. It is instead a methodological, or perhaps an analytical strategy for approaching and reviewing these two inseparable aspects of human life.

15 The general call for **non-dichotomous thinking** seems analogous to the Müller-Lyer illusion. Knowing that the lines between the arrows are equal, we still perceive them as different. Similarly, **knowing that mind and matter are relational entities, we continue to approach them through the distortive lenses of representation**. It seems that the purification project of modernity (Latour 1993) that **habituated our minds to think and talk in terms of clean divisions and fixed categories** makes it very difficult to shift the focus away from the isolated internal mind and the demarcated external material world and toward their mutual constitution as an inseparable analytic unit.



Müller-Lyer illusion

Apparently, this common attitude and implicit approach to the world of things ought to change. But although philosophers, anthropologists and archaeologists have now come to recognise that “who we are is in large part the function of the webs of surrounding structure” (Clark 2003, 174), **escaping from a Cartesian prison requires more than a change in our academic “language games”. It often demands a willingness to transgress the ontological tidiness of modernity.**

Boe: reflect on the dangers of “Hochabstraktion” – the world of our “linguistic signs” – vgl. Evan Thompson “embodied mind”; Shaun Gallagher Phenomenology