

Lecture Five (Add On)



Trimester 2, 2017
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Details

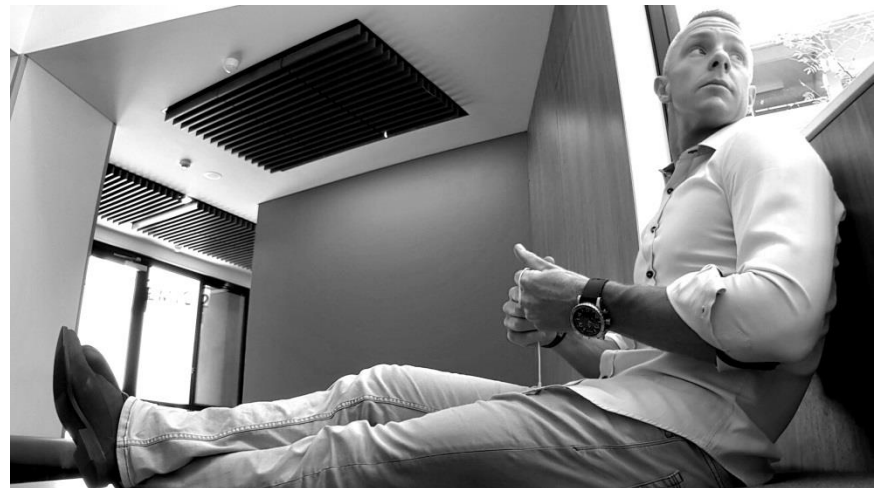
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Lecture Five (Add On) Outline

1. The Extended Mind

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The Extended Mind

The Extended Mind

Andy Clark and David Chalmers put forward *The Extended Mind Thesis* in the late 1990's (it was actually in 1998 and was published in a journal titled, '*Analysis*'). They put forward this thesis back in the days when smartphones didn't exist.

In short ... the extended mind thesis (EMT) states that an agent's mind and associated cognitive processing are neither skull-bound nor even body-bound, but extend into the agent's world.

As Clark and Chalmers see it:

"Where does the mind stop and the rest of the world begin?"

We propose to pursue... an active externalism, based on the active role of the environment in driving cognitive processes"

Case, A. (2013, November). Superhero of the mind. *New Philosopher*, Issue 2, 46-51.

Clark, Andy, and David J. Chalmers. (1998). The extended mind. *Analysis* 58: 7-19.

The Extended Mind

The central tenant of the thesis is that our minds, thoughts, and memory are not confined to our head, but can be extended to the tools and instruments around us.

Smartphones can store phone numbers, addresses, personal photos, videos, ideas, and recordings. Navigation systems tell us where we are, and where other things are in relation to us, like banks and shops. These gadgets can act as an extension - or sometimes replacement - of our memory.

... but should we go as far as saying these devices are a part of our mind ...

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"I think the real attraction of the extended mind theory story is that the activity upon which mindfulness happens depends is much more spread out than we thought. Maybe our ongoing use of things like smartphones and other sorts of external structures is really part of a web of activity, where mind is what happens when that web happens"

Andy Clark (2013)

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The Extended Mind

We have always relied on external things or others to get by in the world.

There is the concept of the '*socially extended mind*' where one person acts as the other's memory or when couples finish each other's sentences.

"And what about socially-extended cognition? Could my mental states be partly constituted by the states of other thinkers? We see no reason why not, in principle."

... further, think prosthetic limbs, a blind person using a cane etc ...

Promoters of smartphone applications will keenly point out that their application will 'extend your mind'. However, most applications are sold as a mere distraction, a foil over life itself.

... a form of extended mindlessness ...

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The Extended Mind

EMT ... It doesn't matter if information is stored inside your brain or out there in the world. If it is accessible to you and driving your mental states then it counts as your mind.

... there is no barrier around the skull ...

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A thought experiment presented to further illustrate the environment's role in connection to the mind ...

*The fictional characters **Otto and Inga** are both travelling to a museum simultaneously. Otto has Alzheimer's Disease, and has written all of his directions down in a notebook to serve the function of his memory. Inga is able to recall the internal directions within her memory. In a traditional sense, Inga can be thought to have had a belief as to the location of the museum before consulting her memory. In the same manner, Otto can be said to have held a belief of the location of the museum before consulting his notebook. The argument is that **the only difference existing in these two cases is that Inga's memory is being internally processed by the brain, while Otto's memory is being served by the notebook. In other words, Otto's mind has been extended to include the notebook as the source of his memory. The notebook qualifies as such because it is constantly and immediately accessible to Otto, and it is automatically endorsed by him.***

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... The Memory Glass Experiment ...

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The glasses, called wearable computing, were designed for people with Alzheimer's or visual form agnosia (where people can't recognize objects in front of them).

“The glasses have a little camera that’s taking input from the surroundings. In the case of someone with mild Alzheimer’s, the system they’re wearing ‘knows stuff’, if you like. As it recognizes a face, it will give you a very quick flash of information – that’s your wife, uncle, dog. Interestingly, that information can be flashed so quickly that you don’t experience it, but nonetheless it helps these patients do better”

David Chalmers

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There is a novel called, '*Accelerando*' written by Charles Stross.

In this novel '*speeding up*' refers to the accelerating rate at which humanity is heading towards '*technologically singularity*' (a theoretical moment in time when artificial intelligence radically alters human civilization and even perhaps the human nature itself).

The argument goes something like this ... artificial intelligence (AI), human biological enhancement or brain-computer interfaces are the type of developments that may push humanity to singularity.

In '*Accelerando*' people wear glasses that provide all kinds of information to the wearer. People become totally dependent on them, so when a character in the novel has his glasses stolen he becomes a gibbering wreck in the same way one would if their frontal cortex was removed.

... now before you write that off as just fiction think Google Glass ...

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“Maybe we are moving into an era where this thesis becomes truer for all of us in everyday life”

David Chalmers, 2013

We are increasingly reliant on technology and the access to knowledge it provides (think back to Tapscott’s “...access to the intelligence contained in the crania of other people on a global basis” statement) equals power.

“It leads to the democratization of the powers of the mind. It is a trend. We are at the very early stages of turning into superheroes of the mind. And technology is giving us these superpowers ...”

...”turning us into cognitive geniuses”

David Chalmers, 2013

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Tale a step back ...

We could argue that the watch or clock was one of the first gadgets that stored information on our behalf.

Before the clock humans relied on the sun to discern time, and this ability extended to other mind functions such as our external compass. We used the position of the sun or the stars at night to navigate our way around the planet – we'd instinctively know north and south, east and west.

Remember this ... point to east guys...

Throw Mr. Average into the desert and he is likely to do nothing but stumble about in circles

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An important question here, however, is this ...

As we download more of our mental functions onto our gadgets or rely on search engines and the internet to provide us with information, what do we lose in the mix?

Clark and Chalmers original paper has a footnote, *'Authors are listed in order of degree of belief in the central thesis'*

And the ideology behind The Extended Mind thesis is the cause for much heated debate.

"I haven't actually seen anything that strikes me as a convincing objection yet. In fact, I think, most of the things put forward as objections, we more or less anticipated in the paper"

Andy Clark

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“To say it’s got to be bound by skin or the skull it seems unprincipled to me. If you want to look for something principled, argue that perception and action are the boundaries of the mind”

David Chalmers

“One of the things that might give you pause is, for example, the role of perception in the cases of the extended mind. It always seems like in all of these cases there’s something perceptual going on”

Andy Clark

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... how did actors in Shakespeare plays remember their lines ...

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This theme has stumped historians for centuries. How did actors in Shakespeare's day remember their lines?

Actors performed anywhere from 60 to 70 plays per year – several plays each week – with few repeat performances. Historians have often thought that a single prompter, with the whole text as a kind of blueprint in their mind, continually fed actors their lines. But many disagree ...

The extended mind theory has been applied to this theme to explain how actors coped under these extraordinary demands. It has been argued that the system, the architecture, or the physical layout of the theatre, remembered the information for them.

Only certain scenes happened on balconies, for example, or at particular entrances or exists. An actor would remember the line to say while cradling a baby under a tree, or slicing an arm of an opponent.

The lines related to the particular array of characters around, the type of activity, the physical layout, and the gestures. Lines were not remembered in isolation.

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The theory suggests that we humans learn, and our mind operates, from the outside in, from our parents and from our society around us.

It implies that our mind is altered by the social system or physical environment that we find ourselves in.

... Alter the way we remember, think and make decisions via gadgets and what do you get ...

David Chalmers

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Ubiquitous computing is a concept where objects, both constructed and natural within every day life, have embedded technology that communicate and connect wherever we are. *We no longer plug ourselves in; the technology is already there.*

... No one would argue that we are more connected than we have ever been but few would ask why ...

... Why are we uploading, downloading, comparing hotels, playing Tetris and Angry Birds. Why ...

... If you lined up an educated student 100 years ago with an educated student today, who would be regarded as the superhero of the mind ...

Would we marvel at the photo sharing abilities of today's students? Would we applaud the number of applications they had downloaded onto their smartphone?

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... when you bask in the sun of ubiquitous computing, have a think about whose rays you are exposed to. Are you extending your mind, or simply giving over control ...

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Like Shakespearean actors, our memories cling to the physical layout of our world, or to novel and unusual events.

You could easily recall that sun filled day you spent in Greece, the day you last moved house, or the day you broke your leg.

Moments spent online, in contrast, are difficult to remember regardless of how entertaining or shocking they were at the time.

... In fact, can you even recall a single significant moment you spent online ...

... or are these simply just lost moments ...

As we ratchet up more and more hours online, the lost moments begin to stack up to.

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