The over-extended mind

Philosophy

Introduction

This essay aims to study the extended mind, without any need of completely adapting new techniques, technology, or interventions the minds like ours can launch into the world (Clark, 2010). The focus of the essay will be on internal and external representation of the mind and will evaluate the statement made by Clark (2010) with reference to other literature on extended cognition.

Cognitivesciencebelieves that the mind has mental representations which are similar to computer data structures and computational procedures analogous and computational algorithms. Cognitive researchers have put forward that the mind holds mental representations as rules, images, logical proposition, and concepts (Dawson 1998). According to Norman (1988, 1993) cognition is viewed as terms of ‘ knowledge in the head’ and ‘ knowledge in the world.’

According to Clark (2010) one of the most significant current discussions in legal and moralphilosophyis the extended mind, which refers to the concept between the mind and theenvironment, from the thesis of Clark and Chalmers (1998) active externalism or Hypothesis of Extended Cognition (HEC).

The extended mind commences with the inquiry of ‘ where does the mind stop and the rest of the world begin?’ in respond to the question Clark and Chalmers (1998) present an alternative view with Hypothesis of Extended cognition (HEC). This is to be distinguished from the more traditional externalism meaning from the writing of (Putnam, 1975 & Burge, 1986).

Clark is asking for people to visualize that individuals could rotate images of geometrical shapes on a computer screen, by the use of a neural implant in their heads or by using a “ rotate” button in the world. Clark affirmed that the implant perspective is evidently cognitive; therefore the button perspective is as well, in spite of either if they are carried out in the head or in the world (cited in Clark 2008).

For this reason, it can be argued that the mind extends into the world which was Clark’s belief in technology, physical objects, chips and CD-ROMs, as external memory stores that individuals can consult as needs dictate sort of coupled systems (Clark and Chalmers 1998).

According to Dartnall (2007); (Schegloff, 1992, cite Alterman, 2007), Clark and Chalmers (1998) admitted that the processes in the world might be seen as individual, “ truly mental states-experiences, desires, emotions, beliefs, and so on” might be in the mind. Nevertheless when it is performed in the head, it should also add up as cognitive when it is carried out in the world, Dartnall (2005) affirmed that the mind leaks or loops into the world. Clark and Chalmers (1998) argued that cognitive processes extend into the world when an individual uses pen and paper to solve a problem, using language to work or to solve a problem and the use of computers. Zhang and Norman (1994) draw our attention to internal representations as being intrinsic to many cognitive tasks and not just input and stimuli to the internal mind. This means that all these researchers thesis show a supportive argument toward Clark (2010) stating that the human mind can be extended into the world.

Clark and Chalmers (1998) made such arguments as cognitive states being “ Parity argument” by the things in the environment, in which they identify a number of possible objections to this argument such as the cognitive and the conscious, portability and reliability. They demonstrate two untrue characters to support their argument that the mind can extend into the world, using the example of Otto and Inga, who were both interested in art. Inga has a normal functioning brain, while Otto suffers from Alzheimer’s disease. They hear about an exhibition at different times and places and they both decide to go, Otto consults his notebook, which says that the museum is on 53rd street so he went to 53rd street to the museum. Whereas Inga recalls that the museum is on 53rd street and walks to the exhibition, as a result of this case Clark and Chalmers (1998) stated that the notebook plays the same role for Otto that biological memory plays for everyone else. They concluded for this reason that some external objects execute this duty, and that some of our cognitive processes transcend the boundaries of skin and skull (Clark 2008). The HEC has been thoroughly criticized by Adams and Aizawa (2001) defenders of “ brainbound” or “ organismbound” approach to cognition.

Clark and Chalmers, (1998) maintain their argument by pointing out to what extreme the mind extended, “ if someone hardly ever takes relevant action without consulting their Filofax, for instance, their cognitive system will be like that of the notebook in Otto’s. Nevertheless if the individual frequently acted without consulting themselves, for example if the individual sometimes answers important questions with ‘ I do not know’ then the information in it counts less as part of individual belief system. Also if

someone is relying on the internet is likely to fail on multiple counts, unless the individual is unusually computer reliant, facile with the technology, and trusting, but information on certain files on the individual computer may qualify” (cited in Clark 2008).

Dartnall, (2005) who argues for internalism and its epistemological implication that an individual can execute actions mentally that someone could typically carry out in the world. These are naturally achieved on inner analogues of external substance, which means that there is a leakage in both ways such as from world to mind, from mind to world. This parity argument has epistemological inference; if the individual can make an empirical discovery in the world using a procedure, then that procedure will also lead to empirical discovery when carried out in the head. For instance if a person walks into a room and sees a partially completed jigsaw puzzle on the table, looks at the puzzle and leaves the room. The person then mentally rotates one of the pieces and discovers where it fits into the puzzle. They have discovered something new, where the piece fits in the jigsaw puzzle, but how has the person done thisNot by straightforward empirical discovery, they did not have the direct entry to the puzzle when they solved it, or if they might have remember it when they walk into the room, because they did not know where it fitted when they were in the room and Shepard & Metzler, (1971) also in support of this work also is consistent with Clark (2010) statement.

A number of studies have highlighted that our mind extends into the world in support of Clark and Chalmers (1998); Clark (2010); Kosslyn (2006); Zhang and Patel (2006), (Baddeley, 1986; Smith and Jonides, 1997) (cited in

Kosslyn 2006). In addition, Kosslyn argues that “ you” are not restricted to what’s in your head, but also includes things around you, including other people”. Consequently, the self becomes distributed over other people who function as long term social prosthetic devices, cited in (Kosslyn 2006).

Rupert (2004) developed a methodology for the hypothesis of extended cognition (HEC) which he called hypothesis of embedded cognition (HEMC), they are two divergent holds on cognitive scheme and their composition and their position in cognitive processing. HEC could more or less correspond to the viewpoint implemented by Clark (2008) those cognitive processes factually extends into the environment, while the traditional HEMC persists that cognitive organism is bound. According to the HEMC rely on cognitive processes, instead of being constituted by the external mechanism and strategy for cognition to happen without the external element being a factual part of the cognitive process. Rupert (2010) opposes Clark (2010), but does not fully reject the HEC. Thus, the HEMC has further empirical support and descriptive worth than HEC (cited in Dahlback, Stjernberg, Kristansson and Skagerlund, 2010).

A recent study by Dahlback et al (2010), reviews the hypothesis of the extended mind and in order for them to support Clark and Chalmers (1998), they conducted an empirical study. They developed a definition of what cognitive processes are and how to examine cognitive systems, for instance how external memory support is actually used in elderly people’s everyday life. The participants were four elderly people with mild memory impairments and were diagnosed with Alzheimer’s disease, and some with a form ofdementia. It was observe that one of the women kept the disposed plastic

envelopes for the medicine she used and clipped it on her kitchen table. The woman stated that the envelope is a way of reminding her that a home healthcare practitioner as visited her as she will not remember. Dahlback, et al. (2010), pointed out that the plastic envelop is part of the woman's memory system from an active internal process, since an already existing material artefact is put to use to improve her memory, because they is no need to create a material artefact to improve the woman's internal function any more. While Clark and Chalmers state that the mind can extend into the world through active externalism, that if process counts as cognitive when carried out in the head, then it could be also counted as cognitive when someone uses object as external memory via a notebook. B's note were on the inside of her door, for her not to open the door for strangers, just like Otto, but Otto carries her own every were she goes.

C uses a shopping list, because she forgets things all the time, while F has an appointment at podiatrist, which she has written and posted on her fridge, she then rewrites the note and the information has been mixed up.

Dahlback, et al. (2010), Clark and Chalmer's (1998), the imagination of Otto is not as straightforward as they may think in real life. Hence external memory support in this context is of question on how information finds its way into the external memory with participant F's memory support functions. Dahlback et al (2010) concluded that extended mind hypothesis of Clark and Chalmers had been argued in isolation, for instance the hypothesis was not looked at in a wider theoretical framework surrounding all variety of cognition. In addition, the empirical debate has been slight be being limited to a few paradigms. Consequently, they supported Clark and Chalmers, but

proposed alternative theoretical framework that Activity Theory could be used to illuminate some problems brought up in the debate.

Activity Theory cognition is first and foremost organism centered and biologically evident in examples alternative from Clark and Chalmers, (1998). Hutchins (1995) argued that cognition is culturally and socially processed. The Activity Theory which is derived from Vygotsky's (1978) cultural historicalpsychology, that the human mind is essentially associated to the interaction linked to the world and thehuman being. According to the Activity Theory, culturemay not only be external which might have power over the human mind, instead is an underlying producing power that is an element of the extraordinarily manufacture of the mind. This finding is consistent with Clark's (2010) thesis, even though they have a different idea. Vygotsky (1978) is also debated Clark and Chalmers (1998) thesis, stating that the human mind is social in nature; that people are shaped by their language, how they are construed and by their culture as well, also that human beings live in a social and communal world.

Although they has been critics such as Adams and Aizawa (2001) claiming that there might be a crucial difference between a real extended cognitive process where some external artifact in the world is element of an actual cognitive process and process that permit some process.

They ask Clark a question: Why did the pencil think that 2 + 2 = 4And Clark answered because it was coupled with a mathematician.

According to Adams and Aizawa (2010) in respond to Clark's answer they stated that, there were problems with Clark's extended mind hypothesis.

They stated that Clark had no right explanation of the cognitive and the “ coupling constitution fallacy”, so they made a theory “ mark of the cognitive”, which may well prove that cognitive processes in fact are extended. Adams and Aizawa (2001) illustrated some artifact pencil and paper, in which they explain when using pen and paper and at the same time as carry out arithmetic which is rather difficult, the individual may not be able to work out the problem when using just their head and that the person needs to pass information onto the paper. They state that the paper and pen merely permitted a little cognitive process or else may be unattainable. While Menary (2010) feels that the mark of the cognitive is too limited.

Adams and Aizawa (2010) propose an explanatory work, that cognition is constituted through underlying processes that involve non-derived content. They offer this in two ways, chemistry, and physics and by psychological laws. They stated that particular psychophysical laws, like Weber’s law, and psychological laws central memory formation and recall. Consequently they projected that the weight of empirical evidence supports the view that, since an object is of conditional empirical fact, that there are some processes that are identifiable cognitive, which happened in the brain and cannot cross from the brain into the external world.

Clark (2010) argued that Adams and Aizawa’s (2010) argument is not strong enough, “ mark of the cognition”, that cognition should be noticed not by its causes, but by its effects, which means Clark is arguing for a different cognition science which is the coupling constitution fallacy.

Nevertheless Adams and Aizawa (2010) believe that Clark cannot come understand the view they had that cognition is a fundamental processing concerning non-derived content. As a result their work did not provoke Clark to address the problem of the most widespread problems with extracranial and transcranial theories of tool use. According to them, Clark did not offer a response to the coupling constitution fallacy and he gives a hint at what he thinks distinguishes the cognitive from the non cognitive.

In conclusion this essay has given an account of and the reasons for the widespread extended mind debate and the statement made by (Clark 2010, p. 18) that “ minds like ours can (without the need for any radically new techniques, technologies, or interventions) extend into the world”. It is possible to state that external representation has shown an option to the classical thesis of Clark (2010) view of all cognition taking place in the head. In addition, how it can be practical to be of assistance in real-world problem solving and arrangement of tasks, hence it provides insight into the association between human internal and external worlds and the nature of the mind itself.

Furthermore other researches such as Clark, 2003, Clark and Chalmers, 1998, Dennett, 1996, Donald, 1991, & Hutchins 1995 (cited in Dartnall, 2005) state that, cognitive processes extend into the world when individuals use pen and paper to work something out or the use of a computer. These findings suggest that the statement made by Clark with reference to other literature on extended cognition has brought new areas to be looked into like the need of technologies.

Finally, a number of important limitations need to be considered, first Adams and Aizawa (2010) (cited in Clark 2008) which were the ones who attempted to argue what was wrong with the extended mind hypothesis and Clark stated that they fall short to successfully undermine the argument for the extended mind, because it seems that everyone agreed with Clark, but also bring alternative explanations. However, Adams and Aizawa (2010) argued that Clark was not able to address their theory of the mark of the cognitive, on the other hand Clark and Chalmers attempt to tackle the pervasive coupling constitution fallacy and set out a reasonable theory of what differentiates the cognitive from the non cognitive. The statement made by Clark and Chalmers (1998) has thrown up many questions in need of further investigation with empirical evidence to support the statement.

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