

A PHILOSOPHICAL DEBATE ON LANGUAGE AND COMMUNICATION IN ANDY CLARK

UM DEBATE FILOSÓFICO SOBRE LINGUAGEM E COMUNICAÇÃO EM ANDY CLARK

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Abstract

Should human language be considered simply as a vehicle of communication or it does more than that in working as a kind of a software installed in the human brain, therefore contributing to the guidance of our minds and behaviour in solving complex issues related to human life? In his article titled *Magic Words: How Language Augments Human Computation*, Andy Clark defends the second position, which is contested in this paper. This article aims to analysing Clarks position concerning the role attributed to language in relation to the task attributed above. To refute this position, the paper employs the argument that Plato takes in the discussion developed in the book titled *Meno* to conclude that language results from the activity of the mind in its interaction with the external world since language is a by-product of human thinking. This paper employs a qualitative, hermeneutical and bibliographical approach to analyse Clark's position developed in the above-mentioned paper. From the discussion developed, it is concluded that the mind does not have a kind of software installed in it by human language as Clark claims. Rather human knowledge, which is conveyed through language, works as the software with the task of contributing for the changes happening in our brain and behaviour. This means, therefore, that our minds are capable of thinking independently of them using human language or not.

Keywords: Language, communication, human brain, mind, thinking

Resumo

Será que a linguagem humana deve ser considerada, simplesmente, como um veículo de comunicação ou esta também funciona como uma espécie de *software* instalado na mente humana, contribuindo para orientar sua mente e o seu comportamento, ajudando-o, ao mesmo tempo, a resolver os seus prolemas e a encarar os desafios por ele enfrentados no dia-a-dia? No artigo intitulado *Magic Words: How Language Augments Human Computation*, Andy Clark defende a segunda posição, que é contestada no presente artigo. Este artigo analisa a posição de Clark em relação ao papel atribuído à linguagem e refuta-a utilizando, entre outras formas, a discussão desenvolvida por Platão na obra intitulada *Meno*. Assim, o artigo defende que a linguagem humana resulta da actividade da mente na sua interação com o mundo externo, fazendo com que a linguagem seja um subproduto das ideias humanas. Utilizando uma abordagem qualitativa, hermenêutica e bibliográfica, o artigo conclui que a mente humana não possui uma espécie de *software* instalado nela pela linguagem humana, como Clark defende. Pelo contrário, o conhecimento que é transmitido através da linguagem, funciona como um *software* instalado na mente humana, contribuindo para a realização das mudanças que acontecem no nosso cérebro e no nosso comportamento. Isso significa, portanto, que nossa mente é capaz de pensar independentemente de ela usar ou não a linguagem humana.

Palavras-chave: Linguagem, comunicação, cérebro humano, mente, pensamento

Introduction

In his article titled *Magic Words: How Language Augments Human Computation*, Andy Clark (1998) argues that the “computational role of language has been [...] neglected [...] in recent cognitive science, due perhaps to a [...] fascination with and concentration upon [...] the role of language as an instrument of interpersonal communication” (Clark 1998, p. 1). For Clark, cognitive science scholars insist that the main purpose of language has to do with the “processes of information transfer between agents and information retrieval from texts” (Clark 1998, p. 1). Clark disagrees with this position because he believes that this view has “little to say about the computational role of linguistic formulations [...] or about the special properties of the external media that support linguistic encodings” (Clark 1998, p. 1). Clark challenges this view in order to defend that language may do far more than merely serve as a vehicle for communication (Clark, 1998).

To accomplish this task, he first discusses the views defended by some scholars such as Lev Vygotsky (1978), Laura Berk (1994), among others who “recognize [...] the potential role of language and text in transforming, reshaping and simplifying the computational tasks that confront the biological brain” (Clark 1998, p. 2). Then, he employs the ideas of these scholars to broaden the idea that with such a role, the mind becomes capable of developing other activities such as scheduling, organisation, learning and in setting up the building blocks of human thinking and argumentation, which contribute for him to live a better life (Clark, 1998). Afterwards, Clark uses the ideas developed in the second section of his article to argue for an understanding of language “as an essential part of the process of thinking about our own thoughts and cognitive profiles” (Clark 1998, p. 2). In the last section, he provides some suggestions and questions concerning the existing relationship between human beings as thinking subjects and the phenomenological world.

This article focuses on the first and the second sections of the article in the attempt to respond to the arguments that Clark defends in the above-mentioned article. In the course of the discussion, this article presents, critically analyses and disagrees with Clark’s position. Reasons for disagreeing with him will be provided and, in the conclusion, the article will maintain the view that language does not serve the functions that he argues for. On the contrary, it is simply a vehicle of communication and thought, as cognitive science suggests. To this end, let us first turn to his position as presented and defended in the first section of the article.

Clark and Vygotsky on Language

In this section, Clark begins the discussion, by employing the works of Lev Vygotsky (1978), Laura Berk (1994), among others to support his argument that language does more than serve as a vehicle of communication. For the sake of brevity, we shall focus on his adoption of Vygotsky (1972) and Berk's (1994) arguments. Clark begins his argument by acknowledging the relevance of Vygotsky's ideas concerning the zone of proximal development (ZPD). Vygotsky uses the concept of ZPD as a psychological scientific term to imply the stage "in which a child is temporarily able to succeed at designated tasks only by courtesy of the guidance or help provided by another human being" (Clark 1998, p. 2). For Vygotsky, "when the child is confronted by a tricky challenge" and "is talked through the problem by a more experienced agent, the child can often succeed at tasks which would otherwise prove impossible (Clark 1998, p. 2). In this regard, Vygotsky believes that "later on when the adult is absent, the child can conduct a similar dialogue, but this time with herself [...] because the speech (be it vocal or internalized) functions as a guide to behaviour, to focus attention, and to guard against common errors (Clark 1998, p. 2). Based on this position, Clark defends that "in such cases, the role of language is to guide and shape our own behaviour [...]" as well as it works as a "tool for structuring and controlling action and not merely as a medium of information transfer between agents" (Clark 1998, p. 2).

Clark also supports this position with the works of Berk (1994) and others who, following Vygotsky's ideas, "observed and recorded the on-going speech of a group of 5-10-year olds in Kentucky", in the United States of America, and concluded that "self-directed speech is a crucial cognitive tool that helps to highlight the most puzzling features of new situations, as well as it helps to direct and control our own problem-solving actions" (Clark 1998, p. 3). This research confirmed the Vygotskian hypothesis that "a child first seems to use language for superficial social interaction, but at some point this language goes underground to become the structure of the child's thinking" (Schütz, 2004, p. 13). For this reason, Clark maintains that apart from language serving as a vehicle for communication, it also effects some crucial changes in guiding and sharpening our minds and behaviour and in helping us to solve problems (Clark, 1998 p. 2).

Clark vs Socrates

In the following section, this article will challenge Clark's position by presenting a different conception of language which shows how Clark's position fails to be convincing. According to Birgitt Flohr (1989),

language is a by-product of the rational mind as it interacts with the external world (Flohr, 1989). This interaction (between the mind and the world) creates ideas which will need to be communicated through a symbolic representation of the world in which such interactions occurs (Flohr, 1989). This means that “our cognition develops theories and symbols based on our pre-conceptual experience and our language transports such symbols” when individual communication occurs (Flohr, 1989, p. 17). In this regard, language (be it private or public) cannot exist without the ‘baggage of ideas’ that it carries, otherwise it would have nothing that would identify it as such. From this, it follows that when there is communication between two [or more] rational beings, the information and/or knowledge conveyed through it is what contributes for the changes that occur in the human brain and behaviour, rather than the language in which such information is transmitted. Therefore, as opposed to Clark’s position, language does not affect the changes that he suggests. On the contrary, the ideas and knowledge transmitted are the contributing factors for such changes to occur.

To explain this position, let us employ a classical example of Socrates discussion in which he called upon the lad who was attending on Meno (Marshall, 2019). Socrates’ intention in calling the lad to come forward in their discussion was to prove his peers that the lad had some innate knowledge of geometry even though he had not been taught anything related to it before (Marshall, 2019). In this discussion, it is important to note that the background of their discussion concerned the definition and nature of ‘goodness’.

In trying to refute Meno’s position that “goodness is like virtue as the desire for beautiful things and as the the power to acquire them” (Plato, sd, p. 887), Socrates argues from the perspective of the immortality of the soul that (in the intelligible world), there must be an unchanging and universal nature of what ‘goodness’ is about. Socrates goes further to argue that through the guidance of a [good] tutor we can recall and know the nature of goodness because “we are said to ‘have learnt’ truth and to have lost it again” but we can regain it through recollection (Plato, sd, p. 886). Having established this foundation, Socrates moves quickly to prove whether and how the slave-boy knows some basic rules about geometry even though no one has ever taught him geometry.

One example of such rules is that the “areas of squares are proportional to the second powers of the lengths of their sides, and in particular that the area of the square, as Socrates described, [...] is double of the original figure” (Plato, sd, p. 887). With less guidance, little information, and some corrections, Socrates proves his peers that the boy already had innate ideas concerning geometry, and through

proper guidance and some questions he can remember and bring out the ideas that are innately existent in him.

Returning to the position that Clark intends to defend, the lad's example serves to show that what contributes to the structural changes of the lad's mind is not the language that Socrates uses when he discusses with him. On the contrary, it is the ideas that are passed on to his mind that change the structure of his understanding of geometry. In this situation, language only serves as a vehicle for communication as it is employed in the transfer and sharing of the information that is passed from Socrates to the child, and from the child back to Socrates. However, it is not the language they use that shapes or alters the child's mind. For this reason, Clark's position does not seem to be convincing when he insists that language also effects some crucial changes in guiding and re-shaping our minds and behaviour and in helping us to solve problems (Clark, 1998).

Clarks' counterargument

To respond to this problem, Clark would still maintain his position and defend that Socrates' use of language in the interaction with the lad has not only served as a vehicle for communication and transfer of thought and/or information, but it has also helped in reshaping the computational space of the lad's brain (Clark, 1998). This position could be explained on the basis of the position taken by Dennett (1998, p. 5, in Clark, 1998, p. 5) who considers "our advanced cognitive skills [...] as a result [...] of our innate hardware" which may undergo some modifications due to the "effects of culture and language". As quoted by Clark (1998, p. 5), Dennett believes that the "subtle re-programming of the brain by [...] linguistic bombardment [...] yields the phenomena of human consciousness [...] and enables us to far surpass the behavioural and cognitive achievements of most other animals". Dennett takes this position because he believes that "linguistic inputs actually re-program or [...] alter the high-level computational structure of the brain itself" (Dennett, 1998, in Clark, 1998, p. 5). He supports this position with the view that "conscious human minds are more-or-less serial virtual machines implanted [...] on the parallel hardware that evolution has provided for us" (Dennett, 1998, in Clark, 1998, p. 4).

Clark improves on Dennett's position by arguing that "where Dennett sees public language as effecting a profound but subtle re-organization of the brain itself" he is "inclined to see it as [...] an external resource which complements [...] the brains own basic modes of representation and computation" (Clark, 1998, p. 5). For Clark, "the mere fact that we often mentally rehearse sentences

in our head and use them to guide and alter our behaviour means that one cannot [...] treat language and culture as wholly external resources” to the mind (Clark, 1998, p. 5). This is why he vehemently insists that apart from language effecting the changes that have been discussed earlier on, it also functions as a complement of the mind.

Refuting Clark’s Position

Before we can critically analyse this contention, it is imperative to point out the fallacious nature of his argument. The argument is misleading because of the weak analogy existent in the human mind and computer hardware discussion. The problem with the argument is that while a computer works on the basis of programs that have been installed and are manipulated by “the minds of those who program them and those who use them,” (Searle 1980, p. 11), John Searle (1980, p. 3) argues that “the computer and its programs do not provide sufficient conditions of understanding”. This differs from the human mind because the latter is capable of understanding since it is part of an “organism with a certain biological [...] structure, and this structure [...] is capable of producing perceptions, actions, understanding, learning, and other intentional phenomena” (Searle, 1980, p. 3). In this regard, the human brain and computer hardware analogy fails to be convincing and to support the argument because the functions of the two are completely different. For instance, a computer cannot perform tasks that go beyond what it has been programmed to do, yet, human minds are capable of thinking [even] about and beyond their own thoughts, generate new knowledge from such thoughts and lead to actions that had [probably] not been planned by anyone else before. Based on this background, it follows that unless we are convinced that the human brain performs the same functions as a computer and not beyond it, the above presented argument stands as unconvincing. However, since we have already presented the problematic nature of the computer and human mind analogy, let us now move on to another analysis of Clark’s argument.

As it has been argued elsewhere, different from Dennett, Clark sees language as “an external resource which complements [...] the brains own basic modes of representation and computation”, instead of it simply altering them (Clark 1998, p. 5). The view that Clark intends to advance is that we should not treat language and culture as totally external resources to the mind (Clark, 1998, p. 5). Rather we should consider them as having important external roles that help to re-shape and restructure the human mind (Clark, 1998). To support this position, Clark employs the arguments developed by Rumelhart and McClelland (1986) and Hutchins (1995) who consider “language as a key element in a

variety of environmentally extended computational processes” (Clark 1998, p. 5). For Rumelhart and McClelland (1986), if we are instructed to act in a particular way, our reactions to such instructions “can be viewed simply as responding to some environmental event” (Rumelhart & McClelland, 1986, cited by Clark 1998, p. 6). In this regard, admitting that “we have [...] internalized the instruction, we end up [believing] that the process of following instructions is essentially the same whether we have told ourselves or have been told what to do” (Clark, 1998, p. 6) or whether it is a human being or a computer performing it. For this reason, these scholars believe that even in following such instructions, “we have a kind of internalization of an external representational format that complements the activities of the brain” (Rumelhart e McClelland, 1986, cited by Clark 1998, p. 6).

To support this position, Clark presents six ways in which “linguistic artefacts can complement pattern-completing brain”. These methods are the following: ‘memory augmentation’, ‘environmental simplification’, ‘coordination and the reduction of on-line deliberation’ (Clark, 1998, p. 7), ‘taming path-dependent learning’ (Clark, 1998, p. 8), ‘attention and resource allocation and data manipulation and representation’ (Clark, 1998, p. 9). The conclusion that he draws from these is that we should not limit “the role of public language and text in human cognition” to the “preservation and communication of ideas” (Clark, 1998, p. 10). Rather, “these external resources make available concepts, strategies and learning trajectories which are simply not available to individual, un-augmented brains” (Clark, 1998, p. 10). For this reason, he maintains that “much of the true power of language lies in its underappreciated capacity to re-shape the computational spaces which confronts intelligent agents” (Clark, 1998, p. 10). By this he means that such powers should not be overlooked in discussions concerning the impact that language can make to the internal structures of the human brain.

Does Clark’s argument sustain?

This position, however, is also problematic because it does not take seriously the aspect that has been raised earlier on that language is a by-product of the rational mind as it interacts with the external world. This means that the mind is capable of thought even in the absence of language. As argued by Paul Bloom and Frank Keil (2002), cognitive science research provides enough literature to support of this position as it defends that “powerful and abstract cognition can take place within minds that, due to injury or deprivation, have no natural language” (Paul and Keil, 2002, p. 7). For instance, such research confirms that “before being exposed to words in a language, [...] all humans

possess the concepts that these words correspond to, as part of what Jerry Fodor (1975) calls ‘mentalese’ or ‘a language of thought’” (Paul and Keil, 2002, p. 1).

As argued by Murat Ayedede (2010), Fodor (2008) supports this position since he believes that “concepts cannot be learned and that the very idea of concept learning is ‘confused’” (Ayedede, 2010). For Fodor, “all concepts are innate” and therefore the learning of new concepts through the media of language is simply a repetition of what is pre-existent in the mind (Fodor in Ayedede, 2010). To support this position, let us employ the ideas of Betty Birner (1999) concerning language.

In her essay titled *Does the language I speak influence the way I think?* Birner (1999) advocates a similar position when she argues that it is possible for human beings to think about something even if they do not have a word for it. A practical example of it that she uses is colour. In her view, “there is an infinite number of different colours, but they do not all have their own names” (Birner, 1999, p. 4). For instance, she argues, “if you have a can of red paint and slowly add blue to it, drop by drop, it will very slowly change to reddish purple, then purple, then bluish purple. Each drop will change the colour very slightly” (Birner, 1999, p. 4). In this continuous change, Birner (1999) argues that we have got a concept of the new colour, but we do not have a particular name for that colour.

To support this position, she provides another interesting example concerning colours again. For instance, she argues, the Dani people of New Guinea “have only two basic colour terms in their language — one for ‘dark’ colours [...] and one for ‘light’ colours” (Birner, 1999, p. 4). In her view, the fact that the Dani people only have two colours “does not mean that they cannot see the difference between yellow and red” (Birner, 1999, p. 6). On the contrary she argues, “they can see different colours just as English speakers can” (Birner, 1999, p. 6). In other words, we can have an idea about something even if we do not have a word for it.

Returning to Fodor’s argument, the two examples presented above provide us with evidence to maintain that humans have innate knowledge and concepts about colours, but such concepts are not always translated into public language. This implies that it is up to the mind to turn such concepts into every-day public language. For this reason, it would be erroneous to argue for language as an external resource that effects changes in the activities of the mind. On the contrary, it is the mind that contains sufficient powers to effect changes in language, and not the contrary. This makes Clark’s position unconvincing because the mind has got its internal features which make it completely independent from language, and therefore, language cannot effect the changes that Clark suggests.

Methodology

This research, of a qualitative-bibliographic nature, sought to establish a link between the subject and the object being studied, so much so that this cannot be numerically quantified. On the contrary, considering the nature of the research, the article developed a critical reflection that was meant to counter the argument presented by the author in question. The research had, as its starting point, Andy Clark's article titled *Magic Words: How Language Augments Human Computation*, followed by the collection and selection of other philosophical published scientific works, which could support the arguments defended in this reflection. The selected material was characterized by books, scientific articles, texts found on the internet, among others.

Once the data was collected, the writing of the article followed a hermeneutic approach. According to Ghedin (2004), understanding a written text is not just proving possible anticipations, but checking and questioning them as possibilities that may prove to be incoherent in understanding the object under interpretation. This happens because hermeneutics is capable of transcending human interpretation, placing itself as an intermediary between language and perception (Filho, 2009). In this regard, the hermeneutical approach used in this reflection helped to clarify the problem being studied, meaning that in his analyses, the author freed himself from ideologies and prejudices understood in line with Gadamer's (2003) thinking that prejudices should not be understood in a negative sense, but rather, in the sense of previously constructed ideas about a certain reality.

Conclusion

As long as Clark does not abandon the position he defended in his *Magic Words*, the intellectual battle over the relationship between language and the mind will still be far from over. With particular focus to the first and the second sections of his article *Magic Words: How Language Augments Human Computation*, this essay has argued that the two [main] arguments that he adopts to defend that "language may do far more than merely serve as a vehicle for communication" (Clark, 1998, p. 2) are unconvincing. Contrary to this position, this article has argued that language neither guides nor shapes our minds and behaviour as well as it does not help us to solve problems nor does it complement the mind, as Clark argues for. Rather, it simply is a vehicle for communication and thought in human life.

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