



The dialogically extended mind: Language as skilful intersubjective engagement

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Abstract

A growing conceptual and empirical literature is advancing the idea that language extends our cognitive skills. One of the most influential positions holds that language – *qua* material symbols – facilitates individual thought processes by virtue of its material properties (Clark, 2006a). Extending upon this model, we argue that language enhances our cognitive capabilities in a much more radical way: the *skilful engagement* of public material symbols facilitates evolutionarily unprecedented modes of collective perception, action and reasoning (interpersonal synergies) creating *dialogically extended minds*. We relate our approach to other ideas about *collective minds* (Gallagher, 2011; Theiner, Allen, & Goldstone, 2010; Tollefsen, 2006) and review a number of empirical studies to identify the mechanisms enabling the constitution of interpersonal cognitive systems.

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1. Introduction

The intimate relation between language and cognition has been long recognised across a broad range of scientific and philosophical disciplines. However, the exact nature of the relation is still widely debated, cf. the different perspectives in A. Clark, 2006b, H.H. Clark, 1996; Fodor, 2008; Fusaroli, 2011; Geeraerts & Cuyckens, 2007; Tylén, Weed, Wallentin, Roepstorff, & Frith, 2010. One of the more recent developments considers language from the perspective of *active vehicle externalism*. In this perspective, language is regarded as an external culturally evolved tool that interacts with our biological cognitive systems facili-

tating and actively supporting certain cognitive processes (Clark, 2006a, 2006b). Language is thus portrayed as ‘a mind-transforming cognitive scaffolding: a persisting, though never stationary, symbolic edifice’ (Clark, 2008), which – thanks to its materiality and freedom from the immediate context – gives a more stable structure to thought. Internalist positions, for instance Fodor (2008), posit an innate language of thought to explain the symbolic structure of certain human cognitive processes. A. Clark on the contrary argues that it is the actual use of external material symbols – which in some cases can be internalized – that enables individual cognizers to think symbolically by constraining and focussing their perceptual and attentional strategies more effectively.

However, Clark’s position tends to neglect a crucial aspect of language, which radically extends its description as an instance of active vehicle externalism: language as a social activity. In most cases, humans do not simply engage

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the material symbols *per se*, but employ them in interaction with other individuals, for instance in contexts of regulation of social relations, or coordination of complex actions and problem solving activities (cf. H.H. Clark, 1996; Brennan et al., 2010; Vygotsky, 1978; Habermas & Cooke, 1998; Fusaroli & Tylén, 2012; Pickering & Garrod, 2004; Hasson et al., 2012). Extending upon A. Clark's proposal, we stress how language enables *skilful intersubjective engagement*, that is the coordination of individual cognitive systems giving rise to composite units that exceed the capabilities of their parts (cf. the notion of *interpersonal synergies* (Riley et al., 2011; Fusaroli, Raczaszek-Leonardi, & Tylén, 2013). Rather than a simple cognition-enhancing external resource for individual cognition, language thus constitutes a new and evolutionarily unprecedented mode of socially extended cognition (Donald, 2001)¹. Linguistic activity is a means by which individuals come to jointly apprehend and manipulate information to create informational and behavioural interpersonal synergies, which potentially outstretch the cognitive abilities of any of the individuals were they on their own. Thus, language as a skilful intersubjective activity *de facto* constitutes dialogically extended minds.

We introduce our proposal by discussing A. Clark's idea of language as a tool. From Clark's perspective of active externalism, we argue that the bodily basis of language provides an initial step towards liberating linguistic meaning from the confines of purely internal neural processing, making language into something we *do*. However, since language use and development importantly anchors cognition into the social world, we will take the claim a step further: language is something we *do together*. We thus propose that language is a 'doubly-extended' cognitive phenomenon: not only is it robustly grounded in the agent's bodily engagement with the world, as hinted by Clark, but it also further extends this engagement into the social world through embodied social dynamics. We support this claim with reference to empirical findings on linguistic coordination, and point to possible mechanisms for the creation of interpersonal synergies. Finally we will discuss in which way our proposal complement other work on collective minds and respond to some possible critiques.

2. Language as tool for individual minds

2.1. Cognition beyond the boundaries of skull and skin

A. Clark's work introduces the notion of language as tool in order to challenge one of the fundamental assumptions in the contemporary philosophy of language and cognitive science, namely that innate internal linguistic representations are the necessary presupposition for the development and use of language as well as for human

thought (Fodor, 1975, 2008). In opposition to such strongly internalistic conceptions, A. Clark develops the extended mind hypothesis: an active externalist conception in which not only internal neural structures, but also elements of the external world can constitute representational vehicles of mental states, that is, actively support the formation and storage of cognitive content. The idea is initially presented in the fictive case of the Alzheimer's patient Otto who uses his notebook to store and retrieve his beliefs. In such cases, Clark argues that Otto's interaction with the notebook enables us to conceive of the notebook as an external memory working *in a way analogous in its effects* to the way many other human beings use their biological memory. The example motivates the introduction of the *parity principle* stating that 'If, as we confront some task, a part of the world functions as a process which, were it done in the head, we would have no hesitation in recognising as part of the cognitive process, then that part of the world is [...] part of the cognitive process' (Clark & Chalmers, 1998). Otto's notebook becomes a vehicle of his mental state because it contains belief-enabling information analogous to neural states in people without Alzheimer's and thereby fulfils the cognitive role of dispositional beliefs. Notice that even if the notebook does not afford the exact same principles of interaction between the cognizer and the database as biological memory and has different physical properties, its function is analogous and – just like biological memory – available for guiding tasks in the world, easily accessible, and automatically endorsed by Otto. Emphasising this functional aspect of the analogy thus seems to meet some of the immediate concerns for drawing a parity between brain-based memory storage and the notebook: just like a notebook can be lost or doubted, we can suffer from forgetfulness, double-check our biological memories employing a calendar and so on (Gallagher, 2011; Sutton et al., 2011; Tollefsen, 2006).

2.2. Extending the individual mind via language

Applying the hypothesis of cognitive extension to the case of language, A. Clark argues that rather than serving merely as a vehicle of already existing symbolic thought, language comes to actually constitute part of the process of thinking (Clark, 1997). It does so not only by virtue of the content of words and sentences, but also crucially by virtue of the *bare materiality* of those words and sentences (Clark, 2006a). The material aspects of language, such as their perceptible depictions or phonemic properties, complement biological processes of cognition by creating new fulcrums of attention, memory and control. A written note enables us to remember a long shopping list more accurately than biological memory alone. A new recipe enables us to finely coordinate our attention and behaviour for the accomplishment of a novel task. Memory and conceptual structures are offloaded in an external linguistic structure. In other words, linguistic patterns enable the cognitive agent to construct, rely upon and manipulate 'cognitive

¹ By "extended" we simply mean that the cognitive activity extends beyond the individual organism. However, we do not intend to engage here the debate of the primacy or not of the social world.

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