



Shared and Social Discourse

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Abstract

On the premise that people achieve knowledge of things by sharing mental resources, what are the scope and philosophical significance of acts of shared intentionality in social discourse? Some philosophers and scientists of social cognition, most notably Jane Heal and Michael Tomasello, have drawn upon insights about the capacity of individual people to share mental resources and contents to argue for the importance of sociality in shaping mental activity. In this paper, I synthesize these strands of research with the aim of comparing different claims about shared intentionality, and facilitate an assessment in the debate on the social aspects of self and mentality.

Keywords Co-cognition · Jane Heal · Shared intentionality hypothesis · Michael Tomasello · We-intentionality

1 Introduction

In recent years, it has become customary among philosophers and scientists to make claims about the importance of shared attitudes and contents as a ‘scaffolding’ for the formation of full-blown human psychology. This is the picture most closely associated with Michael Tomasello and colleagues’ Shared Intentionality Hypothesis about the development of human thinking (Tomasello 2014). The key question is what human cognition could be like on the premise that humans are capable of creating cultures and institutions of unique complexity in the animal kingdom. Tomasello’s response is an account of the evolution of the human mind, which identifies the origin of species-specific forms of modern thinking in the emergence of a genetically evolved psychological adaptation for engaging in cognitively shared activities with co-specifics (Tomasello and Carpenter 2007; Call 2009). In a similar vein, Jane Heal has offered an authoritative formulation of the significance of shared cognitive activities in philosophical work on co-cognition (Heal 2013). Building upon earlier reflections on co-cognition in simulation theory (Heal 1998), Heal draws on insights about shared intentionality to advocate Co-cognitivism, the view

that the logical structure and criteria of adequacy of psychological concepts are determined with a view to the sort of activities that individuals pursue together in everyday life.

Co-cognitivism and the Shared Intentionality Hypothesis gesture to something like a general view of the function of shared intentionality, which has only begun to emerge in the philosophy of mind and society. The idea is that human psychology has evolved in accordance with the fact that novel routes to knowledge of things become available to interacting agents when they align their mental and bodily resources and act as a ‘we’ (Tollefsen and Dale 2012; Gallotti et al. 2017). The capacity to share mental states would then have a positive and constructive effect on the development of mental life and activity. Heal and Tomasello offer articulate formulations of this view and both draw on the shared intentionality literature to make salient the social dimension of mind and behaviour. This is not surprising, since their approaches are generally rooted in the tradition that traces its intellectual ancestry to Vygotsky’s dialectic conception of cognitive development, inherited via Bruner’s social pragmatist work on language acquisition (Moll and Tomasello 2007; Bruner 1998). Heal’s and Tomasello’s accounts of mind, self and agency, lean philosophically towards a form of social externalism that mixes evolutionary and causal-historical considerations (Burge 1979; Bruner 1983). And, yet, despite all similarities and sympathies, the endpoint is strikingly different when it comes to claims about shared intentionality.

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The question at issue in this paper is about the scope and importance of claims about shared intentionality in social discourse. What is it for the capacity of sharing mental attitudes and contents to play an explanatory role in the study of the social mind? The motivation for addressing this question is originally tied to theoretical preoccupations about the tendency to make claims about shared and, especially, we-intentionality in support of arguments about socially extended forms of mentality. The fact that evidence is interpreted as showing that shared intentionality works as a scaffolding for the development of full-blown, representational and normative, thinking, is often associated with claims about the conditions for the existence and identity of mental attitudes and contents being social all the way down. This argumentative line is present in several strands of social-cognitive research at the intersection of studies of shared intentionality and radically (i.e. en-active) externalist views of the mind, but it has not yet been articulated in a satisfactory manner.¹ One primary goal of this paper is to reconstruct this argument, indirectly, by synthesizing Heal's and Tomasello's approaches into a broader framework for examining distinct, though related, claims about shared intentionality. I shall emphasize at the outset that the philosophical (i.e. passive) version of social externalism is not under question in the present paper. Nor is the claim that acts of shared intentionality are necessary in accounting for grasp and use of psychological concepts. I am not concerned with the classic Burge-ian claim of social externalism, but with the claim that the mind of an individual might be en-actively extended into the environment in virtue of its attitudes and contents being shared with others'.

I shall reconstruct and assess the logic of Co-cognitivism and the Shared Intentionality Hypothesis through the lens of the connection that is the critical target of this paper. Although they are self-proclaimed social externalist about the nature of mind, and draw on insights and evidence about we-intentionality, Heal's and Tomasello's claims about the importance of sharing attitudes underlie two different questions. Tomasello's question is about the mechanisms and processes of social cognition—i.e. how any two, or more, people, understand one another. For Heal, instead, the question is: What are the conditions for psychological understanding to be formed in a social process? The key difference in focus, here, is one between the social nature of thought and the nature of social thought. Of course there is a connection between social understanding and understanding in

¹ Explicit references to theories of shared intentionality are present in strands of research in social cognition which focus on aspects of participatory sense-making, critical and second-person approaches to neuro-cognitive theory, and socially extended forms of cognition. For entry points, see: De Jaegher et al. 2010; Schilbach et al. 2013; Slaby and Gallagher 2015; Lyre 2018.

general: making sense of others' minds is part of making sense of things, no matter whether they are animate or inanimate. In other terms, there is a sense in which the problem of the social basis of cognition encompasses the problem of the basis of social cognition. But my claim is that considerations about shared intentionality in social cognition do not serve the purpose to provide empirically-grounded support for the (metaphysical) view that one's thought contents have their conditions of existence and identity determined socially. This distinction rests on the observation that a background of shared meanings and practices is needed for people to learn to recognize the reference of words and gestures when they engage in communicative practices with others. To inquire into the social, that is, shared conditions that must be in place for any two people to entertain mental states with a certain content, in general, is not the same as asking how the relevant sharing is realized in social cognition proper. I hope the considerations developed here will facilitate a more balanced, if not cautious, assessment of the explanatory role of claims about shared intentionality in social discourse.

The structure of the paper is as follows. In Sect. 2, I present Co-cognitivism in terms of the idea that co-cognition involves the ability to share mental resources and contents. I pay particular attention to reconstructing the connection between co-cognition and shared or we-intentionality. Heal's account offers an insightful formulation of this connection, one that touches upon evolutionary considerations though it does not provide a full-blown story. I then turn to the evolutionary account of the Shared Intentionality Hypothesis, in Sect. 3, and suggest that there is a relation between the notion of co-cognition and the cognate notion of collaborative interaction. The discussion of the developmental function of acts of shared intentionality shows that Tomasello's claims are motivated by an interest in the unique traits of human social cognition, while, as I indicate in Sect. 4, Heal's claims can be interpreted as being about the social preconditions of intentionality in its most general philosophical characterization. I conclude with remarks that point in the direction of future research between analysis of shared intentionality in social ontology and empirically-driven work on co-cognition.

2 Social Cognition and Shared Intentionality

As the knowledge, motivations, experiences and plans of agents become shared in interactions, the alignment of minds and bodies makes new information available to each of them—information about each other's mind and, therefore, about the world. Jane Heal claims that this is the chief

aim of co-cognition,² and that considerations about the role of shared cognitive engagements in everyday life provide a solid basis for drawing conclusions about the social foundations of thought. Although the notion of co-cognition is not spelled out in much detail throughout the paper, Heal's choice of words and phrasing bear close similarities with analyses of we-intentionality in social philosophy, which could thus be used to further illuminate the rationale of Co-cognitivism. For the sake of clarity, I shall define a state of shared agency as one in which the mental and bodily resources of individuals are aligned in the appropriate manner (Jankovic and Ludwig 2017).

Talk of co-cognition appears to fall into the area known as the problem of other minds.³ One important question in this area is about the nature and identity of psychological thoughts. To illustrate the key concepts, consider the following example. Suppose that you are on the bus with Mary and Paul, heading somewhere. Nearing the next stop, you come to realise that Mary wants to get off. You also think that Paul is worried it's too early, and that he prefers to carry on. All these thoughts are about Mary and Paul representing things in a certain way. They involve mental-state attributions⁴ on your side—i.e. you think a thought about Mary with the content “Let us get off”, or about Paul thinking “Hold on, it's too early”. The terms ‘thinking’ and ‘thought’ are construed broadly to mean thought contents, namely mental states representing things as thus-and-so. I shall follow Heal, here, and call ‘psychological concepts’ the thought contents which are directed at the mental attitudes of other people. On Heal's definition, to have a psychological concept is to be able to think of another person as intending to get off the bus, rather than wanting to look outside, or to engage in a conversation with Paul.

² According to the original notion, co-cognition stands for “thinking about the same subject matter (...) So for example, two persons M and N co-cognize when each has the same beliefs and interests and reasons to the same further belief” (Heal 1998, p. 483).

³ I refer to issues related to the philosophical debate about knowledge of other minds, such as the question about the grounds for understanding the mental states of other people, rather than the skeptical question of how we know that other minds exist. In the remaining of the paper, I also distinguish between psychological explanation and explanation of psychological knowledge. The former refers to explanations of attitudes and processes that fall in the domain of psychology as a discipline; the latter refers to explanations of attitudes and processes which underpin understanding or knowledge of other minds, i.e. psychological knowledge.

⁴ Notice that, according to Heal, possession of psychological concepts is not necessary to grasp psychological concepts. So, a person can have thoughts about the way in which another person represents things to be in a pre-conceptual fashion, namely without mastering the specific concept of the attitude (belief, want, intention, fear, etc.) at stake (Heal 2013, p. 347).

More generally, the question at stake is what conditions must obtain for a person to come to think of another person as having certain thought contents. Heal conceives of the identity of mental-state ascriptions in terms of their functional relevance to psychology and behaviour, with regard to both the type and content of the relevant state. This is where the concept of co-cognition makes its way into the discussion of the conditions for having psychological knowledge. Co-cognitivism is thus presented as a view of the function of psychological concepts and it provides an answer to the following question: “What are your thoughts about Mary's, or Paul's, behaviour *for?*”. The answer is that mental-state attributions have their conditions determined socially, i.e. with a view to finding ways that can help us to carry out together the sort of activities that make life worth living (Heal 2013, p. 342). People are motivated to do so because, if we join forces and pursue common goals, our action “can be developed and enriched” (*ibid.*) in ways that would allow us to achieve more than if we were acting alone. Therefore, Heal suggests, psychological concepts are grounded in a distinctive blend of shared cognitive engagements irreducible to first-person and third-person concepts of other minds.

One way to characterize this insight in linguistic terms makes salient the first-person plural pronoun ‘we’, as in ‘Whatever you and I intend to do, each individually, *we* will do it *together*’. For an illustration, consider the following passage from Heal's paper:

What co-cognitivism stresses is that much of the thinking we engage in is first personal, but done by *us* rather than just by me. So when I try to establish at the start of a discussion what attitudes you have and to what contents, my aim is not to use that information to predict or control in detail what you will then think and say, but rather to put myself in a position to understand and rightly develop what you offer, so that *we together* can come to some interesting insight or sensible plan of action (Heal 2013, p. 348; emphasis mine).

A co-cognitive interaction is presented here as a two-person activity underpinned by an active process of alignment at the mental and bodily level. Co-cognizers each individually come to think of one another as having the thoughts they do in virtue of engaging in the appropriate type of inter-subjective activities that Heal characterizes as “language-mediated cooperative thinking” (2013, p. 339). Co-cognition thus enriches the agents' individual space of action by opening up the mind to novel option for thinking and acting. To put it differently, when people co-cognize, they achieve knowledge of other minds by exchanging the privileged point of view of the first-person singular for its plural form ‘we’. This form of attunement is meant to capture the relevance of the *inter-subjective* access to information about the world that people experience when they see things, including themselves and

others, from a joint perspective—one that cannot be fully explained in terms of first, purely subjective, or third-person, concepts (Tollefsen 2014).

The analogy between co-cognition and shared intentionality only takes us so far, though. In fact, the main aim of Heal's reflection is not to offer a fully worked-out account of co-cognition. Considerations about the functional role of co-cognition in everyday life serve a different purpose in Heal's own thinking about social cognition, i.e. they provide a compelling basis for concluding that "psychological information about each other couched in terms of the anti-individualist concept of content is primary and information about individualist content is secondary, and usually, of no or marginal interest" (2013, p. 358). The point of Co-cognitivism is to advocate a version of philosophical externalism that gives pride of place to social factors.⁵ I shall not engage with this line of argumentation here. Whilst my analysis moves from Heal's reflection and takes Co-cognitivism as a friendly target, the present discussion goes beyond the scope of her contribution on the (anti-)individualism debate.

To take stock of the discussion so far, psychological thinking is functionally designed to facilitate people's engagement in cooperative endeavours with others—"a way of gearing up to deal with those [thought] contents by thinking with them" (Heal 2013, p. 348). Since psychological thinking has evolved to serve the social needs and interests of humanity, the forms that psychological concepts will take are most fundamentally co-operative and shared. To say that these forms are shared, following Heal, amounts to saying that there is at least one level of description at which grasp and possession of psychological concepts require that they be shared. What she means by 'shared' is not spelled out in detail, but it can be reconstructed indirectly. As I understand this view, if the content of *my* mental-state attributions is determined with a view to the sort of things that we can do together, by sharing thoughts and experiences with *you*, then what I'm tacitly assuming about the identity of your mental states will be that they depend for their individuation on there being a common background of shared and publicly accessible meanings. The conclusion, Heal seems to suggest, is that awareness of the thoughts of other people comes with the realization that membership to the same socio-linguistic community—*our* community—is what matters for fixing the identity conditions of psychological concepts.

This is a fascinating story and promises to break novel routes for further investigation in the philosophy of social cognition, and beyond. From the point of view of our

discussion, however, there are missing details. Firstly, consider the argument that the mind has become adapted to entertaining psychological thoughts with the relevant form in response to interests that can only be satisfied socially, by sharing cognitive resources. The conclusion that the logical form and criteria of adequacy of psychological concepts involve an awareness of the fact that the concepts must be shared, in the sense that they are fixed in the course of social processes of enculturation, is premised on the assumption that there is a distinction between psychological and *non*-psychological concepts. This distinction plays a central explanatory role in the case for Co-cognitivism, but in Sect. 4 we will show that there is conceptual room for arguing that such distinction is much less clear-cut than Heal would like it to be.

Secondly, the discussion so far seems to imply that some capacity for sharing, or co-cognizing, is necessary for grasp and possession of psychological concepts. But, then, if the focus of claims about co-cognition is on the skills and motivations by which individuals exchange and process information by gradually aligning minds and bodies, then a plausible story of the sort of 'vehicle' that enables shared cognitive acts will have to be part of the broader argument. Heal does articulate Co-cognitivism in ways that openly resort to evolutionary considerations, but such considerations are pitched at a high level of generality that leaves important details about co-cognition somehow undefined. For reasons that will become clear in the next section, I argue that these gaps can be filled by turning to the evolutionary account of social cognition of Michael Tomasello and colleagues. As I suggested before, the Shared Intentionality Hypothesis is informed by very similar assumptions about mind and agency to Heal's, but it also provides a story that can nicely supplement her reflection about the evolutionary function of shared intentionality.

3 Co-cognition and Evolution

In *A Natural History of Human Thinking* (2014), Tomasello claims that at some point in the natural history of human thinking, most likely before the rise of symbolic forms of cultural organization, early humans were faced with challenges which urged them to develop novel behaviours and responses to changing conditions in the external environment. Small scale activities like foraging, essential for the survival and development of early humans, now required concerted efforts of the individuals to co-operate, i.e. to operate together, by joining forces and mental resources. Tomasello exemplifies the structure of these engagements in terms of a 'collaborative interaction'—the core explanatory unit of the Shared Intentionality Hypothesis—that is, a form of cognitive activity in which the psychological attitudes of

⁵ As is clear, there are points of contact between talk of the implications of claims about shared intentionality for the debate in cognitive theory and the long-standing controversy about the boundaries of the mind (Adams and Aizawa 2001; Wilson 1995; Zerubavel 1997).

the agents are shared. As such, the notion of a collaborative interaction bears interesting similarities with the notion of co-cognition, so I turn to Tomasello's broader reflection for enlightenment on the key question of the paper about shared intentionality.

Tomasello's thinking on the reach and relevance of collaborative interactions has changed throughout the years in response to a fundamental question—the question of whether, or not, the capacity to read into the minds of co-specifics is the most fundamental adaptation that gave early humans a decisive advantage over the other primate species. To elucidate the importance of the question, it is worth reminding that the central premise of the Shared Intentionality Hypothesis is the observation that human cognition differs from other forms of primate cognition along culturally defined evolutionary dimensions. Dual-inheritance theorists model the evolution of cognitive adaptations for enculturation on the logic of natural selection, yet they describe the output of these adaptations as a system of inheritance that operates by different rules of transmission than genetic inheritance (Henrich and McElreath 2008). The rules of cultural evolution are embedded in acts of social engagement whereby individuals transmit and internalize information that is essential for survival in a highly competitive environment, from basic conventions governing the use of artefacts up to normative instances of institutional behaviour. The flow of information thus ratchets up over time and contributes to alterations of the external environment and, therefore, to the way biology adapts to the environment (Tomasello et al. 1993).

Accordingly, an account of the dual roots of the mind should be able to explain the conditions that enable early humans to initiate processes of cultural evolution, provided that such processes are not unique to humans (Tomasello 2011). As Tomasello has argued at length, based on a large battery of experiments with juvenile chimps and humans, those conditions must take account of the fact that non-human primates are capable of understanding co-specifics as minded subjects, i.e. subjects whose action is governed by intentional attitudes of the kind required for acting meaningfully. Yet, the type of collaboration observed among non-human primates relates to selfish interests and needs, whereas human-like forms of behaviour are strikingly cooperative in nature. Tomasello accounts for this feature in terms of a genetically evolved psychological adaptation for social cognition, structured around the capacity not only to understand but, most importantly, to share the intentional attitudes of others (Tomasello et al. 2005). Participation in a shared, 'common', mental world brings about a brand of self-other interaction that is qualitatively unique and responsible for human-like forms of psychological thinking.

As it should be clear, this characterization bears a strong conceptual resemblance to Heal's characterization

of co-cognition. To elaborate, consider the point that early humans have become adapted to entering and sustaining thoughts with the representational, inferential and normative structure typical of modern human thinking by engaging in cognitively shared practices with others' (Tomasello 2014). As the story goes, when the minds of any two people tune in to one another's, the state of mind that results from co-cognizing turns out to be a distinctive blend of interpersonal engagement and reciprocity that enlarges and enriches the repertoire of options available for action, making it possible for the agents to see and do things in a new, or just different, way. Heal seems to have the same idea of the evolutionary significance of co-cognition for the development of human thought, although her evolutionary story is only sketched in a rather cursory manner as we have remarked. "Co-cognizing"—she claims—"contributes to life going well because it enables elaboration and enrichment of other aspects of our shared life and enterprises such as their emotional, ethical, artistic, intellectual, and political elements." (Heal 2013, p. 344). Sharing cognitive resources enables forms of (inter) activity that may have yielded a decisive evolutionary advantage over the other primate species.

At the same time, it is worth noticing that what emerges from the discussion of the Shared Intentionality Hypothesis is that an account of the place of co-cognition in the evolution and development of human thought calls for an explanation of the vehicle that forms and sustains acts of co-cognition. In the philosophical literature on shared agency, it is generally argued that being able to engage in a joint activity is a necessary condition for the relevant sharing of minds to occur.⁶ Hence, one specific sense of shared intentionality is informed by an interest in the skills and motivations of social cognition (Gallotti and Michael 2014). On this interpretation, the central question is about the structure of the social-cognitive machinery enabling individuals to participate in the common mental world described by Tomasello as one of shared intentionality. This formulation of the question at issue takes us close to discussions of the underpinnings of social cognition, but it does not surface in Heal's characterization of co-cognition. Co-cognitivism is a synchronic⁷ account of the practices that must have been in place evolutionarily for psychological thinking to acquire its characteristic logical structure and criteria of adequacy—not, emphatically, a diachronic account of the machinery that enables co-cognition. If this is correct, Co-cognitivism

⁶ For an up to date review of the main positions at stake see Jankovic and Ludwig 2017.

⁷ I would like to thank one of the anonymous reviewers for suggesting use of this term, which I borrow from their comments to an earlier version of this article.

presupposes a distinct conception of the scope of shared intentionality.

To see the difference, let us further expand on the motivation for positing shared intentionality at the core of human mental development. Tomasello resorts to notions of shared intentionality because he is persuaded that there is something uniquely human about the way in which we each individually get to know each other's minds. The focus, here, is on the mutuality of acts of shared intentionality as the key to knowledge of other minds—i.e. the fact that minds and bodies align dynamically by exchanging relevant information back and forth (Gallotti et al. 2017). To put the point in different words, the central preoccupation is about the fact that human social understanding seems to be achieved in a way that has no equivalent in the animal kingdom, that is, by way of cognizing, emoting, intending, etc., *together*. Notice that this is a point about the nature and machinery of social cognition, about how the fact that a peculiar configuration of individual minds opens up novel ways to get to get to know each other through interaction. Therefore Tomasello's considerations about the individual preconditions of social cognition, enabling individuals to come to think and experience their interacting partners as having a shared representation of the world, should not be conflated with the lesson of Co-cognitivism about the social preconditions of thought contents. By making a principled distinction between the content and the vehicle of psychological knowledge, I contend that one can embrace claims about the socially situated nature of human cognition *à la* Heal, while allowing for certain individualistic notions to still play a role in explanations of the mechanism and processes that realize acts of 'cognizing-together'.

This conclusion seems to align with some interpretations of Tomasello's work as underlying a rather cognitivist stance on mind and agency—something Heal would actively resist (Racine and Carpendale 2007; Racine 2012). According to some commentators, Tomasello's view of social cognition presupposes that, when any two people tune to each other's minds, and body, they must be capable of mentally recognizing something to be the case as a precondition for social interaction (Susswein and Racine 2008). For this effort of mental recognition to occur, it is argued, people must have access to some intrinsically contentful state through reflective understanding. This exercise would require introspecting upon one's own experience of mental-state concepts and deploying more sophisticated cognitive resources than those immediately available in perception (Racine and Carpendale 2007). Alternatively, one might argue, a theory of social cognition consistent with some form of *co*-cognitivism would explain understanding of other minds in terms of enactive processes, whereby the behavioural and cognitive states of two people become shared with limited, if any, mediation of internal mechanisms. Hence the point of highlighting the

inter-subjective, embodied and embedded, nature of co-cognition would be to emphasize that a person's mind can gain awareness of things in the world by addressing others' minds in a direct and unmediated mode of cognition, as opposed to traditional modes of mindreading.

Pursuing this line of argumentation would take us too far afield, however these remarks can help to shed further light on the scope of the Shared Intentionality Hypothesis. Tomasello's critics are right in pointing out that there can hardly be sharing of mental states outside of interactive dynamics involving at least two people. Yet, the emphasis of claims about the relevance of co-cognizing for knowledge of other minds is on the way—distinctively mutual—in which the information is exchanged by the interacting agents back and forth until the relevant shared-ness is achieved. When any two persons inter-act, they experience their thoughts and actions as being about something that is to be jointly achieved, not necessarily, or not just, in virtue of their being involved in action proper (Pacherie 2012; Tollefsen 2014). The emphasis here is on the *inter*-personal, rather than enactive, aspect of acting-together. So, to say that co-cognizing is a two-person activity is equivalent to saying that the agents each ascribe thoughts and feelings to the other not as an 'it', which is emphatically distinct from the 'I', but to a 'we'—a subject that is individually constrained though cognitively plural (Carr 1986). With this in mind, the more general point for our discussion is that Tomasello's conception is motivated and develops within a framework of research and reflection on human social cognition—*this* framework shapes the scope of his claims about shared intentionality and suggests that there is room for distinguishing them from Heal's claims.

4 Co-cognition and Shared Intentionality

Drawing on the connections between the evolutionary function of a collaborative interaction and the scope of co-cognition, a distinction has begun to emerge between two interpretations of the scope of claims about shared intentionality. The driving question for Tomasello and colleagues is a question about the underpinnings of social understanding. The thought seems to be that, although the effort of making sense of other minds is part of the broader effort to make sense of things in general, there is a sense in which making sense of people's minds employs cognitive resources and processes that are evolutionarily unique to humans. I take this as a point of departure to assess the scope of Heal's claims about shared intentionality.

It is important to remember at this point that Co-cognitivism is a view of the nature of *psychological* knowledge. In this respect, Heal contrasts Co-cognitivism with the view that psychological knowledge has evolved to reflect an

interest in understanding other minds in a scientific fashion. The ‘theory-theory’ approach is taken as exemplary of a cognitivist approach to social cognition. On this approach, people represent others’ perspectives on things with the aim to make sense and possibly predict their future behaviour. ‘Cognitivist’ in the present context means this: if *my* thoughts about the contents of *your* mind had their logical structure and criteria of merit shaped by explanatory and predictive purposes, then psychological knowledge would be knowledge of the causally significant structures that govern the cognition and behaviour of individuals ‘from the inside’. To make the point more vivid: if the content of my thoughts about your thoughts is determined with a view to the causal machinery behind your behaviour, what I am tacitly assuming about the identity of your thoughts is that they depend for their individuation on you being in the relevant psychophysical states which instantiate them.

According to Heal, this is a cognitivist conception because, as the cognitivist has it—but not the *co*-cognitivist—to understand the thoughts of other people consists in figuring out what it is for them to see things in the world from the subject’s point of view, the emphasis being on the fact that what fixes the content of thoughts is that people must be in the corresponding causal internal states. An example of cognitivist attitudes are first-level dispositions construed so as to make it clear that grasp of the relevant content is impermeable to causal-historical considerations about the phenomena re-presented before the subjects’ minds—i.e. dispositions such as “the disposition to judge of some perceptually presented item that it is a paradigm F or the disposition to respond ‘No’ on hearing the noises ‘If something is F must it be G’” (Heal 2013, pp. 353–354). On the contrary, the gist of Co-cognitivism is that psychological thinking has evolved to meet increased evolutionary pressure for co-operation rather than, or prior to, theoretical demands for explanation and prediction of behaviour.⁸ What, then, fixes the meaning of first-level dispositions? For Heal, to say that such dispositions have their content fixed by the pooling of cognitive resources means that they do not depend for their individuation on internal conditions alone. Their content can only be connected for use by way of the subject’s relations with others’. Therefore, since information about the thoughts of other people formulated in co-cognitivist terms is information that emphatically brings into focus the role of shared, socio-cultural, historical and contextual conditions,

⁸ However, Co-cognitivism hardly entails that co-cognition involves no mindreading. Heal asserts that Co-cognitivism is “favourable” to a version of simulation theory according to which, when grasp of a person’s thoughts involves “seeking to recreate his or her train of thought”, then the relevant processes can be described in terms of an effort to “reflect imaginatively” about the causes of behaviour (Heal 2013, pp. 350–351).

to acknowledge the central role of acts of shared intentionality for psychological thinking reveals a preference for a conception of the mind that gives pride of place to social i.e. external, rather than internal, factors.

Notice that what these remarks tell us about the reach of co-cognition is that claims about shared intentionality are in fact *general* claims about the social preconditions of thought. Talk of co-cognition is informed by an interest in the sort of preconditions that must obtain for people to arrive at an understanding of things as thus-and-so, that is, the traditional question of intentionality or the question about other minds in its most general expression (Dullstein 2012). These conditions specify what it is for a person to entertain thoughts about facts in the world with a certain content. Since the co-cognitivist conceives of thinking about the content of others’ minds as a two-person matter done by us together, there is room for believing that what Heal means by shared intentionality is the fact that for people to entertain representations of things as thus-and-so, certain cognitively interpersonal conditions must be in place. The emphasis here is not so much on the specific target at which thought contents are directed, i.e. the minds of the other people, as on the pre-conditions for understanding in general. To say that this is a general view of the relevance of acts of co-cognition means that, if correct, it is true of *any* mental state having intentional content, whether it represents inanimate facts in the world or the thoughts of other people.

One immediate consequence for our discussion is that there is a crucial difference here between Tomasello’s and Heal’s projects. Tomasello is interested in the distinctive nature and function of the vehicle of human social cognition, while Heal draws on insights about shared intentionality to champion a more general point about the social preconditions of intentionality *tout court*. In fairness, it is not entirely clear whether Heal’s definition of psychological knowledge encompasses the full range of thoughts and not just thoughts about others’ minds. Some passages in the discussion of co-cognitivism suggest that it does not.⁹ Yet, the argument does rest on an explicit distinction between the function of psychological concepts and that of concepts of things in their inanimate aspects. Also, she articulates the notion of co-cognition in contrast to a moderate version of the theory–theory approach to social cognition, and the discussion is imbued with criticisms of cognitivist claims about knowledge of other minds throughout. Therefore, Heal seems to be making a principled distinction here.

⁹ Consider the following statement, among others: “If we suppose (...) that co-cognitivism supplies the correct account of the role which shapes psychological concepts, including the *concept of what is required to have a thought with a certain content* (...) (Heal 2013, p. 358; emphasis mine).

However, the more relevant point for our discussion is that, as long as the putative distinction between different functions of psychological knowledge is spelled out in terms of considerations about the importance of shared intentionality, the generality of the relevant claims shows that the conflict between a cognitivist and a co-cognitivist conception of social cognition is neither restricted to, nor essentially, about the nature of psychological knowledge *per se*. Although claims about shared intentionality are employed in support of an argument for Co-cognitivism about knowledge of other minds, they are broader in scope than Tomasello's claims about social cognition.¹⁰ In fact if we then compare Heal's line of argumentation with the discussion of the meaning of a collaborative interaction in the context of the Shared Intentionality Hypothesis, we will notice that Heal's and Tomasello's claims gesture in the direction of distinct *explananda*—one is a demand for a theory of the underpinnings of social cognition, the other is a demand for a theory of the social preconditions of cognition. This distinction, I argue, is central to current uses and meanings of shared intentionality in and across the cognitive humanities.

5 Conclusions

In this paper I presented and discussed two lines of argumentation about the importance of shared intentionality for human (social) cognition. The key to Co-cognitivism and the Shared Intentionality Hypothesis is the idea that modern forms of thought have developed out of socially significant evolutionary forces, which pulled early humans towards cooperative forms of life by way of engaging in cognitively shared practices. Claims about the capacity for engaging in shared cognitive activities are in service of two different questions though. Heal's project is premised on the idea that there is a distinction between the central purpose for which we want information about other minds, and the function of non-psychological knowledge. Yet, Co-cognitivism provides a response to the question of intentionality in its most general philosophical formulation. Instead, the focus of Tomasello's and colleagues' work is on the underpinnings of the social-cognitive machinery and results in a conception of shared intentionality that emphasizes the experience of reciprocity in sharing mental states and attitudes—a concern that does not appear to be central in Heal's discussion. Depending on whether the relevant focus is on the social roots of the mind, or on the underpinnings of social cognition proper, different conclusions will follow with regard to

the scope and significance of shared intentionality in cognitive theory.

Despite disagreements, however, the general lesson is that bringing together bodies of research on shared cognitive interactions and analyses of shared intentionality would be highly advantageous for both parties. Just as Co-cognitivism involves thinking about grasp and possession of psychological knowledge in terms of a two-person, cognitively shared, activity; so, too, analyses of we-intentionality offer a solid conceptual basis for articulating the conditions about the social dimension of the mind, although discussions of social ontology have long been insulated from considerations about the actual workings of the social cognitive system. If psychological knowledge derives its content and structure, at least in part, from participation in a shared mental world, it will follow that analyses of shared intentionality may have more to contribute to the debate on the nature of cognition than traditional philosophical analyses of social ontology would suggest.

Compliance with Ethical Standards

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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References

- Adams F, Aizawa K (2001) The bounds of cognition. *Philos Psychol* 14:43–64
- Bruner J (1983) *Child's talk. Learning to use language*. Norton, New York
- Bruner J (1998) Routes to reference. *Pragmat Cogn* 6:209–227
- Burge T (1979) Individualism and the mental. *Midwest Stud Philos* 4:73–122
- Call J (2009) Contrasting the social cognition of humans and non-human apes: the shared intentionality hypothesis. *Top Cogn Sci* 1:368–379
- Carr D (1986) Cogitamus ergo sumus. *The Monist* 69:521–533
- De Jaegher H, Di Paolo E, Gallagher S (2010) Can social interaction constitute social cognition? *Trends Cogn Sci* 14:441–447
- Dullstein M (2012) The second person in the theory of mind debate. *Rev Philos Psychol* 3:231–248
- Gallotti M, Michael J (2014) *Perspectives on social ontology and social cognition*. Springer, Dordrecht
- Gallotti M, Fairhurst MT, Frith CD (2017) Alignment in social interactions. *Conscious Cogn* 48:253–261
- Heal J (1998) Co-cognition and off-line simulation: two ways of understanding the simulation approach. *Mind Lang* 13:477–498

¹⁰ Spaulding (2011) makes a similar point in assessing the reach of claims about embodied social cognition.

- Heal J (2013) Social anti-individualism, co-cognitivism and second-person authority. *Mind* 122:340–371
- Henrich J, McElreath R (2008) Dual inheritance theory. The evolution of human cultural capacities and cultural evolution. In: Dunbar R, Barrett L (eds) *The Oxford handbook of evolutionary psychology*. OUP, Oxford, pp 555–570
- Jankovic M, Ludwig K (2017) *The Routledge handbook to collective intentionality*. Routledge, Abingdon
- Lyre H (2018) Socially extended cognition and shared intentionality. *Front Psychol*. <https://doi.org/10.3389/fpsyg.2018.00831>
- Moll H, Tomasello M (2007) Cooperation and human cognition: the vygotskian intelligence hypothesis. *Philos Trans R Soc B* 362:639–648
- Pacherie E (2012) The phenomenology of joint action: self-agency vs. joint-agency. In: Seemann X. (ed.) *Joint attention: new developments*. MIT Press, Cambridge, pp. 343–389
- Racine TP (2012) Getting beyond rich and lean views of joint attention. In: Seemann A (ed) *Joint attention. new developments in psychology, philosophy of mind, and social neuroscience*. MIT Press, Cambridge
- Racine TP, Carpendale JIM (2007) The role of shared practice in joint attention. *Br J Dev Psychol* 25:3–25
- Schilbach L, Timmermans B, Reddy V, Costall A, Bente G, Schlicht T, Vogeley K (2013) Toward a second person neuroscience. *Behav Brain Sci* 36:393–414
- Slaby J, Gallagher S (2015) Critical neuroscience and socially extended minds. *Theory Cult Soc* 32:33–59
- Spaulding S (2011) Embodied social cognition. *Philos Top* 39:141–162
- Susswein N, Racine TP (2008) Sharing mental states. Causal and definitional issues in intersubjectivity. In: Zlatev J, Racine TP, Sinha C, Itkonen E (eds) *The shared mind: perspectives on intersubjectivity*. Benjamins, Amsterdam, pp 141–162
- Tollefsen D (2014) A dynamic theory of shared intention and the phenomenology of joint action. In: Chant SR, Hindriks F, Preyer G (eds) *From individual to collective intentionality: new essays*. OUP, Oxford
- Tollefsen D, Dale R (2012) Naturalizing joint action: a process-based approach. *Philos Psychol* 25:385–407
- Tomasello M (2011) Human culture in evolutionary perspective. In: Gelfand MJ, Chiu C-y, Hong Y-y (eds) *Advances in culture and psychology: vol 1. Advances in culture and psychology*. OUP, New York, pp 5–51
- Tomasello M (2014) *A natural history of human thinking*. Harvard University Press, Cambridge
- Tomasello M, Carpenter M (2007) Shared intentionality. *Dev Sci* 10:121–125
- Tomasello M, Kruger AC, Ratner HH (1993) Cultural learning. *Behav Brain Sci* 16:495–511
- Tomasello M, Carpenter M, Call J, Behne T, Moll H (2005) Understanding and sharing intentions: the origins of cultural cognition. *Behav Brain Sci* 28:675–691
- Wilson RA (1995) *Cartesian psychology and physical minds. Individualism and the sciences of the mind*. CUP, Cambridge
- Zerubavel E (1997) *Social mindscapes. An invitation to cognitive sociology*. Harvard University Press, Cambridge

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