Introduction

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Ben Kruger develops his argument historically, tracing developments on 'the language of thought' or how scholars have attempted to articulate and explain what the relationship is between language and mind, so to speak. He does this in six sections. In the first, he treats the Enlightenment ideal of doing away with all presupposition and the development of pure scientific thought and how this understanding evolved into the postulation of the 'language of thought'. This corresponds to the later view that mind and body stand in a relationship similar to the computer program and the physical computer hardware from within which it is used. It is only possible to comprehend what the programme can do by looking at how it functions as program and not by looking at the hardware. In his next sections, he then exposes the limits of functionalism, and then treats other scholarly contributions to this evolving discourse, such as the 'phenomenology of thought', 'embodied thought' and 'language as expression'. Throughout, he provides insights from significant philosophers who have engaged this issue. In his conclusion he develops his own position.

As historical linguist, Roger Lass puts his finger on a very central nerve in the sciences—the development of the appropriate discourse (or concepts, or 'metaphors', or 'metalanguage' for short) to accompany science as itself develops and progresses. In order to address this issue at general level, he suggests we deal with it under the general rubric of 'metaphor and knowledge'—which to some degree has a different significance in the arts/humanities/ social sciences nexus than in the different ones in the natural sciences. More particularly, he focuses this question on the role of genetic metaphor—deriving from the biological sciences and how concepts are analogically transferred into other disciplines—in historical linguistics and

the challenges this discipline has faced since its inception. This concerns the use historical linguistics has made of concepts in the other sciences—'hijacking' them. He also gives an example of such 'hijacked metaphor' and then focuses his main argument on developments within historical linguistics as it relates to the question of the 'units' of analysis scholars have recently developed for this discipline, i.e. especially those derived from the notion of the 'meme'. A central point Lass makes is that because of what we could call the developmental (or, rather 'evolutionary') nature of language, we need to consider positioning it as discipline in the biological sciences. The question of teasing out the ontological structure of language in this sense, however, remains still outside our grasp.

Appreciating Lakoff and Langacker's contribution to the change away from too narrowly conceived linguistics—developed to match mathematical precision—and semantics—which was restricted by its taxonomising categories—Gary B. Palmer points out that cognitive studies too needs to be enriched, i.e. with perspectives from cultural linguistics. In his study of Shona noun classifiers, he shows how cultural linguistics could be employed in this task, also referring to the significance ethnographic methods have in the process. His rationale is that 'many lexical domains and grammatical constructions link directly or indirectly to significant cultural models, notably including scenarios and polycentric categories'. In order to understand the grammar and lexicon of a language, one should also understand the cultural models and culturally defined imagery which informs it, and as it derives from the embodied experience and encyclopaedic or world knowledge of that culture. This is the domain in which cultural linguistics works and which he employs in his study. He illustrates how 'cognitive processes of complex category formation' and 'category chaining' function within culturally specific models to create the 'polycentric categories' that we know as Shona noun classifiers. Palmer further importantly points to the need for similar research on other classifiers in the Shona system, other Bantu languages and the varied classifier systems in other languages. Important is that it includes the significant element of ethnographic research on scenarios and themes that may impact on linguistic categories.

Ronald Miller focuses his research on the 'inner world' that human beings have in distinction to the outer world or world in which we live. In order to come to a better understanding of this reality, he follows Vygotsky in asking questions about the generation of this world, and especially as it is not sui generis but mediated through a 'social other' as 'intentional agent'. Looking at theorisings of the senses of self, he points out that, in terms of the understanding of 'mediation', the 'inner site' or 'locus of understanding' is just as crucial as the self as 'a site from which to perceive and act on the world without'. An additional issue at stake in mediation concerns the impact of the action(s) of the mediator on the assumptions of the mediatee. variously described by Gadamer and Ortega. Miller also draws analogical explanations from Heidegger and Harré. Significant in his analysis is his pointing to the role of pre-understanding as part of our being or selfhood in mediated understanding, how understanding incorporates the mediated situation and how new understanding involves negation. In this sense, and to link up with Miller's title, situations are constituted by answers and the nature of pre-understanding is that it posits unsuitable questions to the answers. Understanding then dawns when a mediatee accepts new preunderstandings appropriate to the answers provided. To do so in terms of tasks mastered in an answer-and-question process, understanding takes place as a mastery where the being of the self incorporates the situation—leading to the 'transformation of the self that is achieved by the acquisition of new understanding'. In terms of understanding as the engaging of the playing of a game, the self is drawn into the game to re-play it—with the result that play or recreation is a re-affirmation of the self. Along similar lines, Miller also explains the dynamics involved in the various ways of appreciating sports and art.

In their article, Andrew Dellis and David Spurrett research what they call the ontology of the cognitive agents posited by accounting for the mind as dynamically realised by both body and world. They address this focus by first providing an overview of Dennett's argument in his 'Real Patterns' article, and then Kirsh and Maglio's research on the playing of the computer game, Tetris—that cognitive functioning also importantly exploit non-neural resources. They explain the context in which Dennett's argument occurs, and point to the accumulating evidence for distributed cognition against the

background of more traditional expectations. They also provide a more detailed examination of Kirsh and Maglio, i.e. the case for the thesis that human players exploit a variety of non-neural resources in the course of play—their 'epistemic action' (the category of physical actions with cognitive benefits in question)—and then return to the central focus for the remainder of the article, beginning with a discussion of Van Gelder on the dynamical hypothesis in cognitive science. The question whether the nature hypothesis can be accepted, connects up directly with the debate concerning realist and instrumentalist readings of Dennett. They think that they can make a case for the conclusion that the dynamical structures identified by research like that of Kirsh and Maglio are indeed real patterns in Dennett's sense (as refined and rationalised by Ross) or at least are candidates for being real patterns.

Similar to Beck and Spurrett, Grant Blair and Stephen Cowley's distributed view of language continues the trend which challenges the perspectives from cognitive internalism, the 'computational theory of mind', or the input-output model. As is the case with labelling, language-activity is based on taking part in human life, a diverse, encultured world, and not on linguaform (written signs) or the simplistic langue—parole binary. Rather, the common concern is with how language-behaviour links brains, bodies and world. This view of language also means that it espouses an active externalist perspective which entangles microcognitive processes with communication, culture and cognition. This view therefore overthrows the input-output model of mind, while also avoiding fixation with evolutionary origins. Instead we need a picture that includes history, evolutionary history, cultural co-evolution and, above all, the evolution of human development—where labelling began—they argue. It is therefore a theory of language which attempts to provide a new vision of human rationality. It focuses on the examination of human mentality with respect to its dynamics, i.e. cognitive capacities as they articulate with utterance-activity to function across the inner- and outer world boundaries. It is therefore a theory focused on 'active externalism' which stresses the need to scrutinise what happens 'out in the open'. The argument then looks at the parallels between utterance-activity and actions that underpin performance in computer games, the view that social activity-including language-has cognitive properties that connect linguaform with microcognitive activity that permeates the boundaries of experience or world and brain, and how boundary crossing in this sense contributes to microtemporal aspects of action. It also engages the gap between the externalist view of linguaform and the use of the world as a cognitive resource, the question as to how people act as their talk crosses agent-boundaries, how labelling influences dialogical events, and how stable and decontextualized aspects of language contribute to the remembering of experience.

In their article, Gary Mersham and Gavin Baker succinctly provide a brief discussion of the definition of industrial theatre, put forward their proposal for a 'negotiated dramaturgy' in industrial context-which has to be appreciated as a 'process'—and problematise some models for the 'theatre as communication'. These mainly focus on the Pfister and Hauptfleisch models. They then raise the question of how the negotiated dramaturgy is to be positioned in the field of 'performance studies'-i.e. the area of study which investigates the meanings theatre creates—and how it articulates meanings from both the senders' and the recipients' point of view. Apart from the empirical details concerned with the material substance of the performance, the ultimate question relates to their proposal of a negotiated dramaturgy in industrial theatre context. The authors provide an overview by pointing to the fact that many interactions in industrial context do not engage the real challenges difference pose. Rather than assuming 'standard' techniques which uncritically employ the 'print media, videos, mission statements in languages and cultural codes that may not be mutually comprehended by participants', this proposal of the negotiated industrial theatre may be an alternative to effective 'conversation' and interaction, they argue. The outcome of the article is that it proposes that textbook approaches to internal industrial organisational communication are limited and that negotiated industrial theatre pose an alternate route.

Simon Beck's 'Cognition, Persons, Identity', addresses the non-cognitive critique of the psychological view of identity. Deriving from a materialist view, the views of Peter Unger, Peter van Inwagen and Eric Olson all to various degrees argue that physical or bodily reality forms the essential part of one's identity. In their separate views, they believe that the interests of cognitive science are radically distinct from the metaphysical view.

However, and supporting the 'sophisticated standard view', Beck argues, that this is not the case. The standard psychological view is not inconsistent with materialism (and thus with serious cognitive science). Rather, it follows the trend started with Locke and updated by Parfit, namely that what makes someone the same person over time is a matter of facts concerning cognition. Identity derives from overlapping chains which are significantly formed by apparent memories, continuing beliefs, desires, projects, and emotional attachments. The psychological view, he argues, appears to fit our conceptual scheme better than the biological view. This also means that Locke's notion of personal identity as a 'forensic concept' holds, i.e. that it is of interest and importance because of its role in law and morality. (The question, however, is whether 'law and morality' is universal, and if it is, at what price?)

Jacek Brzozowski's 'Anthropocentric Chauvinism' points out that there primarily exists an objectivist, subjectivist, and a dispositional view as to the cognitive explanation of the experience of colour. The objectivist view argues that colours are real properties of objects (either microphysical properties or surface spectral reflectances in the external world). The subjectivist view points to the human experience of colours (colour as redness, green-ness, blue-ness, etc.), and argues that colour must be a product of our mind as these phenomenological aspects cannot be found in the perceiver-independent world. The third position, that of dispositionalism or the secondary quality view, attempted at marking out a middle ground between phenomenology and externality. This position's point is that colours are secondary qualities in that they consist in a power or disposition to produce a sensory experience in a perceiver, and that this power is grounded in primary qualities. As Brzozowski points out, this is a relational stance as the identification of colours is dependent on the experiences of the perceiver (or at least to the experiences of what is often referred to as the normal perceiver). The counterpoint of this view is that if there cease to be perceivers, then, so too, there would cease to be colour too. This is what, on the evidence of comparative studies of visual systems across species, he labels a species-specific chauvinist position—a label he also reserves for other objectivist positions—and which should therefore be rejected as an explanation of the ontological status of colour. Ultimately, however, he

accommodates the objectivist stance in his version of the primary quality view. He overviews the dispositionalist view showing its dependence on standard perceivers and standard circumstances, briefly explicates the functioning of the visual system, highlights the chauvinism that underlies the dispositional account, and then argues that chauvinism should be limited to pragmatic use. He finally shows that by identifying colours as disjunctive microphysical properties that surpass our experience of them, we can avoid similar criticisms of chauvinism within the proposed ontology.

In her 'No Time like the Present: A Cognitive Approach to Time Differentiation in Discourse', Marie Spruyt explicates perspectives from 'cognitive rhetoric'—'which links human concepts with the theory of image schemas to account for the symbolic nature of human thought'. She shows that the mental spaces approach serves as a background-organizing mechanism for the analysis and description of tense in everyday discourse as well as in fictional narrative texts. Both kinds of discourse, she shows, depends on a complex configuration of hierarchically related mental spaces. This means that as a sentence in a discourse is processed, the configuration of spaces is simultaneously adapted and based on lexical and grammatical triggers in the sentence. She analogically develops the principles developed for time in actual language usage to that of the function of time a story. She does so, by consecutively dealing with 'image schemas', 'the construction of Mental Spaces', 'event frames', 'stories in time, i.e. in terms of analogy and metaphor', and time as a deictic category. She explains that 'time' is here viewed as 'a container in which past, present and future are locked up in still smaller containers as cognitive event frames, each with its own internal, causal and modal structures'.

The study and developing of theoretical models for the study of the articulation of text or image representation and recall or memory have been one of the primary focuses in the research by educators and psychologists for decades. Schreiber and Verdi focuses their work on this problematic and review the theoretical framework related to Raymond W. Kulhavy's Conjoint Retention hypothesis (CR) as well as the research of the past two decades based on this hypothesis. They review how maps improve the recall of associated text and also reviewed of a theoretical model that to some

degree explains the processing of map-text information. Existing research provide much information as to how people process and recall information from maps and text within the conjoint retention hypothesis. (They also discuss the current and future directions of the research.) They found that structural elements in maps, the order of presentation or maps and texts, individual differences, accuracy and task demands all influence the recall of information and articulate with their model. Both the 'form of representation' and the 'constraints imposed by resource limitation of working memory' impact on the level of information acquisition and recall in the cognitive system. The type of map-text stimuli reviewed in their contribution allows for the testing of how a pictorial display is likely to be represented and what sorts of tasks a person is able to perform using the representation. 'The information that is retained about the space of a map is dependent upon both the properties of the map itself and on the transformation selected by both the map maker and reader'. More research in this field will make further contributions to the understanding of how maps or organized spatial displays could be usefully employed to increase the recall and retention of text material and, most fundamentally, how we humans process pictorial and verbal information.

If we accept that cognitive science to various degrees straddle the disciplines philosophy, linguistics, artificial intelligence psychology, neuroscience, the question arises as to the significance of 'consciousness' in this complex. In distinction to physicalism which departs from the perspective that the ultimate constituents of the universe comprise of 'purely physical particles', the focus on 'consciousness' studies the qualitative states some of the elements in the universe experience and enjoy. It is these elements which have given rise to 'life' in some way or another and it is 'life' which is characterised by variable senses of the mental phenomenon of 'consciousness'. Given that there has been a rising tide of research in this field internationally, it is unfortunate that available literature reveals that no South African has so far made a contribution in this field which certainly raise the question at least in psychology and philosophy. In order to address this gap in research, the contribution by Michael Mark Pitman provides a critical but constructive response to the claims of the late David Brooks in his 2000 article entitled 'How to Solve the Hard Problem: A Predictable Inexplicability' published posthumously in the e-journal, *Psyche*. Aiming at delineating a possible course for further contributions to consciousness studies from the South African academy, his own approach is to outline a project similar to that of Brooks but expanded, so that it can articulate with current studies in the field of consciousness studies.

David Spurrett concludes the papers in this issue, by engaging the question of the reasons for seeing cognition as being distributed. He first reviews perspectives on cognition and cognitive processes as articulated with the physical elements of the human brain and nervous system, and then provides examples and evidence for seeing cognition as distributed. He concludes with 'a sketch of an argument for the *likelihood* of distributed cognition'. 'Distributed cognition' captures the view that 'cognitive processes' extend 'beyond the brain'.

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