ProtoSociology

An International Journal of Interdisciplinary Research

Compositionality, Concepts and Representations II:
New Problems in Cognitive Science

ProtoSociology

An International Journal of Interdisciplinary Research

Compositionality, Concepts and Representations II:
New Problems in Cognitive Science

Contents

On Contemporary Philosophy

D. Dennett's brand of anti-representationalism: a key to philosophical issues of cognitive science

Sofia Miguens

Abstract:

Although D. Dennett is sometimes accused of insensitivity to 'real', first-person problems of the mind, his Intentional Systems Theory offers a comprehensive, cognitive science grounded, account of the nature of subjectivity. This account involves views on intentionality (concerning the nature of the representation relation, content, psychological explanation), consciousness (comprising a functionalist model, a second order, belief-like, theory of self-awareness, and a deflationary view of qualia), personhood and freedom of action (concerning what must be in place in terms of cognition for the mentalistic concepts of 'person' and 'action' to apply). Since Dennett defends that the principles for understanding intentionality and consciousness are the same, in order to understand his brand of anti-representationalism we must deal with both intentionality and consciousness. That is what I will do in this article. I will also discuss the metaphysical implications of anti-representationalism, and in general use Dennett's work as a key to describe how a range of philosophical issues of cognitive science appear from an anti-representationalist point of view.

> "There are two major traditions in modern theorizing about the mind, one that we will call representationalist, and one that we'll call eliminativist. Representationalists hold that postulating representational states is essential to the theory of cognition (…) Eliminativists, by contrast, think that psychological theories can dispense with such semantic notions as representation. According to eliminativists the appropriate vocabulary for psychological theorizing is neurological or perhaps behavioral"
> Fodor & Pylyshyn 1988, Conexionism and cognitive architecture, *Cognition*, 38.

1. Cognitive science, mind and method

Cognitive science research bears on our understanding of fundamental questions about the mind, such as the nature of representation, consciousness and

Externalist Thoughts and the Scope of Linguistics

Kent Johnson

Abstract
A common assumption in metaphysics and the philosophy of language is that the general structure of language displays the general metaphysical structure of the things we talk about. But expressions can easily be imperfect representations of what they are about. After clarifying this general point, I make a case study of a recent attempt to semantically analyze the nature of knowledge-how. This attempt fails because there appears to be no plausible bridge from the linguistic structure of knowledge-how reports to knowledge-how itself. I then gesture at some other places where the connection between linguistics and metaphysics is commonly, but illegitimately, assumed.

1   An Alleged Connection between Semantics and Metaphysics

What is the relation between philosophy and linguistics? Many philosophers endorse, tacitly or explicitly, the view that linguistic theories can support philosophical theses in various substantial ways. In particular, there's a long tradition in philosophy of supposing that questions about the metaphysical nature of certain phenomena can be uncovered by investigating the semantics of the expressions we use to talk about them. This has been one of the central underlying components of the "linguistic turn" and of various philosophical programs of "semantic analysis". In short, the thought has been that for many philosophical topics, if you can discern the semantics, you'll uncover the metaphysics. The assumption that linguistics can supply evidence for metaphysical theses has been endorsed by many, including those who are well aware of the finer details of both philosophy and of contemporary linguistic theory. For instance, James Higginbotham, who has made numerous substantial contributions to both fields, has endorsed such an assumption in numerous places (e.g., Higginbotham 1989, 1992, 2001, 2004). Higginbotham suggests that linguistic theory can be a substantial aid in "the clarification of the nature of our thoughts, what we actually express when we understand one another" (Higginbotham 2004, 575). Initially, this might seem like a primarily psychological claim. However, Higginbotham then goes on to individuate (what he calls) "thoughts" in a

Presentations and Symbols: What Cognition Requires of Representationalism

Christopher Viger

Abstract

I consider how several results from cognitive science bear on the nature of representation and how representations might be structured. Distinguishing two notions of representation, presentations, which are cases of direct sensing, and symbols, which stand in for something else, I argue that only symbols pose a philosophical problem for naturalizing content. What is required is an account of how one thing can stand in for another. Milner and Goodale's dual route model of vision offers a model for this 'stand-in' relation. Following this model, symbols must play a functional role of activating cognitive operations relevant to what the symbols stand in for. What emerges is an interconnected network of symbols whose tokenings are central – as opposed to modular – cognitive operations. A consequence of this view, which I call an acquired language of thought (ALOT) since most of the symbols humans use are the words of a natural language, is that the framework for central cognition is constructed during the acquisition of a natural language lexicon.Presentations and Symbols: What Cognition Requires of Representationalism

1. Introduction

For the purpose of this paper I am assuming that some version of the representational theory of mind (RTM) is a correct account of at least some human reasoning; i.e., some thinking consists in the explicit tokening of representations. My intention is not to beg the question against the antirepresentationalist; indeed, many of my points are motivated by antirepresentationalist intuitions. However, for at least some of human cognition I endorse RTM and my purpose is to rethink what the representational system might be like, given some recent findings in cognitive science.

My reasoning for endorsing RTM is that as things stand it is the only solution to Brentano's problem, which challenges materialists to give an account of how we think about the absent, the abstract, and the fictitious (Brentano 1874/1973). The force of the challenge is that we do not stand in any interesting physical relation to things absent, abstract, or fictitious, yet these relations are all that the materialist has available to account for the content of our thoughts. Andy Clark characterizes an updated version of Brentano's list as a "compelling range of cases for which a representational understanding seems *most* appropriate" (Clark 1997, 167, emphasis in original). To the cases Brentano considers,

Perceptual Content

Elka Shortsleeve and Kelly Trogdon

Abstract
Any adequate account of the content of perceptual experience should meet the following four constraints. First, it should simply tell us what perceptual content is. Second, it should explain why some perceptual states are transparent in a manner no cognitive states are. Third, it should explain – perhaps explain away – the apparent discrepancy between the capacity for richness in representational detail of the content of perceptual states and the relative representational sparseness of the content of cognitive states. Fourth, it should provide intuitively acceptable accuracy conditions for perceptions. Our paper outlines an account of perceptual content that meets these desiderata, in addition to being simple and, we think, intuitively appealing.

In what follows we sketch an account of the content of experiential perceptual states.[1] We construct our account around the following four desiderata, which we think any adequate account of perceptual content should be capable of meeting:

> *Identification*: to spell out what perceptual content is;
> *Accuracy*: to provide intuitively acceptable accuracy conditions for perceptions, for the contents of perceptions, we assume, are simply their accuracy conditions;
> *Transparency*: to explain why some perceptual states are transparent in a manner no cognitive states are; and
> *Richness*: to explain – perhaps explain away – the apparent discrepancy between the capacity for richness in representational detail of the content of perceptual states and the relative representational sparseness of the content of cognitive states.

Before taking up these constraints, we briefly address the question of whether the contents of perceptions are conceptual or non-conceptual and distinguish between two types of perception, what we call *mere-perception* and *perception-as*

---

1 A note about our notation in this paper: we follow the convention of capitalizing names for concepts and italicizing names for properties.

The Nonconceptual Contents of our Minds

Diana I. Pérez

Abstract
The aim of this paper is to review the controversy concerning the nature of nonconceptual content, and its philosophical implications. I will focus the presentation on three topics: (a) the different motivations behind the postulation of nonconceptual content, (b) the arguments for nonconceptual content, and (c) the different characterizations offered of nonconceptual content (and the problem these definitions pose). In the last section of the paper I will mention the presuppositions behind this notion and analyze a couple of paradoxical theses that emerged from this discussion.

Introduction

There is a widespread understanding of our human minds (an "official story") according to which our minds are compounded by two kinds of states. On the one hand, there are propositional attitudes, such as beliefs, desires, and the like, which can be specified in terms of (i) an individual/organism/system, (ii) a proposition, or another contentful item (a sentence of a natural language, or of the language of thought), and (iii) a certain relation (an "attitude") holding between such individual and that content. These states, it is said, "constitutively involve" (Bermúdez 1995, 183) the possession of concepts. On the other hand, there are some mental states which are purely qualitative, subjective, they constitute the feelings or "what it is like" of our mental life: in the philosophical literature these states are known as "qualia." It is usually said that these states are not representational states and hence that they are not contentful.

It is a matter of discussion whether all kind of mental states could be understood in terms of propositional attitudes plus qualia. It seems difficult to explain in such terms the nature of emotions, perceptual experiences, bodily sensations and also the subpersonal states postulated by cognitive psychology in order to understand our linguistic competence or our vision, for example. In the last 30 years the notion of mental states with nonconceptual contents have emerged in the philosophical literature to give a better understanding of our minds, including these heterogeneous psychological states. But there are many different characterizations offered of the notion of nonconceptual con-

From Representation and Identification to Misrepresentation and Misidentification

Urszula Żegleń

Abstract
The paper advocates the representational approach to the cognitive system. The issue of representation is considered on the example of visual perception – wherein perception is treated as a complex cognitive process whose final stage is perceptual experience with non-conceptual content. A perceiver is not only able to individuate an external object, but to identify it visually as well. In the controversy between conceptualists and non-conceptualists I stand for the moderate position arguing for the claim that in the efficient human cognitive system non-conceptual perceptual representational content is complemented by conceptual one. The problem of misrepresentation in misleading perception is analyzed contextually as the problem of misidentification.

Introduction

The issue of representation can be considered in different perspectives (epistemological, semantic, psychological, biological and others) in which it is connected with different problems (such as: the ways of representing external objects or referring to them, the nature and structure of representations, especially the mental representations and their contents, the functions of representation in organism or wider – in a cognitive system, the role of representation in explaining cognitive processes, and so forth). Traditionally the most controversial questions about representation concerned those of perception. Although traditional approaches of modern epistemologists are no longer existent, many old problems, considered however in a new context, are still real. One of them is the problem of initial knowledge traditionally formulated in the well-known and still topical Molyneux's Question (asked by Locke): if a born blind man after recover his ability to seeing would be able (merely by seeing itself) to discriminate a round object from that of a cube.[1] Another problem concerns misrepresentation which at the macro-level can be formulated in a simple question: how to explain such cases in which, for instance someone, instead of seeing somebody's clothes hanging on a hanger in a dark hall, sees a man

---

[1] This is equally the problem of sensory modalities, here: visual and tactual. Are they distinct or interconnected? For the new context on Molyneux's Question see: e.g. Campbell 1995.

Personal-Subpersonal: The Problems of the Inter-level Relations

Liza Skidelsky

Abstract
Although the personal-subpersonal distinction was first proposed in 1969 by D. Dennett, it has been approximately in the last ten years that it has received increasing attention and has became a widely used distinction particularly in the philosophy of mind and cognitive psychology literature. While the distinction is ubiquitous there are a few recent proposals about the relationship between the levels, namely, inter alia, the mixed horizontal explanation (Bermúdez 2000), the semantic view of computation (Peacocke 1994), and interaction without reduction (Davies 2000a, b). In this paper I will first describe the way of understanding the distinction shared by the proposals aforementioned. Second, I will show some of the difficulties facing each proposal. Finally, I will suggest what I consider are the misleading assumptions that are at the root of the proposed strategies of inter-level relations.

1. The Personal-subpersonal Distinction

In general, the distinction picks up different cognitive discourse domains as well as cognitive phenomena.[1] Regarding the former, the distinction refers mainly to different levels of descriptions and explanations of the workings of a cognitive system. Regarding the latter, it is applied mainly to different kinds of mental phenomena such as mental states, contents, and processes. The recent proposals that I will consider share some basic ideas about what the personal and subpersonal levels of conceptualization are supposed to be.

For the personal level the shared ideas are the following:

1– *Vocabulary*: the description and explanation of people's behavior make use of the intentional categories of Folk Psychology (FP), such as beliefs, desires, and so on.

2– *Goal of the explanation*: the intentional ascriptions of the FP make intelligible the behavior of the person.

3– *Explanation*: the typical intentional explanation of the FP is based on

---

[1] It is also applied to physical discourse and phenomena. However, the proposals of inter-level relations that I will survey are intended for intra-cognitive relations.

VP-Ellipsis and the Case for Representationalism in Semantics

Anne Bezuidenhout

Abstract:

The debate between representationalists and anti-representationalists in semantics is a debate about whether truth-conditions are or should be assigned directly to natural language sentences (NLSs) – the anti-representationalist view – or whether they are or should be assigned instead to mental representations (MRs) that are related to NLSs in virtue of the fact that the MRs are the output of an interpretive process that has as its input both representations of the lexico-syntactic structure of the NLSs and relevant non-linguistic assumptions that are accessible in the conversational context. I examine some recent work on VP-ellipsis with the aim of showing that discourse level factors play a crucial role in the ellipsis construal process and showing why a syntactic account that requires VP-identity is inadequate. I briefly sketch some views about the mechanisms involved in ellipsis construal. Views that posit operations on representations at the level of discourse structure are best placed to account for the range of evidence presented. Moreover, these accounts support a representationalist conception of natural language semantics, according to which NLSs are not themselves the objects that are assigned a denotational semantics, but rather are vehicles that project partial structures that are the input to inferential processes whose output are structures that can be assigned such a denotational semantics.

> "Our enemies are innovative and resourceful, and so are we. They never stop thinking about new ways to harm our country. And neither do we."
>
> George W. Bush. August 5, 2004

1. Introduction

The debate between representationalists and anti-representationalists as I construe it in this chapter is a debate about whether truth-conditions are or should be assigned directly to natural language sentences (NLSs) – the anti-representationalist view – or whether they are or should be assigned instead to mental representations (MRs) that are related in some appropriate way to these NLSs. On the representationalist view, these MRs are related to NLSs in virtue of the fact that the MRs are the output of an interpretive process that has as its input both representations of the lexico-syntactic structure of the NLSs and relevant

Science and Reality

Nicolas Rescher

One of the salient tasks of metaphysics in addressing its mission to enhance our understanding of reality is to elucidate the relation that obtains between science and nature: between our thought about the world and reality itself. And this creates a somewhat embarrassing situation. For in deliberating about reality we have to recognize that our best and indeed only view of it is afforded by the picture that our science claims. How then are we to relate the finding of science to something that only they themselves provide?

In addressing this issue we do well to begin by confronting two basic facts:

- Our only means of cognitive access to nature's laws is through observation.
- Our observations are open to error, and both to errors of omission (of incompleteness) and to errors of commission (of misjudgment).

A recognition of these fundamental facts means that we cannot but acknowledge that we cannot identify our scientific position of reality (M) with that of reality itself (R).

The guiding idea of this discussion lies in the following four considerations:

1. Our only cognitive access to reality (R) is via a model (M) that we make of it.
2. There is good ground on reasons of general principle to think that even our best model (M) of reality (R) is in some respects discrepant from it.
3. It makes sense to conceive of the relationship of our scientific model (M) to reality itself[*] on the analogy of sight, with R akin to the scene that one actually confronts, and M akin to one's visualization of it. But like all analogies this is imperfect, with conceptualization taking the place of visualization and conception the place of perception.
4. Like visual *sight*, so cognitive *insight* can be and of often is myopic in blurring details, sometimes mildly and sometimes severely, so as to make the discernment of real differences difficult (mild myopia) or even impossible (severe myopia).

Mixed Methods and Ontological Commitments

Steven Miller, Marcel Fredericks

Abstract
This article argues that the emerging field of Mixed Methods faces a series of challenges which must be addressed before the area can fulfill its potential. Foremost among these is the lack of attention given to ontological concerns. Specifically, Mixed Methods must examine what ontological commitments are made as the result of employing the range of typologies now discovered. It is argued that Mixed Methods presently lacks a clear conception of how its paradigm is significantly different from non-mixed methodological approaches. It is suggested that Mixed Methods adopt a "weak" minimal realist ontological stance that is rooted in a position called "measured realism." It is also argued that such a position is required since the present reliance on pragmatism does not sufficiently address ontological concerns. Suggestions are made, by way of an empirical research example, as to plausible ways to handle the issue of ontological commitment.

The purpose of this analysis is to explore the emerging crucial area of Mixed Methods in Interpretive Inquiry, but from a slightly different perspective. The area of Mixed Methods is now developing as a complex form of inquiry that has wide ranging implications for both qualitative and quantitative research. These developments are witnessed by the range of chapters in the recent *Handbook of Mixed Methods in Social and Behavioral Research* (Tashakkori & Tiddlie, 2003). The scope and depth of these contributions attests to the importance and future viability of this emerging area. Our purpose here, however, is to map out a further domain of issues that are closely related to Mixed Methods, but ones that have been given scant attention to date.

While most writings on Mixed Methods are properly concerned at least implicitly, with what may be called epistemological issues, very little has been said as to what implications such methods hold for what we will call ontological commitments. By "ontological commitments" we mean the types of views of "reality" that are implied by the use of Mixed Methods, both theoretically and as they are used in actual practice. Put more precisely, we are interested in exploring the links between the use of Mixed Methods and what such findings suggest for our definitions of reality. Why is any of this of interest to the practicing researcher? The reason is that unless such issues are laid out clearly