

## ABSTRACTS

### Bucharest Colloquium in Analytic Philosophy – 3-5 June 2010 *The Actuality of the Early Analytic Philosophy*

#### *Why Russell mistook his table for sense-data, but why it might still be lost*

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The opening pages of *Problems of Philosophy* feature a table whose shape, colour and so on vary across perceptual circumstances. From this Russell argues that the immediate objects of our perceptions cannot be the table and its features, but must instead be some mind-dependent objects (i.e., sense-data). At the same time, the heart of his epistemology in this period is arguably the distinction between knowledge by acquaintance and by description, and he believed the distinction supports this argument for sense-datum theory. I think there is a core respect in which, when considering these kinds of perceptual scenarios, the acquaintance/description framework does not support the existence of sense-data, but another in which it does. My chief aim is to articulate this difference.

More specifically, I carve out a subclass of perceptual illusions that motivates the existence of sense-data and a subclass that does not. This turns out to be a non-trivial matter because of the role of ambiguity in perception (§3); the various ways in which ‘illusion’ can be glossed and its connection to ambiguity (§4); the often conflated difference between perceptual relativity and illusion (§5); the presence of perceptual constancies (§6) and the connection doctrines of acquaintance and description/representation have to every element of this discourse. To make matters worse, the publicity and multivocality of terms relevant to perception like ‘red’ and ‘square’ have the potential to wreak havoc at all stages. Nonetheless, I believe a clear(er) path can be drawn: there are illusions that support the existence sense-data. It follows that when we engage in these illusory experiences we are not simply perceiving the world outside ourselves, we are directly perceiving a subjective entity (e.g., a sense-datum): one’s grip on the external world has been marginalized – not lost, but once removed.

#### *Frege on contentful arithmetic*

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Frege’s account of identity is puzzling, and his views on this subject continue to occupy contemporary philosophical discussion. My paper attempts to explain why and how Frege made the transition from his theory of identity proposed in *Begriffsschrift* (*Bgs*) to the one presented in *Über Sinn und Bedeutung* (*SB*). Recently, a lot of papers dedicated to this subject have appeared, but unfortunately none of them explains conclusively Frege’s motivation for this change. After presenting some recent contributions [Thau & Caplan (2001), Heck (2003), Bar-Elli (2006) and Dickie (2008)] to this debate, I will focus on what I think was Frege’s motivation for changing his views on identity. The main claim of my paper is that, in order to better understand Frege’s

motivation for the introduction of his distinction between sense and reference, we should seriously consider its original setting, namely the broader framework of Frege's fundamental preoccupations with the foundations of arithmetic and logic. The 'standard interpretation' is basically the narrow interpretation which holds that in *SB* Frege criticizes and rejects the account of identity of *Bgs*. The standard interpretation considers Frege's change of view only within the framework of philosophy of language, and assesses his theory of meaning solely from this perspective. In contrast with this point of view, I advocate an interpretation which considers his views on identity in the wider context of mathematics and logic.

Thus, the focus of my paper is on a new interpretative perspective: Frege's original contributions, especially those on language and semantics, have been viewed from the perspective of his philosophy of mathematics, in which a special emphasis is put on arithmetic's universal applicability. My claim is that the fact that *mathematics is contentful* is the true key to a better understanding of Frege's insights and results. From this perspective the connection between Frege's views on language and mathematics are seen as an organic whole, and so the role of Frege's puzzle in his overall project becomes clear. Frege's puzzle about identities arose in the context of his struggle against formalism and psychologism, and thus it should be clear now that he introduced the S/R distinction in the framework of securing the contentful mathematics thesis. The celebrated distinction between sense and reference plays a crucial role in navigating safely between *formalism* and *psychologism*, and in finding a consistent middle ground between *intensionalism* and *extensionalism*. Fregean senses are not just the mere outcome of a deep linguistic analysis, rather they play an important role in the articulation of Frege's program in the foundations of arithmetic.

### *Carnap's thesis*

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By 'Carnap's thesis' I mean the assertion that logic and mathematics are not factual. This is not simply a more general formulation of the well-known "Principle of Tolerance," but a thesis that is capable of justifying that principle. I present two strategies for establishing Carnap's thesis. The first is based on Wittgenstein's notion of a tautology and his account of logical propositions in the *Tractatus*. The second is based on Hilbert's development of the axiomatic method and the distinction between pure and applied geometry which it inspired. I argue that the second strategy yields a plausible defense of the thesis for a "narrow" concept of factuality, a defense that has eluded the first strategy. My discussion of Carnap's thesis has a corollary: Among applications of mathematical theories, there are those that proceed via a mathematical theory's physical interpretation, and those that do not. It has long been held that the distinction between these cases is well-illustrated by geometry and arithmetic. I show that the distinction can be traced to the role played by empirical constraints on criteria of identity—the criterion of identity that controls ordinary applications of the theory of the natural numbers in counting, and the criterion of identity that controls physical applications of four-dimensional geometrical theories in the theory of space and time.

## ***Opacity. Then and Now***

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The semantics of propositional attitude ascriptions is a crucial topic for the understanding of how people report their own and other people's states of mind, and ultimately of how people use language to relate to the world and to other people's psychological and epistemic mental contents. This is what makes this topic a central issue in philosophical logic, philosophy of language, and philosophy of mind.

The main challenge for a semantic theory, which tackles this issue, is to come up with a satisfactory solution for the apparently deviant logical behavior of terms, in particular different categories of singular terms, within contexts which are syntactically governed by psychological verbs. Sound extensional logical rules, such as identity elimination (the substitutivity of identicals) and existential introduction fail when applied within intensional contexts induced by such attitude verbs.

The paper discusses some prominent solutions to this issue due to Frege, Quine, Hintikka and Kaplan, and confronts the dilemma which we are left with when we theorize upon the semantic mechanism which generates the opacity of intensional contexts: one either opts for a Fregean explanation (based on the celebrated sense-reference distinction) or for a Russellian explanation (based on the notion of direct reference and of singular structured propositions); even if each solution has its merits neither of them is completely satisfactory.

The inference from failure of substitutivity to failure of existential introduction is broken down to its simpler component parts and evaluated in connection with both the issue of quantifying in and with the issue *de re* modalities (and essentialism).

The paper will also explore the soundness of our not uncommon semantic intuitions that, contrary to Frege, there may exist term positions open for substitution even within intensional contexts, and hence sound samples of quantifying in and of preservation of direct reference within such contexts. All this is connected with the notion of a Russellian structured singular proposition which seems to be very worthwhile as an alternative option to the Fregean mechanism of indirect reference within opaque contexts.

## ***Past, Present and Future of Set Theory***

Jaakko Hintikka

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Cantor's set theory was hoped to bring clarity and order to the foundations of mathematics. Instead, it threw them into paradoxes and controversies. One main reason was the use of an inadequate logic, viz. Frege's logic, which does not deal satisfactorily with the way formal dependencies between quantifiers express actual dependencies between their variables. In particular, in set-theoretical definitions the definiens was not kept independent of the definiendum, which led to set-theoretical paradoxes. This was diagnosed by Poincaré but his 'vicious circle principle' was misunderstood by Russell in building his type theories.

Set theory mistakenly came to be treated as a separate axiomatic first-order mathematical theory. The models of such a theory are structures of particular objects and hence inadequate for the study of structures of sets. Such structures have to be dealt with by means of a logic stronger than the traditional first-order logic. This stronger logic makes set theory redundant for foundational purposes. In the future, we are likely to have no separate set theory, but instead plenty of set-theoretical problems, which can now be dealt with more powerful methods than before.

***Rule-following in logic and in Wittgenstein***

Jaakko Hintikka  
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What does it mean to follow a rule? More than merely acting in accordance with it, Wittgenstein realized. He looked for this something more in the way in which a rule functions where one follows it, but in the end could not find it. He changed his mind (on May 26-30, 1940) and came to think of an entire language-game as conceptually prior to its rules.

Now the question as to what rule one is following is logically speaking a dependence question: Given all the different choices of possible moves which one should one make on different occasions? A full answer must for logical reasons specify more than the different particular moves that the rule prescribes. The answer to Wittgenstein's question must also specify the function that codifies the rule. Potential awareness of this function is what distinguished intelligent rule-following from merely acting in accordance with the rule.

***On the Quinean Analyticity of Arithmetic***

Greg Lavers  
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This paper investigates the relation between Carnap and Quine's views on analyticity on the one hand, and their views on philosophical analysis or explication on the other. I argue that the stance each takes on what constitutes a successful explication largely dictates the view they take on analyticity. I show that although acknowledged by neither party (in fact Quine frequently expressed his agreement with Carnap on this subject) their views on explication are substantially different. I argue that this difference not only explains their differences on the question of analyticity, but points to a Quinean way to answer a challenge that Quine posed to Carnap. I then argue that the result is a Quinean view of analyticity according to which arithmetical truths are analytic, according to Quine's own remarks, and set theory is at least defensibly analytic.

***Frege's Proof of Theorem 133: A Case Study in Ampliative Deductive Proof***

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According to Frege, a strictly deductive proof from definitions can extend our knowledge, not merely in the sense of making explicit something that was implicit already in the definitions but in actualizing a potential of those definitions. According to him, such a proof materially extends our knowledge. Frege furthermore took himself to have *demonstrated* in his *Begriffsschrift* proof of theorem 133 (in Part III of his 1879 logic) that a deductive proof can be ampliative. I will clarify central features of Frege's proof of theorem 133, and on that basis explain what Frege seems to mean in saying that the proof is ampliative.

***Empirical Data and the Theory of Reference***

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Edouard Machery and others have argued that there is empirical evidence against Kripke's claim that names are not descriptive. In my view, the kinds of tests that Machery et al. use do not elicit the right kind of data. I will examine and discuss some of

the arguments by semantic experimentalists in order to pinpoint the sorts of data that should constitute the input of semantic theorizing.

***In which sense is 'On Denoting' a paradigm of philosophy?***

Ilie Parvu

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*On Denoting* is one of the most significant and influential philosophical essays of the 20<sup>th</sup> Century. Frank P. Ramsey referred to the essay as “that paradigm of philosophy”, a view that was also endorsed by Moore, Ryle and Quine. My paper intends to contribute to the interpretation of the *On Denoting* -type of theory in an indirect way, namely by trying to reconstruct the meaning and the intended applications of Ramsey qualification of Russell’s achievement.

***Frege, Ramsey and the foundations of mathematics***

Gabriel Sandu

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My presentation will contain few reflections on the work I have done with Hintikka on Frege’s foundations of mathematics. I will discuss in this context the notion of arbitrary function (Ramsey). I will reassess some of the criticisms to that work addressed by Heck and Stanley and I will finally make several connections to a recent paper on the same topic by Demopoulos.