Submitted Summaries

Submitted Summaries

Michał Heller, Limits of space, time and probability

Space, time and probabilities not only form the arena of many physical theories, but also the arena of our everyday life. Therefore, the problem of their ontological status becomes even more interesting. It seems that this problem cannot be solved before we have the final physical theory („theory of everything"). However, various methods of looking for such a theory lead to converging results, and are able to elucidate the problem in question. We analyze noncommutative algebraic methods, and show that, when applied to model the fundamental level, they suggest a nonlocal regime in which there is no space and no time, in their usual sense, and which is essentially probabilistic (in a generalized sense). In the noncommutative approach there are many probabilistic measures (not just one „probability" as in macroscopic physics), and none of them seems to be distinguished in any way. The tentative conclusion is that space, time and probability are not „absolute categories", but rather aspects of the world structure emergent from the fundamental level. One should expect that the ultimate theory will be well off our traditional philosophical categories. This shows that our mind has a peculiar property allowing it to reach far beyond its usual limitations.

Keywords: ontological status of space, time, probability

Cezary Cieśliński, Disquotational conception of truth and the generalization problem

The paper contains a discussion of a basic difficulty encountered by adherents of the disquotational conception of truth. The problem is that the disquotational theory seems to weak to prove many important truth-theoretical generalizations, like e.g.

„All substitutions of the law of excluded middle are true". Various ways of saving the disquotationalist from this objection are analyzed and deemed unsatisfactory.

Keywords: truth, disquotationalism, T-sentences

Justyna Grudzińska, The Meaning of Multiple Quantified Sentences

In my paper I focus on the linguistic phenomenon of multiple quantification. My aim is to defend the grammatical ambiguity hypothesis, the view that a multiple quantified sentence of a language L is semantically ambiguous if a grammar for L (understood as the cognitive mechanism that maps sentences onto meanings) encodes a class of interpretations — specifies the space of possible interpretations of that sentence. I argue both against the position of a unitary semantics: ambiguous sentences encode a single sense, a pragmatic (context dependent) derivation is essential in arriving at the other interpretations; and against that of radical pragmatics: ambiguous sentences encode no senses at all, a pragmatic derivation is essential in arriving at any interpretation (at all). In my attempt at providing a plausible account of semantic ambiguity, I use a combination of approaches and methods: theories of grammar (such as Government and Binding Theory), tools of mathematical logic, linguistic studies and the results of psycholinguistic experiments.

Keywords: semantic ambiguity, underspecification, multiple quantification

Sebastian T. Kołodziejczyk, Requirement of Reference and the problem of the nature of metaphysical discourse

The crisis of metaphysics has many roots. One of them is recognized to be a kind of semantic failure. It lies in the fact that the meaning and reference of metaphysical propositions as well as metaphysical terms seems to be problematic. This diagnosis was first established by I. Kant and then repeated by some of the XXth century philosophers. In this paper I will show what role is played by what I called the Requirement of Reference (RR) in the analysis of the metaphysical discourse. I will argue that the RR draws the limitations for the conceptual and propositional schemata of metaphysics and, at the same time, prevents metaphysics from making *de re* assertions and utterances. I shall also examine in this light some of Ludwig Wittgenstein's theses from *Tractatus* and *Philosophical Investigations* in order to argue that two sorts of metaphysical considerations are possible despite of the above-mentioned criticism. One of them is the analysis of what might be shown but cannot be expressed in language. The other is the deep analysis of the conceptual schemata that constitute the foundations of human thought.

Keywords: Requirement of Reference, metaphysics

Renata Wieczorek, Antirealism and Contextualism — An Attempt of Comparison

The study aimed at comparison of two standpoints in the contemporary analitical philosophy: antirealism and contextualism. Three characteristics of the antirealist views will be taken into consideration:

1) epistemic character of truth,
2) relative character of truth,
3) subjective approach to knowledge.

It seems that at least two of the features are to be found in contextualist views. Nevertheless, it will be argued that some similarities between antirealism and contextualism can be traced but only on a shallow level.

Keywords: antirealism, contextualism, knowledge, truth, skepticism

Mariusz Grygianiec, The Supervenience Argument and Non-constructive Naturalism

In a series of influential articles Jaegwon Kim has developed strong arguments against nonreductive physicalism as a possible solution to the problem of mental causation. One of them is the Supervenience Argument which states that assuming the mental/physical supervenience thesis, the causal closure principle, the exclusion principle with the no-overdetermination requirement and property dualism we obtain the conclusion that mental causation is unintelligible. On the other hand Collin McGinn has argued that a solution to the mind-body problem is forever beyond our reach: we can never understand how the brain produces consciousness and therefore the relation between them must remain mysterious. The main aim of the paper is to demonstrate that Kim's Supervenience Argument corroborates McGinn's pessimistic conclusion (of course, if we do not assume any form of reductive physicalism or epiphenomenalism). Thereby it tries to show that the Supervenience Argument could be treated as a justification of non-constructive naturalism (*aka* new misterianism): we do not understand mental causation, b e c a u s e we cannot understand how the brain generates consciousness. It also suggest considering possibility that the thesis of causal closure of the physical domain might entail the cognitive closure thesis (the claim that those properties of the brain which are responsible for conscious processes are in principle cognitively closed to us).

Keywords: supervenience, physicalism, mental causation, overdetermination, closure

Krzysztof Wójtowicz, Ontological reduction in mathematics. Part I.

The article is the first part of a series of papers devoted to the problem of ontological reductions in mathematics — in particular, of choosing the basic category of mathematical entities. The received view is that such a category is provided by set theory, which serves as the ontological framework for the whole of mathematics (as all mathematical entities can be represented as sets). However, from the point of

view of "naive mathematical realism" we should rather think of the mathematical universe as populated by a variety of diverse mathematical objects, and the set-theoretic reduction seems to be rather unnatural. In the first (introductory) part I discuss the general problem of providing an ontological foundation for mathematics.

Keywords: philosophy of mathematics, mathematical realism, ontological reduction, set theory

Marek Szydłowski, Paweł Tambor, The Cosmological Model (CDM, LCDM) in the Conceptual Framework of Effective Theories of the Universe

In the paper we show that modern cosmology has a status of effective theory of the Universe similarly to the standard models in particle physics. We illustrate that the source of such a point of view is the fact that the complete theory of the Universe (TOE) should be complicated enough to derive observables. The role of epistemological emergence in the context of cosmological models (Cold Dark Matter vs. Lambda Cold Dark Matter) is also investigated. We demonstrate that while the effective theories of the Universe are not conceptually simple and elegant, their strength lies in the predictive accuracy and data fitting required for the model testing.

Keywords: effective theory, emergence, modern cosmology, philosophy of science

Tadeusz Pabjan, The Many Worlds Theory — Science or Philosophy?

There are many interpretative problems, which are to be found in the domain of quantum mechanics, but the measurement problem is one of the most troublesome. According to the standard formulation of this theory, an observer is needed to cause a collapse of the wave function of any isolated quantum system. But in the case of the Universe — the possible largest isolated quantum system — there is no external observer that could be responsible for such a collapse. An interpretation of quantum theory, which solves this difficulty, is the so called Many Worlds Theory, originally credited to Hugh Everett. This paper presents some main ideas of this theory and compares its qualities and faults.

Keywords: many worlds theory, multiverse, interpretations of quantum mechanic

Robert Trypuz, Setna — Simple Theory of Norms and Actions

In the first systems of deontic logic obligatoriness, prohibitiveness and permissibility were features of actions. It was a very natural choice, corresponding to the way in which these concepts were used not only in natural language but also in Law and Ethics. It's well known that contemporary systems of deontic logics do not deal with actions any more. They are simply deontic logics of propositions providing for deontic qualification of states of affairs. Such an approach, although might be useful for instance in Computer Science (especially in security applications, where there is a need of expressing that a certain state of machine is, say, permitted and the other is

forbidden), is inadequate for modeling norms of Law and Ethics (and possibly norms of many other fields).

In this paper the Simple Theory of Norms and Actions (in short: *Setna*) is proposed. It is inspired by the first deontic logics, i.e. it's deontic operators take names of actions as their arguments. Additionally this theory has as its part a theory of actions which has not been taken into account in deontic logic until now. Enriching deontic theory with a theory of action gives an account for expressing dependencies which hold between the deontic properties and some other properties of actions. For instance *Setna* states that two actions that cannot be carried out simultaneously in the same situation should not be both regulated as obligatory—an agent would not be able to follow such a law.

Keywords: action, norms, deontic logic

Krzysztof Gajewski, In the Defence of Internalism. Searle vs. Putnam

The article concerns the problem of reference in general, and the controversy internalism — externalism in particular. The author presents and discusses John R. Searle's criticism of Hilary Putnam's famous arguments for causal theory of reference: the elms-beech example and the Twin Earth example. Instead of external theory of reference Searle proposes his own intentional theory of reference. According to that theory the reference of a name is determined by intentional content of that name. The name is used properly only when used to indicate an object contained in its intentional content. On the ground of intentional theory of reference this feature of names is called casual self-referentiality. Searle underlines that intentional content is not necessarily verbal. In fact he allows non-conceptual, for example perceptual content. The problem of direct reference is closely connected to the question of *de dicto* and *de re* beliefs. In conclusion some drawbacks of Searle's theory are shown. Namely allowing object a name refers to to be a part of the intentional content of the name Searle seems to be very close external theory of reference he is fighting against.

Keywords: internalism, Searle, Putnam, semantics, reference