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# Abstracts

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Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

## **Abstracts**

### **Bartosz Brożek, Adam Olszewski, Some Remarks on Quine's Criterion**

The aim of the paper is to evaluate the usefulness of W.V.O. Quine's criterion for establishing the ontological commitments of a theory. At the outset, Quine's conception is reconstructed. It is argued that Quine does not provide a particularly clear exposition of the procedure of establishing ontological commitments. It is further maintained that — on a persuasive interpretation — one should distinguish several concepts associated with Quine's conception. These are: ontology, domain tolerated by an ontology, ontological commitments type 1 (categorical), ontological commitments type 2 (individual). Then, the procedure itself is reconstructed. It is argued that it consists of three stages: (1) the reduction of the analyzed theory to so-called basic existential propositions; (2) the paraphrase of the basic existential propositions into the formulae of the I order logic; (3) the reconstruction of the ontology presupposed by the given theory as well as of the ontological commitments type 1 and type 2. The final part of the paper contains three objections against Quine's conception. It is argued, first, that it is impossible to reconstruct the ontology presupposed by the given theory as it requires that the same or a richer ontology is already in use. Second, Quine's procedure is based on a vicious circle: one needs to know the ontological commitments in order to reconstruct them. Third, if one assumes that Quine's procedure is applicable to uninterpreted theories, it is impossible to determine the domain of these theories. The conclusion of the paper is that Quine's criterion seem useless.

*Keywords:* Quine, ontology, ontological commitment

### **Maciej Sendlak, Dispute over the Nonactual Possibilities**

In 1947 Quine wrote one of the most important and influential articles in the twentieth century philosophy — „On What There Is”. One of the aims of this article

was a critique of Meinong's Theory of Object. The critique was especially focused upon nonactual possibilities, which (according to Meinong) are some kinds of non-existent objects. In my paper I want to present Neo-Meinongian refutations of Quine's critique. In order to do this I discuss: (i) the main thesis of „On What There Is” (ii) premises of Meinongian Theory, (iii) views of proponents and opponents of the idea of nonexistent objects, (iv) Quine's critique aimed at nonactual possibilities, (v) Terence Parsons' theory, based on the distinction between nuclear and extranuclear properties, and (vi) noneism, defended by Richard Routley. I also try to give a reply to the most popular critiques aimed at both Neo-Meinongian theories. The main conclusion is that Quine's critique and his arguments against nonactual possibilities aren't dangerous for theories endorsing Meinong's Theory of Object. Contrary to what Gilbert Ryle once claimed (*If Meinongianism isn't dead, nothing is*), Meinongian theories are still alive and doing well.

*Keywords:* nonactual possibilities, principle of independence, neo-meinongianism, noneism, Alexius Meinong, Willard van Orman Quine

### **Mateusz Marek Radzki, Logic and its Application in the Light of Ludwig Wittgenstein's Early Philosophy. Logical Notation and Natural Language**

The main aim of this article is to prove that Wittgenstein's early philosophy considers two perspectives: the first one from the view of necessary logic and the second one from the view of contingent application of logic in the natural language. The application of logic is the matter of decisions outside the logical necessity — it is arbitrary and thus it can not be anticipated by logic and can not be considered by logical notation (concept-script). According to Wittgenstein 'logic must take care of itself' and only the exclusion of the contingency from the logical notation let maintain the autonomy of logic.

*Keywords:* Ludwig Wittgenstein, logic, logical notation, natural language

### **Anita Pacholik-Zuromska, The Problem of the Directness of the Cognitive Access to One's Own Mental States**

The question of subject's cognitive access to his own mental states contains an assumption, that this cognition is direct and authoritative, what is also a condition of subject's self-knowledge. The directness means, that this kind of cognition is not burdened by the intermediaries as Fregean senses or representations. Now arises the problem, how the self-knowledge, which has a propositional character can be direct, hence nonrepresentational. In this paper I considered the three kinds of representations, which are present in self-knowledge and I have tried to answer the question, whether it is possible to preserve the directness of self-knowledge, despite of its representational constituents. First I have asked about the representation of self, then I assumed that to have self-knowledge a subject has to conceptualise his state as a belief or other experience of a certain kind and he has to think about himself as a subject of this state. Then I considered the representation of the modality of the state.

Finally I analysed the representational character of the content of mental states. The conclusion of these investigations was that even if the self-knowledge in its epistemological aspect is representational (for example because of its propositional structure) it preserves its directness in its essential form, i.e. psychological aspect.

*Keywords:* direct cognition, first-person-authority, self-knowledge, self-consciousness, representation, mind-body problem, reductionism in philosophy of mind

### **Roman Godlewski, The Spectrum of Possible Answers**

The main idea of the article is that every belief is an answer to a question. Such question is called „calling the belief”. It has a strictly assigned set of possible answers, such that they exclude one another. Understanding a belief means to know the question and all the alternative answers. Total ignorance of a question means that the curve that shows the level of affirmation of every possible answer is horizontal. Getting knowledge means folding the curve. Then some possibilities become better affirmed than others. The possibility of folding the curve means that the question has empirical content. When one of the possibilities wins and becomes highly affirmed whereas others fall down to be rejected the subject obtains the truth.

*Keywords:* question, knowledge, justification, truth, empirical content

### **Izabela Bondecka-Krzykowska, About Connections between Computer Science and Mathematics**

The article is an attempt to answer one of the most important question in the philosophy of computer science: is a computer science a new branch of mathematics or an engineering discipline? Mathematical methods in computer science (especially in the process of program designing and producing, software and hardware verification) are discussed. In the article are considered problems connected with acceptance of mathematical paradigm in computer science. The main issue is the problem of philosophical consequences of regarding computer science as a branch of mathematics.

*Keywords:* computer science and mathematics, philosophy of computer science, mathematical paradigm in computer science

### **Wojciech Sady, How Could It Happen that Max Planck, a Mechanicist, Managed to Introduce Quanta into Physis?**

Ludwik Fleck says that a thought-collective develops a thought-style which shapes the ways of perceiving the world and thinking of the world by its members. So how could it happen that at the end of 1900 Max Planck, whose thinking was determined by classical mechanics, managed to think that energy is quantized — the idea that contradicted the principles of Newton's mechanics? My answer is that Planck did not intend to think it.

From 1880 Planck tried to reconcile the time reversibility of the laws of mechanics with the time irreversibility of the laws of thermodynamics. The irreversibil-

ity in question was expressed in 1854 by Clausius in the form of the law of the growth of entropy defined as  $dS = dQ/T$ . During 1870's Boltzmann found the statistical interpretation of entropy as  $S = k \ln w + \text{const}$ . At first Planck insisted on applying mechanics in an unrestricted way. He criticized Boltzmann statistical physics and rejected atomism as leading to Loschmidt's paradox. For 20 years Planck did not manage to solve his central problem.

From about 1897 Planck started to cope with the problem of irreversibility using experimental data for the energy distribution of black body radiation. When he failed again he started to apply some statistical techniques. Using the laws of classical thermodynamics and adjusting his formulae to experimental data he arrived at the formula for the mean entropy of resonators. When in October 7<sup>th</sup> 1900 Heinrich Rubens gave him improved data for the energy distribution for big values of  $\lambda T$ , Planck at once corrected his expression for the average entropy of resonators and arrived at the formula for the distribution of the energy of black body radiation that was in perfect agreement with the experimental data.

Just after that, trying to provide his results with „the real physical meaning” he tried statistical methods like as developed by Boltzmann — whom he criticized for twenty years — and in December 1900, using purely theoretical combinatorial methods, he arrived at the formula for the average entropy of resonators. It turned out that both formulae were identical if and only if the energy of resonators was complete multiplicity of  $h\nu$ .

So Planck was thinking according to rules inherited from others and quanta appeared rather on paper than in his mind.

*Keywords:* scientific revolution, thought style, discovery, Max Planck, thermodynamics, black body radiation, quanta