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# Summaries

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Filozofia Nauki 1/1, 185-188

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1993

Artykuł został zdigitalizowany i opracowany do udostępnienia w internecie przez **Muzeum Historii Polski** w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej [bazhum.muzhp.pl](http://bazhum.muzhp.pl), gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

## Summaries

Czesław Lejewski

### **Logic, Ontology and Metaphysics**

According to the author, no body of theories deserves to be called philosophy unless some of these theories and problems fall within the province of metaphysics. No problems deserve the name of metaphysics unless some of them add up to constitute ontology. The author presents the reistic version of the science of being as the union of Protothetic, Ontology, Mereology and Chronology. The next possible step in the construction of the reistic ontology will be Stereology (a kind of reistic geometry).

Zdzisław Augustynek

### **Eventism and Pointism**

The domain of contemporary physics consists of two different classes of objects: a) of physical objects — events, particles (and their aggregates) and fields; b) of spatio-temporal objects — space-time points, moments, space points and their corresponding sets: space-time, time and space. If objects of some kind (physical or spatio-temporal) are treated as individuals (= nonsets), then it is possible to define (equivalently) all remaining kinds of objects belonging to both classes which were mentioned above. This way we can construct two monistic ontologies of physics: eventism founded on events, and pointism founded on space-time points. It is also possible to construct a dualistic ontology of physics, based on events and space-time points. The paper presents these three ontologies.

Stanisław J. Surma

### **On Alternatives for the Proof-theoretical Metalogic**

The standard metalogical set-ups seem to be all based on the idea of consequence (or proof). However, metalogic can also be effectively constructed using some non-standard primitive ideas. In this paper an outline is given to four

metalogical frameworks, alternative to the standard set-ups. They are based, respectively, on the idea of consistency; on an omission (or separation) operator; on an extension operator (called in the paper a Lindenbaum operator); and on the idea of maximality. All these metalogics, including the standard consequence-based one, are one-to-one and proof-preserving translatable, and, in this sense, are seen pairwise equivalent and „externally” consistent.

**Leszek Nowak**

**The Method of Relevant Variables and Idealization**

The paper deals with the L.J.Cohen's method of relevant variables, which is supposed to be a reconstruction of idealization in science. The author is going to show that Cohen's method is not a method of idealization, but a certain similar procedure. Nevertheless, the method of relevant variables can be paraphrased as the method of normalization and specification. This paraphrase allows the idealization approach to science better to handle the complexity of empirical research in science.

**Jan Woleński**

**Self-reference and Rejection**

The paper consists of two parts. The first contains the paradox of Truth-teller, i.e. a sentence which asserts own truth. The paradox appears when we apply logic of rejection to the Truth-teller sentence. The Truth-teller paradox is symmetric with respect to the Liar paradox. The second part considers a sentence which asserts own provability. This sentence is unprovable on the base of rejection logic. This leads to counterparts of the Gödel incompleteness theorems and other metamathematical results.

**Cezary Cieśliński**

**Truth Conditional Semantics and the Problem of Extensionality**

In this essay the problem which logically equivalent sentences present to a Tarski-style truth conditional semantics is discussed. The difficulty is that we can obtain deviant theorems which follow by logic alone from our truth theory. After criticizing E.LePore's and B.Loewer's solution, an alternative way of dealing with this problem is presented, making use of the notion of a canonically proved T-theorem.

**Michał Tempczyk**

**The Revival of the Classical Mechanics**

After the rise of the theory of relativity and the quantum theory, the classical mechanics has been recognized as an approximate version of both theories — applicable only within the bounds of macro-phenomena and by relatively low velocities. The theory of chaos — unfolding nowadays, and being amplification of the classical mechanics — reverses this relation: quantum processes are treated as a certain rather simple class of non-linear and non-stable mechanics phenomena. The unexpected revival of the classical mechanics forces the considerable weakening of the thesis about incommensurability of the theories separated by a scientific «revolution».

**Władysław J.H. Kunicki-Goldfinger**

**Biology and the Sense of Life**

Questions concerning the sense of existence and the goals of human life continue to be the fundamental questions asked by human beings. To answer these questions is to determine our relation to other people and to the world. According to the author, science (such as biology) does not give an answer to them.

**Jerzy Bobryk**

**Is Unification of Sciences Possible**

The article addresses the question whether cybernetic simulations of cognitive processes make the study of actual laws of human thinking possible. The article also draws a comparison between the area of social sciences and the area of formal and natural sciences. The Kazimierz Twardowski's theory of intentionality and his theory of actions and products provide the conceptual framework of the undertaken analysis.

**Roger Penrose - Jacek Urbaniec**

**Physical Reality Dissolves into Mathematical Reality**

Jacek Urbaniec: Platonism in the philosophy of mathematics does not necessarily imply that there are links between the temporal physical world and the eternal world of mathematics...

Roger Penrose: I agree with you. Th difference between these worlds and the identity between these worlds is one more query... I think that in some sense physical reality dissolves into mathematical reality. [...] If you ask what table is — you see a perfectly good physical object. But when one asks for the best scientific description, one is led to atoms, and then one is asked how to describe atoms. The mathematical description becomes more and more sophis-

ticated. [...] The reality of physical objects seem to find its home within mathematical reality.

**Kazimierz Ajdukiewicz**

**Syntactic Categories and Logical Antinomies**

During the first semester of the academic year 1930/31 in the John Casimir University in Lvov Kazimierz Ajdukiewicz delivered a series of lectures on logical semantics. In eight of them, now published for the first time, he presents — in the very clear manner — his fractional method of identifying syntactic categories, and he shows how to use this method to eliminate the antinomies of classes, relations and properties. The Ajdukiewiczian method has been appreciated among logicians and it is considered widely one of the starting points of so-called categorial grammars.

The presented lectures throw new light on the genesis of this method; they contain certain technical details not being discussed in Ajdukiewicz's works published hitherto.