Theory and History of Ontology (www.ontology.co)      by Raul Corazzon | e-mail: rc@ontology.co

## Tadeusz Kotarbinski from Ontological Reism to Semantical Concretism

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## Introduction

"I reached the chair of philosophy via logic. Teaching logic became the field of my activity as a university professor of philosophy, a member of other humanistic faculties. Emphasis is here placed on the words 'teaching' and 'humanistic'. For my lectures and classes were conceived as an organon in the classical sense of the term, for philosophers as well as for those who, having completed their course of study, would espouse the cause of disseminating humanistic knowledge and thinking, particularly future secondary school teachers. Somewhat later my activity embraced also law students. My linguistic equipment proved to, be very helpful in this respect. For it seems especially important when the problems of an organon of this kind are conceived historically and is quite crucial when pondering the original Organon of Aristotle (or to be more cautious, of the peripatetic school) and its continuators. Conceived in this manner logic was by no means confined to formal logic, but came to comprise the problems of epistemology, semantics and methodology. It is precisely the latter problems - not those of formal logic - that were of particular interest to my mind. Nevertheless, I felt bound to contribute to the study of formal logic. The feeling was encouraged both by my colleagues at Warsaw University and by my awareness of the precise phase that logic

had reached in its historical development. It was precisely the moment when mathematical logic was triumphantly entering the scene. The names of Frege, Bertrand Russell, Peano, Burali-Forti, Couturat and many others were on everybody's minds.

Mathematical logic was closely allied with the rapidly developing set theory. The international periodical devoted to the latter, Fundamenta Mathematicae was, and still is, published in Warsaw. The distinguished philosophic-mathematical logicians: Jan Łukasiewicz and his disciple and my colleague, Stanislaw Leśniewski among many others, were active here.

I only mention the names of those persons to whom my studies in mathematically oriented formal logic are particularly indebted. In this respect I owe a lot to my close alliance with Professor Leśniewski. I simply took over his original system of formal logic to suit my own purposes. (1)Relieved thus from the necessity to contribute to formal logic itself, I could concentrate on the problems I faced as a teacher of logic to be used by humanists. These centered around the problem of overcoming the hypostasis of linguistic origin, what Francis Bacon referred to as *idola fori*. Both our everyday language and the language of the sciences as well are teeming with nouns or noun-like forms. Hence the tendency to perceive an object behind them even when the noun is an abstract one, like for example, 'roundness', 'equality', etc. Once the existence of the alleged objects of such names is admitted, once we agree to the existence of such qualities or relations, human thought is made to wade through a mire of apparent ontological problems. They in turn impose a literal interpretation of the expressions like 'a quality inheres' in an object in the same way as a nail is embedded in a wall: whereas, in point of fact, their meaning is only metaphorical. Leibniz himself was of the opinion (which he expressed in *Nouveaux essais* 2, XXII, 1) that problems bristling with difficulties can be dispelled as soon as we stick only to the names of concretes in our discourse. Unaware both of these words and equally ignorant of Franz Brentano's similar ideal I formulated in 1929 the principles of the so called reism 2, XXII, 1) that problems bristling with difficulties can be dispelled as soon as we stick only to the names of concretes in our discourse. Unaware both of these words and equally ignorant of Franz Brentano's similar ideal I formulated in 1929 the principles of the so called reism. In its most mature formula it declares war against the hypostasis of linguistic origin on the following lines: inasmuch as it is possible try to formulate statements in a way that would eliminate all names other than the names of objects, that is, physical bodies or parts thereof. Persons ought to be regarded as objects, i.e. sentient objects. Sentences may contain words that are not names, e.g. verbs or conjunctions, etc. The point is, however, to eliminate names other than the names of objects. Let me hasten with an example of a reistic interpretation of sentences. 'Prudence inheres in wisdom' simply means: 'Every man who is possessed of wisdom is prudent.' 'Bonds of brotherhood related Orestes to Electra' simply means: 'Orestes was Electra's-brother.' A reist by no means demands that the use of sentences with abstract expressions like the names of qualities or relations be completely abandoned. Quite the contrary, the necessity of applying them is fully recognized just because their presence may often reduce the length of the statement. The only thing he insists upon is to try to be able to do without names which are not the names of things. I may add, by the way, that at present I prefer to use the term 'concretism' instead of the term 'reism' as my readers were prone to identify 'reism' with 'realism' while the meanings of the two are totally different.

Thus, reism, that is concretism (or somatism - as I identify all objects with bodies and in Greek 'soma' means 'body') proves to be a certain innovation of my organon. It is however, highly debatable as a conception since a number of difficulties inhering in an attempt to interpret reistically theorems of set theory have not yet been overcome." (pp. 3-5)


**Notes**

(1) Those interested in the system are referred to E. C. Luschei, *The Logical Systems of Leśniewski*, Amsterdam: North-Holland Publishing Company 1962.

From: Tadeusz Kotarbinski, "Philosophical Self-Portrait", in: Jan Wolenski (ed.), *Kotarbinski: Logic, Semantics and Ontology*, Dordrecht: Kluwer 1990.

"I feel obliged to begin with an explanation of the term "reism", which I introduced in 1929 into my book on gnosiology, logic, and methodology. Although the book, which had its revised second edition in 1961, also appeared in English in 1966 as Gnosiology, the Scientific Approach to the

Theory of Knowledge, I have no reasons to believe that the term in question is well known to my colleagues philosophers outside Poland. As I know that it has already caused misunderstandings, by being identified with the term "realism", which is completely at variance with my intentions, I have been trying for a couple of years to replace it by the term "concretism", to which I impart the same meaning. But what that meaning is ? Whom do I intend to call a reist or a concretist ? Here is my reply which I make as concise as possible. He, and only he, is a reist, or concretist, who goes to the utmost in putting into effect the following intention: for every declarative sentence (statement) that includes abstract terms he tries to find an equisignificant statement including no such terms. By abstract terms I mean here all those which are not concrete, and by concrete I mean all, and only those, terms which are names of things. Thus, the name of a thing is a proper name of a single individual that is a thing, for instance "Vesuvius", or a description that has only one designatum, e.g., "the volcano near Naples", or a general term that has more than one designatum, but on the condition that each of them is a thing, e.g., "a stone", "an overcoat", or a term that has no designatum but has such a meaning that its analytic definition could be: "N is such and such a thing"; for instance, the term "Pegasus" could be defined as "Pegasus is a winged horse". I do not hesitate to give this example, since by a thing I mean any physical body, living organisms included (which automatically includes human beings), or a totality consisting of physical bodies, or any component part of a physical body, or any micro-physical particle or any totality consisting of such particles. Thus it is obvious that reism, or concretism, is a variation of nominalism. The explanations to follow will show in what it differs from its other better known forms. But even now, on the strength of what has been said so far, it can be seen that we have to do here with an ontological approach, and that this approach is physical in nature or, to use a slightly different terminology, materialistic. And perhaps the most pertinent formulation would be to use the term "somatism" in order to bring out the predilection, inherent in reism, i.e., concretism, to single out and to describe bodies: in Greek "soma" means "a (physical) body". I would not feel surprised if some one expressed his astonishment at the fact that a person has come upon the idea of engaging in analyses concerned with a description of reism. In statements and theorems belonging to the various disciplines reference is made incessantly to abstract ideas by means of abstract terms, and people are inclined to believe that this belongs to the very essence of scholarship. Those statements and theorems abound in such terms as property, relation, dependence, point, number, function, etc. Can we do without them without at the same time renouncing the pursuit of scientific activity ? And if so, what induces reasonable people to reformulate statements including abstract terms as equivalent statements devoid of such abstract terms ?Several fairly weighty arguments can be adduced in favour of such a programme. First of all, it seems almost natural to resort to such a reformulation in those simple cases when a statement comprising an abstract term proves to be a metaphorical paraphrase, which can be comprehended only indirectly, of a directly comprehensible statement free from an abstract term. If we say that "the diamond has the property of extraordinary hardness", does it not mean just that "the diamond is extraordinarily hard" ? We have here successfully eliminated the terms "property" and "hardness". The former has disappeared completely, and the latter has been replaced by the term "hard". But whereas "hardness" is an abstract term, "hard" is a concrete term since it names things: it is certain things, including the diamonds, that are hard, and not the properties. Likewise, if we have the statement "the goat belongs to the class of horned ruminants", we are right in interpreting it as a learned equivalent of the simpler formulation, devoid of abstract terms, which is "the goat is a horned ruminant". In this way we have smoothly eliminated the abstract term "class". The same term can also be eliminated from the statement "the class of joiners is included in the class of artisans" if we say simply "every joiner is an artisan". But there is one reason more why we accept the reistic programme, namely the very reflection on the essence of cognition as expressed by declarative sentences (statements). What is human' knowledge, if not a continuation of animal knowledge, improved by the use of language ? And does not animal knowledge reduce to responding perceptively to stimuli in forms of things? We, human beings, also respond perceptively to things, and all our knowledge possibly is nothing else but an intricate structure of fragments of ourselves as beings that respond perceptively to stimuli in the form of things, with the only essential difference in comparison with the animals that in our case the world of the stimuli is accompanied by language signs shaped not only phylogenetically, but mostly historically, by an imitative transmission of language signs that had developed in human communities. But it seems obvious that when we perceive something we always respond to a stimulus in the form of a thing: a thing struck or moved in some way acts on our ears by air waves which result from the fact that the said thing had been struck or moved, and then we hear somehow.

It is likewise in other cases, with the difference that it is a vibrating electromagnetic field, and not vibrating air, that is the intermediary between the stimulus, which is the thing perceived, and the eye. Then we see somehow. This applies to all sensory perceptions (introspective perceptions will be discussed later); the simplest case is that of tactile perception, when a stimulus in the form of a thing directly presses the receptor organs of the perceiving individual. From the empirical standpoint adopted here, a standpoint suggested by man's situation in nature and in history, the tentative reduction of all statements to those which do not include abstract terms become a tentative satisfaction of an urge which reaches very far, but is not devoid of rational justification." (pp. 441-443)

From: Tadeusz Kotarbinski, "Reism: Issues and Prospects", *Logique et Analyse*, 11, 1968, pp. 441-458.

## The "Concretism" OF Kotarbinski

"In an autobiographical remark, Kotarbinski himself defined 'three ideas which constituted his contribution to philosophy: concretism (both ontological and semantical), praxiology or general theory of efficient action, and the ideal of reliable friend as the guiding rule in ethics. I shall now proceed to discuss them in more detail.

Concretism was first conceived as an ontological doctrine. It was originally meant to be an answer to the problem of reduction of Aristotelian categories. The solution advocated by Kotarbinski is probably the most radical. He maintains that all the categories can be reduced to just one: that of things. The first formulation of this thesis appeared in Kotarbinski's fundamental work, *Gnosiology. The Scientific Approach to the Theory of Knowledge* (1929, English translation: Pergamon Press, 1966). It runs as follows.

> That reduction (of Aristotelian categories -- K. S.) completed, it turns out that there remains only that category of objects -- that is, there are no objects other than things, in other words, every object is a thing, whatever exists is a thing. When metaphorical, abbreviated, picturesque, in a word, substitutive, formulations are eliminated and replaced by the basic formulations, interpreted literally, the latter will include no phrases which would appear to be names of something other than things. They will be statements about things only. But it must be emphasized here that by things we do not mean only inorganic solids. Things are inorganic and organic, inanimate and animate, and "endowed with psychic life" -- that is, they are both things in the narrower sense of the word, and persons, too. So much for the reduction of categories of objects to the category of things. The stand taken here by those In favour of such a reduction might be called *reism*.

> The name 'reism' was intended to stress the unique position of the category of things; it was later replaced by 'concretism' or 'pansomatism', the last word indicating that the concrete objects are bodies, i. e. are of a physical, not spiritual, nature.

Even this first formulation reveals two non-equivalent variants of the thesis of concretism. One of them is a statement about the world. The fundamental philosophical question "What exists?" is answered by: "Things and only things". The other deals with language; it says that all statements made in a descriptive language are reducible to such sentences which refer directly to things alone, i.e. that the only names they contain are individual and general names of things.

The evolution of concretism consisted mainly in replacing the ontological thesis by the semantical one and in substantial weakening of the latter: the statement about has been transformed into a prescription for its users; a doctrine became a programme.

The ontological variant has been put in abeyance (which does not mean rejected) mainly because of certain difficulties involved in attempts to find a consistent formulation for it. Briefly speaking, the point was that statements denying existence of properties, relations, etc., and ascribing it to things alone; violated concretistic criteria of meaningfulness. They contain, in the subject-place, some expressions that are not names of things ('property', 'relation', etc.), which is inadmissible in a concretist's language, provided the sentences are to be interpreted literally. The thesis to the effect that whatever exists, is a thing, remains true; but trivially true, since it results from a decision concerning language. According to this decision, we must construct the language in such a way that

literally interpreted sentences should admit, as substitution instances of individual and predicate variables, only names of things.

Two questions immediately arise: Is the programme of semantical concretism workable ? If it is, why should we adopt it ?

The first question amounts to asking whether it is possible to impose the above mentioned restriction upon the descriptive language, without impairing the sense of what is said: Or to put it another way, are the statements of science reducible, in principle, to concretistic formulations?

There is, so far, no definite answer. Two serious difficulties have, however, been pointed out since the time concretism was born. Kotarbinski admitted their seriousness while expressing the hope that they will in time be overcome.

The first difficulty originates in mathematics. In the language of mathematics, the fundamental role is played by the concept of class or set. Now it seems doubtful that this concept can be given concretistic interpretation.

A set of material objects can, of course, be regarded as a thing, viz. material aggregate of its elements (which, in this case, are more properly called its parts). Stanislaw Leśniewski (1886-1939) was among the first to develop this idea; theory of sets so interpreted was called by him mereology. Leśniewski's thought had a deep influence on Kotarbinski and there is hardly any doubt that, during the initial phase of concretism, he saw in mereology a support of the idea that abstract entities can be dispensed with.

The difficulty that appeared later on consists in the fact that sets in mereological sense of the word have no fixed cardinality. The number of parts in such a set depends on the way the parts are defined: As W. V. O. Quine pointed out in his well known essay "Logic and the Reification. of Universals", the same heap of stones can be said to consist of, say, a hundred stones and of trillions of molecules. In mathematics, however, the number of elements in a set must be an absolute property of that set; two sets having different members cannot be identical. It follows that sets, as they are understood in mathematics, are abstract.

Kotarbinski was, of course, well aware of this difficulty. He expressed the hope that sets in the abstract, non-mereological sense of the word could, in principle, be eliminated from mathematics by a suitable translation of sentences which ostensibly refer to them. Since the rules of such a translation have, so far, not been found, Kotarbinski's latest standpoints was to suspend judgment as to the (theoretical) possibility of practicing semantical concretism in an absolutely rigorous way.

An additional reason was provided by modern physical theory which throws some doubts on the concept of thing as "an object located in time and space and having certain physical characteristics". This concept is modelled on our perception of objects from the macroworld. Is it, however, compatible with the conceptual apparatus of contemporary physics? Does it; for instance, apply to electromagnetic field? Or to a wave? Or to a meson?

Kotarbinski himself considered this objection less serious than the previous one, based on the concept of set. His reply was that is was up to the physicist to provide a satisfactory explication of concepts that, so far, remain somewhat enigmatic and susceptible to various interpretations. Until this happens, attempts to translate statements in physics into concretistic language must be postponed.

But why should there be such attempts at all? What is the reason for accepting the postulate of semantical concretism? Obviously, belief in ontological concretism would constitute a sufficient justification. If one believes that there is nothing but concrete things (which, according to somatistic interpretation, are bodies) then to refer to objects of other kinds, in particular to abstracts, in such a way as if they really existed, is to indulge in fiction. What, however, if such belief is suspended? Kotarbinski's answer is that to accept the programme of semantical concretism would be a sound policy for someone who adopts a less restrictive ontology. The point is that concretistic attitude in discourse is the most radical weapon against uncritical speculation, against *idola fori* Francis Bacon complained of. It acts like Occam's razor, sharpened to the extreme.

To avoid possible misunderstandings, let me stress that what Kotarbinski had in mind was not the actual elimination of abstract names from the discourse (which would result in long and cumbersome circumlocutions) but eliminability in principle. This, in itself, would be a sufficient condition for genuine understanding in verbal communication. As Kotarbinski himself pointed out, the idea goes as far back as Leibniz's *New Essays on Human Understanding* (Book II, Ch. XXIII, 1). It was Leibniz who said that "most intricate speculations, (of scholastics -- K. S.) fall at one blow if we will banish abstract entities and resolve not to speak ordinarily except by concretes, and not to admit any other terms in the demonstrations but those which represent substantial entities".

This philosophical attitude was in harmony with the spirit of the time. Logical empiricism was then the most influential trend in philosophy, while Polish philosophical thought was dominated by the school founded by Kazimierz Twardowski (1866-1938) whose ideas were very similar. He advocated the necessity of a critical reappraisal of the classical problems of philosophy, with the intention of dismissing those which would not conform to rather rigorous standards. Kotarbinski was one of the most prominent members of this school and semantical concretism is his answer to the question, how to reform the language of philosophy and, more generally, of the humanities. Viewed in this light, concretism is an attempt to draw a demarcation line between genuine statements and such utterances which only apparently can be qualified in terms of truth and falsehood. It is somewhat paradoxical that the possibility of a consistent realization of concretistic programme has been called in question by results of analysis of the language of mathematics and physics, sciences of the highest rigour. After all, it is not those sciences that are in urgent need of a criterion which would enable them to get rid of some more or less evident nonsense. And yet, owing to a veto put by those sciences (to be, annulated in future?), the original version of concretism, attractive because of its radicalism, has been abandoned. What remained, was a prescription to use expressions translatable into concretistic language, whenever possible." (pp. 25-28)

From: Klemens Szaniawski, "Philosophical ideas of Tadeusz Kotarbinski", *Reports on Philosophy*, 8, 1984, pp. 25-32.

Preassumpted Theories:
1. Calculus of Prepositions;
2. Lesniewski's Calculus of Names with the only Axiom:

$$(1) \quad \Pi a,b:(a\ \varepsilon\ b)\equiv\Sigma c(c\ \varepsilon\ a)\wedge\Pi c,d[(c\ \varepsilon\ a)\wedge(d\ \varepsilon\ a)\rightarrow(c\ \varepsilon\ d)]\wedge\Pi c[(c\ \varepsilon\ a)\rightarrow(c\ \varepsilon\ b)]$$

Primitive Terms:
a) 'spatial' - '$Space(x)$';
b) 'temporal' - '$Time(x)$';
c) 'sensual' - '$Sense(x)$.

Theses of Reism as Axioms:

$(2) \quad \Sigma a,b: (a\ \varepsilon\ b);$

$(3) \quad \Pi a,b: ((a\ \varepsilon\ b) \rightarrow \{\{[a\ \varepsilon\ Space(x)] \wedge [a\ \varepsilon\ Time(x)]\} \vee [a\ \varepsilon\ Sense(x)]\});$

$(4) \quad \Pi a: \{[a\ \varepsilon\ Sense(x)] \rightarrow \{[a\ \varepsilon\ Space(x)] \wedge [a\ \varepsilon\ Time(x)]\}\}.$

Definitions of Reism:

$(5) \quad \Pi a:[\mathbf{ob}(a) \equiv \Sigma b\ (a\ \varepsilon\ b)];$

$(6) \quad \Pi a:[\mathbf{res_1}(a) \equiv \Sigma b\ (a\,e\ b)];$

$(7) \quad \Pi a:(\mathbf{res_2}(a) \equiv \mathbf{ob}(a) \wedge \{\{[a\ \varepsilon\ Space(x)]\wedge[a\ \varepsilon\ Time(x)]\} \vee[a\ \varepsilon\ Sense(x)]\});$

$(8) \quad \Pi a:\{\mathbf{res_3}(a) \equiv [a\ \varepsilon\ Space(x)]\wedge[a\ \varepsilon\ Time(x)]\}$

Theses of Reism following from Definitions and Axioms:

$(9) \quad \Sigma a:\mathbf{ob}(a)$ (what follows from (2) and (5));

$(10) \quad \Pi a:[\mathbf{ob}(a) \rightarrow \mathbf{res_1}(a)]$ (...from (5) and (6));

$(11) \quad \Pi a:[\mathbf{ob}(a) \rightarrow \mathbf{res_2}(a)]$ (...from (3) and (7));

$(12) \quad \Pi a,b:\{(a\ \varepsilon\ b) \rightarrow [a\ \varepsilon\ Space(x)]\wedge[a\ \varepsilon\ Time(x)]\}$ (...from (3) and (4));

$(13) \quad \Pi a:\{\mathbf{ob}(a) \rightarrow [a\ \varepsilon\ Space(x)]\wedge[a\ \varepsilon\ Time(x)]\}$ (...from (3),(4) and (5));

$(14) \quad \Pi a:[\mathbf{ob}(a) \rightarrow \mathbf{res_3}(a)]$ (...from (13) and (8));

$(15) \quad \Pi a:(\mathbf{ob}(a) \equiv \{\{[a\ \varepsilon\ Space(x)]\wedge[a\ \varepsilon\ Time(x)]\} \vee[a\ \varepsilon\ Sense(x)]\})$ (...from (3) and (5));

$(16) \quad \Pi a:(\mathbf{ob}(a) \equiv \{[a\ \varepsilon\ Space(x)]\wedge[a\ \varepsilon\ Time(x)]\})$ (...from (3),(4) and (5));

On the Basis of: Cz. Lejewski, *On the Dramatic Stage in the Development of Kotarbiński's Pansomatism* (published in: Weingartner/Morscher, eds., *Ontologie und Logik*, Dunker&Humblot, Berlin 1979).

Kotarbinski, *Ontological Reism*, by: Mariusz Grygianiec, Institute of Philosophy, Warsaw University, Poland.