

# OUTLINE OF AN ONTOLOGY<sup>1</sup>

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**B**OOK IV of Aristotle's *Metaphysics* begins with the following passage :

There is a science which investigates being as being and the attributes which belong to this in virtue of its own nature. Now this is not the same as any of the so-called special sciences ; for none of these others treats universally of being as being. They cut off a part of being and investigate the attributes of this part ; this is what the mathematical sciences for instance do (1003<sup>a</sup>21-1003<sup>a</sup>26).<sup>2</sup>

Aristotle has no special name for this science of his. He sometimes refers to it as “ wisdom ” or simply as “ philosophy ”. In Book VI of the *Metaphysics* he distinguishes between three disciplines : mathematics, physics, and theology, and tells us that theology is primarily concerned with the highest kind of being, including the divine if there is any. For this reason theology is called “ first philosophy ”, and being first philosophy it is its task, too, to consider being as being in its full generality.

In modern times Aristotle's first philosophy, conceived as the science of being, was separated from theology. Under the name of *ontology* it came to be regarded by some philosophers as the most important part of metaphysics. It shared with metaphysics the prestige accorded to the latter by some, as well as the utter ridicule and contempt piled by others upon everything that was not a natural science or mathematics. In the second quarter of the twentieth century metaphysics, including ontology, was declared by the logical positivists of the Vienna Circle to be meaningless, devoid of any cognitive value, and more akin to poetry than to science. More recently, however, attacks on metaphysics appear to have lost their drive and vigour, and at least some problems, directly or indirectly connected with ontology, are no longer dismissed as pseudo-problems

<sup>1</sup> A lecture delivered in the John Rylands University Library of Manchester on Wednesday, the 14th of January 1976.

<sup>2</sup> *The Works of Aristotle*, vol. viii, *Metaphysica* (Oxford, 1966).

resulting from conceptual confusion or from predilection for unrestrained speculating.

The distinguishing mark of the science of being is, in Aristotle's view, its highest generality; that is to say, its universality. In this respect the science of being differs from what Aristotle calls special sciences. Let me elaborate a little on the point Aristotle was trying to make. Consider, for instance, ornithology which is a special science. It studies birds. It aims at discovering the truths which apply to various species of birds, and those which apply to all birds irrespective of their species. Now, zoology is a more general science. It aims at discovering more general truths applicable not only to birds but to other animals as well. Biology, which is concerned with anything that lives, is still more general, but ontology is universal, that is to say, most general. It is concerned with everything that there is, and there is nothing else apart from what there is. Thus the subject matter of ontology cannot be extended any further.

Being universal ontology appears to say very little. For whatever it says has to be true, in the first place, of everything that there is, and there are not very many properties or attributes that are shared by everything. However, ontological truths are presupposed either explicitly or, more often, implicitly by every discipline of lesser generality, which is evidenced by the fact that disciplines of lesser generality have to make use of ontological vocabulary, in addition to their own vocabulary, if they are to propose any theories, or any statements at all.

Being universal the science of being is farthest removed from the senses, as Aristotle puts it. It is true that in our ontological investigations we have hardly any need to appeal to observation or experiment. This, however, does not mean that for an ontologist sense experience is entirely irrelevant. It only means that for the purpose of developing ontology our past sense experience is quite sufficient.

Another characteristic feature of the science of being, according to Aristotle, is this: in studying being as being and its attributes we can achieve the degree of precision and exactitude unattainable in other disciplines. Some may fail to find much

support for this claim in Aristotle's own metaphysical treatises, but we must bear in mind that, in the light of contemporary developments in philosophy, there is close affinity of ontology as the science of what there is, with certain systems of logic, and that the standard of precision and exactitude of the latter is second to none. However, it is not within the limits of the present paper to pursue the matter any further.

Now, what are the problems that ontology tries to solve? Aristotle has a list of fourteen such problems. Some of them are no longer of any interest to philosophers, others still give rise to discussions and controversies. However, instead of drawing on Aristotle's ideas we had better turn to contemporary thinkers for their views on the matter.

The distinguished American philosopher and logician, Professor W. V. O. Quine, begins one of his most widely read essays with the following remark :

A curious thing about the ontological problem is its simplicity. It can be put in three Anglo-Saxon monosyllables : 'What is there?' It can be answered, moreover, in a word—'Everything'—and everyone will accept this answer as true. However, this is merely to say that there is what there is. There remains room for disagreement over cases, and so the issue has stayed alive down the centuries.<sup>1</sup>

I agree that the ontological problem can be encapsulated in the question "What is there?". But I hesitate to describe this question as simple, and I doubt whether the answer suggested by Professor Quine will, in fact, be readily accepted by everyone as true. Let me explain, in the first place, my reservations as regards the answer.

If everything is there then, it would seem, Pegasus is there ; if everything is there then the golden mountain is there. In brief, if everything is there, then there is what there is and there is what there is not. Surely, it is not the case that there is what there is not. Nor is it the case that Pegasus is there or that the golden mountain is there. Hence, it is not the case that everything is there.

Perhaps by "everything" we should understand "every thing"—a two word answer, which when fully expanded reads

<sup>1</sup> *From a Logical Point of View* (Cambridge, Mass., 1953), p. 1.

thus : "every thing is there ". Now, the answer " every thing is there " seems to be equivalent to the conjunction of two propositions : (i) " something is a thing " and (ii) " whatever is a thing is there ". For if something is a thing, and whatever is a thing is there, then every thing is there, and, conversely, if every thing is there then both something is a thing and whatever is a thing is there. But what are we to understand by the term " thing "? It seems to be appropriate to adopt, in the present context, the most embracing definition ; that is to say, a definition which is acceptable to everyone and which stipulates only that whatever is a thing is there, and whatever is there is a thing. Needless to add that, defined in this way, the term " thing " is not synonymous with the term " material thing ". On the basis of the proposed definition our expanded answer " every thing is there " is reducible to " something is a thing " which, in turn, is equivalent to " something is there ". And indeed if I were to answer the ontological question " What is there? ", I would do so, like Quine, with the aid of a single word, but in my answer I would replace the word " everything " by the word " something ". I would then claim that my answer, compared with that of Quine, has a better chance of being accepted by everyone as true. But, of course, it tells us hardly anything. It only provides the opening to a further investigation which should aim at determining what Aristotle calls the attributes of being, that is to say the attributes of what there is or the attributes of things. As a result of such an investigation we should arrive at a number of statements of the following form : *whatever there is, is such and such or every thing is such and such.*

However, before we turn our attention to the attributes of being, we must still clarify certain aspects of the ontological question. For it turns out to be not as simple as Professor Quine would like us to believe. So far I have been assuming that the question suffers from no ambiguity. In other words, I have been assuming that the notion of existence embedded in the question can be understood in one way only. Now, there are philosophers who would maintain that, far from being unambiguous, the notion of existence has various senses. They would point out that when we assert, for instance, that things exist,

we use the word "exist" in a certain sense appropriate for talking about things. We use it in a quite different sense when we assert that classes of things exist. For things exist in a manner which differs from the manner in which classes of things exist. A still different manner or mode of existence is alluded to, so the argument goes, in the assertion that numbers exist. Similarly, in statements which say that there are things, there are classes of things, there are numbers, the expression "there are" is used in three different senses, which cannot be defined in terms of a single primitive notion. Things, classes of things, numbers do not add up to form one kind of entity. In fact, things differ in kind from classes of things, and in the same way they differ from numbers. Things form one kind of entity, whereas numbers form quite another kind of entity. Since the ambiguity affecting the expression "there are" and the expression "exist" affects also the expression "is there" in the question "what is there?", our single ontological question becomes many. Thus, instead of asking "what is there?", we should be asking "what kinds of entity are there?". Interestingly enough, this is the sort of question which G. E. Moore once described as the fundamental question of philosophy.<sup>1</sup>

To distinguish between different kinds of entity means the same as to distinguish between different categories of entities. Thus, talking about a philosopher who maintains that there is only one kind of entity, in other words, one category of entities, we shall say that he is a unicategorical ontologist and that his ontology is unicategorical. By a multicategorical ontologist we shall understand a philosopher who holds that there are more than one kind of entity, that is to say, that there are several different categories of entities. Accordingly, his ontology will be said to be multicategorical.

The distinction between unicategorical and multicategorical ontology is not of a very long standing. It has been suggested, on the one hand, by certain relatively recent developments in the study of artificial languages constructed by logicians, and on the other by various problems arising from the enquiries into the meaningfulness or otherwise of certain expressions that can

<sup>1</sup> *Some Main Problems of Philosophy* (London, 1953), p. 1 f.

be formulated within the framework of ordinary language. More about this later. In the meantime, suffice it to note that ordinary language is not sensitive enough to make the required distinction clear without resorting to comments, qualifications, and reservations, which may remove certain ambiguities at the cost of creating others.

A much clearer dichotomy applicable to ontologists presupposes that all of them assert the existence of material things, that is to say, the existence of things that last and are bulky. On this assumption we can now group together those ontologists who assert the existence of abstract entities of one kind or another, and oppose to them ontologists who deny the existence of abstract entities of any kind. I shall follow the example of Professor Quine and refer to the former as Platonists. The term seems to be appropriate, considering that it was Plato who "discovered" the world of forms or ideas, this paradigm of abstract entities. For the purpose of referring to ontologists who deny the existence of abstract entities of any kind I shall borrow a term from Professor Kotarbiński, a Polish philosopher, and call them pansomatists.<sup>1</sup> There is little doubt that in choosing his terminology Professor Kotarbiński was inspired by the Stoics and by their brand of materialism.

Pansomatism is, of course, unicategorical. Many sub-classes of material things can be distinguished, but material things as a whole form only one kind of entity. As regards Platonism, two versions of it are conceivable: unicategorical Platonism and multicategorical Platonism. In accordance with the former, there is only one category of entities. Some of them are material things; some others are abstract things: classes of material things, for instance, or numbers. In accordance with multicategorical Platonism there are things, there are (in a different sense of "there are") classes of things, and there are (in a still different sense of "there are") numbers. Things, classes of things, and numbers do not form, jointly, one kind of entity. We have here, so we would be urged by the multicategorical Platonist to believe, three different categories of entities. Speaking metaphorically, things form, as it were, a world or a

<sup>1</sup> See "The Fundamental Ideas of Pansomatism", *Mind*, lxiv (1955), 488-500.

universe of their own ; classes of things do not belong to that universe ; they form a different universe. And the universe of numbers has its own different identity.

One may be tempted to suggest that there is hardly any difference, except perhaps verbal, between unicategorical Platonism and its multicategorical counterpart. Well, it is certainly true to say that the difference is not easy to see. Nor is it easy to explain, for that matter, but it can be made a little clearer by inviting putative upholders of the two ontological doctrines first to consider the following three propositions :

- (1) Socrates is a philosopher
- (2) the class of lions is a species
- (3) the number two is an even number

and then to comment on the following three additional utterances :

- (4) Socrates is a species
- (5) the class of lions is a number
- (6) the number two is a philosopher

It is more likely than not that either Platonist will concede that, as he understands them, propositions (1), (2) and (3) are true. But here the agreement ends. The multicategorical Platonist will dismiss (4), (5) and (6) as meaningless in the strictest sense of the term. He will regard them as syntactical misfits comparable to such meaningless strings of otherwise meaningful words as *Socrates the is* or *philosopher are class a two*. Now the unicategorical Platonist will probably say that, odd as they are, utterances (4), (5) and (6) are meaningful propositions. In his view, they strike us as odd simply because they are obviously false, and hence not likely to be used on numerous occasions. It is not the case, he will point out, that Socrates is a species. The class of lions, he will say, is no number ; nor is the number two a philosopher. As far as he can see, neither the propositions themselves nor their negations violate any grammatical rules of ordinary language ; they only contradict what seems to be common knowledge.

Another point where the views of the unicategorical Platonist differ from those of the multicategorical Platonist is this. The unicategorical Platonist will maintain that singular noun expressions

(i.e. proper names and definite descriptions), singular class expressions (such as 'the class of lions' or 'the class of even numbers'), and numerals ('one', 'two', 'one third', etc.) belong to one and the same part of speech. The multicategorical Platonist will deny this. He will argue that noun expressions form a part of speech which is not the same as the part of speech to which class expressions belong. And the part of speech which comprises numerals differs from either. On this issue the grammarian of ordinary language can offer little help. He can only remind the disputants that it is owing to the lack of rigid precision in the vocabulary and grammar of ordinary discourse that they can discuss their problems at all, without having recourse to a logically standardized, artificial language. Like a multipurpose tool, the grammarian may point out, ordinary language can do all sorts of different jobs, and this is its advantage, but it cannot do all these jobs equally well, and this is its weakness.

In an attempt at turning away from linguistic considerations the unicategorical Platonist may remark that all classes and all numbers are abstract entities. Now, from the point of view of the multicategorical Platonist this is talking nonsense. It is true, he may concede, that all classes are abstract entities and that all numbers are abstract entities, but he will insist that in these assertions the two occurrences of the expression "abstract entities" do not mean the same. In accordance with the way he is likely to interpret the two assertions, it would also be true to say that all abstract entities are classes, and that all abstract entities are numbers. For he regards the terms "class" and "number" as categorial terms, each categorial term collating under it, or applying to, everything within a particular category of being. For the purpose of stating his ontology the multicategorical Platonist requires several categorial terms, whereas the unicategorical Platonist is satisfied with one such term. And the same can be said about the pansomatist.

It would be presumptuous to claim that the difference between the unicategorical and multicategorical Platonisms have now been made crystal clear. It seems to me, however, that enough has been said to suggest that we can have two versions of Platonism, each accommodating in its own way what in ordinary

discourse with its ambiguities and equivocalities we call abstract entities.

It would also be somewhat risky to apply, without much qualification, the terms "unicategorical" and "multicategorical" to ontological doctrines of the past. We seem to be on safer ground when we consider ontological views advocated or presupposed by various philosophers during the course of the last hundred years. Thus, for instance, it would seem that the ontology envisaged by Gottlob Frege, a great philosopher and an outstanding logician, squarely falls under the title of unicategorical Platonism. Frege's system of the foundations of mathematics, resting on unicategorical Platonism, was found by Russell to generate a contradiction. It was with a view to remedying this disastrous situation that Russell worked out his theory of logical types. As an ontology, and this is how Russell interpreted it at the time, the theory of logical types provides an example of multicategorical Platonism. In several of his papers Quine has shown considerable sympathy with pansomatism. He does not use this term, but refers to ontology which denies the existence of abstract entities, as nominalism. He finds nominalism, that is to say pansomatism, inadequate and settles, regretfully, one cannot help feeling, for a unicategorical Platonism with classes as the only abstract entities. Pansomatism has been unremittingly advocated by Kotarbiński.

And it is to the controversy between pansomatism and Platonism that I propose to direct my attention in the remaining part of my lecture. For the sake of clarity, by Platonism I shall understand unicategorical Platonism, and leave multicategorical Platonism out of the discussion. There does not seem to be any harm in taking this course of action since the arguments the pansomatist is likely to advance against unicategorical Platonism can easily be adapted to meet the claims of the multicategorical Platonist.

The Platonist, that is to say the unicategorical Platonist in the present context, and the pansomatist agree that there are in this world material things, but they part company when it comes to answering the question as to whether, in addition to material things, there are any abstract entities, or things that are not

material. The Platonist's answer is, "Yes, there are abstract entities." The pansomatist's answer is, "No, there are no abstract entities." Now, what sort of evidence or argument is, or can be, advanced in support of either answer?

To begin with, let us note that the positive answer to our question is, in a sense, prior to the negative one. If no one had ever asserted the existence of abstract entities no one would have had a stimulus to deny it. If from time to time we read in the papers that there is no monster in Loch Ness, it is because, in the first place, someone else had earlier asserted that there was a monster in Loch Ness. So we have to start with the Platonist and see how he has been led to accept the existence of abstract entities. His list of abstract entities is likely to include attributes (redness, triangularity, courage, wisdom, etc.), relations (love, hate, similarity, being to the north of, etc.), classes (the class of lions, man, as referred to in the proposition which says that man is a species), numbers, geometrical objects (point, line, circle, sphere, etc.), concepts, propositions (as opposed to sentences, which are material things), facts, thoughts, beliefs, minds, and sense-data. The list is far from being complete, although it already appears to be too long for the pansomatist readily to cope with.

In an attempt at justifying his belief in the existence of abstract entities the Platonist seems to rely on argument rather than on evidence. And the argument he finds to be sufficiently cogent, is based on certain presuppositions concerning the working of language. In every Indo-European language, and this probably is true of any natural language, we have name expressions (proper names and descriptive phrases of the form : *the so and so*) and common nouns, simple or complex. The principal function of such expressions in a language is to refer to things outside the language. The truth value of propositions in which names or common nouns occur depends, in most cases, on whether these names or common nouns refer to things or fail to do so. Thus, for instance, the propositions :

(7) Socrates is a centaur

(8) Zeus is a philosopher

are false because the common noun "centaur" does not refer to anything, there being no centaurs, and the proper name "Zeus" does not refer to anything either.

A great number of names and common nouns of ordinary language refer to material things. But what about nouns in the following propositions :

- (9) justice is a virtue
- (10) we admire courage

These propositions are true, and the nouns "justice", "virtue", and "courage" must refer to something. They do not refer to material things. Consequently, the Platonist will maintain, they refer to abstract entities—attributes, to be more precise. And he goes on to produce analogous arguments in support of the view that there are relations, classes, and numbers. His arguments, however, do not impress the pansomatist, who will point out that propositions (9) and (10) can be paraphrased, without any loss of content or change in the truth value, to read thus :

- (11) every just person is a virtuous person
- (12) we admire courageous people

In these paraphrases noun expressions refer to entities which by no means can be described as abstract. In a similar way he will dispose of noun expressions which are said by the Platonist to refer to relations. Thus, for instance, he will maintain that propositions

- (13) the relation of mutual respect developed between the two leaders
- (14) the relation of seniority is asymmetrical

only appear to imply the existence of any abstract entities called relations. In fact, they are equivalent, respectively, to :

- (15) the two leaders came to respect each other
- (16) if someone is senior to someone else then the latter is not senior to the former

Now, in the pansomatist's view, neither in (15) nor in (16) is there any reference to any relations.

According to the pansomatist, a certain tendency appears to prevail among the users of natural languages. It consists in enriching our discourse by introducing noun expressions to replace verbs. Consider the following sequence of propositions :

- (17) whatever lives changes
- (18) to live is to change
- (19) living is changing
- (20) life is a sort of change

Proposition (17), which is at the head of the sequence, implies, if at all, the existence of living and changing things. Note that there are no noun expressions in (17). But the verbs “lives” and “changes”, which occur in (17), gradually lose their identity in (18) and (19), and acquire nominal characteristics to become in (20) noun expressions, and mislead us into believing that they refer to abstract entities. Coining noun expressions to replace verbs, warns the pansomatist, must not be mistaken for an ontological discovery.

Sometimes the Platonist prefers to support his ontological views by advancing a more comprehensive theory of language. In accordance with this theory, which can be described as the mirror theory of language, not only names and common nouns refer to entities, but every meaningful expression stands for something or other in the real world. Take the propositions which say that

- (21) Socrates is wise
- (22) Edinburgh is north of London

We are told by the upholder of the mirror theory of language that not only the names “Socrates”, “Edinburgh” and “London” stand for certain things but so do the expressions “is wise” and “is north of”, the former standing for an attribute and the latter for a relation. Moreover, the propositions themselves stand for facts or states of affairs. Material things (Socrates, Edinburgh, London), attributes (is wise), relations (is north of), and facts or states of affairs are supposed to be among the *constituents* of what there is. Indeed, in the opening statements of his celebrated *Tractatus* Wittgenstein went to the length of telling us that facts are the only constituents of what

there is. The totality of what there is consists of facts not of things, according to him. Instead of talking about constituents of what there is, some Platonists talk about meanings and postulate for the latter some sort of ontological status.

To the pansomatist the mirror theory of language and its ontological implications are totally unacceptable. He suspects that the Platonist has fallen victim to an illicit sort of generalization. The Platonist has rightly noticed that for the most part proper names, or descriptive phrases of the form *the so and so*, directly name or refer to one thing each. From this he has concluded that other meaningful expressions of a language should name or refer to one thing each. There is no reason that it should be so. The function of meaningful expressions other than names may be different. They may refer, not directly but indirectly and in various ways, to things which are directly named or referred to by name expressions. As Quine, himself a Platonist, aptly puts it, one must not confuse naming with meaning.

Although Quine has been careful enough to avoid the pitfalls of the mirror theory of language—in fact he has greatly contributed to abolishing it—he seems to be unable to free himself from an analogous doctrine concerning variables and quantification. This, however, is a technical matter, hardly suitable for a detailed presentation on this occasion.<sup>1</sup>

Still greater technicalities are involved in showing how statements, which *prima facie* appear to imply the existence of numbers, can be rephrased so as to have no existential implications or to imply the existence of material things only. Strangely enough, in working out the required paraphrases the pansomatist makes use of certain ideas first developed by Platonists, namely by Frege and Russell.

As far as I can judge, the pansomatist's task of refuting Platonism has not been completed as yet. So far, no one has proposed a geometry which presupposes material things only. In other words, one does not really know how to analyse geometrical objects away. This does not mean that such a geometry

<sup>1</sup> See, for instance, my "Quantification and Ontological Commitment" in *Physics, Logic and History*, eds. W. Yourgrau and A. D. Breck (New York, 1970), pp. 173-81.

cannot possibly be worked out. Indeed, some progress has been made in the field of the foundations of a "pansomatic geometry".

Another area which, in the opinion of some pansomatists is in need of consolidation and streamlining, is the area of psychological entities, the area of sense-data for instance. It is here that Platonism appears to be at its strongest.

So far I have discussed various aspects of three ontological doctrines and committed myself to none. Now the time has come for me to abandon the comfortable position of a detached admirer of the ontological landscape and tread on the slippery ground of commitment.

Talking about Plato's theory of forms, Antisthenes is reported by some ancient authorities to have made the following remark: *I can see a horse but I cannot see horseness*. By this he meant a form. Broadly speaking, I agree with the objection raised by Antisthenes. I only generalize it. On many occasions I find myself affected by material objects, but I am not aware of ever having been affected by what unmistakably could be said to be an abstract entity. In my view, philosophers who subscribe to Platonism in one form or another unnecessarily yield to the suggestiveness of ordinary language. Surely it is not right to postulate the existence of entities to fit a language? It is more appropriate to try to construct a language that is adequate for the purpose of describing what there is. I thus opt for pansomatism, and I propose to condense the contents of my version of it into the following ten Theses:

T1. The world is the totality of things, not of facts.

T2. We know from experience that there are many things in the world; there is no evidence that the number of things in the world is finite; it is assumed, by way of hypothesis, that the number of things in the world is not finite.

T3. Many things known to us from experience have proper parts; we have no experience of things that have no proper parts; we thus assume, by way of hypothesis, that everything that exists has proper parts.

T4. Everything known to us from experience lasts, or, to put

it in other words, is extended in time ; we have no experience of momentary things ; we assume, by way of hypothesis, that there are no momentary things at all ; that is to say, we assume that everything that exists, lasts.

T5. Everything known to us from experience is bulky ; in other words, it is extended in space ; no things that could be described as geometrical points are given in experience ; our hypothesis is that everything that exists, is bulky.

T6. The duration of things is a sufficient condition of their having proper parts ; and so is the bulkiness of things ; no other sufficient condition of things having proper parts is given in experience, and according to our hypothesis duration and bulk are not only sufficient conditions of things having proper parts ; they are also necessary conditions ; thus we assume that while every thing is extended in time and in space, there is no other way in which things are extended.

T7. Of the infinitely many things that there are, one thing seems to deserve special consideration ; it is the totality of all things, in the collective sense of the term " totality " ; in other words, it is the world or the cosmologist's universe ; no one can claim any experiential knowledge of its beginning or of its end ; nor does experience give us any clue as to the limits of its bulk ; thus there is nothing to contradict our hypothesis that the universe has no beginning and no end, and that there is no limit to its bulk.

T8. Only material things exist ; there are no other kinds of entity except material things, that is to say, things that last and are bulky ; living beings, perceiving beings, and intelligent beings are material things ; strictly speaking, there are no properties or attributes ; there are no relations, there are no classes ; there are no numbers ; there are no events, no facts or states of affairs ; in brief, if one is allowed to make an illicit generalization, there are no abstract entities of any kind.

T9. Statements which appear to be true yet imply the existence of abstract entities of one kind or another, are likely to be

metaphors and can, as a rule, be rephrased, without any loss of relevant content, so as to have no existential implications, or so as to imply the existence of material things only.

T10. Statements which imply the existence of abstract entities of one kind or another, but which in the view of those who propound them are not metaphorical, are to be rejected as false.

Compared with the pansomatism advocated by Kotarbiński, who originally called it reism and subsequently described as concretism, the pansomatism as embedded in the ten theses is a much less cautious doctrine. Thus it is open to criticism wider than the one levelled by various philosophers at the teaching of Kotarbiński. Obviously, for attracting this wider criticism Kotarbiński is in no way to be held responsible.

It would take at least another lecture to state, analyse, and rebut all the objections raised, in recent years, by the enemies of pansomatic ontology. Let me, therefore, conclude by examining briefly three main objections, put forward for the first time by K. Ajdukiewicz, a colleague of Kotarbiński.<sup>1</sup> They have often been repeated by other critics, and in greater or lesser part conceded, too readily as far as I can judge, by Kotarbiński himself.

In Ajdukiewicz's view it is not quite clear whether the principal thesis of reism is ontological (T8) or semantical (T9), whether it tries to tell us something about reality or merely makes suggestions as to how we should use our language. According to him, the semantical version of reism construed as a programme stipulating the elimination, from our final pronouncements, of any apparent references to any abstract entities is not without merit, as it may lead to the dissolution of a number of philosophical pseudo-problems. He finds, however, the ontological version of reism untenable, indeed, unstatable. For in trying to state it, the reist has to use expressions which are banned by his semantical strictures.

At first, Kotarbiński appeared to uphold the ontological conception of reism as witnessed by his use of the term "pan-

<sup>1</sup> See T. Kotarbiński, *Gnosiology* (Oxford, 1966), pp. 515-36.

somatism", which has no semantical connotation, and which he adopted as the description of his doctrine in the mid-thirties. However, in the late forties and in the fifties Kotarbiński preferred to claim for reism, which he began calling concretism, the status of a programme with the following directive: *avoid using noun expressions which appear to refer to abstract entities; in all your statements use noun expressions which refer to material things*. In a paper published by Kotarbiński in the late sixties<sup>1</sup> we read that "reism, from an ontological doctrine with a semantic spicing, has evolved into a semantic doctrine with an ontological spicing". It "merely suggests a programme . . . It persuades to try to do without names that are not names of things, when one describes reality, and always to leave in such a description some name(s) of things", that is to say material things.

Now, in our view, it is a mistake to talk about two different versions of reism and to try to choose between them. Reism, and pansomatism, is an all-embracing theory. It permeates all its ramifications. What Ajdukiewicz has labelled as semantical reism is, in fact, an extension of ontological reism. It stands or falls with the latter. Severed from its ontological basis, semantical reism loses its *raison d'être*. Conceived as a programme, it should be adopted and adhered to in ontological investigations; it need not be practised elsewhere. The last quotation from Kotarbiński's paper seems to indicate that the founder of contemporary pansomatism has become aware of the need for restricting his semantical programme. After all, ordinary language and the portion of it as streamlined by the pansomatist, are tools like a kitchen knife and a surgeon's knife. One does not need a surgeon's knife to cut a piece of steak, nor should a surgeon use a kitchen knife when amputating a leg.

A second objection levelled against the original reism and, hence, applicable to pansomatism, can be phrased as follows: *the thesis that every entity (or object) is a material thing is a tautology; for it is a consequence of an arbitrary definition proposed by the reist and supplemented by a truism that there are entities (or objects)*. Kotarbiński spurns this objection. According

<sup>1</sup> "Reism: issues and prospects", *Logique et Analyse*, xi (1968), 441-58.

to him the assertion to the effect that every entity (or object) is a material thing, in other words that

- (23) whatever *a* may be, if *a* is an entity (or an object) then *a* is a material object

is the pansomatist's hypothetical credo. And, indeed, it can be pointed out that his critic is guilty of trying to put the cart before the horse. It is true that in the pansomatist's ontology the following equivalence holds :

- (24) whatever *a* may be, *a* is an entity (or an object) if and only if *a* is a material thing

This, however, does not mean that (24) is a definition. As a matter of fact (24) is a conclusion implied by two premisses. One of these premisses says that

- (25) whatever *a* may be, *a* is an entity (or an object) if and only if *a* is something,

and this is a definition, which, far from being arbitrary, is unexceptionable to the opponent of pansomatism. The other premiss is the pansomatist's hypothetical credo, that is to say the assertion (23).

A third, and by far the most important objection, is that when the reist denies the existence of properties or relations or numbers he is, in fact, talking nonsense in the strictest meaning of the term. His apparent denials, Ajdukiewicz maintains, turn out to be nothing but syntactically incoherent sequences of words. The objection does not seem to refer to the reist's denials occasioned by his dispute with the unicategorical Platonist. For, in this case, both the unicategorical Platonist and the reist speak, as it were, one and the same language. Both agree that terms such as "property", "relation", "number", "philosopher", and "centaur" belong to the same part of speech. In the Platonist's view the term "property", to take it as an example, is a referential term ; it designates something just as the term "philosopher" does. According to the reist, however, the term "property" is a non-referential term. Like the term "centaur" it does not designate anything. Thus the

unicategorical Platonist asserts that properties exist, whereas the reist (and pansomatist) denies their existence.

The dispute between the multicategorical Platonist and the reist is not that simple to state. The multicategorical Platonist holds that terms such as "property", "relation" and "number" do not belong to that part of speech to which the terms "philosopher" or "centaur" belong. In accordance with ordinary grammar they are all nouns. But ordinary grammar, in his view, is not sufficiently discriminating. In fact, the terms "property", "relation" and "number" each belong to a different part of speech, and these parts of speech are irreducible to one another. The reist can, so it is put to him by his critic (or critics), meaningfully assert that

(26) it is not the case that centaurs exist

If, however, the term "centaurs", which is a non-referential term, is replaced in (26) by the term "properties", which, the multicategorical Platonist will insist, does not belong to the same part of speech as the term "centaurs", then the result of such a replacement, namely, the expression

(27) it is not the case that properties exist

must be regarded as devoid of syntactical coherence. And if (27) is subjected to the reistic paraphrase, then it becomes

(28) it is not the case that material things are of one sort or another,

which is a palpable falsehood.

Kotarbiński has never tried to refute Ajdukiewicz's argument. He seems to have accepted its apparent cogency, and re-interpreted his denials of the existence of properties and of other kinds of abstract entity. Under the re-interpretation proposed by him (27) amounts to the rejection, as syntactically nonsensical constructs, of both "properties exist" and "it is not the case that properties exist". In the late fifties, Kotarbiński described this re-interpretation as a far-reaching correction to the reistic way of thinking and talking. It is only in the paper published ten years later, and quoted by me in one of the preceding sections, that Kotarbiński seems to have reconsidered the correction. For

he no longer claims that any proposition from which abstract terms cannot be eliminated by paraphrase is a piece of nonsense.

The ontological doctrine outlined in the present lecture is more radical and more in line with the original reism. I find little cogency in Ajdukiewicz's criticism, which, as far as I can see, is based on tacit though unacceptable presuppositions. Ajdukiewicz does not seem to distinguish clearly enough between language and theory. In fact, by language he understands what one would normally call theory. This is why he believes that the reist (or pansomatist) is committed to a reistic language. It is true that the reist is committed to an ontological theory, but there is no earthly reason why he should cease to be a "polyglot". In particular, there is no reason at all why he should be forbidden to use the language of the multicategorical Platonist. It is what the reist says that matters, and not the language he uses to say it. A language in which direct means of reference to entities form one part of speech is sufficient for the reist's positive ontology as well as for his denial of the ontological claims propounded by the unicategorical Platonist. But a richer language, in which expressions supposed to be referring directly to different kinds of entity belong to different parts of speech, is required by the multicategorical Platonist for the purpose of stating his ontology. And this sort of language, provided it is ontologically neutral, that is to say provided its mere use does not commit the user one way or the other, is required by the reist to deny the claims of multicategorical Platonism.

In a sense the predicament of the reist is analogous to that of a visitor to an exhibition of etchings which are all in black and white, as he has discovered for himself. If he wants to keep a photographic record of the exhibition, he will put an ordinary film into his camera. But, however good his photographs may turn out to be, he will not be able to use them as evidence that there are no etchings in coloured inks at the exhibition. If he were to provide such evidence he would have to use a colour sensitive film, although he would not expect to get any coloured transparencies. He would, however, have to make sure that the film was without any original tint of its own.

In my statement of pansomatism Theses 1, 2 and 8 provide the answer to the fundamental ontological question "What kinds of entity are there?" In fact Thesis 2 does a little more, but still without touching the problem of what Aristotle called attributes of being. A tentative answer to this latter problem is attempted in Theses 3, 4, 5 and 6. The reference, in Theses 1 and 7, to the collective totality of things, that is to say to the cosmologist's universe, may appear to be out of place within the framework of a most general discipline, whose primary concern is the totality of things in the distributive sense of the term, since it tries to say something that is true of everything that there is. In this connection suffice it to mention that the notion of collective totality of things is definable in terms of the notion of "part of", which means that the former belongs to the vocabulary of a universal theory. Theses 9 and 10 determine the pansomatist's attitude to theories propounded by his opponents. Ajdukiewicz would say that they summarize pansomatic semantics.

Finally, I wish to emphasize the hypothetical nature of pansomatic assertions. The most important of them, namely Thesis 8, is falsifiable. If someone could arrange for me to be affected by an abstract entity, I would gladly renounce pansomatism and apologize. For if that happened, I would suffer no loss. On the contrary, I would have gained something; I would have learnt something that had not been known to me before. Some of the pansomatic assertions, Thesis 7 for instance, defy testability. Neither the assertion that the totality of what there is has an end, nor its contradictory, can possibly be verified or falsified. Thus the choice is between making a guess that cannot be tested, or saying nothing. The latter option is too easy and too safe to be attractive.