SOME SEMIOTIC CONSIDERATIONS CONCERNING INTENSIONAL EXPRESSIONS AND INTENTIONAL OBJECTS

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1. Judgements, suppositions, propositions and sentences

What grammatically is a declarative sentence may express a thought that something is so and so. That thought will be termed a judgement, in the psychological sense of the word, or the process of holding a belief. If that process fuses into one process of pronouncing, listening to, or reading declarative sentences, we say that it is verbal, or discursive, in nature. That mental pocess includes the element of assertion, which consists in accepting a given sentence, to some extent at least, or in rejecting it, also to some extent at least. If I accept a sentence I express by it my belief that the state of things on which that sentence reports, does take place. If I reject it, then my attitude toward that sentence — which I would use if I wished to express my belief that it is so and so — is negative. It also occurs that in the process of thinking about a state of things that pragmatic element, i.e., acceptance (to some extent) or rejection (to some extent) of that sentence, does not appear: I think about that state of things in a detached manner. In such a case we have to do with a supposition (*Annahme* in Meinong's terminology), but not with a judgement. On the other hand, judgements and suppositions share the property of being declarative, but neither interrogative nor imperative, sentences.

A distinction is made between judgements and propositions (in the logical sense of the word). A proposition is the content of the above mentioned process of thinking, or judgement. In other words, a proposition is the meaning of the expression

used to express a judgement, i.e., such a meaning that an expression which has that meaning is a sentence in the logical sense of the word, i.e. a statement, because it is the sentence in the logical sense of the word that is used to express the said judgement. A proposition may be affirmative or negative, and a statement may be true or false. It is sometimes said that truth and falsehood, i.e., truth-values, are attributes of propositions: this is intended to emphasize that it is irrelevant in what ethnic language the statement to which we ascribe a certain truth-value is formulated, or else to emphasize that a truth-value is ascribed not just to any declarative sentence, but to every and only such sentence or grammatically equivalent expression which expresses a judgement, and not, for instance, a supposition. Declarative sentences used to express judgements are termed statements, and grammatical sentences which report on a state of things but do not express a judgement are termed declarative sentences. If we refuse to ascribe a truth-value to a declarative sentence which is not a statement, we do not thereby want to say that such a sentence has a third truth-value, nor do we oppose the principle of the excluded middle. Likewise, nothing of that sort is done by a person who refuses to ascribe a truth-value to an interrogative sentence. By defining a statement (in a language) as an expression which (in that language) has a specific truth-value, we do so from the point of view of semantics. By defining a sentence as expressing judgement (i.e. as an expression which, in that language, expresses a mental state which consists in a belief), we define it from the point of view of pragmatics. In linguistics, a sentence is usually defined in syntactic terms, that is, as an expression which has a specified structure. (1)

(1) Kazimierz AJDUKIEWICZ, «Sprache und Sinn», *Erkenntnis*, IV, 1934; «Empirical Problems and the Concept of Meaning» (in Polish), *Studia Filozoficzne, 1/36, 1964; Pragmatic Logic*, Dordrecht, Holland, 1974.

2. *Quasi-judgements*

Some philosophers use the sentence «**X** accepts **Y**» in the sense of «**X** believes in the existence of **Y**», where **Y** is a broadly interpreted object, also in the sense of intentional object. The concept of intentional object plays an important role in Roman Ingarden's analysis of literary works. ([2]) In his opinion, declarative sentences which occur in literary works become modified, as a result of which they acquire the nature of quasi-judgements. The concept of quasi-judgements has given rise to various misunderstandings which were due to the ambiguity of the term *Urteil* (or its Polish equivalent *sąd*), which may mean either a judgement or a proposition. Some places in his texts seem to indicate that he meant quasi-judgements, others, that he meant quasi-propositions; in still others he referred to a «quasi-affirmative» character of sentences, and — as has been said earlier — the attributes *affirmative* and *negative* are applied by us to propositions. Let us adopt the interpretation in which Ingarden's *Quasi-Urteil* is a quasi-judgement.

Ingarden places quasi-judgements between judgements and suppositions. Sentences which occur in literary works, that is, sentences which express quasi-judgements, have the outer form of sentences which express judgements, but in fact they neither do, nor are intended to, express judgements. If I express a judgement seriously, I take responsibility for the sentences which I accept, I am ready to argue in favour of my belief, to substantiate what I assert, and to reject it if I find counter-arguments convincing. According to the phenomenological conception of the philosophy of language, a sentence which expresses a judgement expands by its meaning a purely intentional state of things and transfers it as a real one into a specified sphere of existence and sets it in that sphere, be it for instance the real world. It is in that transfer and setting

([2]) Roman INGARDEN, *Das literarische Kunstwerk*, 1931; «On What Is Called Truth in Literature» (in Polish), in *Szkice z filozofii literatury*, Łódź 1947.

that the said sentence claims the right o be true, i.e., it claims that the state of things determined by its meaning should hold in fact, not as purely intentional, but as set in a given sphere of existence which is independent, as to its mode of existence, from the judgement involved. On the contrary, a sentence which expresses a supposition does not claim any such right to be true. Its meaning determines a purely intentional state of things, but does not set it in any sphere of existence that would be independent, as to its mode of existence, from that supposition. That state of things as it were remains suspended and rootless.

Unlike the sentences mentioned above, the sentences which occur in literary works create, in Ingarden's opinion, certain intentional objects and artificially place them in a quasi-real world; those objects cannot, however, find themselves in the real world. By pronouncing quasi-judgements we behave as if we believed what we say, but not seriously: we do not take responsibility for what we have said, we do not intend to verify nor to substantiate that. While making judgements results from the receptive cognition of existing objects, making quasi-judgements results from creative acts which are intended not to comply with the existing state of things, but to go beyond that state of things, and even to create a new world by a «*sic iubeo*». Sentences which occur in literary works are *sui generis* arbitrary decisions or requirements. This is why, as Ingarden claims, we have to renounce the logical truth of the sentences which occur in literary works and to accept the fact that if we may at all speak about their truth-values, then we may do so in a quite different sense, which would be in agreement with the nature of those sentences which express quasi-judgements.

3. *Syntactic and semantic metalanguage*

Logical semiotics, i.e., the logical theory of language, also termed the logic of language, has three divisions: pragmatics, logical syntax, and logical semantics. Pragmatics is concerned

with the relationships between speaking and thinking, i.e., relations between expressions and those who use them, and vice versa. Hence it uses a metalanguage which includes names of the expressions that occur in the corresponding object language, names of persons, and names of things. For instance, the metalanguage of pragmatics includes the expression «I believe that sentence to be true». Logical syntax refers to the expressions that occur in the given object-language and to relationships between those expressions, but it does so by taking into consideration the shape of those expressions only. It accordingly uses a metalanguage which includes names of expressions of the object language under consideration, but does not include the expressions of that language. Thus the metalanguage of syntax does not include a given object language as its part. Logical semantics refers to expressions that occur in the object language under consideration, and also to the objects to which those expressions refer, and to the relation that holds between an expression and its object. Thus the metalanguage of semantics includes not only the names of expressions that occur in a given object language, but also those expressions themselves. That metalanguage includes its object language as its own part. Since semantics includes sentences which refer to expressions of its object language and to the objects to which those expressions refer, it is exactly in semantics that we can formulate a definition of truth and a definition of denoting: «a sentence '**p**' is true if and only if **p**», and «a name '**N**' denotes **x** if and only if **x** is **N**». These two definitions enable us to pass from sentences about expressions to those about those objects to which those expressions refer, and hence, for instance, to infer from the truth of a sentence 'p' that p. Such a transition would be impossible in a syntactic metalanguage ([3]).

([3]) Kazimierz Ajdukiewicz, «The Problem of Transcendental Idealism in Its Semantic Formulation». *Przegląd Filozoficzny*, XL 1937; «On What Is Called Logical Positivism», *Myśl Współczesna*, 6-7, 1946; «Epistemology and Semiotics», *Przegląd Filozoficzny*, XLIV, 4, 1948; «Concerning Professor Adam Schaff's Paper on My Philosophical Opinions», *Myśl Filozoficzna*, 2/80, 1953 (all in Polish).

Discussions of purely intentional objects as determined by meanings of sentences in a given language pertain to meanings as *sui generis* ideal objects. Every sentence which says something about meanings and about purely intentional objects determined by those meanings has its analogue in a sentence or terms that have precisely those meanings. In this manner we can pass from the material to the formal mode of speaking, that is, from a discussion of e.g., intentional objects to a discussion of language and to a discussion of semiotic issues. Hence certain problems can be formulated properly by passing from the spere of objects to that of language.

I think that those problems include the ideas of phenomenological philosophy, as described above, such as the issue whether purely intentional states of things, which are correlates of quasi-judgements, are placed in a separate quasi-real world.

4. *Intensional expressions*

An expression **E**, which includes no free variables, is intensional if and only if on replacing one of its members, **M**, by an expression $\mathbf{M}_1$, equivalent to **M**, we obtain an expression $\mathbf{E}_1$ which is not equivalent to **E**. Likewise, if **E** includes one or more free variables and if on replacing each of those free variables by two different but equivalent constant expressions, $\mathbf{S}_1$ and $\mathbf{S}_2$ respectively, we obtain two nonequivalent expressions, $\mathbf{E}_1$ and $\mathbf{E}_2$ respectively, then **E** is an intensional expression ([4]).

We shall be concerned here with intensional sentences in the form of «**A** says that **p**».

([4]) Kazimierz AJDUKIEWICZ, «Intensional Expressions», *Studia Logica*, XX, 1967.

5. *Quoted expressions*

Some theorists of literature think that all sentences which occur in literary works are quoted expressions. Thus, in lyric poetry we would have to do with quoted expressions of what is called the lyric ego; in the drama, with what is said by the *dramatis personae,* listed explicitly; in epic works, with what is said by the narrator or by the heroes, which would be quotations of the second or a higher degree within what is said by the narrator, whose narrative is a first-degree quotation. Those literary theorists also hold that the lyric ego is not identical with the real author of a given poem, and that a narrator is not identical with the author; it goes without saying that none of the *dramatis personae* is identical with the author. According to that opinion, the lyric ego, the narrator, and the *dramatis personae* are represented personages who belong to the world created by a given literary work.

I do not discuss here the correctness of that opinion, and especially the issue whether that opinion is correct *in toto.* Personally, I think that not all that which is said in lyric poetry is said by the lyric ego; there are things which the poet says in his own name; likewise, I think that not all what is said in an epic work is said by the narrator; there are things which are said by the author. Yet the fact remains that certain sentences in literary works are quotations; this undoubtedly applies to the speeches of characters in plays. But a different interpretation is possible, too: every literary work would be treated as a single quotation, a single direct speech by its author. As we have seen, quoted sentences can at any rate be found in literary works, and it is such quoted sentences that will be discussed in this paper, strictly speaking, statements of the form: «*A* says: '**p**'».

6. «*A says:* '**p**'» *and intensionality*

The formula «**A** says that **p**» is intensional. So is the sentence which we obtain by substituting for the free variable **A**

a proper name of a person, a definite description of a person, or a name of a person, and a declarative sentence for **p**. When it comes to the formula «**A** says: '**p**'», with a quotation in direct speech, and the sentence that can be obtained from this formula, two different views are possible. One is that the expression «**p**» quoted in direct speech is a declarative sentence from the grammatical point of view only, whereas from the point of view of logical semiotics that expression «**p**» is a name, that is, the name of a sentence which belongs to a language which is one level lower than the pragmatic metalanguage in which «**A** says: '**p**'» is formulated. That name is peculiar by being equiform with its designatum, which is the case of every name used in *suppositione materiali*. In this interpretation, the formula «**A** says: '**p**'» is reduced to the formula «**A** pronounces a sentence in a language $\mathbf{L}_1$, such that the expression '**p**' is the name of that sentence in a language $\mathbf{L}_2$». In a particular case $\mathbf{L}_1$ and $\mathbf{L}_2$ belong to one and the same ethnic language. It can easily be seen that the formula «**A** pronounces the name '**p**' of a certain sentence» is no longer intensional. The equivalent formula «**A** says: '**p**'», if interpreted in this way, is not intensional either.

The other interpretation of the formula «**A** says: '**p**'» is such that the expression «**p**» is treated as a free sentential variable. In this interpretation the functor «says», which in the former interpretation was a sentence-forming functor of two term arguments, is now treated as a sentence-forming functor of one term argument and one sentential argument. Further, the quotations marks embracing **p** formerly were an operator which, when taken together with the sign **p** between the quotation marks as its argument, formed the name of a sentence. Now the quotation marks indicate that the expression which they embrace is a sentence in a certain language and such that the speaker used a sentence which is both equiform and equisignificant with **p** (in the stronger interpretation of the word «says») or merely equisignificant with it (in the weaker interpretation of that word). As examples we may quote, correspondingly, the expressions «Caesar says: 'Gallia est omnis divisa in partes tres'» and «Caesar says: 'All Gaul is divided into three

parts'». As we can see, in the formula «**A** says: '**p**'» the sentence which is substituted for **p** may be in an ethnic language other than the rest of the formula. The formula «**A** says: '**p**'» is intensional, as is also its equivalent «**A** says that **p**». To verify that, it suffices to replace, in the example given above, the word «three» by its equivalent «seven less four».

We shall adopt the second interpretation of the formula «**A** says: '**p**'» when we proceed to analyse below quoted expressions that occur in literary works. This decision is supported by the fact that a natural language consists of an object language and of metalanguages of various levels, and that the users of natural languages, in particular the authors and readers of literary works, usually do not realize which expressions in a natural language are in the object language, and which are in metalanguage. They usually treat all expressions so as if they belonged to a language of one and the same level, which is manifested in the fact that sentences in direct speech are usually held to be sentences, and not metalinguistic names of sentences.

7. *The author and/or the reader and the expression «**A** says: '**p**'»*

Now that we have seen that at least some expressions which occur in literary works are substitutions of the formula «**A** says: '**p**'», we shall examine the pragmatic relations that hold between the author of a given text and that expression. To simplify matters we assume that these relations are the same if a reader is considered instead of the author.

I make a hypothesis that a sentence **p** quoted in direct speech is, when it comes to literary works, usually treated as a semiotic enclave which is embedded in the context «**A** says...». That context sometimes occurs explicitly, and sometimes is reconstructed by us. We disregard the difference between the linguistic levels of the context «**A** says...» and the sentence **p** quoted in direct speech, and also the syntactic difference between those elements, mentioned earlier in connection with

the first interpretation of the formula «**A** says: '**p**'», and we are usually inclined to treat both the expression which is a substitution of «**A** says: '**p**'» and that which is a substitution of **p** as sentences in a language of one and the same level. Moreover, we are inclined to isolate one from the other and to adopt a separate pragmatic attitude toward each of them. Out of the many possibilities that consist in accepting, to some extent, or in rejecting, to some extent, each of these two sentences, or in adopting an assertively neutral attitude toward one or both of them, one case deserves a special mention: when we reject the sentence which is a substitution of the formula «**A** says: '**p**'», and at the same time accept the sentence which is a substitution of **p**.

As is known, positive or negative assertion is an element of judgements. My hypothesis, as formulated here, implies that in the case of the pragmatic attitude described here both a sentence in the form of «**A** says: '**p**'» and a sentence which is a substitution of **p** express judgements, and not quasi-judgements in the sense described above. The concept of quasi-judgements enabled Ingarden to explain certain cognitive aspects of literary works, since he could point to a similarity between intentional objects and relations among them, on the one hand, and real objects and relations among them, on the other. The hypothesis which is being advanced in this paper does not refer to the concept of intentional objects. Its main point is to draw attention to the fact that (1) we adopt opposite pragmatic attitudes toward the sentence which is here termed the context and toward what is termed the semiotic enclave, (2) these two pragmatic attitudes belong to different linguistic levels, since when we reject the sentence called the context we refuse to express our belief about a certain (usually fictitious) person **A** as saying something, and when we accept the sentence called the semiotic enclave we place ourselves in the position of that person **A** and adopt a certain attitude toward what he says as if that what he says were not a quotation.

It seems that a similar analysis could be extended — with necessary modifications — so as to cover those sentences in which the functor under consideration is not one of the verbs

traditionally termed *verba dicendi*, but also one of the epistemic verbs, such as «thinks»,, «believes», etc.

8. *The semantic properties of the expression «**A** says: '**p**'»*

Propositions are the content of judgements. The former also are meanings of statements, which in turn are either true or false. Hence the adoption of the hypothesis formulated above enables us to consider some declarative sentences that occur in literary works as statements and thus to assess their truth-values.

If we adopt the classical definition of truth and if we take the empirical world to be the semantic model for sentences occurring in literary works, then the result turns out to be trivial and useless in any tentative explanation of the cognitive values of literary works. This is so because all those declarative sentences which include names of persons and/or objects that do not exist empirically as their arguments, and especially as their grammatical subjects, turn out to be false statements. Such sentences seem to be typical of literary works.

If we, however, bear in mind the intensional nature of the formula «**A** says: '**p**'» and its syntactic structure, i.e., the fact that **p** stands for a semiotic enclave embedded in the context «**A** says...», the result turns out to be less trivial.

Out of the semantic properties of the sentences in the form «**A** says: '**p**'» we shall consider their truth-value by analysing separately the truth-value of the statement called the context and that of the statement called the semiotic enclave, with the proviso that it is not necessary to analyse all the four possible cases.

I advance the hypothesis that special mention is due to the case in which the statement which is a substitution of the formula «**A** says: '**p**'» is false because an empty term stands in the place of the free variable **A**, while the semiotic enclave, i.e., the statement which is a substitution of **p**, is true.

As has been mentioned above, the adequate definition of truth, formulated in the metalanguage of semantics, enables us

to conclude that **p** if the statement «**p**» is true. This is why, among other things, it is possible to pass, in the sphere of semantics, from statements about expressions to statements about facts. In this connection it seems that the semantic properties of a sentence in the form «**A** says: '**p**'», as described above, provide a partial explanation of the fact, which we know from our experience, that literary works are occasionally sources of our knowledge of empirical facts.

Thus the first tentative and partial explanation of certain cognitive aspects of literary works consists (i) in drawing attention to expressions in the form «**A** says: '**p**'» as typical of those works; (ii) in interpreting that formula especially for the case in which **p** is a sentential argument, and the whole formula is intensional in nature; (iii) in adopting the pragmatic interpretation in which we reject the statement which is a substitution of the formula «**A** says: '**p**'» while we accept the statement **p** which functions as a a semiotic enclave; (iv) in adopting the semantic interpretation in which the statement «**A** says: '**p**'» is false, while the statement '**p**' is true.

It must, however, be borne in mind that this hypothesis applies to some sentences only out of those which occur in literary works, and that it explains the cognitive role of literary works to some extent only.

9. *Real versus intentional existence*

In his calculus of terms, which Stanisław Leśniewski called ontology ([5]) the primitive term «ε» («is») is introduced by the axiom:

$$\mathbf{a} \varepsilon \mathbf{b} \equiv (\Pi \mathbf{x})\,(\mathbf{x} \varepsilon \mathbf{a} \rightarrow \mathbf{x} \varepsilon \mathbf{b}) \,\&\, (\exists \mathbf{x})\,(\mathbf{x} \varepsilon \mathbf{a}) \,\&$$
$$\&\, (\Pi \mathbf{x}, \mathbf{y})\,(\mathbf{x} \varepsilon \mathbf{a} \,\&\, \mathbf{y} \varepsilon \mathbf{a} \rightarrow \mathbf{x} \varepsilon \mathbf{y}).$$

([5]) Stanisław Leśniewski, «Über die Grundlagen der Ontologie», in *Comptes rendus des Séances de la Société des Sciences et Lettres de Varsovie*, XXIII, CL, III; see also Tadeusz Kotarbiński, *Gnosiology*, Warsaw 1966.

The right side of that axiom is a product of three factors for which the following definitional abbrevations are given:

Df. 1 $\mathbf{a}$ sub $\mathbf{b} \equiv (\Pi \mathbf{x})\ (\mathbf{x} \varepsilon \mathbf{a} \rightarrow \mathbf{x} \varepsilon \mathbf{b})$

(any **a** is **b** if and only if, for every **x**, if **x** is **a**, then **x** is **b**).

Df. 2 ex $\mathbf{a} \equiv (\exists \mathbf{x})\ (\mathbf{x} \varepsilon \mathbf{a})$

(**a** exists if and only if, for some **x**, **x** is **a**).

Df. 3 sol $\mathbf{a} \equiv (\Pi \mathbf{x}, \mathbf{y})\ (\mathbf{x} \varepsilon \mathbf{a}) \,\&\, (\mathbf{y} \varepsilon \mathbf{a}) \rightarrow (\mathbf{x} \varepsilon \mathbf{y})$

(there is at most one **a** if and only if, for every **x** and **y**, if **x** is **a** and **y** is **a**, then **x** is **y**).

Hence the above axiom may be rewritten thus:

T. 1 $\mathbf{a} \varepsilon \mathbf{b} \equiv \mathbf{a}$ sub $\mathbf{b}$ & ex $\mathbf{a}$ & sol $\mathbf{a}$

(**a** is **b** if and only if any **a** is **b** and **a** exist and there is at most one **a**).

The definition of being an object is now introduced:

Df. 4 ob $\mathbf{a} \equiv (\exists \mathbf{x})\ (\mathbf{a} \varepsilon \mathbf{x})$

(**a** is an object if and only if, for some **x**, **a** is **x**).

T. 2 ob $\mathbf{a} \equiv$ ex $\mathbf{a}$ & sol $\mathbf{a}$

(**a** is an object if and only if **a** exist and if there exists at most one **a**).

Proof:

It follows from T. 1 and Df. 4 that

(1) ob $\mathbf{a} \equiv (\exists \mathbf{x})\ (\mathbf{a}$ sub $\mathbf{x}$ & ex $\mathbf{a}$ & sol $\mathbf{a})$,
(2) ob $\mathbf{a} \equiv (\exists \mathbf{x})\ (\mathbf{a}$ sub $\mathbf{x})$ & (ex $\mathbf{a}$ & sol $\mathbf{a})$.

Since it follows from the law of identity $\mathbf{p} \rightarrow \mathbf{p}$ and from

Df. 1 that

(3) **a** sub **a**,

hence

(4) $(\exists \mathbf{x})$ (**a** sub **x**).

We accordingly leave out that factor, which is always true, from the product on the right side of (2) and obtain T. 2 (q.e.d.). Now T. 2 immediately yields

T. 3 ob **a** $\rightarrow$ ex **a**

(if **a** is an object, then **a** exists).

As can be seen, in Leśniewski's ontology nothing can be said to be a non-existent object. In his ontology we are not in a position to point to any constant term such that we could prove for it a statement in the form «**a** is **b**» or in the form «**a** exists», in which such a term would take the place of **a**.

Yet Ajdukiewicz ([6]) succeeded in formulting two methods of making the language of onotology richer: (i) by introducing into the vocabulary of ontology names of real objects and by joining to its accepted statements new accepted statements which include those names, and by modifying the rule of substitution, as valid in ontology, so that such names might be substituted for term variables in ontological statements; (ii) by introducing into the vocabulary of ontology names of fictiious persons and objects, such as «Zeus», «Cyclops», and by joining to ontological statements such accepted statements as «Zeus is an Olympian god». The theorems valid in ontology make it possible to deduce from such statements the statements «Zeus is an object» and «Olympian gods exist». In this way, according to the manner in which we amplify the language of ontology, we can obtain, respectively: the concept of a real object and the concept of real existence, and the concept of an inten-

([6]) Kazimierz AJDUKIEWICZ, «On the Notion of Existence», *Studia Philosophica*, IV, 1949/50.

tional object and the concept of intentional existence. We assume that the language of literary works is one in which the concept of an intentional object occurs. Ajdukiewicz notes that when we use that language we accept the statement «Zeus is an Olympian god» on having established empirically that it occurs in Homer's texts. We must accordingly also use the empirical language, and at least its metalinguistic part. The rules of accepting statements in intentional language include the following one: we may accept, in intentional language, an object-language sentence «**a** is **b**» if we have earlier accepted, in empirical language, the metalinguistic sentence «a certain sentence which occurs in a certain literary text has the form '**a** is **b**'». This rule thus leads from the acceptance of certain metalinguistic sentences in empirical: language to the acceptance of certain object-language sentences in intentional language. Moreover, a certain immanent logic is valid in intentional language, which logic enables us to accept certain sentences in that language as inferential consequences of other sentences in that language even though they have no corresponding metalinguistic sentences in empirical language. Thus, for instance, from the sentences, «Zeus is an Olympian god» and «every Olympian god is immortal», which occur in Homer's texts, we may deduce and accept in intentional language the sentence «Zeus is immortal» as an inferential consequence of the former sentences, even if the latter sentence did not occur in Homer's texts.

Finally, Ajdukiewicz notes that the user of intentional language, who — as we have said — must also use at least the metalinguistic part of empirical language, may either hold that the two do not form a single language, or he may treat them both as one language, and accordingly to consider as meaningful a sentence which consists of two sentences such that one of them belongs to empirical language, and the other, to intentional language.

Ajdukiewicz confines himself to recording these two possible solutions without giving preferences to any of them. I, on the contrary, want to advance the hypothesis that the language of literary works consists of the two languages mentioned above,

i.e., empirical language, and that not only in its metalinguistic part, and intentional language. When it comes to sentences of the form «**A** says: '**p**'» it seems that special consideration is due to the case in which the semiotic enclave **p** is in empirical language, whereas the sentence which is termed the context is in intentional language. This proposal supplements the hypotheses formulated earlier concerning the expression «**A** says: '**p**'».

Thus, according to the hypotheses formulated above, the sentence «**p**» happens to be an accepted sentence which is a true statement and belongs to empirical language. This is why such sentences play an important role in providing information about the real world.

10. *Language as a deductive system*

In order unambiguously to describe a deductive system it suffices to list (i) the rules which determine which expressions are in the system, (ii) the rules which designate certain statements as axioms, (iii) the rules which state how certain statements follow directly from other statements or classes of statements. Since we may consider the axioms to be statements which follow directly from any class of statements, hence in order to describe a deductive system it is sufficient and necessary to list the rules which determine which staetments are in the system and the rules of how statements follow directly from other statements.

In order unambiguously to describe a language it is sufficient and necessary to list the expressions of that language and to assign the meanings of those expressions. But once the meanings of the expressions of that language are fixed, the ways in which sentences of that language follow from other sentences also become fixed; this applies to two kinds of relationships: certain sentences follow directly from certain specified classes of premisses only (e.g., the sentence «John is older than Peter» follows directly from the sentence «John is Peter's father» and certain obvious tacit premisses), while certain other sentences

follow directly from every class of premisses and are thus axioms in that language (such as the sentence «every **a** is **a**»). Hence language may be viewed as a deductive system.

In a deductive system, the set of its theorems includes all its axioms and all those statements which can be deduced from axioms, in a finite number of steps, in accordance with the rules of deduction. This is what is called the finitistic concept of a theorem.

Ajdukiewicz has shown (7) that in an incomplete deductive system not every statement which, in the language of that system, is true in the classical sense, that is, in the sense that the metalogical principle of the excluded middle holds, is a theorem in that system. This is so because a deductive system is incomplete if its language includes at least one statement such that neither that statement nor its negation is a theorem in that system. Under the principle of the excluded middle either that statement or its negation is true, but even if it is true, it is not a theorem in that system.

The language of literary works, like natural language, is incomplete, because it includes vague terms. A statement in which a vague term occurs, is undecidable, which means that the principle of the excluded middle does not apply to it. The rules of the language in question do not enable us to conclude that it is so as that statement says, nor does it enable us to conclude that it is not so as that statement says. This would be an argument in favour of abandoning the metalogical principle of the excluded middle, which — as Tarski has shown (8) — is equivalent to the logical principle of the excluded middle if the term «true», which occurs in it, is taken in the classical sense. That, however, would not be desirable, because in the language of literary works, like in any natural language, we are inclined to accept the logical principle of the excluded middle. Moreover, in accordance with the hypothesis advanced here, the language of literary works includes empirical language as its part. The abandoning of the logical principle of the excluded

(7) Kazimierz AJDUKIEWICZ, see the first paper listed in footnote (3).

(8) Alfred TARSKI, «The Concept of Truth in Formalized Languages», in *Logic, Semantics, Metamathematics,* Oxford 1956.

middle in empirical language would have untoward effects. This leaves the other solution: to keep the logical principle of the excluded middle as valid, but to consider it not to be equivalent to the metalogical princpile of the excluded middle, and hence to abandon the classical concept of truth and to replace it by the concept of theorem in the language of literary works.

To do so it is convenient to begin with a syntactic definition of a «true statement». That definition can be formulated so that nothing is said about the objects to which such a statement refers, namely: a statement «**S**» is true if and only if the statement «**S**» satisfies specified criteria. Such criteria depend on the kind of the language in which a given literary work is written; those valid in science fiction differ from those valid in realistic novels. It seems that they usually include the criterion of coherence, according to which a given statement is not the negation of any statement accepted earlier, but follows from those earlier accepted statements.

It may also prove useful to treat the language of a literary work as a deductive system. It is sometimes said that the world of fiction is governed by its own immanent laws. This can be interpreted so that certain norms are in force in that world, which point to certain statements as to axioms. Those norms would have as their counterparts the axiomatic rules of the language of that literary work, and the norms of the immanent logic which prevails in the world of fiction would have as their counterparts the deductive rules of that language. Thus the norms which prevail in the world of fiction would have as their counterparts the rules of direct consequence which prevail in the language of literary works. Finally, the propositions dictated in the world of fiction by the norms which prevail in that world would have as their counterparts theorems in the language of literary works, interpreted as a deductive system. In such a case, such a principle prevailing in the world of fiction be that those propositions are true which are dictated by the norms specific to that world, then in the language of literary works those statements would be true which are dictated by the rules of direct consequence, which means that only those statements would be true in that language

which are theorems in it. In this way we could abandon the classical concept of truth and replace it by the concept of a theorem in the language of literary works. (9)

It seems that such a solution is convenient in the case of an intentional language only, and hence it would satisfy only those who hold that the language of literary works is intentional. I think, however, that it is a language which consists of intentional language and empirical one, and I would not be inclined to replace, in empirical language, the concept of truth by that of a theorem in that language; nor would I dare to abandon the classical concept of truth and the related principle of the excluded middle.

11. *The concept of the use of an expression*

The hypothesis which states that the language of literary works consists of intentional language and of empirical one, the latter being taken not only in its metalinguistic part, is the second tentative partial explanation of the cognitive values of literary works. So far I have only drawn attention to the statements which are substitutions of the formula «**A** says: '**p**'», and in particular to the fact that substitutions for the empirical enclave '**p**' may, in a certain interpretation, be classed as belonging to empirical language.

It seems that the scope of this hypothesis can be extended beyond the cases of the type «**A** says: '**p**'», and that a partial verification of that broader hypothesis may refer to the analysis of the use of nominal expressions in the language of literary works.

We adopt the following concept of the use of a nominal expression. Given a nominal expression **N**, which in a language **L** has a meaning **M**, two tokens of that expression **N**, namely $\mathbf{N}_1$ and $\mathbf{N}_2$, occur in the same use $\mathbf{U}_1$ iff they refer to one and the same object $\mathbf{O}_1$. On the contrary, $\mathbf{N}_1$ and $\mathbf{N}_2$ occur in two different uses, $\mathbf{U}_1$ and $\mathbf{U}_2$, respectively, if and only if $\mathbf{N}_1$

(9) This is a paraphrase of some of Ajdukiewicz's proposals concerning the interpretation of transcendental idealism.

refers to $\mathbf{O}_1$ and $\mathbf{N}_2$ refers to $\mathbf{O}_2$, $\mathbf{O}_1$ being not identical with $\mathbf{O}_2$. For instance, two tokens of the word «dog» occur in different uses if the former refers to my dog, and the latter, to that of my friend. We note in particular that difference of uses in which $\mathbf{N}_1$ refers to an intentional object $\mathbf{O}_i$ (to be called an intentional use), and $\mathbf{N}_2$ refers to a real object $\mathbf{O}_e$ (to be called an empirical use); for instance, if $\mathbf{N}_1$ refers to the hound of the Baskervilles, and $\mathbf{N}_2$, to my dog. This requires an adequately liberal concept of meaning, for which $\mathbf{N}_1$ and $\mathbf{N}_2$ are tokens of one and the same nominal expression **N** that has a meaning **M**. It seems that this concept of meaning is possible and that it is not at variance with common intuitions, such as expressed, for instance, by a dictionary of an ethnic language. In such a dictionary the words «dog» and «cat» have different meanings assigned to them, but the word «dog», whether as a name of this or that real dog, or as a name of this or that fictitious dog, is usually described as one type-expression, that is so that one and the same meaning is assigned to it in all the cases listed above. It must be borne in mind that natural language, and hence also the language of literary works, is a set of languages in the logical sense of the term, i.e., languages in which the rules of meaning are described with precision and in which there is a one-to-one correspondence between the expressions of a language and their meanings. I must confine myself here to this explanation which refers to intuition, since the construction of the concept of meaning would require a separate paper.

12. *A semantic model*

Let us recall the concepts of domain, subdomain, and semantic model. A domain is a system of objects which includes a set, functions fixed for arguments from that set and with values in that set, certain selected elements of that set, and some relations between those elements. Thus a domain consists of individual objects, classes, and relations. A subdomain of a given domain is a system of objects, described as above, which satisfies two conditions: the set of the elements of the sub-

domain is included in that of the elements of the domain, and the operations and relations in the former set coincide with the corresponding operations and relations in the latter. A domain, which includes a non-empty set, is a semantic model of a given statement if that statement is true in that domain. The concepts of model and domain may also be referred to a set of statements and a language. A domain is a model of a given set of statements if they are true in that domain and if the set of the individuals of that domain is not empty. The concepts of domain and model can be rigorously applied to such a language only whose rules are fixed with precision, which cannot be said about natural language. If a set of statements includes not only true statements, but also false ones, then the domain assigned to that set of statements is not its model. But in such cases we can single out in that set those statements which are true in a given domain; they will then form a theory, and that domain will become a model of that theory. Every domain in which all the axioms of a language are true is a model of that language. If we take the empirical world to be a domain which is a model of natural language, we do not require all the statements in that language to be true in that domain: we rest satisfied with the truth of those statements which are in the body of our knowledge.

13. *Literary use, literary model, language of literary works*

The empirical model, which includes real objects, is the designated model of the language of empirical science. Should we refer to the fact that the classical concept of truth was genetically, e.g., in Aristotle's intentions, restricted to that model, we might accept that empirical model as the designated model of the language of literary works as well. In such a case, however, all statements in intentional use, and hence at least those statements which have a name in intentional use as their grammatical subject, would have to be considered false. In order to avoid that we could avail ourselves of the concept of the secondary use of denoting phrases in the sense of Russell's

theory of descriptions. ([10]) Thus, for instance, the denoting phrase «the present King of France» in the statement «the present king of France is not bald» occurs in its primary use in the interpretation «there is a human being who is now the king of France and who is not bald» (which is a false statement), and in its secondary use in the interpretation «it is not the case that there is a human being who is now the king of France and who is bald» (which is a true statement). But to do so we would have to interpret all the names which occur in intentional use as descriptions in Russell's sense; hence the corresponding statements in a literary text would have to be treated as non-independent elements of more comprehensive contexts, such as the context in the second interpretation of the statement about the king of France. It is only if we do that that a name **N** which occurs in intentional use becomes a masked description of the form «the person or the thing which is given by the author of the text the name 'N'». The other way to avoid the falsehood of statements in intentional use, but only those which fall under the schema **S a P**, would be to give them the weak interpretation, i.e., such in which we only state that **S** is included in **P**, but do not assume the existence of **S**. Both solutions seem unwieldy, and the latter is not universally applicable.

On the other hand, those who hold the opinion that the language of literary works is purely intentional, would probably take the model which includes intentional objects only to be the designated model of that language. But then, as has been mentioned earlier, they would have to abandon the classical concept of truth and to replace it by the concept of theorem in the language under consideration, or else they would have to abandon the logical principle of the excluded middle and to assume that intentional statements have a third truth-value. ([11]) These solutions do not seem attractive, either. The third way out would be to assume that declarative sentences in the lan-

([10]) Bertrand RUSSELL, «On Denoting», *Mind*, XIV, 1905.

([11]) P.F. STRAWSON, «On Referring», *Mind*, LIX, 1950; Leonard Linsky, «Reference and Referents», in *Philosophy and Ordinary Language*, (ed.) Ch. A. Caton, Urbana 1963.

guage of literary works are not statements, as they do not express judgements, and that they accordingly are expressions which do not have any truth-value (like, for instance, terms).

The last mentioned solution seems to be the best, as it saves the classical concept of truth and the principle of the excluded middle, but it is applicable to some sentences only out of those which occur in literary texts, namely to sentences in intentional use. But, as I have said earlier, I hold that the language of literary works does not consist of such sentences only, as it consists of two parts: the empirical and the intentional one. I accordingly suggest that for the language of literary works we take two models (and not only one) as the designated ones, namely the empirical model (the subdomain in which the selected statements of the empirical part of that language are true) and the intentional model (the subdomain in which the selected sentences of the intentional part of that language are satisfied).

The analyses which I have carried out on another occasion ([12]) have led me to the conclusion that it often happens that out of two successive sentences in a literary text which have one and the same name **N** as their grammatical subject, one sentence is in empirical use, since that name **N** refers to a real object, while the other is in intentional use, since that name **N** refers to an intentional object. Moreover, as is shown by an analysis of sentences in the form «**A** says: '**p**'», within a single complex or compound sentence one of its parts is in intentional language while the other is in empirical language. This same also sometimes occurs in the case of those simple sentences which are as it were bipolar: the subject is in intentional use and is a singular term, while the subjective complement is in empirical use and is a general term. It seems that this oscillation of one and the same expression, often in an analogical syntactic position, between intentional and empirical use is characteristic of the language of literary works. Next

([12]) Jerzy PELC, *Studies in Functional Logical Semiotics of Natural Language, Janua Linguarum, Series Minor*, No. 90, The Hague — Paris 1971, pp. 119-41.

to the oscillation of the uses of sentences we can sometimes note their ambivalence; a given expression may be interpreted in two ways: either as used in the empirical sense or as used in the intentional sense. That oscillation and ambivalence of the two uses, empirical and intentional, that imposition of the two uses upon one and the same expression, have been termed literray use by me. The model which consists of two models, empirical and intentional, I have termed the literary model, and the language, consisting of its empirical and its intentional part, the language of literary works. I hope that the meaning of those terms is in agreement with the well known fact that literary works speak about real and fictitious objects; in both cases they provide information about the world, whether directly or indirectly.

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