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The Significance of the Lvov-Warsaw School in the European Culture

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Chapter 7
The Lvov-Warsaw School and Austro-German Philosophers. Two Cases

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Ideological connections between the Lvov-Warsaw School and German-speaking philosophy are well known. The genesis of these connections is obvious. The creator of the School, Kazimierz Twardowski, was a student of the Viennese philosopher – Franz Brentano, and many Twardowski's students, especially from the older generation, studied (or complemented their studies) for a longer or shorter period in Austria, Germany and Switzerland. Many representatives of schools consciously referred to the achievements of German-speaking philosophers: primarily to Bernard Bolzano from Prague, Wilhelm Wundt from Leipzig, Gottlob Frege from Jena, David Hilbert from Gottingen, Hans Cornelius from Munich, Moritz Schlick, Rudolf Carnap, Karl Popper and Kurt Gödel from Vienna, Hans Reichenbach from Berlin etc.

The text below shows how filliation of ideas and personal relationships between the School and German-speaking philosophers looked in detail – on the example of two of them: Alexius Meinong from Graz and Heinrich Scholz from Münster.

7.1 Alexius Meinong

7.1.1 *Meinongian Presence in the Polish Philosophical Life*

Meinong was connected to Poland in many different ways.

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Firstly, Meinong, Ritter von Handschuchsheim, was born on the 17th of July, 1853, in Lvov, the town which was one of the greatest centers of Polish culture for six centuries.

Secondly, Meinong, an Austrian philosopher born in Poland, was on friendly terms with Kazimierz Jerzy Adolf Ogończyk of Skrzypna Twardowski, a Polish philosopher born in Austria – specifically in Vienna. There still remain some fragments of correspondence between Meinong and Twardowski. Twardowski's letters were published; Meinongs letters (from the years 1893 to 1907), kept in Twardowskis Archives at Warsaw University, await publication. It has been rumored that Meinong was influential in advancing the date of Twardowski's professorship to 1898.

Thirdly, one of the participants at Meinong's seminar at Graz University during the academic year 1909–1910 was Jan Łukasiewicz, with a scholarship awarded by the Cracow Academy of Sciences and Letters. It is likely that he attended Meinong's lectures during the winter semester of the academic year 1908–1909. Over time, the attitude of Łukasiewicz to Meinong altered. In the beginning it was enthusiastic. Later, Łukasiewicz changed his attitude and noted more defects than virtues in his book on logic, stressing for instance that it contains the following sentence: "The principle of contradiction is often pronounced as: *A* is not non-*A*", whereas it is false to identify the principle of contradiction with the negation of the positive formula "*A* is *A*", adopted for the principle of identity.[1]

Fourthly, Meinong's references to the works of Polish scholars are rare indeed. His works contain only some references to Twardowski, Łukasiewicz and Marian Smoluchowski.

Fifthly, a number of works written by Polish philosophers contain numerous mentions of Meinong's papers and books. Twardowski refers widely to Meinong. Henryk Struve appreciates Meinong's efforts to write philosophical propaedeutics for secondary schools. The above are the first mentions of Meinong in Polish philosophical literature.

After these first mentions, the name of Meinong has a constant presence in the Polish philosophical literature of the twentieth century, especially in the works of philosophers from the Lvov-Warsaw School. After the Second World War there are numerous references to Meinong in the works of Polish historians of philosophy.

These authors express either a high opinion of Meinong's theories, writing, like Kazimierz Ajdukiewicz, that he is "one of the most outstanding of Brentano's pupils", or else are rather neutral. The only exceptions are represented outside the Lvov-Warsaw School, namely by Leon Chwistek and Roman Ingarden.

Chwistek regarded Meinong as "an ideologist". And sometimes considered Meinong ironically, saying that

> from the days of Bolzano there has been a special school of logicians (Meinong, in Poland Łukasiewicz), who think that there is no need to reject [. . .] [contradictory] objects, not

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[1] J. Łukasiewicz, *O zasadzie sprzeczności u Arystotelesa* [On the Principle of Contradiction in Aristotle]. Cracow: Polska Akademia Umiejętności 1910, p. 44.

being able to find a «proof» of the principle of contradiction. This standpoint can be named «hyperrealism»[2]

or contemptuously, writing in a later paper that "Meinong, the Austrian philosopher whose views were fashionable in Poland before the war of 1914, was firmly convinced that non-Euclidean geometry deals with intersecting parallels and in all seriousness was attracted to this absurdity".[3]

Ingarden very often wrote of Meinong with ostentatious antipathy.

Sixthly, Polish philosophical literature contains detailed reports of Meinong's views on semiotics, ontology and axiology. Unfortunately, not many of Meinong's works have been translated into Polish.

Seventhly, some of Meinong's logico-ontological ideas found creative development in Poland. In this regard, we may consider some works by Bogusław Wolniewicz and, especially, several works by Jacek Paśniczek. Both authors emphasize that only a kind of general inspiration is at stake here.

If we may say so, Meinong was – and is – present in many ways in Poland: he was born there, and he had friends and students from that country; he referred to Poles and was referred to by them; his scholarly production found among them reviewers as well as developers.

I would like, however, to concentrate here upon a different «mode of existence» of Meinong in Poland, namely upon something that can be described as his negative existence, but which is – in spite of its description – the strongest mode of being for philosophical ideas. Thus many of Meinong's ideas met criticism in Poland; criticism which has not only historical value. Below, I shall indicate some of Meinong's crucial ideas, together with their critical Polish clarifications.

The following are Meinongs main theses, *expressis verbis* attacked by Polish philosophers.

7.1.2   The Main Meinongian Ideas Commented on by Polish Philosophers

7.1.2.1   Ontological Theses

(A) There are various kinds of objects: concrete and abstract objects, fictitious objects and *incompatibilia* (contradictory objects).
(B) In particular, one can prove that some objects are *incompatibilia*.

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[2]L. Chwistek, "Trzy odczyty odnoszące się do pojęcia istnienia" [Three Papers Concerning the Notion of Existence] (1917), in: L. Chwistek, *Pisma filozoficzne i logiczne* [Philosophical and Logical Papers]. Vol. I. Warsaw: PWN 1961, p. 6.

[3]L. Chwistek, *The Limits of Science. Outline of Logic and of Methodology of the Exact Science.* London: Routledge and Kegan Paul 1935/1949, p. 178.

(C) Concrete objects differ from other objects because the former are complete (*vollständige Gegenstande*), whereas the latter – including abstract objects – are incomplete (*unvollständige Gegenstande*).

(D) There are various modes of being: existence (*Existenz*), subsistence (*Bestand*) and «extra-sistence» (*Aussersein*).

(E) All concrete objects – constituting the so-called external world – exist.

(F) The idealists' argument against the existence of the external world is invalid.

7.1.2.2 Semiotic Theses

(G) Names and sentences belong to the basic kinds of (categorematic) expressions.

(H) The difference between names and sentences does not inhere in their semantic functions.

 (I) Every name, as well as every sentence, designates something (and informs about something).

 (J) In particular, there are no empty names.

(K) The difference between names and sentences inheres in the kind of their designata.

 (L) Names (and only names) designate objects, whereas sentences designate objectives.

(M) There is something between names and sentences, namely assumptions (*Annahmen*).

(N) Assumptions – like names and sentences – perform the function of designating.

(O) In particular, assumptions designate – like sentences, and in opposition to names – objectives.

 (P) The difference between assumptions and sentences inheres in their pragmatic function.

(Q) Names (and only names) express (*druck aus*) presentations (*Vorstellungen*), sentences (and only sentences) express convictions (*Überzeugungen*), and assumptions (and only assumptions) express quasi-convictions.

7.1.2.3 Psychological Theses

(R) Presentations and thoughts – i.e. convictions and quasi-convictions – fall within the class of intellectual psychic acts; additionally we have emotional (*Gefühle*) and volitive acts (i.e. desires: thirsts and decisions).

(S) Emotional acts contain presentational emotions (*Vorstellungsgefühle)* and convictional emotions (*Urteilgefühle*), i.e. logical and axiological ones.

(T) Logical emotions – in contrast to axiological emotions – are independent from the quality of convictions, being motives (or foundations) of these emotions.

We shall now move on to details.

7.1.3 *Against incompatibilia*

The thesis (B) that it is necessary to admit *incompatibilia* was criticised by Stanisław Leśniewski[4] and Chwistek,[5] a philosopher relatively close to the Lvov-Warsaw School.

Chwistek presents Meinong's view on this subject[6] in the following way:

The exclusion of non-existent objects from logic is impossible. As a matter of fact, if I want to exclude from logic, e.g., the round square, it seems right to accept the judgment "A round square is not an object". But in this judgment I say something about a round square; thus I do not exclude it from logic.

Chwistek rejects Meinong's view, because it has two non-acceptable consequences.

1. A system of logic cannot be free of contradiction, since it also has to include contradictory objects.[7]
2. We cannot find criteria for distinguishing contradictory objects from all the other objects. As a matter of fact, criteria of that sort cannot be given by a system of logic, because any system provides facilities for demonstrating that a round square is a contradictory object, as well as that it is not a contradictory object. (This property is possessed by every round square which both is and is not a contradictory object.) All intuitive criteria fail analogously.[8]

It must be said that is difficult to reconstruct Chwistek's second argument in detail. Besides, he himself adds:

The difficulties connected with the above theory have the following feature in common with paradoxes: both of them are hard to demolish by means of a critical analysis, but we can eliminate them with a systematic construction of concepts.[9]

This is precisely the method used by Bertrand Russell to eliminate the paradox discussed above, and Chwistek finally opts for this Russellian solution. Leśniewski chooses a quite different way. I will quote his argument *in extenso*:

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[4]S. Leśniewski, "The Critique of the Logical Principle of the Exclude Middle" (1913), in: S. Leśniewski, *Collected Works*. Vol. I. Warsaw & Dordrecht: PWN & Kluwer 1992, pp. 47–83.

[5]L. Chwistek, *Zasada sprzeczności w świetle nowszych badań Bertranda Russella* [The Principle of Contradiction in the Light of the Newest Results of Research of Bertrand Russell]. Rozprawy Akademii Umiejętności. Wydział Historyczno-Filozoficzny. Series II, XXX (LV), 1912, pp. 270–334.

[6]From: A. Meinong, "Über die Erfahrungsgrundlagen unseres Wissens", in: A. Meinong, *Gesamtausgabe.* Graz 1968–1978, Akademische Druck- u. Verlagsanstalt 1906, B. V, pp. 367–481.; A. Meinong, "Über die Stellung der Gegenstandstheorie im System der Wissenschafte", in: A. Meinong, *Gesamtausgabe.* Graz 1968–1978, Akademische Druck- u. Verlagsanstalt1906–1907, B. V, pp. 197–365.

[7]L. Chwistek, *Zasada sprzeczności w świetle nowszych badań Bertranda Russella*, p. 283.

[8]*Ibid.*, p. 284

[9]*Ibid.*

If it were true that there are no «contradictory objects», in other words, that no objects
are «contradictory», then it would be true that a «contradictory object» is not an object.
It can be, however, true that a «contradictory object» is not an object only in the case
when a certain object is «contradictory»! If no object were «contradictory», then no
proposition about the «contradictory object» could be true, including the proposition [that]
a «contradictory object» is not an object. Thus, if it were true [that] a «contradictory
object» is not an object, then it must be also true that a certain object is «contradictory».
This being so, the assumption made at the beginning that no object is «contradictory»
entails the conclusion that a certain object is «contradictory»! If, on the other hand, the
assumption that no object is «contradictory» is false, then it is true that a certain object
is «contradictory»! Thus, both the assumption that a certain object is «contradictory»,
and the assumption that no object is «contradictory» entails the conclusion that a certain
object is «contradictory». In other cases, the acceptance of «contradictory objects» becomes
logically inevitable.[10] The solution of this «paradox» becomes quite simple. [. . .] If it is
true that no object is «contradictory», then the proposition "A «contradictory object» is not
an object" cannot be true, contrary to Meinong's opinion. This proposition cannot be true
because its subject "contradictory object" denotes nothing if no object is a «contradictory
object» (the expression "contradictory object" could after all denote only an object which
was «contradictory»). Since the proposition "A «contradictory object» is not an object"
is false, it is not necessary to accept the proposition "A certain object is «contradictory»"
as true, it would have to be considered true if the proposition "A «contradictory object»
is not an object" were true. Thus, contrary to Meinong, the assumption that no object is a
«contradictory object» does not entail the conclusion that a certain object is «contradictory».
There is not, then, any logical necessity such as Meinong envisages leading to the
acceptance of «contradictory objects».[11]

Leśniewski's argumentation is not the most limpid, but we can give it the
following form.

The point of departure (i.e. the assumption) of Meinong's reasoning is the
sentence:

(1) No object is an *incompatibile object.*

Sentence (1) is either false or true. If sentence (1) is false, then:

(2) A certain object is an *incompatibile object,*

i.e. there are *incompatibilia.* If sentence (1) is true, then:

(3) The sentence "An *incompatibile object* is not an object" is true.

Now:
If a given sentence is true, then its subject designates something. Thus from (3)
and (4) we have:

(4) The expression "*incompatibile object*" designates something.

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[10]A. Meinong, "Über die Stellung der Gegenstandstheorie im System der Wissenschafte", In:
A. Meinong, *Gesamtausgabe*. Graz 1968–1978, Akademische Druck- u. Verlagsanstalt1906–1907,
B. V, pp.197–365.

[11]S. Leśniewski, "The Critique of the Logical Principle of the Exclude Middle", pp. 62–63.

And then:

(5) A certain object is an *incompatibile object*,

or there are *incompatibilia.* Both assumptions lead to acceptance of the view that there are *incompatibilia.* Leśniewski does not assume that (1) is false, because elsewhere he proved that (1) is true.[12] The other assumption does not lead to the thesis that some objects are *incompatibilia.* Provided that (1) is true, then:

(6) The expression "*incompatibile object*" could designate only an object which was an *incompatibile object.*

Thus from (1) and (7) we have (in spite of (3)):

(7) If the subject of any sentence designates nothing, then this sentence is false.

Thus we cannot make steps (4)–(6), and we do not have to accept that there are *incompatibilia.*

7.1.4   Against Abstract Objects

According to the thesis (C), abstract objects are incomplete objects. For Meinong, objects are complete when they are determined in the smallest detail. Łukasiewicz[13] presents Meinong's position with the following words: "Every thinkable property can be either ascribed or denied to such an object. [Adam] Mickiewicz's column in Lvov is determined in all its smallest details – it is a complete object." (NB. During Meinong's stay in the town, this column did not exist.) The situation is quite different with incomplete objects:

> Should the proposition "A column [in general] is made of bronze" be considered as true or as false? Some columns are made of bronze, others are *not;* a column in general is not determined in this respect. For this reason the above property cannot be either ascribed or denied to it.

Therefore, Łukasiewicz adds, for Meinong "the proposition "A column in general is bronze" is neither true nor false." Łukasiewicz proposes a different solution. The point is not that some sentences concerning abstract objects are neither true nor false. He does not say why, but we are able to fill in the missing details. Utterances of the type "A column in general is bronze" are neither true nor false because they are not sentences. We may avoid this conclusion if we accept that some sentences about abstract objects, and their negations, are false.

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[12]*Ibid.*

[13]J. Łukasiewicz, *O zasadzie sprzeczności u Arystotelesa*, p. 121.

Then: "We realize that the distinctive mark of incomplete objects is their non-falling under the principle of the excluded middle."[14] Note (and I take responsibility for this remark) that Meinong's thesis about the complete determination of concrete objects does not satisfy our intuitions. In fact, it seems that the principle of the excluded middle can be violated also by concrete objects. Would it not be quite natural to concede that Mickiewicz's column in Lvov is, e.g., incomplete in the respect of rationality or of virtue? This question has a certain psychological bias. Meinong claims that acts of constructing abstract objects – or acts of abstracting – "consisted of with attention, casting into relief, some properties of the imagined object, at the cost of the remaining properties, placed into the background."[15] However, since during our acts of presentation – and in particular of imagination – our attention is never uniformly directed, then none of our imaginings are concrete. Meinong accepted this consequence. Twardowski objected that Meinong had made a wrong analysis of the acts of abstraction. The point is that

> the process of abstraction contains something more [than a non-uniform attention given to the several properties of the imagined object] and [. . .] the phenomenon described by Meinong [. . .] as an abstraction, considers only its necessary conditions and not also its sufficient conditions.[16]

For Twardowski, the "something more" concerns the underlying imagined judgments.[17]

7.1.5   Against Various Modes of Being

The problem of the several modes of being – see thesis (D) – was indirectly addressed by Marian Przełęcki in some of his works[18] as part of a polemic between Przełęcki and the author of this text. At that time I defended a fictionalistic ontology, whereas Przełęcki took an anti-fictionalistic position. In his works Przełęcki reduced notions to abstracts, identifying the latter with classes (in the sense of set theory). His reduction concerned also modes of being. Przełęcki's position is well represented by the title of one of his papers: "There is nothing that does not exist".[19]

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[14]*Ibid.,* p. 122.

[15]K. Twardowski, "Wyobrażenia i pojęcia" [Images and Concepts] (1898), in: K. Twardowski, *Wybrane pisma filozoficzne* [Selected Philosophical Papers]. Warsaw: PWN 1965, p. 135.

[16]*Ibid.*, p. 136.

[17]J.J. Jadacki, "Kazimierz Twardowski's Descriptive Semiotics" (1989), in: F. Coniglione, R. Poli, J. Woleński (Eds.), *Polish Scientific Philosophy.* Amsterdam & Atlanta (GA): Rodopi 1993, pp. 191–206.

[18]M. Przełęcki, "On What There Is Not" (1979), in: *Dialectics and Humanism* VIII, 4, 1981, pp. 123–129; M. Przełęcki, "Nie ma tego, co nie istnieje", in: *Studia Filozoficzne* XXIV, 9, 1980, pp. 141–148. English version: "There Is Nothing That Does Not Exist", in: *Dialectics and Humanism* VIII, 4, 1981, pp. 141–145.

[19]M. Przełęcki, "Nie ma tego, co nie istnieje".

Przełęcki's argument against this doctrine is well expressed by the following sentences:

> There is only one sense of "existence" or "being" [...]. In that sense, all real, i.e. non-fictitious, objects are said to exist; at the same time, it is said that no fictitious entity exists [...]. The concept of "existence" or "being" seems to be a basic one – not definable by means of other, more elementary notions. To grasp it, we have ultimately to appeal to the way it is understood within natural language [...]. To exist means the same as to be. Whatever is, it exists, and conversely. Saying that something does not exist is saying nothing more than that there is no such thing. So, either something is, or it is not – *tertium non datur* [...]. If I have to speak literally and seriously, I must conclude that there is no such thing as [...] [a fictitious entity]; that no such entity exists. I cannot find any literal sense of "being" or "existence" that would permit me to reach a different conclusion. I really do not understand what is meant by "being" as applied to the so-called fictitious entities.[20]

But there is more to this. Przełęcki reinforces his argument:

> Contrary to [Jacek] Jadacki's opinion, I would thus claim that metaphysical inquiry can be developed without resorting to the theory of the several modes of being. What it might require is a theory of various ontological categories. Objects which belong to different categories differ in the properties they have (but not in their mode of being) and these differences seem sufficient to account for what the alleged differences in their modes of being were supposed to be needed for.

Ironically enough, instead of trying to build up «my» fictionalistic ontology, I turned to developing a «thin» ontology.[21] In Poland, the first task was instead assumed – rather successfully – by Paśniczek.

7.1.6 Against the Invalidity of the Argument of Idealism

Sometimes Meinong – instead of elaborating his own position – analyzes the opposite positions elaborated for some problem. Needless to say, to demolish an argument in favor of a certain thesis is not the same as to argue for a thesis contradictory to the former one. In any case, there may prove to be an important psychological reason in support of the latter. This fact exhibits a value of reasoning, which leads to thesis (F). Meinong presents the idealists' argumentation with the following words:

> Am weitesten geht ohne Zweifel, wer meint, daß auf die Erkenntnis einer Außenwelt deshalb nicht Bedacht zu nehmen sei, weil es eine solche Außenwelt nicht nur nicht gibt, sondern nicht einmal geben kann, da ihre Konzeption einen Widerspruch in sich schließt. Jedermann, das ist der für eine solche Behauptung maßgebende Grund, den man von "Idealisten", "Positivisten", "Empiriokritizisten" u.s.f. in den verschiedensten Weisen variiert findet, denkt sich die Außenwelt als etwas, das existiert, mag er oder sonst jemand daran denken oder nicht. Aber am Ding, das unabhängig von meinem Denken existiert, m.a.W., ein Existierendes, an das ich nicht denke, ist eine Unmöglichkeit; denn dächte

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[20]*Ibid*., pp. 142–143.

[21]Z. Augustynek, J.J. Jadacki, *Posssible Ontologies*. Amsterdam & Atlanta (GA): Rodopi 1993.

ich nicht daran, wie wollte ich seine Existenz erkennen? Jedes Nichtgedachte oder vom Denken Unabhängige, für das einer eintritt, mußte am Ende doch zugleich am Gedachtes, also jedenfalls ein in sich Widersprechendes sein.[22]

Then he calls our attention to a mistake in this argumentation, continuing in the following way:

Fragen wir nun aber ganz direkt nach der Beweiskraft unseres Argumentes. Ich durfte es eben als sehr einleuchtend bezeichnen, daß, woran ich denke, kein zugleich Ungedachtes sein kann. Denke ich also einmal an das Weltganze, so erhält auch dieses sozusagen durch mich die Eigenschaft, von mir gedacht zu sein. Folgt aber daraus irgendwie, daß, wenn ich an dieses Ganze oder an am einzelnes Objekt nicht denke oder auch eben jetzt nicht dachte, jenes Ganze oder dieses Objekt nicht existieren könnte? Ebensowenig, als einer behaupten durfte, nur das existiere, wovon er spreche, oder was er aufschreibe, aufzeichne oder dgl. Denn auch in jedem dieser Falle ließe sich *mutatis mutandis* der obige Beweisgang anwenden: ich kann ja auch nichts Unaufgezeichnetes aufzeichnen, nichts Unbesprochenes besprechen u.s.f. [. . .] Wie dem am Ende aber auch sei, dem in Rede stehenden Argumente ist einfach entgegenzuhalten: Daß ich an nichts denken kann, das dann in jedem Sinne für ungedacht gelten durfte, ist richtig. Aber es besagt weder, daß die Existenz dessen, woran ich denke, irgendwie von diesem Denken abhangig ware, noch, daß nichts existieren könnte, ohne daß bisher irgend jemand daran gedacht hätte, oder dem sich auch meine Gedanken anders als in diesem so allgemeinen Urteile zuwenden müßten.[23]

Providing that I understand Meinong's ideas correctly, he ascribes to the idealists the following assumptions:

(1) If somebody thinks of *P*, then *P* is thought by somebody.
(2) If P is thought by somebody, then *P* exists.

On the basis of these assumptions it is also obvious that:

(3) If somebody thinks of *P,* then *P* exists.

Assumption (1) as well as assumption (2) – and their consequences, of course – are explicitly accepted by Meinong (according to a certain interpretation of the word "exists"). Moreover, he thinks that the idealists regard the thesis

(4) If nobody thinks of *P*, then *P* does not exists,

as implied by (1) and (2). Thus the idealists would make a serious error, because they reason according to the scheme: $[(p \rightarrow q) \land (q \rightarrow r)] \rightarrow (\sim p \rightarrow \sim r)$.

Ajdukiewicz noted very elegantly:

The above way of formulating the idealists' argument and ITS CRITICISM [my emphasis, JJ] cannot be considered as perfect.[24]

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[22] A. Meinong, "Über die Erfahrungsgrundlagen unseres Wissens", p. 458.

[23] *Ibid*., pp. 460–461.

[24] K. Ajdukiewicz, "Alexius Meinong. Krytyka argumentów idealizmu" [Criticism of the Arguments of Idealism], in: K. Ajdukiewicz, *Główne kierunki filozofii* [The Main Directions of Philosophy]. Lvov: K. S. Jakubowski 1923, p. 99.

He then presented his own interpretation of the idealistic argumentation:

The external world is defined as something which exists independently of any thought. The true fact, that the external world is defined, causes the world to be dependent on the thought expressed in the definition. But the consequence of the content of this definition is that the external world is independent of any thought; thus it is independent also of the above expressed thought. Therefore we have a contradiction [...]. The above argument consists in using the words "independent of thought" in two senses [...]. The independence ascribed to the external world by the definition consists in the non-occurrence of the relation of a necessary condition between the world and the thought. The dependence motivated by the definition consists in the occurrence of a rather DIFFERENT relation between its members, namely an [intentional] relation occurring between a thought and its object [...]. So the contradiction is apparent, and the appearance of this contradiction comes from an equivocal use of words.

According to Ajdukiewicz, the idealists reason in the following way. Let us suppose that:

(5) The external world is independent of thought.

We can then say that:

(6) If in any sentence one says something about P, then P is dependent on the thought expressed in this sentence.

In virtue of (5) and (6), we obtain:

(7) The world is dependent on the thought expressed in sentence (5).

Thus, assumption (5) leads to (7), which is the contradiction of (6); so we are forced to reject this assumption, i.e. to agree that the external world is dependent on (some) thought.

The above argument must be rejected because it falls into an error of equivocation. "Dependence" in assumption (5) – as well as in the supposed conclusion (7) – has a meaning different from the meaning of "dependence" in assumption (6).

It should be pointed out that the above reconstruction of the analysis of the idealists' argument developed by Ajdukiewicz has been simplified in some respects. An interpretation closer to the original is the following. Let us assume that

(8) The external world is independent from any thought.

Thus:

(9) The external world is dependent on no thought.

Let us agree that:

(10) If somebody claims that P exists, then he thinks of P,

and that:

(11) If somebody thinks of P, then P is thought of by somebody,

as well as that:

(12) If *P* is thought of by somebody, then *P* is dependent on a certain thought.

From (10), (11), and (12) we obtain:

(13) If somebody claims that *P* exists, then *P* is dependent on a certain thought.

Inversely:

(14) If *P* is dependent on no thought, then nobody can claim that *P* exists.

From (9) and (14) we obtain:

(15) Nobody can claim that the external world exists.

And (15) entails that:

(16) The external world does not exist.

The crucial point of this argument is assumption (12), which gives to the expression "dependence [on a certain thought]" a meaning different from the meaning it had in assumption (8).

It is worth noting that while rejecting idealism, Meinong did not avoid one of the most typical of the idealistic mistakes, namely the mistake of classifying relations using as their *fundamentum divisionis,* the procedure of comparison.[25]

As a result of the above criterion, Meinong distinguished between two classes of relations: *Verträglichkeitsrelationen* and *Vergleichungsrelationen.* Marian Borowski noted:

> A psychical act of comparing cannot be an essential foundation of relations; it [can] only make it easier to PERCEIVE them. The relation, e.g., of real equality in the physical domain – or of the exclusion of two notions in the ideal domain – does not result from our psychical act of comparing, but it exists also without our being conscious of this relation. The equality of two objects is not something less real or more dependent on us than their causal connection. The combining of both the objects under consideration – what is called "comparison" – is necessary only for perceiving the first as well as the second relation. We cannot bring ourselves to believe that any of our psychical acts constitute a condition of the relation of equality, of time succession, or of nearness.[26]

I completely agree with Borowski.

7.1.7 *Against the Non-Existence of Empty Names*

As to empty names – that is, as to thesis (J) – Izydora Dąmbska, according to her pupil Jerzy Perzanowski, explicitly "accepted a solution in the spirit of [. . .]

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[25]A. Meinong, "Zur Relationstheorie" (1882), in: A. Meinong, *Gesamtausgabe.* Graz: Akademische Druck- u. Verlagsanstalt 1968–1978, B. II, pp. 1–172.

[26]M. Borowski, "Przedmioty względne i bezwzględne" [Absolute and Relative Objects], in: *Przegląd Filozoficzny* XXV, 3, 1922, p. 340.

Meinong".[27] Dąmbska – in other words – accepted the thesis. She analyzed – and rejected – a certain argument against it:

> Someone might say that [. . .] logicians are not interested in the extensions of empty names; they merely claim that names of non-existent objects do not designate anything. And you honest people have to worry about deciding – under the guidance of philosophers – which names are empty. But you must not run the risk of claiming that there are no empty names, for then you will have to accept the negation of that statement: for if there are no empty names, then at least the name "empty name" is empty since it does not designate any object.[28]

The argument against thesis (J) would derive from the definition of "empty name":

(1) An empty name is a name which designates nothing.

Now let us assume that:

(2) There are no empty names.

If so, then:

(3) The name "empty name" designates nothing.

In light of (1) and (3):

(4) The name "empty name" is an empty name.

Thus:

(5) There is at least one empty name.

Conclusion (5) is of course contradictory to assumption (2). Dąmbska writes furthermore:

> This antinomic issue can easily be dealt with: it is sufficient to make the reservation that we are concerned only with names taken in their formal supposition [*in suppositione formali*], and that we are only interested in such a use of names.

To avoid the paradox, Meinong should keep silent – at least with regards to . . . empty names.

I agree with Perzanowski's comment that the price is too high. According to Perzanowski, we are not forced to pay such a price, providing we distinguish between two types of semantic functions of names: designating (existent objects) and assuming (possible objects), and – in consequence – two types of emptiness: d-emptiness and a-emptiness. Now only "the concept of a-empty name seems to

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[27]J. Perzanowski, "Pogranicze logiki i filozofii w pracach Profesor Izydory Dąmbskiej" [Between Logic and Philosophy: Works of Professor Izydora Dąmbska], in: *Ruch Filozoficzny* XLI(4), 1984, p. 318.

[28]I. Dąmbska, "Concerning the So-Called Empty Names" (1948), in: J. Pelc (ed.), *Semiotics in Poland. 1894–1969.* Warsaw & Dordrecht: PWN & Reidel 1979, p. 128.

be contradictory and with no natural examples".[29] In the past, I thought that the only empty name was the expression "non-being" ("nothing"). Przełęcki noted that this name causes problems very similar to those described by Plato in his *Sophist*.[30] According to Przełęcki, the simplest way to avoid these problems is to use the above expressions only in their relative sense: we do not say that something is a non-being, but that something is a non-being-from-a-such-and-such-viewpoint.

Dąmbska herself puts the issue like this: Each name designates at least one possible object of thought. The question of existence of designated objects, and of the mode of this existence, is an extralogical issue: it is an issue of metaphysics.

7.1.8   Against Attributing Sentences the Function of Designating

Theses (I) and (L) have been criticized by Stanisław Ossowski.[31]

Concerning thesis (L), Ossowski notes that "by means of noun-phrases [i.e. names] – and not by means of sentences – we designate what Meinong calls "objectives." Meinong himself, speaking about the *designata* of sentences, refers to these designata not by sentences, but by noun-phrases. After all, the expression "that there were no disorders" ("*daβ keine Ruhestörung vorgefallen*") is a noun-phrase and not a logical sentence".[32]

According to Ossowski, thesis (I) results from the following reasoning. Since

(1) If a certain expression designates *P* then this expression also informs about (the existence of) *F*,

then

(2) If a certain expression informs about (the existence of) *F,* then this expression designates *P.*

Assumption (1) is an unsubstantiated generalization of the thesis that NAMES (*vel* noun-phrases) designating a certain object, inform us about this object. On the other hand, (2) is an unsubstantiated conclusion from (1). Meinong commits the simple logical error of reasoning according to the scheme: $(p \rightarrow q) \rightarrow (q \rightarrow p)$.

Let us add that the source of the analogy between the semantic functions of names and sentences derives from the fact that we can ascribe the same categorial structure to the sentences

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[29]J. Perzanowski, "Pogranicze logiki i filozofii w pracach Profesor Izydory Dąmbskiej", p. 319.

[30]M. Przełęcki, "Nie ma tego, co nie istnieje", p. 145.

[31]S. Ossowski, "Analiza pojęcia znaku" [Analysis of Concept of Sign] (1926), in: S. Ossowski, *Dzieła* [Collected Works].Vol. IV. Warsaw: PWN 1967, pp. 33–59.

[32]*Ibid*., pp. 43–44.

(a) The name *N* designates *P*

and

(b) The sentence *S* informs that *p* (*scil.* that *P* exists),

given a certain interpretation of (b). In fact, we can assume that "The name *N* designates *P*" and "The sentence *S* informs that *p*" have both the structure: *n s/nn n,* where *n* means "name", and *s/nn* means "functor creating a sentence from two names". But (b) can also be described as "The sentence *S* informs-that *p*", that is as *n* SINS *s,* where *s/ns* means "functor creating a sentence from a name and a sentence." On the ground of the second approach, the above analogy vanishes.

After all, what would the term "to designate" means in the case of sentences? Perhaps something like: "The sentence *S* designates [the fact] that *p*, when it is possible to truly predicate the sentence *S* about [the fact] that *p*."[33] Rejecting this interpretation as unintelligible, Przełęcki declares:

> Strictly speaking, I understand the phrase "We can truly predicate '*y*' about *x*", only when I treat this phrase as a substitution of the phrase ""*x* is *y*" is true" or simply "*x* is *y*", i.e. when I treat this phrase in the way which cannot be used, when '*y*' is a sentence and not a name.[34]

It is very interesting to note that both Łukasiewicz and Meinong claimed that names as well as sentences have the function of designating. The former claims "that something exists or does not exist, is such-and-such or is different or – generally speaking – that a certain object has a certain property or does not have it".[35] However, at the same time, Łukasiewicz charged Meinong with the error that he "transfer[red] on no evidence the relation of dependence, existing among PROPOSITIONS [my emphasis, JJ], into the domain of psychical phenomena".[36] Łukasiewicz's argument is so clear and persuasive that we can quote it without comment:

> The first member of an intentional relation is [here] an act of conviction, the second member is a real or an imaginary state of affairs [. . .]. If we express in words or with other signs this second member of an intentional relation, a proposition will come into being, and this proposition is either true or false, because it REPRODUCES either a real or imaginary state of affairs. On the other hand, a conviction [. . .] REPRODUCES as a phenomenon no fact, and for that reason it is – strictly speaking – neither true nor false.[37]

An explanation of Meinong's concept of objective was proposed by Wolniewicz. According to his explication, the objective of a given sentence is identical with

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[33]J.J. Jadacki, "Being and Existence. On the Being and What Seems Not to Be" (1980), in: *Dialectics and Humanism* VIII, 4, 1981, pp. 131–139.

[34]M. Przełęcki, "Nie ma tego, co nie istnieje", p. 147.

[35]J. Łukasiewicz, *O zasadzie sprzeczności u Arystotelesa*, p. 30.

[36]*Ibid*., p. 29.

[37]*Ibid*., pp. 30–31.

the greatest situation presented by these sentences.[38] He defines "situation" as any fragment of reality which verifies a sentence. For instance, the sentence

(a) "Alexander, the prince of Polish Mazovia during the years 1423–1444 was the bishop of Tridentum" is verified not only by the fact

(1) that Alexander, prince of Polish Mazovia during the years 1423–1444 was the bishop of Tridentum,

but also by the fact, containing the fact (1)

(2) that in 1440 he was appointed cardinal by the antipope Felix the Fifth,

and by the fact, containing the fact (2),

(3) that he died in Vienna, etc.

The smallest situation verifying a given sentence is considered by Wolniewicz the correlate of the sentence. In the case of sentence (a), situation (1) is its correlate. The sentence

(b) "Alexander, prince of the Polish Mazovia, during the years 1423–1444 was the bishop of Tridentum, and in 1440 he was appointed cardinal by the antipope Felix the Fifth"

presents situation (1) as well as situation (2). Situation (2) is also the objective of sentence (b) because this sentence does not present, e.g., situation (3). It is easy to note that the objective of a given sentence is its correlate as well.

7.1.9   Against the Category of Quasi-Convictions

Thesis (M) and its consequences say, in brief, that assumptions – and the quasi-convictions expressed by them – are *sui generis* entities: they are neither reducible to names (presentations) nor to sentences (convictions).

Meinong did not accept Twardowski's solution, according to which the class of psychical phenomena is exhausted by presentations, judgments, feelings and decisions (Twardowski considered, say, thirsts as a combination of the first three phenomena). According to Twardowski, quasi-convictions are not specific acts, but kinds of presentations, namely presentations of convictions (judgments), or – which amounts to the same – presented convictions (judgments). Meinong's argument against Twardowski's view can be summed up as follows. If quasi-convictions are presentations of corresponding convictions, then negative quasi-convictions would be presentations of some negative convictions. But no negative presentation (of any non-*P*) is possible. When a negation occurs, we have to deal with something more

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[38]B. Wolniewicz, *Ontologia sytuacji* [Ontology of Situation]. Warsaw: PWN 1985; pp. 13–14, 16.

than with a presentation. Only a simple object can be the object of a presentation; a complex objective can be the object only of a conviction or of something that is similar to it.

Twardowski answered by pointing out that "the presentation of a negative judgment runs symbolically",[39] which means that we present to ourselves not a judgment, but a sentence expressing this judgment.

On the other hand, Twardowski understood "quasi-conviction" rather narrowly; e.g., he excluded – in opposition to Meinong – presumptions (tendencies to some convictions) and lies.

Władysław Witwicki, one of Twardowski's pupils, only partially followed his teacher. On the one hand, he explicitly distanced himself from Meinong, writing:

> Il pense [...] que nous ne pouvons pas nous représenter des lacunes, des négations resp. des objets incomplets. Ces dernières thèses ne paraissent pas nécessaires.[40]

The Polish version of this paper contains something more:

> Contrary to Meinong, I consider it possible to present to myself some negative states of affairs, which I then either must describe by means of some negations, or feel inside them some gap or lack during the time of their presentation. I can perfectly present to myself a giraffe without a tail or a man without a head [...]. During these presentations, I am not forced to take into account whether these objects and situations, together with their gaps, exist or do not exist.[41]

Witwicki thought also that – contrary to Meinong – quasi-convictions can be graduated: not only as to their vividness, but also as to their strength (Meinong introduced the second gradation only in the area of convictions). Witwicki measured the vividness of quasi-convictions "calculating" their "distance" from the focus of attention, the strength of emotions connected to their objects, the attitude towards the contradictory conviction, and the degree of readiness to act in a consistent way with the corresponding convictions.

On the other hand, Witwicki understood "quasi-convictions" as generally as Meinong; that is he treated – in opposition to Twardowski – assumptions as quasi-convictions.

The following principle is for Witwicki a criterion able to distinguish quasi-convictions from convictions:

> (W) Il est difficile à l'homme, en toute présence d'esprit, d'admettre deux conditions contradictoires à la fois et avec conscience.[42]

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[39] K. Twardowski, "Psychologia supozycji" [Psychology of Suppositions] (1906), in: K. Twardowski, *Wybór pism psychologicznych i pedagogicznych* [Selected Psychological and Pedagogical Papers]. Toruń: Wydawnictwo Adam Marszałek 1992, p. 264.

[40] W. Witwicki, *La foi des éclairés.* Paris, Libraire Félix Alcan 1939. Polish version: *Wiara oświeconych.* Warsaw: PWN 1959, p. 13.

[41] *Ibid.*, p. 31.

[42] *Ibid.*, p. 42.

Witold Marciszewski charged Witwicki with imprudently including – contrary to his great teacher – assumptions in the class of quasi-convictions, as well as criticizing the ambiguity of his criterion for being a conviction.[43]

As a matter of fact, principle (W) can be understood in three different ways:

(Wl) $\sim a$ believes that $(p \wedge \sim p)$,
(W2) $\sim (a$ believes that $p \wedge \sim a$ believes that $p)$,
(W3) a believes that $\sim (p \wedge \sim p)$.

The difference between quasi-convictions and presumptions can be easily seen as soon as we remember that one can hold a quasi-conviction in respect to a certain 'p' that $(p \wedge \sim p)$, whereas it is normally impossible to presuppose the same. For a presupposes that p, when the probability of the fact that p for a is equal to k, with $1 > k > 0$.

Witwicki tried to find an agreement between two empirical theses: that convictions fall under the principle of contradiction, and that sometimes evident contradictions occur among the convictions of one person. Marciszewski recognized this attempt as unsuccessful, because of the oversimplification of the situations analyzed. Marciszewski himself proposed distinguishing at least three kinds of acceptance among non-assertive acts: perceptual (motivated by the perception of something), probabilistic (motivated by the feeling of probability) and instrumental (motivated by the usefulness of issuing proposition).

7.1.10   Against Opposing Logical and Axiological Emotions

In thesis (T) Meinong opposes logical emotions rather than axiological ones, because only logical emotions are dependent on the quality of the convictions that motivate these emotions.

Meinong's classification of emotions is as follows:

(1) On account of their bases, emotions divide into convictional and presentational.
(2) An emotion is convictional when its base is the experience of a conviction.
(3) On account of the relation to the quality of their base, convictional emotions divide into logical and axiological.
(4) An emotion is logical when its quality does not depend on the quality of a conviction which is its base.
(5) A logical emotion is pleasant when its base is identical with reaching any solution of a given problem; it is unpleasant when no solution of a given problem is reached.

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[43]W. Marciszewski, *Podstawy logicznej teorii przekonań* [Foundations of Logical Theory of Beliefs]. Warsaw: PWN 1972.

Twardowski considered the above classification invalid and proposed corrections.[44] Twardowski's reasoning is the following:

(6) Experiencing any conviction, as well as reaching a solution of a given problem, consists in uttering some affirmative or negative judgment.

Hence – on the basis of (2) – it follows that

(7) The base of a logical emotion is the utterance of some judgment,

and

(8) The base of an unpleasant logical emotion is uttering no judgment.

If so, then

(9) Unpleasant logical emotions are not logical emotions.

To avoid this unpleasant consequence, Twardowski proposes that the so-called logical emotions are certain kinds of axiological emotions. The class of axiological emotions is identical with the class of convictional emotions. In fact, their base is – for (2) – experiencing any conviction. If this conviction is positive and concerns the existence (or utterance) of some judgment, then a logical emotion motivated by this conviction is pleasant. On the other hand, if this conviction is negative and concerns the non-existence (or utterance) of a judgment (in a given matter), then a logical emotion motivated by this conviction is unpleasant.

It is worth pointing out that Salomon Igel, Twardowski's pupil, went further and questioned the general validity of recognizing emotions of pleasantness and of unpleasantness for kinds of experiences having presentations of convictions as their objects.[45]

7.1.11 Conclusion

A complete description of the relation between Meinong and the Lvov-Warsaw School should also contain a comparison of the problems developed by Meinong, and his solutions, with the ideas elaborated by Polish philosophers. Fortunately, steps are being taken in this direction. Simons[46] presents a partial comparison

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[44]K. Twardowski, "W sprawie klasyfikacji uczuć" [On Classification of Feelings] (1906), in: K. Twardowski, *Rozprawy i artykuły filozoficzne* [Philosophical Papers]. Lvov: Książnica Atlas 1927, pp. 411–412.

[45]S. Igel, "Stosunek uczuć do przedstawień ze względu na klasyfikację faktów psychicznych" [Relation between Feelings and Images As Regards Mental Facts], in: *Przegląd Filozoficzny* XXII, 1919, pp. 352–418.

[46]P. Simons, *Philosophy and Logic in Central Europe from Bolzano to Tarski*. Selected Essays. Dordrecht: Kluwer 1992.

between Meinong and Łukasiewicz; Barry Smith[47] and Paśniczek[48] compare some views of Meinong and Ingarden.

7.2   Heinrich Scholz

7.2.1   *Life and Work*

I would like to register here some facts from Scholz's life which are interesting from the point of view of his connections with the Lvov-Warsaw School.

The first fact is that Scholz studied in Berlin under the direction of Alois Riehl. The philosophical views of Riehl were formed in the atmosphere of herbartianism. The same went for the philosophical views of Brentano, the teacher of Twardowski, the founder of the Lvov-Warsaw School. Johann Herbart's pupils dominated during their studies in Germany as well as in Austria. This fact is probably a source of the posterior aversion of Scholz – and Łukasiewicz, one of Twardowski's pupils – to Immanuel Kant as well as to kantianism.

The second fact is that Scholz – inspired by the Warsaw Logical School – created in 1943 the Institut für mathematische Logik und Grundlagenforschung. In creating this institute, Scholz culminated his attempts to plant analytical philosophy in Germany. Scholz conceived this design – as he stressed himself – following the Warsaw example (*nach dem Warschauer Vorbild*).[49] His idea was similar to an idea brought forward by Twardowski at the Lvov University in the end of the 19th century. And it was identical to an idea that Łukasiewicz had had before him when he took the chair of philosophy at the Warsaw University in 1915.

The third fact is that the Scholz's ties with Twardowski and his school were not limited to ideological ones. Scholz came into personal contact with representatives of the Lvov-Warsaw School. These contacts resulted in his two visits to Poland in the thirties. During a visit in 1932, Scholz delivered three lectures in Warsaw and in Lvov. On October 18th he talked about "Die moderne Prädikatenlogik als die erste exakte Darstellung der aristotelischen Ontologie" at the 370th meeting of the Warsaw Philosophical Society. On October 25th he talked about "Über analytische und synthetische Sätze" at the 320th meeting of the Polish Philosophical Society in Lvov; an annalist noted that one of the participants of the discussion after this lecture was Ajdukiewicz. On October 26th Scholz repeated his Warsaw lecture at the 321st

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[47]B. Smith, "Ingarden vs. Meinong on the Logic of Fiction," in: *Philosophy and Phenomenological Research* XVI, 1–2, 1980, pp. 93–105.

[48]J. Paśniczek, "Struktura ontologiczna przedmiotów nieistniejących: Meinong a Ingarden" [Ontological Structure of Non-Existing Objects: Meinong and Ingarden], in: *Studia Filozoficzne* XXVIII, 4, 1984, pp. 27–41.

[49]H. Scholz, "Was ist Philosophie" (1940), in: H. Scholz, *Mathesis universalis*. Basel & Stuttgart: Benno Schwalbe & Co. 1961, p. 384.

meeting of Polish Philosophical Society in Lvov; Ajdukiewicz and Ingarden took part in the discussion. During a visit on December 19th, 1938 Scholz delivered the lecture "Sprechen und Denken. Ein Bericht über neue Gemainsame Ziele der Polnischen und der Deutschen Grundlagenforschung" at a meeting of the Warsaw Scientific Society, and on December 20th he took part in a ceremony at the German embassy in Warsaw, where Hans von Moltke, the Reich ambassador in Poland, consigned the scroll of honorary doctor of Münster University to Łukasiewicz.

Scholz's philosophical activity falls into two periods: prelogical (up to 1921) and logical (since 1928). The first period is dominated by theological-philosophical problems; the second one is filled by logical-philosophical investigations. The transformation of interests is usually explained by an accidental falling upon Russell-Whitehead's *Principia mathematica* and examining this work in 1921. It is worth saying that reading this book also challenged the logical interests of Łukasiewicz and Leśniewski.

The fourth fact which I want to stress in connection with this explanation is that there were also other reasons for Scholz's philosophical conversion. These questions were the subject of a conversation between Scholz and Twardowski in Lvov, on October 25th, 1932. According to Twardowski's witness, "great troubles" and consequently a "loss of faith" have something to do with Scholz's conversion. He chose logic – instead of the philosophy of religion – as the subject of his investigations as a discipline being "most abstract and far from urgent problems".[50]

7.2.2 Scholz's Views on the Background of the Lvov-Warsaw School

The philosophical views of Scholz are constituted by four ideas: the idea of antispeculative deductionism, the idea of antidogmatic conservatism, the idea of anticonstructivist realism, and the idea of antihypothetist illuminationism.

According to ANTISPECULATIVE DEDUCTIONISM, philosophy – if it is meant to be scientific philosophy (and not speculation) – ought to use the analytical method. Tadeusz Czeżowski called this "the method of analytical description":

> It is a feature of the philosophical trend called "analytical philosophy", represented i.a. in Poland by Kazimierz Twardowski. [. . .] In philosophical research [. . .], where we set ourselves a task of solving the most difficult problems created by reality, the method of analytical description is the most infallible – if not the only – method giving a perspective such that our results will be as objective as possible and that they will have a lasting value.[51]

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[50]K. Twardowski, *Dzienniki* [Diaries]. Part II (1928–1936). Toruń: Wydawnictwo Adam Marszałek 1997, p. 248.

[51]T. Czeżowski, "O metodzie opisu analitycznego" [On the Method of Analytical Description] (1953), in: T. Czeżowski, *Odczyty filozoficzne* [Philosophical Papers]. Toruń: PWN 1958, pp. 197, 207.

The language of scientific philosophy ought to be, after Scholz, clear (intersubjectively intelligible) and exact (accurate). A similar position was held by Twardowski. He wrote a well known text which was a kind of manifesto for the so-called clearlists (Polish "jasnościowcy"; Tadeusz Kotarbiński's term); remember that all Twardowski's pupils took themselves to be «clearlists». We read in this manifesto:

> If the author is not able to express his thoughts clearly, he cannot also think clearly [. . .]; thus his thoughts are not worthy of our efforts to recover them.[52]

After Scholz, philosophical theories ought to have a form of interpreted axiomatic-deductive systems.[53] Ontology, in particular, can be identified with interpreted mathematical logic. For:

> Philosophy can be described as MATHEMATICAL PHILOSOPHY in a certain deep sense [of the term]. [. . .] It can be also apprehended as mathematics transposed with essential restrictions to the sphere of philosophical matters, and in this well defined sense – as *mathesis universalis*.[54]

The project of Scholz in this area does not vary from a project formulated by Łukasiewicz. He wrote:

> Scientific philosophy should start its construction from the beginning, from foundations. To start from foundations means here to take in the first place a survey of philosophical problems and to choose from among them only these problems which can be formulated intelligibly, rejecting all the others. Mathematical logic can be already useful in this preliminary work, for it has fixed the meaning of many expressions belonging to philosophy. Then we ought to start trying to solve the philosophical problems which can be intelligibly formulated. The most useful method of realizing such a task seems to be again a method of mathematical logic: the deductive, axiomatic method. We need to base our work on sentences being as intuitively clear and undoubted as possible; such sentences should be taken as axioms. As primary or undefined notions we need to choose such expressions that their sense can be universally explained by cases. We should try to limit maximally the number of axioms and primary notions, enumerating all of them carefully. All remaining notions need to be unconditionally defined on the ground of primary notions; all remaining theorems need to be unconditionally proved on the ground of axioms and by means of directives of proof accepted in logic.[55]

One should express regret that, unfortunately these projects have never been fully implemented.

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[52] K. Twardowski, "O jasnym i niejasnym stylu filozoficznym" [On Clear and Unclear Philosophical Style] (1919–1920), in: K. Twardowski, *Wybrane pisma filozoficzne* [Selected Philosophical Papers]. Warsaw: PWN 1965, p. 348.

[53] H. Scholz, "Die klassische deutsche Philosophie und die neue Logik", in: *Actes du Congrés International de Philosophie Scientifique*. Vol. VIII. Paris 1936, p. 5.

[54] H. Scholz, "Was ist Philosophie", p. 373.

[55] J. Łukasiewicz, "O metodę w filozofii" [For the Method in Philosophy] (1928), in: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, p. 42.

ANTIDOGMATIC CONSERVATISM requires that analytical philosophers not slight their own tradition[56] – reaching as far back as Plato and Aristotle,[57] and then René Descartes[58] and Gottfried Wilhelm Leibniz.[59] A special position in this tradition is occupied by Frege.[60] As Scholz writes:

> [For Frege] was the first to present logic in such a way that it can compete with a mathematical theory, being superior to all mathematical theories in respect to exactness and accuracy. To achieve this magnificent aim, [Frege] created the first genuinely Leibnizian [i.e. artificial] language".[61]

Scholz's formula harmonizes with Łukasiewicz's opinions of mathematical logic. We read in Łukasiewicz:

> The logic created by mathematicians fixed a new measure of scientific exactness, much higher than all previous measures of exactness; in consequence, the logic opened our eyes to the nothingness of philosophical speculation.[62]

The remaining philosophical tradition must not also be treated only as a cemetery of badly posed problems. As Łukasiewicz wrote:

> If we draw nearer to great philosophical systems with a measure of exactness created by mathematical logic [. . .], these systems fall in our hands as houses of cards. [. . .] Almost all logical [. . .] theories, so often underlying these systems, are mistaken.[63]

However, the matter is to use the method of creative interpretation, recommended by Twardowski in reconstruction of the history of philosophy. In Kotarbiński's approach, this method is described in such a way:

> An adherent of creative interpretation tries [. . .] to understand a given problem better than an investigated thinker. [. . .] He set himself an ambitious task to understand a given thinker more clearly and more deeply than this thinker could understand his own views.[64]

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[56]H. Scholz, "Die klassische deutsche Philosophie und die neue Logik".

[57]H. Scholz, "Was ist Philosophie".

[58]H. Scholz, "Über das *Cogito, ergo sum*" (1931), in: H. Scholz, *Mathesis universalis*. Basel & Stuttgart: Benno Schwalbe 1961, pp. 75–94; H. Scholz, "Augustinus und Descartes" (1931), in: H. Scholz, *Mathesis universalis*. Basel & Stuttgart: Benno Schwalbe & Co. 1961, pp. 45–61.

[59]H. Scholz, "Was ist Philosophie".

[60]*Ibid.*

[61]H. Scholz, "Sprechen und Denken", in: *Organon* III, 1939, p. 3.

[62]J. Łukasiewicz, "O metodę w filozofii", p. 42.

[63]J. Łukasiewicz, "O determinizmie", in: J. Łukasiewicz, *Z zagadnień logiki i filozofii* [On Logic and Philosophy] (1922). Warsaw: PWN 1961, p. 115.

[64]T. Kotarbiński, "Dobra robota w filozofii" [Good Work in Philosophy] (1973), in: T. Kotarbiński, *Myśli o ludziach i ludzkich sprawach* [People and Their Matters]. Wrocław: Ossolineum 1986, pp. 3–7; p. 5.

In particular, we ought to apply this attitude critically to Kant. Here we have Łukasiewicz opinions concerning Kant:

> Everywhere we have addled notions, unintelligible sentences, unfounded theorems, contradictories and logical fallacies.[65]

One of Kant's worst fallacies is – according to Scholz – that he illegitimately recognized logical laws as analytic judgements not referring to reality.[66] Under ANTICONSTRUCTIVIST REALISM:

> [Truths belonging to the «theory of foundations», including theology[67] or metaphysical truths, [...] bind of course [...] also in real world. [...] [However,] a scope of their validity is [...] incomparably larger [in comparison, e.g., with laws in physics]. The scope of their validity contains on the totality of possible worlds.[68,69]

Possible worlds create a logical frame for every description of the real world. Even the will of God is subjected to logical laws; this fact does not limit God but rather deifies logic, because these laws directing God's activity are in the divine mind. Łukasiewicz expressed a similar thought in the following words:

> When I am occupied even with the smallest logistic problem [...], I have the impression that I stand in front of a mighty, extremely consistent and unusually immune construction. This construction acts upon me like a concrete palpable object made of the hardest substance, a hundred times stronger than concrete or steel. I can change nothing in it, I create nothing arbitrarily.[70]

Consequently, if the basis of rationality lies in the divine logic, rationality has, in any case for the theist, solid support. Therefore, imposing the requirement of constructability upon logical objects is a manifestation of arbitrary anthropomorphism.

According to ANTIHYPOTHETIST ILLUMINATIONISM, philosophical theorems ought to be not only formulated clearly and strictly, and included into an axiomatic-deductive system, but all of them, including axioms, ought to be justified.

> [They] ought to be incessantly confronted with intuitive data and experience as well as with results of other sciences, especially natural ones. In cases of incoherence, the system should be corrected by formulating new axioms and selecting new primary notions. One should care incessantly about contact with reality lest one create mythological entities like Plato's

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[65]J. Łukasiewicz, "Kant i filozofia nowożytna" [Kant and Modern Philosophy] (1924), in: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, p. 368.

[66]H. Scholz, "Die klassische deutsche Philosophie und die neue Logik", in: *Actes du Congrés International de Philosophie Scientifique*. Vol. VIII. Paris 1936, pp. 4–5; H. Scholz, *Metaphysik als strenge Wissenschaft*. Köln: Staufen-Verlag 1941.

[67]H. Scholz, "Das theologische Element im Veruf des logistischen Logikers" (1935), in: H. Scholz, *Mathesis universalis*. Basel & Stuttgart: Benno Schwalbe & Co. 1961, pp. 324–340.

[68]H. Scholz, "Was ist Philosophie", p. 362.

[69]Tarski solved this problem in a different way [M. Kneale, "*Mathesis universalis* [...] by Heinrich Scholz [review]", in: *Mind* LXXIII, 290, 1964, p. 303].

[70]J. Łukasiewicz, "W obronie logistyki" [In Defence of Logistic] (1937), in: J. Łukasiewicz, *Z zagadnień logiki i filozofii* [On Logic and Philosophy]. Warsaw: PWN 1961, p. 219.

ideas or Kant's things in themselves, but still understand the essence and the structure of the real world in which we live and act.[71]

The manner of justifying a logical – as well as a philosophical – theorem ought to be distinguished from the manner of discovering it:

> Objects of mathematics [. . .] [and logic] exist in themselves like Plato's ideas.[72]

The same holds for objects of philosophy understood as *mathesis universalis.* In Scholz's opinion, we receive the knowledge of necessary truths – concerning these objects – thanks to God's illumination. Łukasiewicz declared similarly that:

> By intense work [. . .] he acquires firm and eternal truths [of logic]. Where is this ideal construction and what is it? Philosopher-believers would say that it is in God and that it is His thought.[73]

7.2.3   Scholz on the Lvov-Warsaw School

Scholz spoke of representatives of the Lvov-Warsaw School with the greatest approbation.

In the first place, this concerned Łukasiewicz.

The paper "Philosophische Bemerkungen zu mehrwertigen Systemen des Aussagenkalküls" written by Łukasiewicz – "a leading Polish logistician" – was recognised by Scholz as "an important and very interesting work", although he regarded Leibniz as a precursor of the idea of three-validity; in his work "Specimina Iuris III", Leibniz formulated in fact "the first matrix of three-valued logic".[74] It was Łukasiewicz – "a revered and dear friend from Warsaw" ("*verehrt liebe Warschauer Freunde*") – who called Scholz's attention to some embarrassing (and *prima facie* unseen) consequences of the thesis that axioms of logic are sentences true in every (possible) world.[75] Close to the outbreak of the Second World War, Scholz announced that:

> The nearest issue of our *Inquiries* would be filled in general by an effect of formulating two competitive problems in Münster which had been masterly solved by Prof. Łukasiewicz in Warsaw.[76]

Scholz made no bones about the fact of how many inspirations his logical-historical works owed to Łukasiewicz's investigations.

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[71]J. Łukasiewicz, "O metodę w filozofii", p. 42.

[72]H. Scholz, G. Hasenjaeger, *Vorlesungen über die Grundzüge der mathematischen Logik*. Berlin, Göttingen & Heidelberg: Aschendorff 1961, p. 1.

[73]J. Łukasiewicz, "W obronie logistyki", p. 219.

[74]H. Scholz, *Geschichte der Logik*. Berlin: Junker und Dünnhaupt 1931, p. 20.

[75]H. Scholz, "Die klassische deutsche Philosophie und die neue Logik", pp. 334–335.

[76]H. Scholz, "Sprechen und Denken", p. 4.

Asserting the construction of propositional logic as Stoics' merit, Scholz stressed that "Łukasiewicz was the first who formulated this assertion". He added:

> I must declare that I have followed him in my conviction that what I have said in continuation of my work in favor of saving the Stoics' honor is reasonable in spite of every «good» tradition.[77]

For his side, Łukasiewicz mentioned proudly that his paper "Zur Geschichte der Aussagenlogik", delivered during the Philosophical Congress in Prague, 1934, was considered by Scholz to be "the most beautiful twenty pages from the history of logic".[78] This paper, published finally in *Erkenntnis* and characterized as a model dissertation (*die bahngrechende Abhandlung*), constituted a basic source of information on Chrysippos' logic [1941:23].

The only critical remark directed to Łukasiewicz by Scholz probably concerned the so-called paradox of logical determinism, formulated by Aristotle. He saw a mistake in this paradox. Hence he was anxious about the fact that for Łukasiewicz this paradox is "the basis of a new kind of logic (cf. J. Łukasiewicz, "Philosophische Bemerkungen zu mehrwertigen Systemen des Aussagenkalküls")". However Scholz added in a footnote:

> As I understand, Łukasiewicz does not think that Aritstotle's argument is valid; he considers only that it is a sufficient ground for discussion. In my opinion, it is enough to be a point of departure from his extremely interesting logic. According to my knowledge, this logic is the first example of *non-Aristotelian* logic in the strict sense of the word, i.e. a logic containing sentences which would be *false* in Aristotelian logic.[79]

Alfred Tarski was the second representative of the Lvov-Warsaw School who was mentioned by Scholz appreciatively.

He wrote in 1939:

> Among representatives of the Warsaw School I must mention [. . .] Prof. Tarski with his fundamental works on methodology of deductive sciences, and especially his work formulating a noncontradictory notion of truth for these sciences.[80]

Of course, the matter is of – as he expressed himself – a fundamental work (*die grundlegende Arbeit*[81]) *Pojęcie prawdy w naukach dedukcyjnych.* In Scholz's opinion, the definition of *truth*, given in this work, is coherent with the classical conception of this notion.[82] Scholz refers to this work for an exact presentation of the Liar antinomy.[83] Tarski himself noted (in a footnote added in 1956) the following

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[77]H. Scholz, *Geschichte der Logik*, p. 31.

[78]J. Łukasiewicz, *Pamiętnik* [Diary]. Warsaw: Semper 2013, p. 35.

[79]H. Scholz, *Geschichte der Logik*, p. 76.

[80]H. Scholz, "Sprechen und Denken", p. 5.

[81]H. Scholz, "Was ist Philosophie", p. 384.

[82]H. Scholz, "*Studia Philosophica* [review]", in: *Deutsche Literaturzeitung* LVIII, 50, 1937, pp. 1914–1917.

[83]H. Scholz, "Die Wissenschaftslehre Bolzano. Eine Jahrhundert-Betrachtung" (1937), in: H. Scholz, *Mathesis universalis*. Basel & Stuttgart: Benno Schwalbe & Co. 1961, p. 264.

remark by Scholz made after publishing the German original of this work, in the paper "Die Wissenschaftslehre Bolzanos. Eine Jahrhundert-Betrachtung":

> [He] noticed a far-reaching analogy between [. . .] the definition of consequence [according to which a sentence *X* is a logical consequence of sentences of a class *K* always and only if every model of the class *K* is at the same time a model of a sentence *X*] and the definition proposed a hundred years ago by B. Bolzano.[84]

For Scholz, the fact that there is no reference to Bolzano even in Tarski's work is a testimony of the general ignorance as to Bolzano's production.[85] In 1941 (the date is of no little importance), Scholz admits that his method of making precise the notion of general validity ("*der Allgemeingültigkeit*") is modeled upon Tarski's work which is recognized by Scholz as a strictly philosophical work in the proper sense of the word.[86] In 1944, Scholz adds that the notion of logical truth was made precise in this work; the matter is about the notion of logical truth as a truth valid in each possible world.[87]

Apart from these references, in his lectures on logic, Scholz appealed to the irreducibility of axioms of implication proved by Tarski[88] as well as to Wajsberg's theorems.[89] He also made use of the notion of logical consequence defined in Tarski's work "Über den Begriff der logischen Folgerung".[90] Discussing Pascal's contribution to the analysis of the notion of the definability of predicates, Scholz indicated the fact that the essential work (*grundlegende Arbeit*) in this domain is Tarski's paper "Einige methodologische Untersuchungen über die Definierbarkait der Begriffe," in which he formulated two definitions of definability and proved that one of them resulted from the other. Two other of Tarski's papers, i.e. "Fundamentale Begriffe der Methodologie der deduktiven Wissenschaften I" and "Grundzüge des Systemenkalküls," were recognized by Scholz as essential, this time for the explanation of Blaise Pascal's methodology from the point of view of a modern theory of knowledge.[91]

Scholz knew and set a high value on Ajdukiewicz's works, i.a. his "Założenia logiki tradycyjnej"; Scholz found in this paper – as he wrote – "the strictest interpretation of Aristotelian moods".[92] On the other hand, he spoke very well of an analysis of Occam's logic made by means of modern logic in works of

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[84] A. Tarski, "O pojęciu wynikania logicznego" [On Notion of Logical Entailment] (1936), in: A. Tarski, *Pisma logiczno-filozoficzne* [Logical and Philosophical Papers]. Vol. I. Warsaw: PWN 1995, p. 198.

[85] H. Scholz, "Die Wissenschaftslehre Bolzano . . . ", pp. 221–222.

[86] H. Scholz, *Metaphysik als strenge Wissenschaft*, p. 72.

[87] H. Scholz, "Logik, Grammatik, Metaphysik" (1944), in: H. Scholz, *Mathesis Universalis*. Basel/Stuttgart: Benno Schwalbe & Co. 1961, p. 432–433.

[88] H. Scholz, *Grundlagen der logistischen Logik*. Sommer 1934, p. 17.

[89] H. Scholz, *Grundlagen der logistischen Logik*, pp. 23–24.

[90] H. Scholz, "Die Wissenschaftslehre Bolzano", p. 267.

[91] H. Scholz, "Pascals Forderungen an die mathematische Methode" (1945), in: H. Scholz, *Mathesis universalis*. Basel & Stuttgart: Benno Schwalbe & Co. 1961, p. 122.

[92] H. Scholz, *Geschichte der Logik*, p. 72.

Jan Salamucha, murdered in Warsaw during the Second World War by Germans (*während des Krieges in Warschau von den Deutschen ermordeten*), and of Józef M. Bocheński.[93,94] Scholz characterised these works as "an innovative inquiry" in its area. Scholz noticed also that the Carnapian notion of syntactic language (*Syntaxsprache*) has its analogue in Tarski's notion of metalanguage which is called "semantic language" ("*Semantiksprache*") by Maria Kokoszyńska in her excellent study ("*in einer feinen Studie*") "Über den absoluten Wahrheitsbegriif und einige andere semantische Begriffe".[95] Another example of Kokoszyńska's "beautiful approach" (*die schöne Betrachtung*), "Bemerkungen über die Einheitswissenschaft" is a place to which Scholz refers for details concerning the thesis that the notion of truth for a given language cannot be formulated in the same language.[96]

In Scholz's works, there are many positive opinions on the whole group of Polish logicians in the inter-war period.

Scholz wrote in 1931:

> In the last ten years, thanks to Jan Łukasiewcz, Poland has become the main country, and Warsaw has constituted the main center of logistic investigations. [. . .] [I mean, i.a.] works published in *Fundamenta Mathematicae* [. . .] by Stanisław Leśniewski, W[acław] Sierpiński, Alfred Tarski and others. I must at least mention Leon Chwistek [and his] "The theory of constructive types. Principles of logic and mathematics".[97]

Scholz considered representatives of the Warsaw School as discoverers of Frege. Łukasiewicz noted that Frege was the first to create propositional calculus and introduce the notion of the INDEPENDENCE OF AXIOMS. Leśniewski proved that the axiom of extensionality disallowed for results forseen by Frege.[98]

"Warsaw friends" were also people – according to Scholz – who realized Leibniz's[99] and Frege's ideas.[100] In the Warsaw School, initiated by Łukasiewicz

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[93]H. Scholz, "Zur Erhellung der spätmittelalterlichen Logik", in: *Philosophisches Jahrbuch* LVIII, 1948, pp. 288–289.

[94]Scholz wrote by mistake that Bocheński – Dominican – was Salamucha's monastic brother. In fact, Salamucha was a secular priest.

[95]H. Scholz, "Die Wissenschaftslehre Bolzano", p. 266.

[96]H. Scholz, "Was ist Philosophie", p. 385.

[97]H. Scholz, *Geschichte der Logik*, p. 73.

[98]H. Scholz, "Sprechen und Denken", p. 4.

[99]H. Scholz, "Was ist Philosophie", p. 384.

[100]According Lubomirski, Scholz did not see the difference between Frege's views and the views of the representatives of the Lvov-Warsaw School: Łukasiewicz pursued the propositional logic of Frege's *Begriffschrift*, and Leśniewski was a continuator of *Grundgesetse* [A. Lubomirski, "Frege i Szkoła Lwowsko-Warszawska" [Frege and the Lvov-Warsaw School], in: M. Hempoliński (ed.), *Polska filozofia analityczna* [Polish Analytical Philosophy]. Warsaw: PWN 1985, p. 226]. But Łukasiewicz – in opposition to Frege – used the function of asserting as well as the function of rejecting [*Ibid*., p. 244]. He also extended the Fregean notion of logical value [*Ibid*., p. 245]. On the other hand Leśniewski did not accept Frege's identification of a singleton with its element [*Ibid*., p. 241].

and Leśniewski, a new style of practicing philosophy was developed. We owe a "new [rational] comparative linguistics" to "Polish friends".[101] They created: (a) new Lebnizian (i.e. artificial) languages, (b) standard theories of these languages, and (c) ground for comparative studies concerning them.

Scholz summed up:

> Talking about the Warsaw School, we talk about the fortress (*Hochburg*) in the domain (*Kontinent*) of comparative inquiries about Leibnizian languages.[102]

7.2.4 The Lvov-Warsaw School on Scholz

Two testimonies of how Twardowski estimated Scholz have endured to our times. Scholz, invited by Twardowski, delivered two lectures in Lvov, in autumn of 1932. In his *Diaries*, Twardowski wrote about the first of these lectures in the following words:

> The lecture was perfectly constructed, clear, limpid, very well delivered.[103]

He estimated the second lecture equally well:

> The same can be said about this lecture [. . .], but with the addition that it was still more beautiful. [. . .] The knowledge of Aristotle and the manner of interpreting certain notions of his metaphysics were really extremely interesting. As it could be noticed, the lecture strongly impressed the whole audience.[104]

The author of the paper "On clear and unclear style of making philosophy" can hardly be expected to formulate a better praise.

Twardowski's pupil, and the main pillar of the Warsaw School, Łukasiewicz, described Scholz as "a devotee of scientific philosophy grounded in modern logistics".[105] However, he made references first of all to Scholz's logical-historical works.

On the one hand, Łukasiewicz expressed his satisfaction as to the fact that Scholz accepted in *Geschichte der Logik* the view on the Stoics' dialectics as a propositional logic, predicated by Łukasiewicz since 1923.[106] Drewnowski added

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[101]H. Scholz, "Sprechen und Denken", pp. 4–5.

[102]*Ibid.*, p. 5.

[103]K. Twardowski, *Dzienniki*, p. 248.

[104]*Ibid.*

[105]J. Łukasiewicz, "Kartezjusz" [Descartes] (1938), in: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, p. 372.

[106]J. Łukasiewicz, "Z historii logiki zdań" [Issues in the History of Propositional Logic] (1934), in: J. Łukasiewicz, *Z zagadnień logiki i filozofii* [On Logic and Philosophy]. Warsaw: PWN 1961, p. 180. J. Łukasiewicz, "Znaczenie analizy logicznej dla poznania" [Significance of Logical Analysis for Knowledge] (1934), in: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, p. 61.

later that this logic (which was not fully revealed earlier than by Łukasiewicz and Scholz) "was known and developed by medieval Schoolmen".[107] Scholz justified also that Scholastic logic reached a much higher standard than logic of the next ages; Scholz's achievement was specially stressed by Salamucha.[108] Łukasiewicz noted also Scholz's hypothesis from *Geschichte der Logik* that "Galenus is probably not the author of the four syllogistic figure".[109]

On the other hand, Łukasiewicz based himself on Scholz[110] in his analysis of Descartes' formula "*Cogito, ergo sum*". After Scholz, Łukasiewicz admitted specifically that this formula expressed an inference, and not a conviction. But only a conviction can be estimated as to its truthfulness or falseness. Thus Descartes' formula does not fall under such an estimation. From another perspective, the inference expressed by the formula "*Cogito, ergo sum*" is an enthymematic inference. After completion, it has the following form: "If I think, then I exist; I think, so I exist".[111] After years, Eugeniusz Wojciechowski paid attention to the fact that Scholz really considered such a possibility of interpreting Descartes' formula, but "he rejected this interpretation as inadequate, for Descartes himself protested against it".[112]

Łukasiewicz admitted also that Scholz was his inspiration in the investigation of axiomatising intuitionist propositional calculus, constructed in 1930 by Arend Heyting. This investigation resulted in proving that "three-valued calculus resulted in calculus being stronger and farther reaching than two-valued", i.e. the latter can be interpreted in the former.[113]

Scholz's works belongs to the mathematics called to the attention of Chwistek, who not being a member of the Lvov-Warsaw School, was very near to it in many respects. He accepted Scholz's view from "an interesting work "Warum haben die Griechen die Irrationalzahlen nicht aufgebaut?"" that:

> The essential cause of the fact that Greeks did not create the notion of irrational numbers was the fact that they did not possess the notion of rational numbers.[114]

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[107] J.F. Drewnowski, "U progu nowoczesnej syntezy filozoficznej" [At the Dawn of Modern Philosophical Synthesis] (1958), in: J.F. Drewnowski, *Filozofia i precyzja* [Philosophy and Precision]. Lublin: Wydawnictwo TN KUL 1996, p. 176.

[108] J. Salamucha, "Zestawienie scholastycznych narzędzi logicznych z narzędziami logistycznymi" [Comparing Scholastical Logical Tools with Logistical Tools], in: J. Salamucha, *Wiedza i wiara* [Knowledge and Faith]. Lublin: Wydawnictwo TN KUL 1937, pp. 187–196.

[109] J. Łukasiewicz, *Sylogistyka Arystotelesa z punktu widzenia współczesnej logiki formalnej* [Aristotle's Syllogisms from the Point of View of Contemporary Formal Logic] (1951). Warsaw: PWN 1998, p. 54.

[110] *Ibid*.

[111] J. Łukasiewicz, "Kartezjusz", p. 372.

[112] E. Wojciechowski, "W sprawie Kartezjańskiego *Cogito, ergo sum*" [On Cartesian *Cogito, ergo sum*], in: *Ruch Filozoficzny* XLIV, 3–4, 1987, p. 294.

[113] J. Łukasiewicz, "Logika i problem podstaw matematyki" [Logic and Problem of Foundations of Mathematics] (1941), in: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, p. 84.

[114] L. Chwistek, "Granice nauki" [The Limits of Science] (1935), in: L. Chwistek, *Pisma filozoficzne i logiczne* [Philosophical and Logical Papers]. Vol. II. Warsaw: PWN 1963, p. 30.

In this work, Scholz impugned also the prejudice that Greeks were finitists; this prejudice was earlier objected to in Poland by Jan Sleszyński.[115]

Representatives of the Lvov-Warsaw School were interested mainly in Scholz's production concerning the history of logic.

We may suppose that Kotarbiński shared three of Scholz's philosophical-historical opinions from *Geschichte der Logik*: (a) that Stoics were not aware of the logical anteriority of their logic in relation to Aristotelian logic[116]; (b) that the authors of *Logic* from Port Royal were probably the first logicians who treated methodology as a theory of methods of mental operations[117]; and (c) that their *Logic* was written so well that "it can be read even nowadays".[118]

Czeżowski also had a very favorable opinion of *Geschichte der Logik*; he called it a monograph of the history of logic which was concise but "standingon the level of the state of knowledge of the present day".[119] But Czeżowski was interested mainly in Scholz as a metaphysician – a representative of one of three types of modern metaphysical theories. Czeżowski distinguished namely axiomatic, inductive and intuitionist metaphysics. He wrote:

> The first of them is a modern form of old speculative metaphysics; theorems of an axiomatic metaphysics are interpretations of theorems of an extended theory of propositional functions (a theory of predicates and a theory of relations); these interpretations are obtained by substituting the term "thing" or "empirical individual" for nominal variables, and the terms "feature", "property" or (in the case of many-place functions) form functorial variables. The hypothetical-deductive theory created in such a way is an extended Aristotelian first philosophy. H. Scholz's logical-ontological investigations [*Mathesis universalis*] are an example of theories of such a type.[120]

In particular, Scholz's *Metaphysik als strenge Wissenschaft* is a "standard example" of axiomatic metaphysics.[121]

The same opinion was held by Ajdukiewicz who claimed that Scholz was right in naming some parts of mathematical logic "metaphysics" ("in its primary

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[115]*Ibid*., p. 33.

[116]T. Kotarbiński, *Wykłady z dziejów logiki* [Lectures on History of Logic]. Wrocław: Ossolineum 1957, pp. 52, 54.

[117]T. Kotarbiński, "Treść i zakres pojęcia metodologii" [The Content and the of the Notion of Methodology] (1956), in: T. Kotarbiński, *Elementy teorii poznania, logiki formalnej i metodologii nauk* [Elements of the Theory of Cognition, Formal Logic and Methodology of Sciences]. Wrocław: Ossolineum 1961, p. 517.

[118]T. Kotarbiński, *Wykłady z dziejów logiki*, pp. 78, 82.

[119]T. Czeżowski, *Logika* [Logic]. Warsaw: PWN 1968, p. 257.

[120]T. Czeżowski, "Klasyfikacja rozumowań i jej konsekwencje w teorii nauki" [Classification of Reasonings and its Consequences for Theory of Science] (1963), in: T. Czeżowski, *Filozofia na rozdrożu. Analizy metodologiczne* [Philosophy on the Crossroad. Methodological Analyses]. Warsaw: PWN 1965, p. 180.

[121]T. Czeżowski, "Zagadnienie istnienia świata w świetle przemian metodologicznych" [The Problem of Existence of the World in the Light of Methodological Changes] (1951), in: T. Czeżowski, *Odczyty filozoficzne* [Philosophical Papers]. Toruń: PWN 1958, p. 42.

sense").[122] Stanisław Kamiński stressed also this fact many times,[123] paralleling (rather wrongly) Scholz in this context with Benedykt Bornstein as the author of *Teoria Absolutu*.

Ajdukiewicz appealed to Scholz also in the case of justifying the thesis that operators (including quantifiers) were not complex but rather simple expressions. According to Ajdukiewicz, there are "manners of signifying operators where this fact comes to light. For instance, Professor Scholz writes "x" instead of "(Πx)"".[124]

In general, Ajdukiewicz ascertained to his satisfaction that Scholz was "a sympathizer of logicising empiricism".[125] Bocheński considered Scholz to be a classical representative of analytical philosophy; he stressed at the same time that Scholz was an extreme Platonist, because according to him even the negation "must be somewhere".[126] According to Salamucha, the fact that such outstanding logicians as Łukasiewicz and Scholz along with other representatives of the so-called Group from Münster (*Gruppe von Münster*) spoke for the thesis that mathematical logic (logistics) is functionally independent from positivism was of significance.[127]

Geschichte der Logik was (in general) positively estimated also by Antoni Korcik. In his opinion, "the author used the respective literature thoroughly and accurately".[128]

But Korcik – appealing to his own investigations – questioned Scholz's identification of the so-called Galenus' figure with the traditional fourth figure and showed that Galenus' figure is a separate figure consisting of three Aristotelian figures.[129]

Korcik announced also some small historical corrections to Scholz's work. He noticed namely that: (a) The second edition of Julius Pacius' *Aristotelis Organum* was published not in Frankfort but in Hanover; (b) the first trial of axiomatisation

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[122]K. Ajdukiewicz, "O tzw. neopozytywizmie" [On So-Called Neopositivim] (1946), in: K. Ajdukiewicz, *Język i poznanie* [Laguage and Knowledge]. Vol. II. Warsaw: PWN 1960, p. 28.

[123]S. Kamiński, *Nauka i metoda. Pojęcie nauki i klasyfikacja nauk* [Science and Method. The Notion of Science and Classification of Sciences] (1961). Lublin: Wydawnictwo TN KUL, 1992, p. 312. S. Kamiński, "Aksjomatyzowalność klasycznej metafizyki ogólnej" [On Possibility of Making Classical General Metaphysics Axiomatized] (1965), in: S. Kamiński, *Jak filozofować?* [How to Make Philosophy?]. Lublin: Wydawnictwo TN KUL 1989, p. 138. S. Kamiński, "Próba typologii metod filozofowania" [Attempt to Make Typology of Methods of Making Philosophy] (1975), in: S. Kamiński, *Jak filozofować?* [How to Make Philosophy?]. Lublin: Wydawnictwo TN KUL 1989, pp. 64, 69.

[124]K. Ajdukiewicz, "O spójności syntaktycznej" [On Syntactic Coherence] (1935), in: K. Ajdukiewicz, *Język i poznanie* [Laguage and Knowledge]. Vol. I. Warsaw: PWN 1960, p. 235.

[125]K. Ajdukiewicz, "O tzw. neopozytywizmie", p. 28.

[126]J.M. Bocheński, "O filozofii analitycznej" [On Analytical Philosophy], in: *Ruch Filozoficzny* XLVII, 1, 1990, pp. 36–37.

[127]J. Salamucha, "O możliwościach ścisłego formalizowania dziedziny pojęć analogicznych" [On Possibilities of Strict Formalizing the Field of Analogous Notions], in: J. Salamucha, *Wiedza i wiara* [Knowledge and Faith]. Lublin: Wydawnictwo TN KUL 1937, pp. 217–218.

[128]A. Korcik, "H. Scholz, *Zarys historii logiki* [review] [H. Scholz, *Outline of History of Logic* [review]]", in: *Studia Filozoficzne* IX, 4, 1966, p. 173.

[129]*Ibid*.

of classical logic was taken up not by Girolamo Sacheri but by Johann Christoph Sturm; (c) Sturm is also a precursor of Brentano as to taking into account syllogisms of four terms; (d) Rudolf Lotze (as well as, e.g., Leibniz and Frege) considered the copula "is" in sentences of the type "*S* is *P*" to be referring to identity, but only for the sake of «signifying» and not of meaning; (e) the principle of excluded middle was criticized by Robert Grassmann much earlier than by Letzen Brouwer; (f) the idea of non-Aritstotelian three-valued logic appeared before Łukasiewicz in Nikolai Aleksandrovič Vasilev, and the idea of anti-Aristotelian logic – in Elias Schnegass.[130]

Scholz's works belonging to the domain of philosophy of religion became an object of interest among Polish philosophers only lately.

Thus Wolniewicz noted that Scholz in *Religionsphilosophie*: (a) called into question the existence of an «experience» of *sacrum*[131]; (b) ignored – as do many philosophers of religion – the importance of the problem of death; if he mentioned in his book *a horror* of death and a hope of immortality, he did so only in the context of a discussion on sources of religiosity, indicating namely that there were religious people who were not afraid of death.[132]

Lubomirski estimated Scholz much better in this respect. He wrote:

> Scholz's reflection [...] imposed not only with its clarity and simplicity, but also – and probably first of all – by COURAGE OF FAITH in dignity of the human being as an entity who is able to participate in the sphere of *sacrum*, and with COURAGE OF HUMILITY, expresses itself in the conviction that only thanks to the Creator's grace were we able to outrun the limit between finititude and infinity.[133]

7.2.5 Conclusion

Among Polish philosophers Łukasiewicz was the person who kept the nearest relations with Scholz. For that reason, in Łukasiewicz's writings, we found many notes concerning Scholz as a man.

In letters to Twardowski, Łukasiewicz characterized Scholz – after his visit to Warsaw in 1932 – in the following words:

> Prof. Scholz is immensely pleasant and likeable, sincere and with winning manners, but for a long time he has suffered from ulcers of the stomach; hence he must be careful of his lifestyle and after dinner he must rest in bed. He is interested very much in the history of art. [...] Everybody was favorably impressed by him.[134]

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[130]*Ibid.*

[131]B. Wolniewicz, "O istocie religii" [On Essence of Religion] (1992), in: B. Wolniewicz, *Filozofia i wartości* [Philosophy and Values]. Warsaw: Wydawnictwo WFiS UW 1993, pp. 167–168.

[132]*Ibid.*, pp. 168–169, 190.

[133]A. Lubomirski, "Heinrich Scholz: metafizyka logicyzmu" [Heinrich Scholz: Metaphysics of Logicism], in: *Archiwum Historii Filozofii i Myśli Społecznej* XXXVI, 1991, p. 72.

[134]J. Łukasiewicz, "Z korespondencji z Kazimierzem Twardowskim (1901–1937)" [Letters with Kazimierz Twardowski: 1901–1937], in: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, pp. 499–500.

In 1936, Łukasiewicz visited Münster on Scholz's initiative; after this visit he wrote to Twardowski that he was received "unusually cordially" and brought home "the best associations connected with this twelve day journey".[135]

Two years later, in one of his publications, Łukasiewicz describes Scholz as a person "connected with the Warsaw Logistic School by bonds of collaboration and friendship".[136]

Many mentions concerning Scholz are in Łukasiewicz *Diaries*. We find there, e.g., a description of an evening in February, 1936, "in which nearly thirty professors took part", and during which "Scholz tasted wittily in honor of his colleagues".[137] There is a description of an event just before Christmas in 1938 in the oldest Warsaw church of Our Lady, where Scholz felt a religious affection of such a depth that "though evangelical, he kneeled down and prayed" fervently.[138] However, first of all, there is a description of efforts, made by Scholz during Hitler's occupation of Poland in the years of 1939–1944, to better the conditions of his friends' lives. Thus, we come to know that Scholz procured a clerical post in the Municipal Archives in Warsaw; this position did not secure even the minimum of means for existence, but at least it protected against a forced working deportation to Germany.[139] Thanks to Scholz, Łukasiewicz received in 1944 passes for the Reich; it enabled him to run (with his wife) to Münster from the German-Russian front, nearer to the capital of Poland.[140] In Münster, Scholz procured the Łukasiewiczs with passports, which was the necessary condition for getting food ration cards. Scholz also secured a residence for them: initially in his home,[141] then in a hospital, then in Meklenbeck near Münster,[142] and in the end, in a hospital again.[143]

It is small wonder that after the war – in his correspondence to Bocheński – Łukasiewicz complains of a lack of answers to his letters to Scholz,[144] who finally addressed him "after more than a full year's silence".[145] However, first of all, Łukasiewicz rectified calumnies on Scholz which started to make the rounds. He wrote:

> Your news on Scholz, Father, is strange. In my opinion, he is an exceptionally good and honest German. During the war, he saved us as he could; he got out late Salamucha from

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[135] *Ibid*., p. 504.

[136] J. Łukasiewicz, "Kartezjusz", p. 372.

[137] J. Łukasiewicz, *Pamiętnik*, pp. 57–58.

[138] *Ibid*., p. 45.

[139] *Ibid*., p. 73.

[140] *Ibid*., p. 78–79.

[141] *Ibid*., p. 80.

[142] *Ibid*.

[143] *Ibid*., pp. 81–92.

[144] J. Łukasiewicz, "Z korespondencji z Józefem M. Bocheńskim" (1945–1950)" [Letters with Józef M. Bocheński: 1945–1950]. In: J. Łukasiewicz, *Logika i metafizyka. Miscellanea* [Logic and Metaphysics. Miscellanea]. Warsaw: Wydawnictwo WFiS UW 1998, p. 521.

[145] *Ibid*., p. 524.

Dachau; he pleaded even for Jews. I could not believe that "he was the first to hoist a Hitlerian flag at the end of the war", for he has never been a Hitlerian; still in the autumn of [19]44, he deprecated Hitlerians; and on November of [19]44, he left Münster, and at the end of the war, he was to be in Göttingen.[146]

Another representatives of the Lvov-Warsaw School spoke also very highly of Scholz.

Kotarbiński – after Scholz's death – stressed that:

> He was a well-tried friend of the community of Polish logicians. He showed many signs of this fact not only in presenting its achievements in the best light but also by bringing help to Polish colleagues in bad times.[147]

Ajdukiewicz called him also "a friend of Polish logicians."[148] According to Drewnowski's testimony, Scholz had taken to speaking Polish in order to study our logical works.[149] Bocheński described a characteristic event:

> Illegally leaving Poland in December [of 1939], I feared to take [. . .] a copy [of my paper on Theophrastus' logic] with myself, because it was said that Germans (or Muscovites?) shot a Polish philosopher only for the reason that custom-house officers took a mathematical-logical text found on him as a cryptogram. Therefore I sent copies of my work to Scholz; he not only kept them in his seminar, but also announced in its bulletin that this work was with him. One can imagine my terror when one day, opening *The Times* in London, I read that Münster had been raided by *a sea of flames*.[150]

Scholz rendered special services to save Salamucha.[151] On November 6th of 1939, together with another 182 professors of Jagiellonian University in Cracow, Salamucha was arrested by Nazis and committed firstly to the camp in Sachsenhausen, and then to the camp in Dachau.

Salamucha was liberated from Dachau only thanks to Scholz's intervention.

Unfortunately, after 5 years, he was murdered by the Nazis during the Warsaw Uprising.

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[146] *Ibid.*, p. 522.

[147] T. Kotarbiński, "Introduction", in: H. Scholz, *Zarys historii logiki* [Outline of History of Logic]. Warsaw: PWN 1965, p. 6.

[148] K. Ajdukiewicz, "O tzw. neopozytywizmie", p. 28.

[149] J.F. Drewnowski, "U progu nowoczesnej syntezy filozoficznej", p. 165.

[150] J.M. Bocheński, *Wspomnienia* [Memories]. Cracow: Philed 1993, p. 138.

[151] E. Köhler incorrectly writes that the matter was about Łukasiewicz [E. Köhler, "Heinrich Scholz", in: P. Edwards (Ed.), *The Encyclopedia of Philosophy*. Vol. VII. London: Macmillan 1967, p. 324].

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