

Carnap and the Members of the Lvov–Warsaw School. Carnap’s Warsaw Lectures (1930) in the Polish context



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10.1 Introduction

Carnap visited Poland once, at the end of 1930. In his intellectual autobiography, he recollected this visit as follows:

In private discussions, I talked especially with Tarski, Leśniewski, and Kotarbiński [...]. Kotarbiński’s ideas were related to physicalism. [...] Both Leśniewski and Kotarbiński had worked for many years on semantic problems. I expressed my regret that the comprehensive research work [...] was inaccessible to us and to most philosophers in the world, because it was published only in the Polish language, and I pointed out the need for an international language, especially for science. I found that the Polish philosophers had done a great deal of thoroughgoing and fruitful work in the field of logic and its application to foundation problems, in particular the foundations of mathematics, the theory of knowledge, and the general theory of language, the results of which were almost unknown to philosophers in other countries. I left Warsaw grateful for many stimulating suggestions and the fruitful exchange of ideas which I enjoyed. (Carnap 1963, 30)

Carnap flew from Vienna via Cracow and arrived in Warsaw on Wednesday, 26th November.¹ He returned to Vienna on 3rd December (a day later than planned; he stayed longer at Tarski’s request). The main aim of Carnap’s visit to Warsaw was to

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¹On November 26th, he noted: “From 9.30 to 14.30 I flew to Warsaw. [...] Before Cracow a little gusty.” And on December 3rd, we read: “Departure at 8.30; at 10h (instead of 10 ½) in Cracow. 11.15–13.15 to Vienna. Slightly windy and foggy.”

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give three lectures. He was officially invited by the Warsaw Philosophical Society, whose president was Tadeusz Kotarbiński. Thanks to the content of Carnap's *Diaries*,² as well as the preserved correspondence with members of the Lvov–Warsaw School (hereafter: LWS), we know the details of his visit, including personal meetings with Polish scholars. The present paper concentrates on Carnap's lectures and reactions to them. It also presents some interpersonal relations between Carnap and representatives of the LWS.

At the request of Polish philosophers, Carnap prepared summaries of his lectures, which were translated into Polish and published in *Ruch Filozoficzny* [*Philosophical Movement*], the journal of the Polish Philosophical Society.³ Below, I present the content of these lectures together with their background and their resonance in Poland. As part of the background, I include the intellectual atmosphere in Warsaw in 1930, especially the dominant trends and views in the areas and problems discussed by Carnap in his lectures. By 'resonance', I mean the reactions of Polish thinkers to what Carnap presented. I must add that the analysis of the relations between Carnap and the Poles he met is only sketchy, and to make them complete, a lot of further research is needed.⁴

Before coming to Carnap's lectures, some historical facts should be mentioned. Usually, two events are indicated as the beginning of the interactions between the Lvov–Warsaw School and the Vienna Circle: Carl Menger's visit to Warsaw in 1929 and Alfred Tarski's visit to Vienna in the following year. However, it turns out that already in 1928, Jan Łukasiewicz, Warsaw's leading logician, met Schlick in Vienna and learned about soon-to-be-published book by Carnap (probably the *Aufbau*). This is how Łukasiewicz recounted this event:

When in Vienna⁵ in 1928, I learned from him [i.e., Schlick] that in the series of J. Springer's Company in Berlin, entitled *Schriften zur wissenschaftlichen Weltauffassung*, a book by an associate professor of Vienna University, R. Carnap, containing a critique of philosophy from the point of view of mathematical logic, will be issued soon. (Łukasiewicz 1929b, 431)

The first mention of the Vienna group happened 1929 in the journal *Ruch Filozoficzny*.⁶ Tarski's Vienna lectures took place in February 1930, and thanks to them Carnap became acquainted with the main results of Polish logicians. He was very impressed and instantly noticed the importance of these results for his own scientific projects. He also tried to convince his Viennese colleagues of the value of the Polish results:

²See Carnap (1908–1935). All quotations from the *Diaries* are in my English translation.

³See Carnap (1930–31a; 1930–31b; 1930–31c).

⁴The most long-lasting relation occurred between Carnap and Tarski; it was the only one that lasted into the second half of the 20th century. Carnap–Tarski relations were characterized many times, even by themselves, and that is the reason why I do not develop this subject here. See, for instance, Woleński and Köhler (1999); Brożek, Stadler and Woleński (2017).

⁵Perhaps Łukasiewicz stayed in Vienna on his way to Italy, where he participated in the 5th International Mathematical Congress in Bologna.

⁶Cf. *Ruch Filozoficzny* IX (1928–29), p. 196.

Tarski came to Vienna in February 1930, and gave several lectures, chiefly on metamathematics. We also discussed privately many problems in which we were both interested. Of special interest to me was his emphasis that certain concepts used in logical investigations, e.g., the consistency of axioms, the provability of a theorem in a deductive system, and the like, are to be expressed not in the language of the axioms (later called ‘the object language’), but in the metamathematical language (later called ‘the metalanguage’). In the subsequent discussion, the question was raised whether metamathematics was of value also for philosophy. I had gained the impression from my talks with Tarski that the formal theory of language was of great importance for the clarification of our philosophical problems. But Schlick and others were rather skeptical at this point. At the next meeting of our Circle, when Tarski was no longer in Vienna, I tried to explain that it would be a great advantage for our philosophical discussions if a method were developed by which not only the analyzed object language, e.g., that of mathematics or of physics, would be made exact, but also the philosophical metalanguage used in the discussion. I pointed out that most of the puzzles, disagreements, and mutual misunderstandings in our discussions, arose from the inexactness of the metalanguage. My talks with Tarski were fruitful for my further studies of the problem of speaking about language, a problem which I had often discussed, especially with Gödel. (Carnap 1963, 28–29)

It was also during Tarski’s stay in Vienna, in February of 1930, that Carnap received an informal invitation to Warsaw.⁷ Let us stress that this first contact of Carnap with Warsaw thought was a contact with mathematical logic. Tarski never considered himself as a philosopher (despite his results proving to be of great importance to philosophy). However, many philosophers, and logicians trained in philosophy, belonged to Tarski’s Warsaw environment. Carnap will have realized the diversity of the scientific philosophy in Poland while visiting Warsaw at the end of 1930.

10.2 Lecture 1

Let us now come to the content of Carnap’s lectures, which I present based on the author’s summaries. The first of them in Warsaw was public and was presented on 27th November (starting at 7.15 pm) in Lecture Hall 3 at the University of Warsaw. It was entitled “Psychology in physical terms”. Here are Carnap’s main theses⁸:

⁷See the notes in Carnap’s *Diaries* of 22nd and 24th February 1930. Let me only mention that Tarski of course attended Carnap’s lectures in Warsaw, and both men met several times in private, also in Tarski’s flat. A day before Carnap’s departure, they talked about the possibility of publishing Tarski’s ‘brochure’ and about the planned logic journal in Poland (Tarski complained about Lukasiewicz’s sluggishness). Cf. Carnap (1908–1934, 891).

⁸I focus only on Carnap’s auto-abstract (see Carnap 1930–31c) and not on Carnap’s paper published later in *Erkenntnis*. It is, however, an interesting question whether there were any essential differences between the content of the Warsaw lectures and that of the articles prepared by Carnap. I answer this question in this paper only partially. I also do not discuss Carnap’s views; I assume they are known to the reader.

- (1) The sense of a sentence is the method of its verification, that is, the conditions of its truthfulness: if two sentences have the same conditions of truthfulness, they have the same sense.
- (2) A sentence about a mental experience (e.g., ‘Individual *A* is angry now’) has the same sense (i.e., the same conditions of veracity) as the corresponding sentence about a physical behavior pattern attributed to this experience (‘The body of individual *A* is in a given physical state’).
- (3) Psychology is concerned with certain physical processes, namely, (visible) behavior of living creatures.
- (4) All sciences (including social sciences and cultural studies) speak of physical processes, and therefore all sciences share the same subject. (This is a version of the argument for the Unity of Science.)

What was the ‘Warsaw background’ of this lecture? Let us note that apart from the logical branch, which Carnap visited in Warsaw, the Lvov–Warsaw School also had a psychological branch, and that this psychology was practiced in the spirit of Franz Brentano. Interestingly, the main, or perhaps even the only, centers of Brentano psychology at that time were Warsaw and Lvov, rather than Vienna, where Brentano taught and where his ideas came from, through Twardowski, first to Lvov, and then to Warsaw. This is why the most prominent representatives of this psychology are Twardowski and his psychology students: Władysław Witwicki, Bronisław Bandrowski, Stefan Baley, Mieczysław Kreutz, etc. Although Twardowski abandoned psychologism as a *philosophical* standpoint, he remained a *methodological* psychologist, namely, he was convinced that the best method to practice philosophy was to analyze (the content of) mental states. He also practiced psychology as such, which N.B. he considered to be one of the basic philosophical disciplines, even though at that time it was in the process of becoming independent of philosophy.

The Lvov–Warsaw psychology in that period had three characteristic features: understanding psychology as the analysis of mental phenomena, stress on notional distinctions, and a distinct lean towards humanism. This interpretation was clearly supported by the conviction that physical and mental phenomena were fundamentally separate.

Naturally, Carnap’s claims were unacceptable for Warsaw psychologists, including the most prominent of them – Władysław Witwicki. He was Twardowski’s student, and a co-founder (together with Twardowski) of the Lvov school of psychology. From 1920, he was the head of the department of psychology at the University of Warsaw. As a representative of the psychological branch of the LWS, he did not maintain particularly close relationships with the Warsaw logicians, which he spoke of in very critical terms. Witwicki attended Carnap’s lecture; the two scholars also met in private a few times. One of Carnap’s notes suggests that Witwicki tried to convince him that mental states exist and that they may be recognized intersubjectively (by extraspection). By analyzing the details of Carnap’s physique and various behavioral circumstances of his life, he deduced a purely psychological surplus. Carnap described these actions in the following way:

Witwicki guessed on the basis of my physique that I was not married or happy alone, that I am agreeable to others, that I prefer music to painting and that one of my parents was tall and the other was plump. (Carnap 1908–1935, 984)

He also admitted: “There were many surprisingly apt observations” (Carnap 1908–1935, 984).

Both men almost certainly had different assessments of these results. For Witwicki, they were the effect of a procedure of interpretation of behavior, admissible in science, whereas for Carnap they were merely lucky guesses.

Polish psychologists (or psychologically inclined philosophers) were of course aware of the subjectivity of introspection and the problems arising from it. One of the responses to these issues was Twardowski’s theory of actions and products, as well as distinguishing physical and psychophysical products as indications of mental life. The physical or psychophysical product of a given mental activity as its visible result was considered to be its indication, and the occurrence of the result lets us infer (reductively, of course) the occurrence of the cause.

The members of the LWS also paid attention to the relationship between physical predicates and mental (or psychophysical) predicates, especially to the reduction of the latter to the former. This issue was raised by Kotarbiński (1920, 1929) in the 1920s, and in the 1930s Ajdukiewicz proposed a solution, according to which physical predicates and psychological predicates reduced to them can be of equal range but are never equivalent (see Ajdukiewicz 1934). Immediately following World War II, Ajdukiewicz (1946) referred directly to Carnap’s views on introspective sentences. In Ajdukiewicz’s opinion, the phenomenon of physicalism is quite distinct from simple materialism or behaviorism. A physicalist only claims that we cannot state anything rational about that which is given in introspection, rather than, for instance, that there is no introspective data. Ajdukiewicz adds that a physicalist cannot accept the materialist thesis that mental objects are not physical objects, not because he deems this thesis to be false, but because he deems it to be nonsensical.

10.3 Lecture Two

The second lecture was presented by Carnap on the 350th plenary scientific meeting of the Warsaw Philosophical Society on 29th November and was entitled “Overcoming metaphysics through logical analysis of language”. Carnap noted in his *Diaries* that the lecture took place in a room at the Theological Department, where there was a crucifix hanging on the wall. He probably considered it inappropriate when compared to Austrian practices. This inappropriateness contrasted with Carnap’s astonishment at the fact that many listeners agreed with the main theses of the lecture.

Here are the main points of the lecture (again based on the author’s summary; see Carnap 1930–31a):

- (1) A sentence is nonsensical if it contains at least one word which is devoid of meaning or when its syntax is faulty.
- (2) A word has a meaning when empirical conditions of the veracity of sentences in which this word occurs are established.
- (3) The terms of metaphysics do not meet the requirement of being empirical ('God', 'arché', 'objective spirit', 'a thing in itself').
- (4) Some metaphysical sentences have faulty syntax (for instance Heidegger's 'Das Nichts nichtet').
- (5) Metaphysicians attempt to express content which cannot be tested empirically; this is why sentences formulated by them are apparent (nonsensical) sentences.
- (6) The problems and sentences of metaphysics are nonsensical.
- (7) The function of sentences in metaphysics is to express emotions, and their proper place is art. (Carnap 1930–31a)⁹

Carnap was probably unaware at the time that the fight against vagueness and pseudo-problems in philosophy had many advocates in Poland, especially since Twardowski's times. One could even say that it was one of the dominant trends in Poland in those times,¹⁰ with traditions reaching far back, at least to the beginnings of the 19th century.

Twardowski's role is significant in this context. Firstly, Twardowski's analysis of the word 'nothing'¹¹ at the end of the 19th century is noteworthy, since it anticipated Carnap's analysis of the sentence 'Das Nichts nichtet'. Secondly, in the paper "On clear and unclear philosophical styles", published at the beginning of the 20th century,¹² Twardowski explicitly formulates the postulate of precision in thought and in speech, which became conventional for the LWS. This postulate had long been implicitly fulfilled by his students. Incidentally, the term 'Scheinproblem', which was used in the title of one of Carnap's books, was used by Leśniewski as early as 1911.¹³

Among Poles, one of Carnap's main supporters in his fight against nonsensical metaphysics was Stanisław Leśniewski, the head of the second department of logic at the University of Warsaw (the first one was under Łukasiewicz). The fact that Carnap found an ally in Leśniewski is supported by two remarks in his *Diaries*. After one of their discussions, he wrote that "we understand each other well in everything" (Carnap 1908–1935, 980); and on the day of his departure he wrote that

⁹It is significant that in the theses (3) and (5)–(7) – as they were formulated in the auto-abstract – there are no quantifiers. It may be assumed that at that time Carnap would have given general quantifiers everywhere: 'all the terms of metaphysics', 'all metaphysicians', 'all the problems and sentences of metaphysics', or at least limited general quantifiers (with the emphasis that the theses are about traditional metaphysics; for Carnap, Heidegger was a personification of such a metaphysics). Cf., in this case, Ajdukiewicz's (1946) comments quoted below.

¹⁰See Ajdukiewicz (1934).

¹¹See Twardowski (1894) and van der Schaar (2017).

¹²See Twardowski (1919).

¹³See Leśniewski (1911).

“everyone, but especially Leśniewski and Kotarbiński, seem very satisfied with the visit” (Carnap 1908–1935, 981).¹⁴

However, there were two questions that distinguished their standpoints. The first concerned sense-data. For the early Carnap, the assumption of the existence of sensory data was something significant, as they constituted the only reasonable foundation of the whole edifice of science. According to Carnap’s recount (and my knowledge of Leśniewski’s viewpoint from his writings), Leśniewski considered sensory data to be typical metaphysical fictions. Leśniewski’s arguments could be one of the reasons for Carnap gradually withdrawing the description of the empirical foundation of scientific knowledge in the categories of sense-data and replacing it with a description in the categories of physical objects.

The second question raised in discussions between Carnap and Leśniewski concerned general criteria for the meaningfulness of expressions, more specifically, of sentences. As Carnap wrote, “Leśniewski claims that it is a matter of linguistic convention whether the sentence ‘Life is square’ will be deemed false or nonsensical” (Carnap 1908–1935, 979). Based on Leśniewski’s concept of syntactic categories, later expanded by Ajdukiewicz, it depends on what categories will be permitted in the description of a given language, and in particular on whether we allow for the existence of subcategories in this description. If we have one category of predicates at our disposal, and we consider ‘being-square’ to be a predicate, then the formulation quoted by Carnap will be meaningful, but false. If we distinguish from the category of predicates a subcategory which may, e.g., only be applied to geometrical objects, our phrase will be devoid of sense (it will be syntactically wrong).

Carnap’s main host in Warsaw was Tadeusz Kotarbiński, who personally looked after Carnap in Warsaw; for instance, he helped him find an appropriate room. They met almost every day throughout Carnap’s stay in Warsaw. Kotarbiński is the only philosopher about whom Carnap writes that they had a conversation about something other than science, namely they talked about politics.¹⁵ The Carnap–Kotarbiński academic disputes concerned the language used to express experiences (which was of particular interest to Kotarbiński), Esperanto (which Carnap was fascinated with), differences between the theory of cognition and logic (which was in the scope of Kotarbiński’s intense activity then), and pansomatism (which Carnap was “moved” by¹⁶). In Carnap’s evaluation, Kotarbiński’s views approached physi-

¹⁴Leśniewski’s name first appears in Carnap’s *Diaries* on 27th November, after a lecture on physicalized psychology, when he spent the evening in the company of Kotarbiński and Leśniewski in one of Warsaw’s cafés. Throughout his stay in Warsaw, Carnap met Leśniewski every day, including several times in the Leśniewskis’ apartment.

¹⁵Kotarbiński wrote to Twardowski on 13th December 1930: “The last two weeks here [that is, in Warsaw] were at a peak of hectic preparation and accumulation of tasks, especially due to Carnap’s stay, a very pleasant and well-educated person, which I shall write about in more detail.” Kotarbiński did not keep his promise; or at least no letter containing such an account survived.

¹⁶Carnap probably made a note from the discussion about pansomatism, but as far as I know such a note did not survive.

calism, but to what degree? Let us respond to this question by comparing the quintessence of Kotarbiński's semantic reism and Carnap's physicalism.

Semantic reism states:

(SR) Only reist (let us call them so) sentences are meaningful, or sentences which can be reduced to reist sentences. Reist sentences are sentences where the only names are names referring to things.

On the other hand, according to physicalism (in its original version),

(Ph) Only physical sentences are scientific, or sentences from which physical sentences can be derived. Physical sentences are sentences which are verifiable by sense-data.

In such a formulation, (SR) and (Ph) are very similar syntactically. Their *semantic* similarity requires the investigation of the relationships between the following pairs: meaningful *versus* scientific; a reist sentence *versus* a physical sentence; a name referring to an object *versus* a sentence which is verifiable by sense-data. Further comparisons of (SR) and (Ph) are necessary from both historical and systematic perspectives.¹⁷ Generally speaking: Kotarbiński admitted that some elements of his reist doctrine were revised under the influence of Carnap's remark. This concerns in particular his deeming sentences of the type 'A given object is a state or a relationship or a feature' nonsensical.¹⁸ However, it is also true that, as mentioned before, certain details of Carnap's physicalist doctrine were modified under criticism from the Warsaw logicians.

10.4 Lecture Three

The third of Carnap's lectures in Poland was entitled "The tautological character of reasoning" and was presented at the 45th meeting of the Department of Cognition of the Warsaw Philosophical Society (combined with the 4th meeting of the Section of Logic of the Warsaw Philosophical Society). It took place on 1st December at 8 pm; here are its main points:¹⁹

- (1) All reasoning is tautological in the sense that the conclusion does not state more than the premises.
- (2) Every solid science is based on data from experience.
- (3) Inductive metaphysics wants to draw conclusions from experience concerning what lies beyond experience.
- (4) Since all reasoning is tautological, such transcendence is impossible.

¹⁷A part of the comparative work was already done by Sztejnberg (1934) and Kokoszyńska; see also Woleński (1989). Carnap's views on metaphysics were analyzed by Lutman-Kokoszyńska (1937, 1938) and Ajdukiewicz (1946).

¹⁸See Kotarbiński (1930–1931, 299).

¹⁹Cf. Carnap (1930–31b).

Carnap noted in his *Diaries* that the lecture was followed by a lively discussion, continued in an informal setting in a café. Once again, let us discuss what the intellectual background for these ideas in Warsaw was. One of the premises of Carnap’s third Warsaw lecture was the claim that all inference is tautological in the traditional sense, that is, in the sense that the conclusion does not enrich the knowledge contained in the premises. Unfortunately, the record of the discussion which took place after the lecture did not survive (although such discussions were often reported in *Ruch Filozoficzny*). We may only speculate about possible comments from Polish logicians. It is sure that if Łukasiewicz did not question Carnap’s aforementioned reasoning, he did so out of either courtesy or lack of time.

The fact is that problems of inference, or more broadly, reasoning, were the object of a long-running discussion in the LWS, initiated by Łukasiewicz in 1912.²⁰ Łukasiewicz, as well as his successors, noted that reasoning contains a creative component which makes it possible for inferences to enrich our knowledge significantly, although the price to pay for it may be an increase in the degree of hypotheticality of the inferred claims²¹. At any rate, disavowing the creative character of reasoning would mean removing from science its hypothetical component.

Parenthetically let me briefly characterize the relation between Carnap and Łukasiewicz. As mentioned before, Łukasiewicz learned about Carnap’s academic interests from Schlick in 1928. He had great hopes for Carnap’s activity. Just after his meeting with Schlick he wrote:

I was confirmed in my views the meaning of mathematical logic for philosophy when I see that also some German philosophers reach similar notions independently of me. (Łukasiewicz 1929b, 431)

Those German philosophers were Heinrich Scholz and Carnap himself. (Otherwise, Łukasiewicz had the worst possible opinion of contemporary German philosophers.) On the day of his arrival in Warsaw, that is, 28th November, Carnap participated in Łukasiewicz’s seminar devoted to the logic of the Stoics. Łukasiewicz listened to all Carnap’s lectures; we know that he gave Carnap a copy of a book of his.²² They also met at two parties: at Tarski’s and at Kotarbiński’s.

Still, did Łukasiewicz find in Carnap an ally to help him fulfill his philosophical program? Let us take a closer look at this program, which took shape starting about 1918. Ten years later, Łukasiewicz formulated it most explicitly in his lecture “For the method in philosophy”, published in 1928, before his meeting with Schlick:

²⁰ See Łukasiewicz (1912).

²¹ As an example, Łukasiewicz gave the reasoning that led to the formulation of laws and hypotheses. In the first case, the reasoning consists in the incomplete induction, leading from individual sentences of the type “ a_1 is B ”, “ a_2 is B ”, ... “ a_k is B ” to general sentences of the type “Every A is B ”, where $\{a_1, a_2, \dots, a_k\}$ is a proper subset of A ; as a consequence, the sentence “Every A is B ” also applies to events unknown from experience. In the second case, reasoning seeks to find the answer to the question why some S is P by referring to the law of the type “Every M is P ” and assuming the hypothesis that this S is M ; the acceptance of such a hypothesis is a creative (not reproducing) act.

²² This was probably Łukasiewicz (1929a).

Future scientific philosophy must begin its reconstruction from the very beginning, from the fundamentals. To begin with the fundamentals means, firstly, to review all philosophical problems and to choose only these which may be formulated comprehensibly and to refuse the others. Already at this preliminary work, mathematical logic may be useful, as it established the meaning of many expressions belonging to philosophy. Then one should start trying to resolve these philosophical problems which may be formulated comprehensibly. The most appropriate method which should be applied to this purpose seems to be once again the method of mathematical logic: the deductive, axiomatic method. One should rely on sentences as intuitively clear and certain as possible, and accept such sentences as axioms. One should select as primary concepts, that is, non-definable concepts, expressions such that their meaning can be comprehensively explained with examples. One should attempt to minimize the number of axioms and primary concepts and one should list them carefully. All other concepts must be defined without exception on the basis of primary concepts, and all other statements must be without exception proven on the basis of axioms and directives of inference assumed in logic. The obtained results should be constantly compared with the data of intuition and experience as well as with the results of the other sciences, especially the natural sciences. In case of discrepancies, the system should be corrected by formulating new axioms and creating new primary concepts. One should always take care to maintain contact with reality in order to not create mythological entities of the type of Platonic ideas and Kant's things in themselves but rather to understand the essence and construction of this real world in which we live and act, and which we would somehow like to transform into a better and more perfect one. (Łukasiewicz 1928, 42)

Carnap's views agree with Łukasiewicz's convictions on certain points. First of all, just like Łukasiewicz, Carnap is convinced that philosophy cannot stay indifferent to the occurrence and development of mathematical logic. Influenced by Russell's writings, Carnap wrote:

I felt as if this [Russell's] appeal had been directed to me personally. To work in this spirit would be my task from now on. And indeed, henceforth the application of the new logical instrument for the purposes of analyzing scientific concepts and of clarifying philosophical problems has been the essential aim of my philosophical activity. (Carnap 1963, 13)

Carnap and Łukasiewicz also had the same negative opinion of existing philosophy (especially the one dominating in Germany). They both realized that applying the tools of mathematical logic to traditional philosophy (both earlier and contemporary to them) reveal its worthlessness, to put it bluntly.²³ They also shared the conviction that philosophy cannot ignore the results of the natural sciences. This, however, is where the similarities end and the differences begin.

These differences primarily concern, firstly, views on the genesis of philosophers' past failures. Carnap ascribed the poverty of contemporary philosophy to its detachment from empiricism: to the fact that its conceptual apparatus was devoid of

²³ Łukasiewicz wrote: "When we approach the great philosophical systems of Plato, Aristotle, Descartes, Spinoza, Kant, or Hegel with the standard of accuracy created by mathematical logic, these systems fall apart like a house of cards. Their fundamental notions are unclear, the crucial claims are incomprehensible, the reasoning and the proofs are inexact; the logical theories at the root of these systems are almost all faulty. Philosophy must be rebuilt from scratch, supplemented with the scientific method and based on a new logic. An individual cannot dream of achieving this deed. This will be the work of generations, and of minds much more powerful than the world has ever seen" (Łukasiewicz 1922, 115).

empirical content. For Łukasiewicz, philosophy’s main sin was imprecision of concepts and messiness of justifications.

The difference in this area perhaps derived from the fact that, secondly, they had different scientific ideals. Carnap’s ideal science was physics, whereas for Łukasiewicz it was mathematical logic. Consequently they also had different ideals of philosophy. Łukasiewicz wanted philosophy to become an interpreted axiomatic system. According to Carnap, philosophy should not assume the form of any system: it should be limited to a logical analysis of the language of physics (and more broadly, of science) conducted *ad hoc*.

Thirdly, Łukasiewicz and Carnap differed on the question of the origins of science. According to Carnap, acquiring the experiential data which constitute the foundations of science is of imitative character and reasoning does not provide anything new to the image of the world provided by this data. If the content of our knowledge is experiential data, then logic (and mathematics) is only a contentless scaffolding for this knowledge. In the LWS, the idea of creation, in combination with the idea of freedom, was one of the crucial ideas. (Besides, the tradition of attachment to these ideas had a long history in Poland, and it ran against philosophical paradigms.) As mentioned earlier, Łukasiewicz insisted on the idea of the creative character of scientific processes of reasoning, no less creative than the activity of artistic imagination in art. Łukasiewicz’s views on the methodological status of logic and mathematics evolved over time, but at no stage of the development of these views did he see a drastic difference between the cognitive statuses of analytical and synthetic statements.

Łukasiewicz and Carnap also differed in their views on the ontological status of the world described by science. In simple terms, in Carnap’s eyes, Łukasiewicz was a realist, whereas in Łukasiewicz’s eyes, Carnap’s position approached materialism. Carnap was somewhat surprised by Łukasiewicz’s views and he wrote in his *Diaries* that “Łukasiewicz accepts independently existing states of affairs (a realist?)” (Carnap 1908–1934, 981). Łukasiewicz supposedly said in a radio lecture that Carnap was one of those philosophers who use formal logic to justify a metaphysical claim (Hiz 1971, 526).

It seems that both diagnoses were wrong, which incidentally is surprising in the case of such astute analysts. After all, Carnap was rather convinced that metaphysical problems such as the problem of materialism or realism are senseless.

In the LWS, the attitude of *reinterpretation* of metaphysical problems was more readily assumed than that of *refutation*. The best-known example of the former was the semantic paraphrasing of metaphysical claims performed by Ajdukiewicz.²⁴ They tried to lead at the solutions of philosophical disputes rather than suspending judgment in such disputes.

²⁴ See, e.g., Ajdukiewicz (1937).

10.5 Other Warsaw Acquaintances

Apart from the personalities mentioned above, Carnap met in Warsaw other representatives of the LWS (in particular, of its Warsaw wing). They were (presented in alphabetical order): Janina Hosiasson, Maria Ossowska, Stanisław Ossowski, Edward Poznański, and Dina Sztejnberg.²⁵ They represented the variety of disciplines: Hosiasson worked in probabilistic logic, Ossowska in semantics and ethics, Ossowski in aesthetics and sociology, Poznański in philosophy of science, and Sztejnberg in semantics and methodology.

The relatively large number of female representatives is often mentioned as a characteristic feature of the LWS. Carnap met three of them. These three female Warsaw scholars had very different personalities. People were struck by Ossowska's aristocratic refinement (she was called 'the lady of Polish philosophy'), Hosiasson emanated energy and a certain propensity to dominate (among others, over her future husband, Adolf Lindenbaum), and Sztejnberg's characteristic features were a meditative nature and self-control (which allowed her to survive the long suffering in Auschwitz). Carnap, being an astute observer, surely caught these differences, but in the case of Ossowska he also noted that she made an impression on him as a woman.

Sztejnberg, as was her custom, primarily listened carefully to what Carnap was saying and took detailed notes. She must have had serious doubts as to the program of physicalism, since a few years later she published a critical study of it.²⁶ Conversely, Hosiasson utilized Carnap's presence to discuss with him the issues of her work on induction and probability (which she was just preparing as the basis for her MA). It must be admitted that she made a great (academic) impression on him, as they met three times (November 28 and 30, December 2) in Warsaw to discuss the problem of induction in detail. Later, in 1933, she went to Vienna for a scholarship; she also took part in Congresses of United Science. There, she made a similar impression on Popper. In his own papers on induction, Carnap mentions her results several times. Hosiasson's career tragically ended in 1942 when she was killed by Nazis in Vilna.

10.6 Carnap and Lvov

The year 1930, when Carnap came to Warsaw, was the same year in which Twardowski retired in Lvov. He had been the *spiritus movens* of Polish philosophy for over 30 years, since 1895, when he got the chair of philosophy in Lvov after having become a „Privatdozent“ in Vienna. Despite his retirement, Twardowski re-

²⁵This is the later Janina Kotarbińska; in his *Diaries*, Carnap incorrectly spelled her name at that time "Steinberg".

²⁶See Kotarbińska (1934).

remained active, for instance as the editor of the aforementioned journal *Ruch Filozoficzny*, which was established by him.

It was in *Ruch Filozoficzny*²⁷ that Carnap’s summaries appeared (in Janina Hosiasson’s translation). As requested by Carnap, Twardowski sent him a copy of the journal. Carnap reacted in the following way:

Dear Colleague,

Thank you very much for your cards and friendly offer to send me further numbers of your journal. Unfortunately, I do not understand Polish and have to thankfully refuse this offer. I know from the letter of Prof. Ajdukiewicz [...] that there is a prospect of giving my lectures in Lwów. I would be glad to meet you personally when these lectures take place. I read the bibliography and the table of contents of your journal with a great interest. I would wish very much to have something like that in German.

With great respect,

Rudolf Carnap (Carnap 1934)

We also learn of the plans to invite Carnap to Lvov from Twardowski’s *Diaries* (Twardowski 1997, 322, 327, 331). In 1934, Twardowski talked about it to Ajdukiewicz on several occasions. Still, the visit never came to pass. This does not mean, however, that Lvov paid no attention to what Carnap was doing. As mentioned earlier, Carnap’s program was carefully followed by Ajdukiewicz. Primarily, though, it was Maria Kokoszyńska who was in close social and academic contact with the Vienna Circle (hereafter: VC), which I describe extensively elsewhere (Brożek 2017). It could generally be said that the contacts between the Lvov–Warsaw School and the Vienna Circle during the interwar period were lively. Members of both groups met not only in Warsaw and Vienna, but also during philosophical congresses in Prague (1934) and Paris (1935).

10.7 Final Remarks

The day Carnap went back from Warsaw to Vienna, he noted in his *Diaries*: “*Große Geschichte*.” If this was a comment on the Polish journey (no other interpretation of these words is equally admissible), we may interpret it as another symptom of the great impression that Polish logicians and philosophers, as well as their results, made on him. Carnap started to include these results in his own work and lectures. One of the confirmations of this early impact may be found in a letter to Twardowski of 29 May 1931 by Walter Auerbach, who had a scholarship in Vienna in the spring of 1931:

Carnap (who ultimately stayed in Vienna for this term rather than move to Prague) includes Leśniewski’s and Tarski’s results in his classes. (Auerbach 1931)

²⁷ See Carnap (1930–31a; 1930–31b; 1930–31c).

The further cooperation between Carnap and Polish thinkers did not develop as well as one could foresee based on the promising visit in 1930. The most important reason was Carnap's emigration. However, there were also some other reasons.

Let us take Leśniewski as an example. Here, the reason was Leśniewski's personality, who on the one hand was a harsh critic of other people, and on the other hand demonstrated hypersensitivity on the issue of the originality of his results. His remark on the fate of the concept of intentionality is a good illustration of this issue:

The speaker [that is, Leśniewski] mentions that his concept of DESINTENSIONALISATION of intensional functions has been developed by him for many years in different lectures, and he simultaneously draws attention to R. Carnap's concept, similar to this concept in terms of the fundamental idea, and presented lately in *Logische Syntax der Sprache*, a concept which is, according to the speaker, completely inaccurate in some of its significant details, and leads to untenable theoretical consequences. (Leśniewski 1939, 778)

A lot of light is shed on Leśniewski's mentioned personality features by his correspondence with Neurath on the Congress of United Science, as well as by letters to Twardowski about plagiarism on the part of certain contemporary logicians.

It was not only Leśniewski who was sensitive in regard to originality. In a letter to Neurath (September 7, 1936), Tarski wrote:

It is to me frankly unpleasant that we could not come to any agreement over historical questions. It seems to me at times that the whole discussion is quite pointless: we lean, both of us, upon some reminiscences, impressions, and so on. A prospective historian will certainly employ a completely different method of inquiry; if the points of dispute which turn up in our letters will interest him, then first of all he will study carefully the publications of both circles – the Vienna Circle and the Warsaw Circle – from the period in question. His task, by the way, will be quite difficult, for unfortunately the publications of both sides at that time were not very numerous; I hope, however, that he will agree with me at least partially, after all. (Tarski 1992, 24–25)

Well, based on the analysis of sources, any 'future historian' has to admit that Tarski was right. However, Tarski's reservations were not directed at Carnap but only at Neurath. Carnap never denied the influence of the Poles.

Tarski continued his letter as follows:

I wrote to you once a few words about the "emergence of legends". I can now point you to an example of a "legend" which is, so to say, in "statu nascendi"; some Polish acquaintances, who participated in the Paris Congress, brought this recently to my attention. I gave a lecture in Paris about the concept of logical consequence; there I contested (among other things) the absolute character of the division of concepts into logical and descriptive, as well as of sentences into analytic and synthetic, and I endeavored to show that the division of concepts is quite arbitrary, and that the division of sentences has to be related to the division of concepts. In the discussion, Carnap explained that he regards my remarks in this connection as very deep, and presented my main thoughts once more, in a clear and popular form; I was certainly very grateful to him for this. Now, one should see how the report of this lecture and the discussion which followed is expressed in *Erkenntnis* 5, No. 6, pp. 388–389! To my lecture not as much as a whole line is devoted²⁸ (it is not even mentioned that I gave a lecture on this topic). Carnap's talk has by comparison a very precise

²⁸In the original letter there are two insertions in Neurath's handwriting: "that's not true: 6 ½ lines!" and "not more to others either" (the footnote of the editor of Tarski 1992).

and comprehensive account in 13 to 14 lines. The reader must have the impression that Tarski only asked a question, and that Carnap, however, answered this question in great detail and in a very appropriate way; it is absolutely impossible to guess from the report the real state of affairs. (Tarski 1992, 28–29)

Let us leave aside the snappish elements of Tarski’s letter. What is interesting is that Tarski draws attention to the fact that Carnap accepted (to some degree?) an undermining of the analytic–synthetic distinction. The same attitude towards this distinction was shared by Łukasiewicz, Leśniewski, and Ajdukiewicz. The Wittgensteinian vision of logic as a set of analytic, ‘empty’ truths was never something obvious among Poles. But it was accepted for many years by Carnap. More generally, as Hiż puts it:

The atmosphere among philosophers of the Vienna Circle was similar in spirit to the one in the Warsaw center. In Vienna, Carnap was one of the most important personalities. And his philosophy was influenced to some degree by Wittgenstein [...]. Tarski’s views corresponded to Carnap’s as long as Carnap disagreed with Wittgenstein. In the points in which Carnap agreed with Wittgenstein, Tarski’s views were essentially different. The positions of Tarski and Wittgenstein are alien. (Hiż 1971, 523)

To recapitulate: Carnap’s visit was a fruitful event for both visiting and visited scholars. Carnap had occasion to learn about Polish logic, philosophy, and psychology and found supporters of some of his main ideas. He gained some stimuli for the further evolution of his thought. For his Polish partners, the visit was mainly of psychological significance. Polish logicians had the opportunity to see that they were not an isolated intellectual island in Europe, that their results may be appreciated and developed further outside of Poland. Thanks to Carnap and his Viennese colleagues, they also obtained a kind of contrasting background for their own philosophical views. But they did not share the radicalism of VC, as Ajdukiewicz strongly emphasized:

I do not know any Polish philosopher who would have assimilated the material theses of the Vienna Circle. The affinity between some Polish philosophers and the Vienna Circle consists in the similarity of THE FUNDAMENTAL METHODOLOGICAL ATTITUDE AND THE AFFINITY OF THE PROBLEMS ANALYZED. (Ajdukiewicz 1935, 151–152)

However, thanks to this radical Viennese background, they became confirmed in their cautious philosophical positions.

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