

Roman Murawski

ORCID: [0000-0002-2392-4869](https://orcid.org/0000-0002-2392-4869)

Faculty of Mathematics and Comp. Sci.

Adam Mickiewicz University (Poznań, Poland)

rmur@amu.edu.pl








The Connections Between the Lvov-Warsaw School and the University in Poznań

Abstract

Lvov-Warsaw School in Philosophy – as the very name suggests – was connected mainly with two academic centers: universities in Lvov and Warsaw. However, it had a broader impact. The members of this school were active also at other universities, in particular in Cracow, Vilnius and Poznań. The aim of the paper is to present and analyze the connections of Lvov-Warsaw School with the University in Poznań.

Keywords: *Lvov-Warsaw School, the University in Poznań, logic, philosophy, methodology*

| | | | | |
|--|---|--|---|---|
| PUBLICATION INFO |  | e-ISSN 2543-702X ISSN 2451-3202 |  |  DIAMOND OPEN ACCESS |
| CITATION | | | | |
| Murawski, Roman 2023: The Connections Between the Lvov-Warsaw School and the University in Poznań. <i>Studia Historiae Scientiarum</i> 22, pp. 379–396. DOI: 10.4467/2543702XSHS.23.010.17701 . | | | | |
| RECEIVED: 08.07.2022 ACCEPTED: 06.04.2023 PUBLISHED ONLINE: 05.10.2023 | ARCHIVE POLICY Green SHERPA / RoMEO Colour | LICENSE  |  | |
| WWW | https://ojs.ejournals.eu/SHS/ ; https://pau.krakow.pl/Studia-Historiae-Scientiarum/archiwum | | | |

Związki Szkoły Lwowsko-Warszawskiej i Uniwersytetu w Poznaniu

Abstrakt

Szkoła Lwowsko-Warszawska – jak wskazuje sama nazwa – związana była głównie z dwoma ośrodkami akademickimi: uniwersytetami we Lwowie i w Warszawie. Jednakże jej wpływ był znacznie szerszy, uczeni będący członkami tej szkoły byli aktywni także w innych uniwersytetach, w szczególności w Krakowie, Wilnie i Poznaniu. Celem tej pracy jest prezentacja i analiza związków Szkoły Lwowsko-Warszawskiej i uniwersytetu w Poznaniu.

Słowa kluczowe: *Szkoła Lwowsko-Warszawska, uniwersytet w Poznaniu, logika, filozofia, metodologia*

1. Introduction

By Lvov-Warsaw School one means the school in philosophy founded by Kazimierz Twardowski at the turn of the 19th century in Lvov.¹ A broader and a specific meaning of this term should be distinguished. Specifically, it denotes a group of logicians active mainly in Warsaw (and called Warsaw School in Logic), as well as philosophers who postulated the usage a logical analysis in philosophy. In the broader sense, the term ‘Lvov-Warsaw School’ refers to Twardowski’s students, as well as their students, regardless of their worldviews or areas of expertise. Despite differences in their views, they all shared some common general convictions concerning philosophy and the way, in which it should be developed. Among these convictions were the following ones: philosophy should be a scientific, analytic and clear discipline, separated from one’s worldview and it should avoid any speculative issues. The beginning of the school is associated with the arrival of Twardowski to Lvov and his appointment to chair of philosophy at the Jan Kazimierz University. This event took place on 15th of November 1895.

Among students of Twardowski there were more than 30 professors – not only philosophers, but also logicians, psychologists, pedagogues,

¹ See Woleński 1985; 1989.

linguists and literary scholars. The members of Lvov-Warsaw School dominated in the philosophy in Poland in the first half of the 20th century. They were appointed to many chairs of philosophy at Polish universities, which were reactivated or newly established after the First World War. There, they propagated Twardowski's scientific and didactic standards and patterns. In this way, the Lvov-Warsaw School was not only local, but it became national. In particular, an important school of logic was established in Warsaw, which was the common achievement of philosophers (Stanisław Leśniewski and Jan Łukasiewicz) and mathematicians (Zygmunt Janiszewski, Waclaw Sierpiński, and Stefan Mazurkiewicz)².

The university in Poznań³ was established after the First World War in 1919 (the first inauguration took place on 7th May 1919). However, the academic tradition was present there already in the 16th century. In 1519, a Roman-Catholic Bishop Jan Lubrański founded the Academy, which back then boasted the status of a tertiary education institution. Shortly after, another institution of tertiary learning was established in Poznań, namely the Jesuit College (1573), and it continued the academic traditions there. The first rector of the Jesuit College – rev. Jakub Wujek – was the first scholar to translate the Bible into Polish. Then, the university status was granted to the Jesuit College by King Sigismund III Vasa on October 28th, 1611. Thus, it became the first university-type school in Poznań. The privilege was confirmed by king John III Sobieski. Only in 1919, i.e. 308 years after the formal king's decision, the university started its practical activity.

² See Murawski 2010.

³ The name of the University in Poznań was changing. At the very beginning its name was Piast University [*Wszęchnica Piastowska*], 1920 it was renamed to University of Poznań [*Uniwersytet Poznański*]. During the Second World War, the staff and students of the university (expelled by the Nazis) founded an underground Polish University of the Western Lands [*Uniwersytet Ziemi Zachodnich*]. It operated primarily in Warsaw from 1940 to 1944 and had branches in Kielce, Jędrzejów, Częstochowa and Milanówek. In 1945, the University was reopened in Poznań. In 1955 University of Poznań adopted a new patron, the 19th-century Polish Romantic poet Adam Mickiewicz, and changed its name to Adam Mickiewicz University. In the present paper, I will abstract from such details and say simply University in Poznań.

2. Zygmunt Zawirski

The appointment of Zygmunt Zawirski (1882–1948) to the Chair of Theory and Methodology of Sciences at the Faculty of Mathematics and Natural Sciences may be assumed to be the first liaison of the University in Poznań with the Lvov-Warsaw School. The chair was established after the retirement of Władysław Mieczysław Kozłowski⁴ in 1928.

Kozłowski had been, since 1920, the head of the Chair of Theory and Methodology of Sciences at the Philosophical Faculty, which was the first chair of logic at the University in Poznań. After the division of the Philosophical Faculty into the Faculty of Humanities and the Faculty of Mathematics and Natural Sciences, in 1921, the chair was renamed to Chair of Theory and Methodology of Natural Sciences and Humanities and incorporated into the faculty of Humanities. After Kozłowski's retirement, his chair was canceled. In the academic year 1929/1930, the Chair of Theory and Methodology of Sciences was established at Faculty of Mathematics and Natural Sciences and Zawirski became head of it. He came to Poznań from Lvov, where he had lectured at polytechnic.

Zawirski had studied mathematics, physics and philosophy at the universities in Lvov (1901–1906), Berlin (1909) and Paris (1910). He completed his doctorate under Kazimierz Twardowski's supervision in 1910. Then, he taught mathematics and the propaedeutic to philosophy in various Lvov gymnasiums. He was habilitated in 1924 at the Jagiellonian University in Cracow on the basis of the thesis on the axiomatic method in natural sciences. Between 1924–1928, he lectured on philosophy at the Faculty of General Studies of the Lvov Polytechnic.

Zawirski dealt mainly with the methodology of sciences, as well as the theory of cognition and ontology, especially with problems related to the development of physics – relativity theory and quantum theory.

⁴ In the context of connections between Lvov-Warsaw School and University in Poznań one should mention also Czesław Znamierowski (1888–1967). He was philosopher, jurist and sociologist, professor of legal theory at the University in Poznań – he chaired there the Department of Legal Theory and Philosophy of Law. His axiological views, as well as his analytic approach to the philosophy, were close to views dominating in Lvov-Warsaw School. He contributed to shaping the ethical views of the school. However, he was not considered a member of this school and he never saw himself as its member (see Woleński 1985, p. 25; 1989, p. 16).

He was then the most outstanding Polish specialist in problems related to the borderline of physics and philosophy. However, he was also interested in mathematical logic, especially in its applications. Poznań period was one of the most creative ones in his scientific career.

In the philosophy of science, he was engaged in polemics with neo-Kantianism and Empirio-criticism – the philosophical trends prevailing at that time. He also referred to the ideas of Vienna Circle as most scholars of the Lvov-Warsaw School did. An important topic in his research was the question of time – see his monograph *L'Evolution de la notion du temps* (1936) regarded as his *opus magnum*. Zawirski opted for moderate realism. He appreciated the role and significance of both induction and deduction in natural sciences. He was also interested in the problem of axiomatization of fragments of physics.

What concerns logic, one should consider at least two problems, in which Zawirski was interested: the problem of relations between logic and mathematics and the meaning of non-classical logic, especially of many-valued logics and intuitionistic logic.

The problem of relations between logic and mathematics was considered by Zawirski, first of all, in his paper “Stosunek logiki do matematyki w świetle badań współczesnych” [The relation between logic and mathematics from the point of view of contemporary investigations] (1927a). There, he describes the development of logic stressing the importance of the Stoics' logic, his focus being Whitehead and Russell's work *Principia Mathematica*. He comes to the conclusion that it is of no greater importance whether the judgements of logic and mathematics are regarded as analytic or synthetic. What is relevant, is the problem of the consistency and independence of axioms.

It is obvious that mathematics and logic do influence our cognition of the world. Since mathematical theories can be interpreted, mathematical constructions become elements of physical theories. This highlights the role and significance of mathematics and its methods for natural sciences. Therefore, he paid special attention to the problem of axiomatizability of such theories (cf. his works 1923–1924; 1927b; 1938b; 1948).

Logic was understood by Zawirski in a broad sense – not only as a formal system or collection of such systems, but he included there also, for example, the theory of reasoning. This was, in fact, a reflection of contemporary tendencies in Poland (and not only there). In his *Logika teoretyczna* (1938a), he wrote

logic is a general science and it indicates a structure common to all disciplines; it is the way, in which specific domains justify their statements, respectively⁵ (p. 2).

And on p. 1 he wrote that logic is not

a science about reason but rather about forms of reasoning used by us in any deduction, as well as in reasoning⁶.

Zawirski was interested – as we wrote above – in a non-classical logic. He treated many-valued logics as a way to describe and understand the phenomena of the micro-world. Combining ideas of Jan Łukasiewicz and Emil Post, he attempted to construct a system of logic, which would enable us to interpret problems of contemporary physics, as well as the probability calculus. Zawirski can be described as a precursor of the so-called quantum logic.

In 1936, Zawirski left the University in Poznań and moved to Cracow to Jagiellonian University. The investigation on the borderline between philosophy and physics was continued in Poznań by his student Franciszek Zeidler (1907–1972).

3. Zawirski's students in Poznań

Zawirski had also another student in Poznań, who should be mentioned here, namely Zbigniew Jordan (1911–1977). He is regarded as belonging to the second generation of Lvov-Warsaw School. Jordan⁷ studied (1930–1934) philosophy at University in Poznań – his master thesis was devoted to the critical analysis of psychological propositions in the philosophy of Tadeusz Kotarbiński. Influenced by Zawirski, he got interested in the axiomatic method in philosophy. In 1936, he was rewarded PhD under Zawirski's supervision. In his doctoral thesis *O matematycznych podstawach systemu Platona* [Mathematical foundations of Plato's system] (1937), Jordan claimed that Plato was the discoverer of the axiomatic method in mathematics. After doctorate, he continued his

⁵ „[L]ogika jest nauką ogólną i zdaje sprawę ze wspólnej wszystkim naukom struktury, ze sposobu, w jaki pojedyncze nauki swoje twierdzenia uzasadniają”.

⁶ „[N]auką o rozumie, ale raczej o formach rozumowania, którymi się posługujemy we wszelkim wnioskowaniu jako też rozumowaniu”.

⁷ See Konstańczak (2010).

studies at universities in Bonn and Paris preparing the Habilitationsschrift devoted to the problem of the infinity. Unfortunately, the outbreak of the Second World War prevented the habilitation (the manuscript went missing). After the war, he worked in England and Canada and his works were devoted to the history of logic and philosophy.

4. Alfred Tarski and the University in Poznań

After Zawirski left Poznań, a vacancy appeared at his Chair of Theory and Methodology of Sciences. And here again we see the Lvov-Warsaw School entering the stage. Unfortunately, the history is not quite clear, since no documents that could explain the issue have been found. So, we must rely on opinions and relations from other historians.

Anita Burdman-Feferman and Solomon Feferman wrote in their biography *Alfred Tarski. Life and Logic*:

The Ministry of Education asked all the relevant professors in Poland to suggest a candidate to fill the vacancy, and Tarski was unanimously recommended. However, Poznan, always a stronghold of right-wing conservatism and dominated by the Catholic church, had, since Pilsudzki's death in 1935, moved even further to the right and become outright fascistic and anti-Semitic. Unanimous recommendations notwithstanding, Poznan University did not appoint Tarski, and since there would have been no way to appoint anyone else without making the reasons for denying him the professorship patently clear, the position was eliminated (Burdman-Feferman, Feferman 2004, pp. 102–103).

In fact, the position left by Zawirski was not filled in 1937–1939. Woleński (1995, p. 400) explains this in the following way:

According to Hiż⁸, the people in Poznań were afraid that Tarski would apply and win the competition. Poznań was

⁸ Henryk Hiż (1917–2006) – logician and philosopher. He studied at University of Warsaw, where he was a student of Tadeusz Kotarbiński. In 1950, Hiż left Poland. He lectured at various universities, in particular at the University of Pennsylvania in Philadelphia. He had strong connections with Tarski – first as a pupil of gymnasium in Warsaw and later as his *protégé* in the USA. [my remark – R.M.]

perhaps the most anti-Semitic region in Poland. This would explain the situation.

The position at Chair of Theory and Methodology of Sciences – due to the outbreak of the Second World War – remained in fact unfilled until 1945. One can only imagine what would be the history of logic in Poland, if Tarski were appointed at the University in Poznań!

5. Kazimierz Ajdukiewicz

The spirit of Lvov-Warsaw School appeared again at the University in Poznań after the war, when Kazimierz Ajdukiewicz (1890–1963) rejected the offers from universities in Warsaw and Cracow and decided to take the position just in Poznań. He became the head of the Chair of Theory and Methodology of Sciences at Faculty of Mathematics and Natural Sciences.

Ajdukiewicz studied philosophy, physics and mathematics at the Jan Kazimierz University in Lvov. In 1912, he obtained his doctor's degree under the supervision of Kazimierz Twardowski. In the years 1913–1914, he continued his studies at the University of Göttingen, where he listened to the lectures given by Edmund Husserl, Leonard Nelson and David Hilbert. The latter exerted a considerable influence on Ajdukiewicz, which was revealed in his *Habilitationsschrift*. In the years 1919–1922, he worked as a teacher in a gymnasium in Lvov and at the same time he conducted his research. In 1921, he completed his habilitation at the Philosophical Faculty of the University of Warsaw. In the years 1922–1925, he lectured as a private docent at the University of Lvov and taught in secondary schools in Lvov. In 1925, he became the professor at the University of Warsaw, and from 1928 he was professor at the University of Lvov. In 1940–1941, he lectured on psychology at the Lvov State Medical Institute. During the Nazi occupation, he worked as an accountant and, at the same time, he was involved in the underground education. In 1944–1945, he held the Chair of Physics at the Ivan Franko University in Lvov. In 1945, he was given the Chair of Theory and Methodology of Sciences at the University of Poznań, where he was also elected a rector for the term 1948–1952. In 1955, he moved to the University of Warsaw. Ajdukiewicz belongs to the outstanding representatives of Lvov-Warsaw School. He had

a significant influence on the development of logic and philosophy in Poland and abroad. When he came to Poznań, he was already widely known in the world – his works from the interwar period brought him fame. He dealt mainly with semiotics, epistemology, logic and general methodology of sciences. In what follows, we shall indicate some of his main achievements.

One of Ajdukiewicz's main achievements has been the conception of meaning – it formed the logical base of his radical conventionalism proclaimed in his early works. Later on, he shifted towards empiricism stressing the role of experience and measurement in science. In formal logic – treated by him as a tool of philosophy allowing for precise and strict considerations – he proposed the definition of the consequence, which, in a certain sense, preceded Tarski's definition. Also, he formulated the deduction theorem, as well as studied the rule of infinite induction. Also, the calculus of syntactic types belongs to his important achievements. In methodology, he was interested in problems of practical logic, such as classification of reasoning, or the problem of rationality of inferences. He proposed a new definition and classification of reasoning and studied non-deductive reasoning. In his views, Ajdukiewicz represented anti-irrationalism and criticized severely and explicitly various idealistic tendencies in philosophy in his works published during his Poznań period. This critique was always based on logical analysis of discussed conceptions, and aimed at indication of logical mistakes and errors. Also, he discussed Marxist philosophy (prevailing at that time in Poland) and exchanges opinions with Marxist philosophers. What is interesting, he not only defended his own philosophical views against attacks of his opponents, but sometimes also seemed to advance the latter some solutions in favour of their ideas⁹.

Ajdukiewicz – following his teacher Twardowski's ideas – paid great attention to the problem of teaching logic. He wrote some excellent

⁹ Among his main works published in the Poznań period one finds the following papers: „Logika i doświadczenie” [Logic and experience] (1947), „Zmiana i sprzeczność” [Change and contradiction] (1948a), „Epistemologia i semiotyka” [Epistemology and semiotics] (1948b), „Metodologia i metanauka” [Methodology and metascience] (1948c), „On the notion of existence” (1951), „W sprawie artykułu prof. A. Schaffa o moich poglądach filozoficznych” [Concerning the paper by Professor A. Schaff on my philosophical views] (1953), „Klasyfikacja rozumowań” [Classification of reasonings] (1955).

textbooks on logic and philosophy,¹⁰ took part in discussions concerning the didactics of logic,¹¹ and organized meetings devoted to teaching of logic and philosophy.

During ten years (1945–1955), when Ajdukiewicz was the head of the chair at the University in Poznań¹², he created a significant scientific center in logic and philosophy there. In logico-methodological seminars¹³ directed by him, many scholars from various Polish universities took part. Numerous papers in logic, methodology and philosophy were written there – papers representing the highest scientific level. Ajdukiewicz really introduced the spirit of Lvov-Warsaw School in Poznań.

It should be added, that Poznań was a center of publishing scientific journals at that time. It was there, where the journal *Studia Logica* was founded in 1953. Its Editor-in Chief was Ajdukiewicz, and Roman Suszko was the first secretary of the Editorial Board. The journal is published till today and belongs to the leading logical journals in the world. Also, the journal *Studia Philosophica* was published in Poznań, being co-edited by Ajdukiewicz together with Roman Ingarden and Kazimierz Twardowski in the period 1935–1951.

6. Ajdukiewicz's students in Poznań

Among collaborators and students of Ajdukiewicz during his Poznań period were Seweryna Łuszczewska-Romahnowa, Roman Suszko, Zbigniew Czerwiński and Andrzej Malewski – they continued his work when he left Poznań for Warsaw.

Roman Suszko (1919–1979) studied physics, mathematics, and chemistry at the University in Poznań, and at underground schools

¹⁰ Let us mention here *Zagadnienia i kierunki filozofii* [Problems and Trends in the Philosophy] (1949) and *Zarys logiki* [The Outline of Logic] (1957).

¹¹ Let us mention here the discussion, which took place in the journal *Mysł Filozoficzna* [Philosophical Thought] in the fifties. Among its participants were leading Polish logicians (Ajdukiewicz, Andrzej Grzegorzczak, Klemens Szaniawski, Roman Suszko), as well as Marxist philosophers (e.g., Adam Schaff). This discussion was important not only for teaching logic but also for ideological reasons.

¹² Let us add that in 1951 the Faculty of Mathematics and Natural Sciences was transformed into Faculty of Mathematics, Physics and Chemistry and Ajdukiewicz's chair was renamed to the Chair of Logic.

¹³ See Murawski, Pogonowski 2008.

in Cracow during the war. In 1945, he obtained his master degree in philosophy at Jagiellonian University under the supervision of Zawirski and in 1946 started working at the Chair of Theory and Methodology of Sciences at the University in Poznań. He obtained the doctor's degree under the supervision of Ajdukiewicz there in 1948, and habilitated in 1951. He was also – as mentioned above – the secretary of the Editorial Board of *Studia Logica*. In 1953, Suszko left Poznań and moved to Warsaw (to the Chair of Logic at the Philosophical Faculty of the University of Warsaw). His papers written during the Poznań period were devoted to logical rules of reasoning and their relations with laws of logic; to theory of mathematical definitions, as well as some problems related to the theory of axiomatic systems. In particular, he considered systems of logic without axioms but with appropriate finitistic inference rules. His *Habilitationschrift* „Canonic axiomatic systems” (1951) was devoted to explication of Skolem paradox and contained general metatheoretical considerations concerning models of axiomatic theories. During his work in Poznań, Suszko published also a few other papers, in particular a critical discussion of logical positivism (see 1952) and began his work on diachronic logic.

Zbigniew Czerwiński (1927–2010), in his logical works, was concerned with the theory of induction and its connections with statistics and game theory. Later, he took interest in problems of econometrics. Andrzej Malewski (1929–1963) was an assistant in Ajdukiewicz's chair. In 1956, he moved to the Institute of Philosophy and Sociology of Polish Academy of Sciences in Warsaw. Later, he collaborated with Jerzy Topolski in the field of methodology of history (for Poznań is considered to be the school of the methodology of historical sciences). He wrote also an interesting and simple textbook in logic *ABC porządnego myślenia* (1957).

7. Seweryna Łuszczewska-Romahnowa – the successor of Ajdukiewicz

After Ajdukiewicz left Poznań and moved to Warsaw, Seweryna Łuszczewska-Romahnowa¹⁴ (1904–1978) became the head of the Chair of Logic. She had studied philosophy and mathematics at the Jan

¹⁴ See Murawski, Pogonowski (2018).

Kazimierz University in Lvov. In 1932, she obtained her doctor's degree there – the real supervisor was Ajdukiewicz, however her official supervisor was Kazimierz Twardowski for formal reasons. Then, she started working at the Chair of Philosophy at the University in Lvov, where Ajdukiewicz was the head. In 1943, she was arrested by Gestapo and sent to Nazi concentration camps in Majdanek, Ravensbrück and Buchenwald. In December 1946, she came to Poznań, and in 1947, she started working at the Chair of Theory and Methodology of Sciences of the University in Poznań directed by Ajdukiewicz. In 1955, she became his successor as the head of the chair. In 1970, her chair was incorporated into the newly founded Institute of Mathematics and renamed to the Department of Mathematical Logic. She directed it till her retirement in 1974 and her successor was Tadeusz Batóg.

Luszczewska-Romahnowa worked in mathematical logic, methodology and history of logic. Due to her dramatic experiences during the war, she published relatively few papers. However, in her works one can recognize the influence of Twardowski, Ajdukiewicz and Roman Ingarden (in philosophy), as well as Hugo Steinhaus and Stefan Banach (in mathematics) from Lvov. This can be seen, in particular, in the synthesis of analytical philosophy and logic, which is so characteristic for her style of writing.

Among her works one should definitely mention „Wieloznaczność a język nauki” [Polysemy and the language of science] (1948) devoted to the ambiguity of concepts used in the language of science, “Analiza i uogólnienie metody sprawdzania formuł logicznych przy pomocy diagramów Venna” [An Analysis and Generalization of Venn's Diagrammatic Decision Procedure] (1953), where she proposed a method of checking the decidability of the first-order monadic predicate calculus, as well as papers dealing with argumentation theory (1962; 1964), or with the problem of induction (1957). She wrote also papers on multi-level classifications and on the distance functions connected with such classifications (1961; 1965a; 1965b).

8. Honorary doctorate awarded to Twardowski

Considering connections of the University in Poznań with Lvov-Warsaw School, one should mention one more issue – however of a different nature than those mentioned above. We mean here the fact that

the University in Poznań awarded honorary doctorate to Kazimierz Twardowski¹⁵ in 1930. This was formally done by Senate of the university on 21st of May 1930 on the request of the Council of the Faculty of Humanities. Unfortunately, due to his poor health, Twardowski was unable to take part in the ceremony in Poznań. Therefore, the ceremony, in which a delegation from the University in Poznań participated, took part in the Hall of Jan Kazimierz University in Lvov on 21st of November 1932. The delegation consisted of professors Jan Sajdak (vice-rector), Ludwik Jaxa-Bykowski (dean of the Faculty of Humanities) and Stefan Blachowski (supervisor). The rector of Lvov University, Adam Gerstmann, the Senate, representatives of secular and spiritual authorities, as well as numerous students, took part in the ceremony. There, Twardowski gave his famous speech *O dostojęństwie uniwersytetu* [The majesty of the university] (1933). He wrote his text in 1931 and complemented it in September 1932. He called it himself, in his *Dzienniki* [Diaries] (1997), „my testament on the essence of university”.¹⁶ The text was published by the University in Poznań in 1933 with a circulation of 500 copies (including 100 copies on a handmade paper).¹⁷ Twardowski's photograph, description of introductory speeches, and a copy of his diploma were added.

It is worth quoting here some passages from Twardowski's speech. They show how he did define the tasks of a university (cf. Twardowski 2011, Section 3):

Hence, the core and the nucleus of University's work consists in scientific production in both the semantic and methodological sense. It is the duty of the University to discover ever new scientific truths and probabilities and to improve and spread the ways whereby they can be

¹⁵ See Sierpowski, Malinowski (2014), pp. 105–111.

¹⁶ „[jest] rodzajem testamentu mego uniwersyteckiego”

¹⁷ It was reprinted by the University in Poznań (with an English translation by Olgiert A. Wojtasiewicz) in 2011 in the framework of the celebrations of the 400 years of university tradition in Poznań and the jubilee decade of the university (2009–2019). Add that in 2007 Department of Promotion of the University in Poznań [Zespół ds. Promocji UAM] prepared a bibliophile edition of Twardowski's speech (Polish and English text) in 200 copies. They were not for sale and were used for promotion of the university only.

discovered. [...] The nature of objective scientific research manifests itself in that. It does not receive any orders from any external factors and refuses to serve any accidental considerations. It recognizes experience and reasoning as its sole masters and has only one task: to arrive at properly substantiated true opinions, or at least those which are the most probable.¹⁸

9. Conclusion

The above considerations show that there were real and significant connections between the Lvov-Warsaw School and the University in Poznań. The connections can be seen between the scholars, who were students of Twardowski and in this way members of this school, as well as in the directions and tendencies of research that they undertook in Poznań and in methods they promoted. Let us recall here, that in the Lvov-Warsaw School no philosophical manifesto concerning metaphysical views have been formulated. However, such views can be reconstructed on the basis of remarks concerning the nature and methods of philosophy made on the margin of works devoted to particular problems. According to them: (1) philosophy should be separated from the world-view, (2) philosophy should be seen through particular problems and not through general philosophical systems, the so-called „small” philosophy should be developed, (3) philosophy developed so far was criticized for its speculative character, (4) in philosophy, strict and correct methods based on logic must be used, (5) one should take care of the precision and exactness of concepts and methods. This stresses the crucial role of logic in philosophy – however philosophy was never reduced to it.

¹⁸ „Rdzeniem i jądrem pracy uniwersyteckiej jest tedy twórczość naukowa, zarówno pod względem merytorycznym jak i pod względem metodycznym. Cięży na Uniwersytecie obowiązek odkrywania coraz to nowych prawd i prawdopodobieństw naukowych oraz doskonalenie i szerzenie sposobów, które je odkrywać pozwalają. [...] W tem właśnie uwydatnia się charakter obiektywny badania naukowego, że nie przyjmuje ono rozkazów od żadnych czynników zewnętrznych i że nie chce służyć żadnym względom ubocznym, lecz że za panów swoich uznaje jedynie doświadczenie i rozumowanie i że jedno tylko ma zadanie: dochodzenie należycie uzasadnionych sądów prawdziwych albo przynajmniej jak najbardziej prawdopodobnych.”

It is obvious, that the indicated postulates were realized in the studies of scholars described above, who were active at the University in Poznań. They focused on methods used in exploration of particular philosophical problems, and usage of precise methods; they took care of the precision of concepts, they applied logical analyses in discussions on classical problems in philosophy. Instead of formulating general systems, they focused on particular problems. They stressed the role and significance of logic for methodology and philosophy. They attempted to construct reliable foundations of various disciplines, e.g. physics, by using axiomatic method. They contributed also to the development of logic itself, both general and mathematical one.

One remark should be added here. Twardowski, who wanted to build modern philosophy in Poland, postulated that Polish scholars should write modern academic textbooks in Polish. And his students active in Poznań followed this postulate – one can mention here, for example, Ajdukiewicz and his excellent textbooks, or textbooks by Zawirski and Malewski. Though Tarski was not given the position at the University in Poznań, for political reasons, which had nothing to do with science, (what would certainly change the situation of logic and philosophy in Poland generally, and in Poznań in particular), nevertheless the spirit of Lvov-Warsaw School was present there and influenced the development of scientific investigations carried out. And the influence of this spirit should not be seen as limited to scholars mentioned in our paper (who can be seen as the first and second generation of the Lvov-Warsaw School), but can be also detected in the research work of their successors.

Bibliography

- Ajdukiewicz, Kazimierz 1947: Logika i doświadczenie. *Przegląd Filozoficzny* 43, z. 1–4, pp. 3–21.
- Ajdukiewicz, Kazimierz 1948a: Zmiana i sprzeczność. *Mysli Współczesna* nr 8/9, pp. 35–52.
- Ajdukiewicz, Kazimierz 1948b: Epistemologia i semiotyka. *Przegląd Filozoficzny* 44, pp. 336–347.
- Ajdukiewicz, Kazimierz 1948c: Metodologia i metanauka. *Życie Nauki* 6, pp. 4–15.
- Ajdukiewicz, Kazimierz 1949: *Zagadnienia i kierunki filozofii. Teoria poznania, metafizyka*. Warszawa: Czytelnik; second edition: Warszawa: Czytelnik, 1983; third edition: Kęty–Warszawa: Wydawnictwo Antyk – Fundacja Aletheia, 2004.

- Ajdukiewicz, Kazimierz 1951: On the notion of existence. *Studia Philosophica* 4, pp. 7–22.
- Ajdukiewicz, Kazimierz 1953: W sprawie artykułu prof. A. Schaffa o moich poglądach filozoficznych. *Mysł Filozoficzna* 2, pp. 292–334.
- Ajdukiewicz, Kazimierz 1955: Klasyfikacja rozumowań. *Studia Logica* 2, pp. 278–300.
- Ajdukiewicz, Kazimierz 1957: *Zarys logiki*, Warszawa: Państwowe Zakłady Wydawnictw Szkolnych.
- Burdman-Feferman, Anita; Feferman, Solomon 2004: *Alfred Tarski. Life and Logic*. Cambridge: Cambridge University Press. Polish translation: *Alfred Tarski. Życie i logika*. Warszawa: Wydawnictwa Akademickie i Profesjonalne, 2009.
- Jordan, Zbigniew A. 1937: O matematycznych podstawach systemu Platona: z historii racjonalizmu. Poznań: Poznańskie Towarzystwo Przyjaciół Nauk.
- Konstańczak, Stefan 2010: Zbigniew Jordan (1911–1977) – szkic do filozoficznej biografii. *Studia z Filozofii Polskiej* 5, pp. 35–52.
- Łuszczewska-Romahnowa, Seweryna 1948: Wieloznaczność a język nauki. *Kwartalnik Filozoficzny* 17, pp. 47–58. Reprinted in: J. Pelc (ed.), 1971: *Semiotyka polska 1894–1969*. Warszawa: Państwowe Wydawnictwo Naukowe.
- Łuszczewska-Romahnowa, Seweryna 1953: Analiza i uogólnienie metody sprawdzania formuł logicznych przy pomocy diagramów Venna. *Studia Logica* 1, pp. 185–213.
- Łuszczewska-Romahnowa, Seweryna 1957: Indukcja a prawdopodobieństwo. *Studia Logica* 5, pp. 71–90.
- Łuszczewska-Romahnowa, Seweryna 1961: Classification as a kind of distance function. Natural classifications, *Studia Logica* 12, pp. 41–81. Reprinted in: M. Przelecki, R. Wójcicki (eds.), 1977: *Twenty-Five Years of Logical Methodology in Poland*. Warszawa-Dordrecht: D. Reidel, pp. 341–373.
- Łuszczewska-Romahnowa, Seweryna 1962: Pewne pojęcie poprawnej inferencji i pragmatyczne pojęcie wynikania. *Studia Logica* 13, pp. 203–208. Reprinted in: T. Pawłowski (ed.), 1966: *Logiczna teoria nauki*. Warszawa: Państwowe Wydawnictwo Naukowe, pp. 163–167.
- Łuszczewska-Romahnowa, Seweryna 1964: Z teorii racjonalnej dyskusji. [In:] *Rozprawy logiczne. Księga pamiątkowa ku czci profesora Kazimierza Ajdukiewicza*. Warszawa: Państwowe Wydawnictwo Naukowe, pp. 163–167. Wydawnictw Szkolnych.
- Łuszczewska-Romahnowa, Seweryna; Batóg, Tadeusz 1965a: A generalized theory of classificatio I. *Studia Logica* 16, pp. 53–74.

- Łuszczewska-Romahnowa, Seweryna; Batóg, Tadeusz 1965b: A generalized theory of classificatio II. *Studia Logica* 17, pp. 7–30.
- Malewski, Andrzej 1957: *ABC porządnego myślenia*. Warszawa: Państwowe Zakłady Wydawnictw Szkolnych.
- Murawski, Roman 2010: Philosophy of mathematics in the Warsaw Mathematical School, *Axiomathes* 20, pp. 279–293. Reprinted in: R. Murawski 2011: *Lógos and Mátbema. Studies in the Philosophy of Mathematics and History of Logic*, Frankfurt am Main: Peter Lang Internationaler Verlag der Wissenschaften, pp. 227–241.
- Murawski, Roman; Pogonowski, Jerzy 2008: Logical investigations at the University of Poznań in 1945–1955, in: *Methodisches Denken im Kontext*, eds. P. Bernhard und V. Peckhaus, Paderborn: mentis Verlag, pp. 239–254. Reprinted in: Murawski, R.: 2011: *Lógos and Mátbema. Studies in the Philosophy of Mathematics and History of Logic*, Frankfurt am Main: Peter Lang Internationaler Verlag der Wissenschaften, pp. 283–294.
- Murawski, Roman; Pogonowski, Jerzy 2018: Seweryna Łuszczewska-Romahnowa, in: Garrido, A., Wybraniec-Skardowska, U. (eds.), *Lvov-Warsaw School. Past and Present*, Basel: Birkhäuser Verlag, pp. 241–247.
- Sierpowski, Stanisław; Malinowski, Józef (eds.), 2014: *Doktorzy honoris causa Uniwersytetu im. Adama Mickiewicza w Poznaniu*, vol. I: *Okres międzywojenny*, Poznań: Wydawnictwo Naukowe UAM.
- Suszko, Roman 1951: Canonic axiomatic systems. *Studia Philosophica* IV, pp. 301–330.
- Suszko, Roman 1952: Aksjomat, analityczność i aprioryzm. *Mysł Filozoficzna* 4 (6), pp. 129–161.
- Twardowski, Kazimierz 1933: *O dostojęństwie uniwersytetu*, Poznań: Uniwersytet Poznański.
- Twardowski, Kazimierz 1997: *Dzienniki*, red. R. Jadczyk, tom I: 1915–1927, tom II: 1928–1936, Toruń: Wydawnictwo Adam Marszałek.
- Twardowski, Kazimierz 2011: *O dostojęństwie uniwersytetu, reprint*. Poznań: Fundacja Uniwersytetu im. Adama Mickiewicza.
- Woleński, Jan 1985: *Filozoficzna szkoła lwowsko-warszawska*, Warszawa: Państwowe Wydawnictwo Naukowe.
- Woleński, Jan 1989: *Logic and Philosophy in the Lvov-Warsaw School*, Dordrecht–Boston–London: Kluwer Academic Publishers.
- Woleński, Jan 1995: Mathematical logic in Poland 1900–1939: People, circles, institutions, ideas, *Modern Logic* 4, pp. 363–405. Reprinted in: J. Woleński, 1999: *Essays in the History of Logic and Logical Philosophy*, Kraków: Jagiellonian University Press, 1999, pp. 59–84.

- Zawirski, Zygmunt 1923–1924: Metoda aksjomatyczna a przyrodoznawstwo, *Kwartalnik Filozoficzny* 1, pp. 508–555; *Kwartalnik Filozoficzny* 2, pp. 1–58 and 129–157.
- Zawirski, Zygmunt 1927a: Stosunek logiki do matematyki w świetle badań współczesnych, in: *Księga pamiątkowa ku czci Profesora W. Heinricha*. Kraków: Skład Główny: Księgarnia Jagiellońska, pp. 171–206.
- Zawirski, Zygmunt 1927b: Próby aksjomatyzacji fizyki i ich znaczenie filozoficzne. *Przegląd Filozoficzny* 30, pp. 289–290.
- Zawirski, Zygmunt 1936: *L'Evolution de la notion du temps*. Cracovie: Academie Polonaise des Sciences et des Lettres.
- Zawirski, Zygmunt 1938a: *Logika teoretyczna*, script. Kraków.
- Zawirski, Zygmunt 1938b: Doniosłość badań logicznych i semantycznych dla fizyki współczesnej. *Przegląd Filozoficzny* 41, pp. 25–30.
- Zawirski, Z. 1948: Uwagi o metodzie nauk przyrodniczych. *Przegląd Filozoficzny* 44, pp. 315–318.