Logical investigations
at the University of Poznań in 1945–1955

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Abstract

The paper is devoted to the presentation of logical investigations carried out at the University of Poznań in the first decade after its reopening in 1945. One of the problems considered in the paper is whether there was any continuation of the Lvov-Warsaw Logical School at Poznań University.

1 Some introductory information

The history of Warsaw Logical School (being an important part of Lvov-Warsaw Philosophical School) is well known.[1] But logical investigations have been carried out also at other scientific and academic centers of Poland, not only in Warsaw. Hence the question how did they look like? What were the connections with Warsaw School? Were they connected with the tradition of Lvov-Warsaw School?

We want to investigate those questions with respect to Poznań University. We are interested in the period 1945–1955.[2] To understand it better we shall start by describing briefly logical investigations at Poznań before the Second World War.

The university in Poznań was founded in 1919. This happened 400 years after the foundation of the Lubrański Academy and 308 years after the formal creation of the university in Poznań by king Zygmunt III on the base of a Jesuit college (the university was not created then as a consequence of objections by the Cracow Academy). The initiators of the foundation of a university after the First World War were scholars gathered at Poznań Friends of Scholarship (Poznańskie Towarzystwo Przyjaciół Nauk; shortly: PTPN) existing since 1857. The university was founded as Wszechnica Piastowska (Piast University). In 1920 the name was changed to that of the University of Poznań.

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[1]Cf. Woleński (1989).

[2]Our study is based on materials from the archive of Adam Mickiewicz University, the archive of Poznań Friends of Scholarscip (Poznańskie Towarzystwo Przyjaciół Nauk) and on some studies on the history of the University (cf. Grot 1971, 1972). Remembrances of some persons (former students of Kazimierz Ajdukiewicz), whose scientific career has started in the considered period as well as (rather few) existing papers on the activity of particular scholars were also used.

At the beginning there were two faculties: Faculty of Philosophy and Faculty of Law. Since 1925 there existed five faculties: Law and Economy, Medicine, Humanities, Mathematics and Natural Sciences, Agriculture and Forestry.

Already in 1919 at the Faculty of Philosophy a Chair of Theory and Methodology of Natural Sciences and Humanities was founded. Its head was Władysław Mieczysław Kozłowski (1858–1935). He was scientifically active in many domains: botany, history, theory of literature and others but he is known first of all as a philosopher working also in logic. His main achievements in the latter are: an interesting and original classification of sciences and his works in the methodology of sociology. He was also the author of a university handbook in logic *Podstawy logiki, czyli zasady nauk* (Warszawa 1916). It was already a bit out of date when Kozłowski taught logic at the University of Poznań, nonetheless it was the first Polish handbook of logic in which Boolean algebras and the theory of relations were presented. The author formulated there the whole of syllogistic using the concepts of Boolean algebra augmented by a certain type of existential quantifier.

His follower at the chair was Zygmunt Zawirski (1882–1948) who studied philosophy, mathematics and physics at the Lvov University and received Ph.D. in Lvov in 1906 and *Habilitation* at the Jagiellonian University in Cracow in 1924. Since 1928 he was professor at the University in Poznań. He worked in the methodology of physics as well as in the formal logic. In the latter he was interested mainly in possible applications of logic, in particular in interrelations between many-valued logics and the probability theory.

At the beginning of 1937 Zawirski moved to Cracow where he became ordinary professor at the Philosophical Faculty of the Jagiellonian University. The Ministry of Education asked all the relevant professors in Poland to suggest a candidate to fill the vacancy. Alfred Tarski (1901–1983) was unanimously recommended but was not appointed. The reason was the atmosphere in Poznań – always a stronghold of right-wing conservatism and dominated by the Catholic church, had, since Piłsudski's death in 1935, moved even further to the right and became outright fascistic and anti-Semitic. Because there was no way to appoint anyone else without making the reasons for denying Tarski the professorship patently clear, the position was eliminated.[3]

Before the war at the University in Poznań worked also a philosopher and logician Adam Wiegner (1889–1967). He obtained his *Habilitation* in 1934 and was active mainly after the Second World War – hence we will talk about him later.

One can see that before 1945 there were no real investigations in logic *sensu stricto* in Poznań. Logic was developed by philosophers interested mainly in the methodology. On the other hand mathematicians in Poznań were not interested in logic at all. During the Second World War the university was closed by the German authorities. It existed and worked, however, as the underground Uniwersytet Ziem Zachodnich (University of Western Territories).

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[3]Cf. Woleński (1995) as well as Feferman and Feferman (2004), pp. 102–103.

The university was reopened in 1945.[4] And now the situation of logic has changed: philosophers who moved to Poznań (mainly from Lvov) were really interested in logic and scientifically active in this field and on the other hand mathematicians, in particular Władysław Orlicz (a collaborator of Stefan Banach in Lvov) who relaunched the mathematical center in Poznań – though not working in logic – set a high value on it.

In 1945 at the Faculty of Mathematics and Natural Sciences the Chair of Theory and Methodology of Science has been founded — its head was professor Kazimierz Ajdukiewicz (who came to Poznań from Lvov via Cracow). In 1951 its name was changed to Chair of Logic at the Faculty of Mathematics, Physics and Chemistry. Members of the chair were (in various periods): Seweryna Łuszczewska-Romahnowa, Roman Suszko, Tadeusz Strumiłło, Franciszek Zeidler, Zbigniew Czerwiński, Andrzej Malewski.

Researches led at the chair were devoted to epistemology, formal logic and methodology. Beside the doctorate and *Habilitation* of R. Suszko (see below) two other procedures leading to *Habilitation* were carried out: by Henryk Mehlberg (on the basis of the dissertation *Essai sur la theorie causale du temps*) and by Maria Lutman (dissertation *O wzglêdności prawdy* (On the relativity of truth)).

Classes given by members of the chair were devoted to: main principles of logic and methodology (with exercises) (this course was obligatory for all students of the Faculty of Mathematics and Natural Sciences), mathematical logic (with exercises), logic (for students of other faculties), elements of set theory and mathematical logic, seminar on methodology as well as proseminars. Ajdukiewicz led also a seminar in logic for postgraduate and graduate students (see below).

In 1945 at the Faculty of Humanities, the Chair of Philosophy was reactivated. It was renamed in January 1951 to Chair of the History of Philosophy. Since 1947 its head was Adam Wiegner. In 1951 Wiegner became the head of the newly opened Chair of Logic which, since 1952, was located at the Philosophical-Historical Faculty. In this chair were active among others Jerzy Giedymin (since 1953) and Zbigniew Czerwiński (from 1951 till 1953).

An important role in the scholar life in Poznań after the war was played by Poznań Friends of Scholarship. Poznań logicians repeatedly delivered lectures at meetings of the Philosophical Committee of this society (often held as joint meetings of PTPN and the Polish Philosophical Society). Among the invited speakers one finds also: Stanisław Jaśkowski, Tadeusz Kotarbiński, Tadeusz Czeżowski, Maria Kokoszyńska-Lutmanowa, Izydora Dźmbska, Maria Ossowska.[5]

PTPN was also active by editing books and journals. In minutes of administrative

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[4]In 1955 the university assumed the name of Adam Mickiewicz – after the greatest Polish Romantic poet of the first half of the 19th century.

[5]Let us add, as a curious detail that on 5th March 1953, the day of the death of Joseph Stalin, a lecture by Rev. Mieczysław Dybowski on "Existentialism in psychology" was given (30 persons were present).

meetings one finds some interesting information on editorial plans (as well as changes of them). For example, Ajdukiewicz intended to publish in October 1950 a work *Krytyczna analiza idealizmu* (Critical analysis of idealism) (10 printed sheets) (in the minute it was written: "the subject of the work is of great world-view significance"). In plans for the fourth quarter of 1951 a work under the same title is planned in the size of 5 printed sheets only. In 1952 Ajdukiewicz withdrew a work (planned for this year) under the title *Analiza klasycznej problematyki epistemologicznej* (An analysis of the classical problems of epistemology) — instead a paper by R. Suszko *O antynomiach logicznych* (On logical antinomies) (1.5 printed sheets) was planned. The latter was then moved in plans to 1953, next to 1954 (ultimately it was never published in Poznań; Suszko published *W sprawie antynomii kłamcy i semantyki jêzyka naturalnego* (Concerning the antinomy of the liar and semantics of natural language) in Warsaw). Heated discussions were led concerning the question of publishing or rejecting a paper by T. Włodarczyk *Logika zdań u Dunsa Szkota i Pseudo-Szkota* (Propositional logic by Duns Scotus and Pseudo-Scotus).

Poznań logical center was active also in publishing journals. Note that the first volume of the new journal devoted to logic, namely *Studia Logica* has been prepared for publication in Poznań in 1953. The Editor-in-Chief was Kazimierz Ajdukiewicz, and Roman Suszko was the first secretary of the Editorial Board. Kazimierz Ajdukiewicz was also the Editor-in-Chief of the *Studia Philosophica*. The fourth, and at the same time the last, volume of this journal has appeared in 1951 (containing texts from 1949–1951).[6]

Below scientific researches and results of four leading Poznań logicians (Kazimierz Ajdukiewicz, Adam Wiegner, Seweryna Łuszczewska-Romahnowa and Roman Suszko) obtained in the considered period will be shortly presented and discussed.

2 Kazimierz Ajdukiewicz

The main figure among logicians active at the considered period in Poznań was doubtlessly Kazimierz Ajdukiewicz (December 12, 1890 – April 12, 1963). During his "Poznań time" he published more than thirty works (among them were his textbooks). He gained a world wide reputation already before the war. In Poznań he served as a rector of the University (1948–1952). He belonged of course to those whose opinion on the organization of scientific life in Poland after the war was of great importance.

Work and achievements of Ajdukiewicz were presented and discussed in many places.[7] We shall not attempt here to present them again, even in short. But on the other hand one should say some words about his works published during his

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[6] It is not true that *Studia Logica* was a continuation of *Studia Philosophica*. The ruling authorities simply closed *Studia Philosophica*, in the same way as they have done it to *Kwartalnik Filozoficzny*.

[7] His works are presented, e.g., in papers by L. Borkowski and Z. Czerwiński in vol. XVI of *Studia Logica* – complete bibliography is provided there.

activity in Poznań in the considered period. As most important and representative we consider his following papers:

- "Logika i doświadczenie" (Logic and experience) (1947),

- "Zmiana i sprzeczność" (Change and contradition) (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 poglźdach filozoficznych" (Concerning the paper by Professor A. Schaff on my philosophical views) (1953),

- "Klasyfikacja rozumowań" (Classification of reasonings) (1955).

In the period 1945–1955 some translations of important Ajdukiewicz's works written before the war were also published, for example *The Scientific World Perspective* and *Syntactic Connection*.

In papers written in the considered period Ajdukiewicz repeatedly criticized severely and explicitely various idealistic trends in philosophy. He analysed the languages of the considered doctrines from the logical point of view and indicated various logical errors either in the construction of concepts or in reasonings.

Considering the idea maintained by some idealists according to which logic can be treated as a system of empirically verifiable hypotheses, Ajdukiewicz characterized strict empiricism as a certain *programme* of developing science. He showed that such a programme is in fact realizable but simultaneously stressed the inconformity of the hitherto development of science to the programme of strict empiricism.

Analysing paradoxes connected with notions of change and contradiction Ajdukiewicz attempted to explain misconceptions concerning the law of contradiction and to make precise some concepts involved in paradoxes.

In papers written in the period 1945–1955 Ajdukiewicz very often — for obvious reasons — undertook discussions with Marxists. And what is interesting, he not only defended his own philosophical views against attacks of opponents but also sometimes seemed to advance the latter some solutions in favour of their ideas.

In a paper on the classification of reasonings Ajdukiewicz critically analysed earlier proposals of Łukasiewicz and Czeżowski and presented his own classification. Critical remarks on it have been formulated by Wiegner.

As is known, Ajdukiewicz attached very great importance to the problem of teaching logic. He was an author of some excellent textbooks, in various papers expressed his opinion on the didactic of logic, organized meetings devoted to these problems. He spoke also in a discussion (important for the history of Polish logic and philosophy) on teaching logic which took place in the journal *Myśl Filozoficzna* (Philosophical Thought) in the fifties.

3 Adam Wiegner

In contrast to other logicians presented in this paper, Adam Wiegner (December 16, 1889 – September 28, 1967) was connected with Poznań during his whole life.[8] He studied philosophy at the Jagiellonian University in Cracow in 1908–1914 where he obtained his doctorate in 1923. His *Habilitation* took place at the University of Poznań in 1934. Since 1928 he was a member of the faculty of this university.

Main works of Wiegner (except his textbooks in logic) were written before the war. In the period considered here Wiegner did not publish a lot. Nevertheless he took an active part in scientific life. Let us quote as an example titles of some of his lectures delivered at that time: "Conference of German logicians in Berlin" (30 March 1954), "On paraphrasing subject statements into language" (18 October 1946), "On philosophical meaning of *Gestalttheorie*" (15 March 1948). He very often took part in discussions after talks presented on meetings of the Polish Philosophical Society or Poznań Friends of Scholarship.

Scientific works of Wiegner belong to various domains: history of philosophy, epistemology, ontology, psychology, philosophical foundations of physics and formal logic. Most important are his achievements in epistemology. His position was characterized by himself as "holistic empiricism". He claimed that what is directly given to us are certain wholes, "Gestalten", structures (together with causal relations). Elements of those data separated in the process of study are obtained by the process of abstraction. All scientific statements have a non-observational contents (of theoretical or hypothetical character). Hence Wiegner anticipated the thesis of hypothetism (though he himself attributed this to Avenarius).

Wiegner attempted to defend the principle of reciprocity between the contents and the extension of a notion. He claimed that sources of some of critics of this principle can be seen in terminological mistakes and in unsound assumptions concerning the concept of richness of the contents. He introduced a concept of a derived feature, the addition of which do not lead to the enlargement of the contents.

Wiegner was also interested in traditional logic — in some of his papers he considered the problem of a theoretical foundations of the traditional formal logic. He developed and improved the result of Ajdukiewicz which makes possible to obtain the principal part of the traditional formal logic in the system of the quantifier logic. This result of Wiegner was obtained earlier than a similar one by Ivo Thomas. Wiegner extended the system of axioms proposed by Ajdukiewicz (they ensured the non-emptiness of all considered names and the existence of three pairwise disjoint names) by adding an axiom ensuring the non-universality of all considered names. He proposed to add to the rule of substituting terms with nonempty denotation for variables representing general names a rule of substituting terms with a non-universal denotation.

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[8]Information on his life and scientific activity can be found in Nowakowa (2001). See also (Wiegner, 2005) for the selection of his works in the philosophy of science.

Wiegner's textbooks (cf. 1948 and 1952) were accurate and simultaneously clear and easy to understand. He proposed axiomatics for the propositional calculus which turned out to be of a didactic value. Primitive notions of this system are conjunction and negation and the axioms are the following:

1. $p \supset p \cdot p$,

2. $p \cdot q \supset p$,

3. $p|q \supset q|p$,

4. $(p \supset q) \supset (q|r \supset p|r)$,

where $\cdot, \supset$ and $|$ are symbols denoting conjunction, implication and Sheffer's stroke, resp. (the two latter being defined by negation and conjunction in the known way).

Wiegner carried out an analysis of important concepts of the philosophical logic such as: abstraction, generalization, idealisation, concretisation. Those analyses influenced in a significant way the methodological reflexion undertaken later in Poznań. In *Studia Logica* one can find short notes by Wiegner concerning for example attempts to specify logical terminology and some polemics with the classification of reasonings proposed by Ajdukiewicz.

4   Seweryna Łuszczewska-Romahnowa

Seweryna Łuszczewska-Romahnowa (August 10, 1904 – June 27, 1978) has published relatively little.[9] The main reason for that were, without any doubts, her dramatic experiences during the Second World War and the consequences these events had for her health afterwards.

One can recognize in her works the influence of her studies in Lvov: philosophical (under the guidance of Kazimierz Twardowski, Kazimierz Ajdukiewicz and Roman Ingarden) and mathematical (under the supervision of Hugo Steinhaus and Stefan Banach). She was awarded the degree of doctor of philosophy by Lvov University in 1932 on the basis of the dissertation "O wyrazach okazjonalnych" (On occasional terms; unpublished).

One of her earliest papers from the considered period "Wieloznaczność a jêzyk nauki" (Polysemy and the language of science; 1948) is devoted to the ambiguity of concepts used in the language of science. She argues that certain ambiguities in that language can not be avoided. However, scientific idiom remains intelligible and serves as an efficient tool of communication. This is due — in Łuszczewska-Romahnowa's opinion — to certain structural as well as semantic properties of scientific texts.

The first volume of *Studia Logica* contained an extensive article by Łuszczewska-Romahnowa about a generalization of Venn's diagrams: "Analiza i uogólnienie metody

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[9]Information about Łuszczewska-Romahnowa's life and academic work can be found in (Batóg, 1979 and 2001).

sprawdzania formuł logicznych przy pomocy diagramów Venna" (Analysis and generalization of the method of verifying logical formulae by means of Venn's diagrams; 1953). The author presented there a method of checking the decidability of the first-order monadic predicate calculus.

In the period we are interested in, Łuszczewska-Romahnowa had also published a short note about natural classifications. Later on, she had also worked on multi-level classifications as well as on the distance functions connected with such classifications — cf. her "Classification as a kind of distance function" published in *Studia Logica* in 1961 and "A generalized theory of classifications I, II" written together with Tadeusz Batóg and published in 1965 in the same journal. According to those papers, any multi-level classification of a given set of objects is a linearly ordered hierarchy of partitions of that set. The ordering in question is that of "being a finer than" partition. The index of similarity of two objects is determined by the last level of the hierarchy at which these objects still remain elements of the same member of some partition in the hierarchy. It appears that the difference between the number of partitions involved and the index of two objects is the quasi-distance D between these objects (in the case where each member of the last partition is a one-element set it is simply the distance, i.e., a metric in the space of objects). The concept of naturalness of a multi-level classification is of a relative character: we say that a multi-level classification of a set of objects is natural with respect to an, *a priori* given, metric d, if for any objects x, y, u, v: if $D(x, y) < D(u, v)$, then $d(x, y) < d(u, v)$. Thus, natural multi-level classifications reflect similarity between objects given by an independent measure.

Łuszczewska-Romahnowa was also interested in methodological problems of the sciences and especially in those connected with 17th century. She had translated the important logical treatise *Logique de Port-Royal* of Nicole and Arnauld into Polish. It seems that she focused her attention exactly on those topics in the period we are describing.

Quite recently (2002) there appeared the special issue of *Kwartalnik Filozoficzny* (*Philosophical Quarterly*) vol. XIX, No 3/4, 1950, whose publication — at that time, exactly in 1950 — has been cancelled by the ruling political authorities. The volume includes the first part of a dissertation by Łuszczewska-Romahnowa *Rozważania o "metodzie" w filozofii francuskiej XVII wieku* (*Considerations concerning "the method" in French philosophy of the 17th century*). The text ends with the words: *to be continued.* However, we do not know whether any continuation of this text exists. We have found, in the archive of the University of Poznań, a review of Łuszczewska-Romahnowa's scientific achievements (written by Kazimierz Ajdukiewicz), where the reviewer mentioned — without title — her contribution sent for publication in the *Kwartalnik Filozoficzny* with a note about cancellation of the volume. In the published part one finds, among others, a classification of action programs. It is used in discussion of positions taken, e.g., by Pascal, Malebranche, Descartes and Leibniz as well as the views presented in the famous *Logique de Port-Royal*.

Seweryna Łuszczewska-Romahnowa was working at the University in Poznań up to her retirement in 1974. Some of her important works have been published after the period we are interested in. Let us shortly indicate the subjects touched upon in those works.

A few of Łuszczewska-Romahnowa's publications deal with argumentation theory — "Pewne pojêcie poprawnej inferencji i pragmatyczne pojêcie wynikania" (A certain concept of valid inference and a pragmatic concept of consequence) from 1962, "Z teorii racjonalnej dyskusji" (From the theory of rational discussion) from 1964. She had suggested a modernization of the classical theory of argumentation. She had been also working on a proper definition of the concept of pragmatic entailment.

Łuszczewska-Romahnowa was also interested in the problem of induction — her paper "Indukcja a prawdopodobieństwo" (Induction and probability) on that topic has appeared in 1957 in *Studia Logica*. It contains a critique of the probabilistic approach to the problem of induction and author's own suggested solution of this problem, which could be called a pragmatic one. In particular, she stresses that the goal of cognitive activity is not to arrive at absolute truth, but rather to get a better recognition of the environment and to find a smooth correlation between cognitive subject's actions and that environment.

5   Roman Suszko

Roman Suszko[10] (November 9, 1919 – June 3, 1979) was a student of physics at the University of Poznań in the years 1937–1939. He wrote his M.A. Thesis under the supervision of Zygmunt Zawirski in Cracow during the wartime. He has started his work at Ajdukiewicz's Chair of Theory and Methodology of Science in Poznań in 1946.

Suszko's first publications concerned logic without axioms (Suszko 1947a, 1948). He has shown how, given an axiomatic system T, one can eliminate its axioms and introduce a set of certain special finitistic inference rules so that the initial consequence relation of T is being preserved. Suszko has solved this problem in the case of propositional calculus and has pointed out to the limitations of the corresponding solution in the case of the predicate calculus with identity.

Another field of Suszko's interest at that time was the theory of definitions. He has developed an approach to this theory with an original criterion of extensional equivalence as replacing conditions of translatability and non-creativity. He has proposed a natural hierarchy of extensions-by-definitions of axiomatic systems. His main attention in (Suszko, 1949b) is devoted to such definitions of some functors which need an extra inference rule to be accepted in the system under consideration in order to introduce this definition in a correct, unique way.

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[10]Some bio-bibliographical information on Suszko can be found in Omyła (1986, 2001) and Omyła and Zygmunt (1984).

The works (Suszko, 1949a and 1949b) were published together, as a separate book-let in the series edited by the Poznań Friends of Scholarship. They also correspond to the essential part of Suszko's Ph.D. Thesis submitted to the University of Poznań in Autumn 1948. The supervisor was Kazimierz Ajdukiewicz.

On November 19, 1951 Roman Suszko defended his *Habilitationsschrift* at the Faculty of Mathematics, Physics and Chemistry of the University of Poznań. The Polish text of this dissertation has appeared in print only recently in the above mentioned special issue of the *Philosophical Quarterly* under the title *Konstruowalne przedmioty i kanoniczne systemy aksjomatyczne* (*Constructible objects and canonic axiomatic systems*) [sent for publication on June 12, 1950]. Up to now, it was believed that the text of Suszko's *Habilitationsschrift* was published in *Studia Philosophica* in 1951 under the title *Canonic axiomatic systems* [sent for publication on November 25, 1950; published in 2002 (sic!)]. Actually, the latter is a genuine English translation of the former (there is a change of the title only). The reviewers of Suszko's dissertation were: Kazimierz Ajdukiewicz, Andrzej Mostowski and Władysław Orlicz.

Suszko's main aim in *Canonic axiomatic systems* is, according to his own words, "to precise and develop certain reasonings conveyed generally in connection with the so called Löwenheim-Skolem paradox". The distinguished feature of Suszko's approach, as compared with other (contemporary as well as later) resolutions of the paradox is that Suszko does not involve the Löwenheim-Skolem theorem at all. The author makes an essential use of his proposals developed earlier in the theory of definitions. The dissertation is the only one among Suszko's publications where he is directly addressing himself to set theoretical problems. He works in a system of set theory resembling those of Bernays and Gödel. In that system Cantor's theorem, stating the existence of an uncountable set, is of course provable. In his metatheorethical approach Suszko makes use of Tarski-style description of "morphology" of formal sys-tems. The k-names introduced by Suszko correspond to categorematic names (here: closed terms obtained without the use of the descriptive operator) and the relation of k-designation holds between k-names and their extra-linguistic correlates, called *constructible* objects (sets). One obtains theorems concerning relative consistency of the investigated systems. If the universe of a given system consists entirely of con-structible objects, then such a system is called *canonic*. The property of canonicity corresponds, according to Suszko, to Fraenkel's Axiom of Limitation (*Beschränkheit-saxiom*), which says that there are no other sets than these whose existence is postu-lated by the axioms (of a given axiomatic system of set theory). Suszko's metasystems are canonic. Constructible sets in canonic systems are k-designated by k-names and there exist only countably k-names. Thus we have a resolution of the paradox.

During his work in Poznań Suszko has also published a few other, minor articles. In particular, he reported about mathematical logic and foundational research in the Soviet Union (Suszko 1949c) and presented a critical discussion of logical positivism (Suszko 1952).

As it follows from the archives, Suszko has begun his work on *diachronic logic*

already in Poznań — cf. also his first footnote to the text of (Suszko, 1957a) which (together with 1957b, both reprinted in Pawłowski 1966) is one of the first comprehensive applications of the Tarskian model theory to epistemological investigations. In the bibliography of this paper one finds also a reference to his work *Syntax and Model* (in preparation for print in *Studia Logica*). One may presume that what Suszko had in mind here are papers published a few years later in *Studia Logica* under the title *Syntactic structure and semantical reference* — part I in 1958, part II in 1960. Also the paper *W sprawie antynomii kłamcy i semantyki jêzyka naturalnego* (*Concerning the antinomy of the liar and semantics of natural language*) published in Warsaw in 1957 has its roots in Suszko's investigations conducted in Poznań; cf. Suszko 1957c.

In 1953 Suszko left Poznań and moved to Warsaw.

6 Ajdukiewicz's seminar

An important role in the scientific life in Poznań was played by the seminar led by Ajdukiewicz. We had interviewed some participants of the Ajdukiewicz's seminar. According to their memories, the problems discussed there were very diversified. Professor Jerzy Albrycht remembers among others discussion concerning Hume's philosophy. A vividly discussed topic was connected with logical fallacies in a natural language (common day) reasoning. Much effort had been also devoted to investigation of the logic of induction.

Some of the participants of the seminar changed later their interests from logic to other fields. Among them were Zbigniew Czerwiński, Dobiesław Bobrowski and Zbyszko Chojnicki.

Professor Zbigniew Czerwiński has written his M.A. thesis about logic of induction. He has also published some papers on this topic in *Studia Logica.* Some of Czerwiński's proposals appeared to be of importance to inferences conducted in economic sciences. At present Czerwiński is *professor emeritus* at the Academy of Economics in Poznań.

Professor Dobiesław Bobrowski's M.A. thesis has concerned propositional calculi without axioms. He remembers having many consultations with Roman Suszko on this topic. His further academic work was connected mainly with probability theory. At present he is *professor emeritus* at the Faculty of Mathematics and Computer Science at the Adam Mickiewicz University in Poznań.

Professor Zbyszko Chojnicki devoted his M.A. thesis to the logic of norms. At present he is *professor emeritus* at the Institute of Geography at the Adam Mickiewicz University in Poznań. Quite recently he has published a book devoted to the philosophy of science.

A teaching assistant at the Ajdukiewicz's Chair was, for a short time, Andrzej Malewski. He has published then a quite interesting textbook *ABC porzâdnego myśle-nia* (*ABC of well-ordered thinking*) which can be classified as belonging to logico-linguistic pragmatics. He has also collaborated with the late Professor Jerzy Topolski

on the methodology of history.

7 Concluding remarks

Above we have described the logical investigations carried out at the University of Poznań at the period 1945–1955. One can ask the following question: was there any continuation of the Lvov-Warsaw Logical School at the University in Poznań right after the Second World War? Unfortunately, the answer is far from obvious. Without any doubts one can find a stigma of that School in the post-war publications of Ajdukiewicz and Łuszczewska-Romahnowa. On the other hand, Suszko belonged to the new generation. Further, one has also to be fully aware of the political situation in Poland right after the war. One can grasp a touch of it, e.g., reading the discussion concerning the teaching of logic published in the fifties of the last century in *Myśl Filozoficzna* — the participants were, on one side, prominent Polish logicians (a.o. Ajdukiewicz, Suszko, Grzegorczyk, Szaniawski, Przełêcki) and, on the other side, Marxists philosophers (headed by Adam Schaff). It is a real challenge for a historian of science to present a comprehensive report of the situation and ways of development of the academic life in Poland at the beginning of the post-war period. Some works already published are not free from emotional evaluations.

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