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THE SCIENCE OF SCIENCE (*NAUKOZNAWSTWO*) IN POLAND:  
THE CHANGING THEORETICAL PERSPECTIVES AND POLITICAL  
CONTEXTS – A HISTORICAL SKETCH FROM THE 1910S TO 1993\*

Abstract. The article sketches the history of *naukoznawstwo* (literally meaning the *science connoisseurship* or the *science of science* or *science studies*) in Poland from the 1910s to the end of the Cold War (1991), and the recovery of full political independence in 1993. It outlines the changing research perspectives of this interdisciplinary field of knowledge in Poland against a background of changing political conditions caused by the reconfigurations of the political order.

The first part of the article concerns the period from the 1910s, when Poland was occupied by Russia, Prussia, and Austria, through the regaining of independence by Poland in 1918, the reconstruction of the state in 1918–1939; the second part – World War II; the third part – the period from the initial period of Soviet dominance (1944–1954) in Poland and simultaneously the beginnings of the Cold War (1947–1954), the period 1955–1956 (when the Polish state was liberated from Sovietization), through the different political crises in October 1956, March 1968, December 1970, and June 1976, to the emergence of the Independent Self-governing Trade Union *Solidarity* in September 1980, the end of the Cold War (1991), and the recovery of full political independence in 1993.

The article outlines the fundamental achievements of prominent Polish scholars (among others K. Twardowski, M. Ossowska, S. Ossowski, T. Kotarbiński, K. Ajdukiewicz, S. Michalski, F. Znaniecki, B. Suchodolski, L. Fleck, M. Choynowski, Z. Modzelewski, S. Amsterdamski), politicians (among others B. Bierut, E. Krasowska), politicians and scholars (H. Jabłoński, S. Kulczyń-

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\* The text develops in detail the theses of M. Kokowski, *The science of science (naukoznawstwo) in Poland*. While working on these two articles on the history of Polish *naukoznawstwo*, I was influenced by a very interesting article on the history of Russian *Наукovedenie (Naukovedenie; literally meaning science studies)* by E. Aronova, *The politics and contexts of Soviet science studies (Naukovedenie)*. I would like to express my gratitude to her for arousing my interest in this subject.

ski), as well as committees (among others the Academic Section of the Józef Mianowski Fund, The Science of Science Committee of the Polish Academy of Sciences), schools of thought (among others the Lvov–Warsaw School of Philosophy), and academic units (among others the Science of Science Seminar in Kraków, the Department for the History of Science and Technology of the Polish Academy of Sciences, and The Department of Praxeology and Science of Science at the Institute for the Philosophy and Sociology of the Polish Academy of Sciences).

Key–words: naukoznawstwo, Polish science of science, Polish science studies, science of science, science studies, political contexts.

### 1. From the 1910s to 1939

The science of science (*naukoznawstwo*) emerged in Poland in the 1910s–1920s<sup>1</sup>. It was a result of intellectual interactions and cooperation between Stanisław Michalski (1865–1949) from the Academic Section of the Józef Mianowski Fund, and, among others, the representatives of the Lvov–Warsaw School of Philosophy (Kazimierz Twardowski's school of philosophy), including especially Kazimierz Twardowski, Maria Ossowska, Stanisław Ossowski, Tadeusz Kotarbiński, Kazimierz Ajdukiewicz, and other thinkers operating on the fringe of this school, such as F. Znaniecki<sup>2</sup>.

From 1916 to 1939 the Academic Section of the Józef Mianowski Fund<sup>3</sup> established a real centre for research into the science of science. It organized congresses (1920, 1927) and a cyclic seminar (from June 1928)<sup>4</sup>, published specialist journals: *Nauka Polska. Jej Potrzeby, Organizacja i Rozwój* [*Polish Science: Its Requirements, Organization and Development*] (from 1919) and *Organon* (from 1936) – all edited by S. Michalski – and established its own library and documentary centre (managed by Janina Małkowska), as well as cooperating with many universities in the country and abroad.

<sup>1</sup> The subject matter of the science of science was already undertaken in Poland fragmentarily from the 1860s in the context of the so–called Warsaw positivism, developed in the Russian Partition after the January Uprising (1863–1864), and then in the context of the positivist–Kantian philosophy. See J. Skarbek, *Koncepcja nauki w pozytywizmie polskim*, S. Borzym, „Przegląd Filozoficzny” wobec prądów modernistycznych & S. Zamecki, *Na marginesie rozprawy: Znaniecki, Florian ...*, pp. 212–215.

<sup>2</sup> See Zamecki's works mentioned in the bibliography, particularly S. Zamecki, *Koncepcja nauki w szkole lwowsko–warszawskiej* (esp. ch. 5: *Problem metanauk. Programy naukoznawcze*, pp. 177–195) & S. Zamecki, *Na marginesie rozprawy: Znaniecki, Florian ...*.

<sup>3</sup> The Fund was founded in 1881. Regarding its history, see J. Piskurewicz, *Warszawskie instytucje społecznego mecenatu ...*, L. Zasztowt, *Józef Mianowski – pomiędzy Polską a Rosją*, P. Hübner, J. Piskurewicz & L. Zasztowt, *A History of the Józef Mianowski Fund*, L. Zasztowt (ed.), *Kasa Mianowskiego 1881–2011*.

<sup>4</sup> According to Z. Kowalewski, *Teoria praktyki naukowej jako nowa wyodrębniająca się nauka*, p. 109 and to the best of my knowledge, it was the first cyclic seminar on the science of science in the world. The first seminar lecturer was Bogdan Suchodolski (1903–1992), who analyzed Max Scheller's sociology of knowledge. See W. Osińska, *Les débuts de recherches systématiques ...*, B. Suchodolski, *Quelques souvenirs sur le Cercle Scientifique de la „Caisse Mianowski”*, B. Suchodolski, *Kilka wspomnień o Kole Naukoznawczym Kasy im. Mianowskiego*, N. Lietz, *Udział Bogdana Suchodolskiego ...*.

Among many important articles published in *Nauka Polska* from 1919 to 1939, two of them have special importance for this article, namely the two often cited programmatic articles about a new branch of knowledge named *naukoznawstwo* (*science of science* or *science studies*). These were *Przedmiot i zadania nauki o wiedzy* [*The subject and tasks of the science of knowledge*] (1925) by the philosopher and sociologist Florian Znaniecki (1882–1958), and *Nauka o nauce* [*The Science of Science*] (1935) by the philosopher Maria Ossowska (1896–1974), and the philosopher and sociologist Stanisław Ossowski (1897–1963)<sup>1</sup>.

In 1925, F. Znaniecki, in the above cited article introduced the term *naukoznawstwo*<sup>2</sup>. He did so, in the following context: analysing different currents of thought such as the humanism of Schiller; the pragmatism of Dewey, Mead and A. W. Moore; and Rauth's extreme empiricism; Mach's empirio-criticism; and Poincaré's partial relativism:

*In brief, in these currents, the centre-of-gravity of cognitive theory shifts from metaphysics to an empirical science of knowledge; and precisely to that extent these currents cease to fit within the boundaries of general philosophical epistemology and contribute the building of a science of science [naukoznawstwo] as a special humanistic discipline.*<sup>3</sup>

Then, by 1928, the term *naukoznawstwo* replaced the term *wiedza o nauce* [*knowledge about science*] (applied at least from 1923) in the Polish terminology. For example, M. Ossowska and S. Ossowski used it in 1929 in

<sup>1</sup> See F. Znaniecki, *Przedmiot i zadania nauki o wiedzy*, M. Ossowska & S. Ossowski. On Znaniecki see Z. Dulczewski, *Florian Znaniecki życie i dzieło*, Z. Dulczewski, *Archiwum Floriana Znanieckiego PTPN w Poznaniu*, Z. Dulczewski, *O Florianie Znanieckim*, J. Szacki, *Znaniecki*, G. J. Kaczynski (ed.), *Florian Znaniecki (1882–1958)*, *Wikipedia* 2013znan1, 2013znan2 (with further references). On Ossowska see W. Osińska, *Maria Ossowska (1896–1974)*, K. Szaniawski, *La connaissance et le souci des valeurs ...*, *Wikipedia* 2013osow1, 2013osow2 (with further references). On Ossowski see J. Strzelecki, *Mój nauczyciel (O Ossowskim)*, W. Osińska, *Stanisław Ossowski 1897–1963*, B. Tuchańska, *Stanisław Ossowski on scientific controversies and the variety of perspectives*, R. Chymkowski, *Stanisław Ossowski*, *Wikipedia* 2013osow3, 2013osow4 (with further references).

<sup>2</sup> He treated it as synonymous to the term *teoria wiedzy* [*theory of knowledge*] which signified an empirico-theoretical discipline lying on the crossroads of many branches: epistemology, logic, history of science, sociology of knowledge, psychology of knowledge, etc. Such a view stemmed from his earlier philosophical works. See e.g. F. Znaniecki, *Humanizm i poznanie*, F. Znaniecki, *Zasada względności jako podstawa filozofii* [Engl. version *The Principle of Relativity and Philosophical Absolutism*].

<sup>3</sup> F. Znaniecki, *The Subject Matter and Tasks of the Science of Knowledge*, pp. 2–3 [*Słowem, w prądach tych punkt ciężkości teorii poznania przesuwają się z metafizyki na empiryczną naukę o wiedzy, i o tyle, właśnie przestają się one mieścić w granicach filozoficznej epistemologii ogólnej i przyczyniają się do budowy «naukoznawstwa» jako specjalnej nauki humanistycznej*]. Hence, the following two theses are wrong: 1) the Russian term *науковедение* (*naukowedenije*, *the science of science*), introduced in 1926 by Иван Адамович Боричевский, *Науковедение как точная наука*, was coined before the Polish term *naukoznawstwo* [*the science of science*] – see for instance S. R. Mikulinsky & N. J. Rodny, *Science as an object of Special Investigation*, p. 75, S. R. Mikulinsky/S. R. Mikulinsky, *Jeszcze raz o przedmiocie i strukturze naukoznawstwa*, pp. 497–498, P.J. Винклер & В. Ж. Келле, *Социология науки*, pp. 370–371, А. П. Огурцов, «Науковедение», А. П. Огурцов, «Науковедение как точная наука»; 2) the Polish term *naukoznawstwo* was invented by Maria and Stanisław Ossowski (in 1935 or 1936) or T. Kotarbiński, *Elementy teorii poznania ...* – see D. J. de Solla Price, *The history of science as training ...*, J. D. Bernal & A. L. Mackay, *Towards a Science of Science* [Polish transl. *Na drodze do naukoznawstwa*], G. M. Dobrow/G. M. Dobrov, *Nauka o nauce* [Polish transl. *Wstęp do naukoznawstwa*], С. Р. Микулинский & Э. М. Мирский, *Науковедение*.

their lecture entitled *Problematyka naukoznawcza* [*The subject matter of the science of science*]<sup>1</sup>.

Another interesting contribution to the science of science developed by a Polish author was the thought of Ludwik Fleck (1896–1961), a microbiologist, immunologist, historian, and philosopher of medicine, the author of the *Entstehung und Entwicklung einer wissenschaftlichen Tatsache. Einführung in die Lehre vom Denkstil und Denkkollektiv* [*Genesis and Development of a Scientific Fact: Introduction to the theory of thought–style and thought–collective*]<sup>2</sup>. Before World War II his *opus magnum* was met with quite considerable interest, since about twenty reviews of it were published in Germany, Austria, Switzerland, Sweden, Italy, Belgium, the Netherlands, and Poland. In addition, it was mentioned by Hans Reichenbach in his monograph published in the USA<sup>3</sup>. These elaborations were written mainly by experts in medicine and biology, and three by experts in philosophy. Nearly all of them assessed Fleck's monograph very highly<sup>4</sup>. As regards to Poland, Fleck's views were analyzed by four authors: a philosopher – logician Leon Chwistek<sup>5</sup>, a philosopher Izydora Dąmbska<sup>6</sup>, a historian and philosopher of medicine Tadeusz Bilikiewicz<sup>7</sup>, and a biologist, Jan Dembowski<sup>8</sup>. Among them, Izydora Dąmbska had classical reservations regarding Fleck's negation of the inter-subjectivity of empirical sentences<sup>9</sup>, and Tadeusz Bilikiewicz had very serious objections concerning the negation of the idea of truth (and thus the relativity of truth)<sup>10</sup>.

<sup>1</sup> See also T. Krauze, Z. Kowalewski & A. Podgórecki, *The sociology of science in Poland*, pp. 194–196, P. Wouters, *The Citation Culture*, pp. 82–83.

<sup>2</sup> See L. Fleck, *Entstehung und Entwicklung einer wissenschaftlichen Tatsache* [Engl. transl. *Genesis and Development of a Scientific Fact*]. See also W. Baldamus, *Ludwik Fleck and the development of the sociology of science* [Polish transl. *Ludwik Fleck i rozwój socjologii nauki*], T. Schnelle, *Ludwik Fleck ...*, T. Schnelle, *Microbiology and philosophy of science*, J. Gierasimiuk, *Socjologia poznania naukowego Ludwika Flecka*, J. Gierasimiuk, *Logos in Science*, R. S. Cohen & T. Schnelle (eds.), *Cognition and Fact*, I. Löwy (ed.), *The Polish School of Philosophy of Medicine*, pp. 215–227, I. Löwy, *Polska szkoła filozofii medycyny*, pp. 38–49, I. Löwy, *Medical acts and medical facts ...*, pp. 88–119, S. Magierska & E. Tuskiewicz, *Ludwik Fleck (1896–1961)*, F. Coniglione, *Ludwik Fleck*, S. Werner, C. Zittel & F. Schmaltz (eds.), *Style myślowe i fakty*, C. Zittel & F. Schmaltz, *Wstęp*.

<sup>3</sup> See H. Reichenbach, *Experience and Prediction*, p. 224.

<sup>4</sup> See T. Schnelle, *Ludwik Fleck – Leben und Denken ...*, pp. 341–342, L. Chwistek & al., *Przedwojenne recenzje książki Ludwika Flecka*.

<sup>5</sup> See L. Chwistek, *Ciekawa książka*.

<sup>6</sup> See I. Dąmbska, *Czy intersubiektywne podobieństwo wrażeń zmysłowych jest ...*

<sup>7</sup> See T. Bilikiewicz, *Uwagi nad artykułem L. Flecka „Nauka a środowisko”* & T. Bilikiewicz, *Odpowiedź na replikę L. Flecka*.

<sup>8</sup> See J. Dembowski, *Recenzja trzech publikacji Ludwika Flecka ...*

<sup>9</sup> However in this point L. Fleck was right. See L. Fleck, *W sprawie artykułu P. Izydory Dąmbskiej ...*, K. Szlachcic, *Konwencje, style myślenia i relatywizm*, pp. 35–39.

<sup>10</sup> See S. Symotiuk, *Two Sociologies of Knowledge*. This critique is right and Fleck was not to ignore and reject it – see L. Fleck, *Odpowiedź na uwagi Tadeusza Bilikiewicza*.

Furthermore, according to F. Znaniński<sup>1</sup> and to the best of my knowledge, Poland's government was the first in the world to establish a separate unit for the development of science and the humanities. It already happened in 1918, when the Ministry of Religious Denominations and Public Enlightenment (1918–1939) [Ministerstwo Wyznań Religijnych i Oświecenia Publicznego] established a special new unit, named the Division for Science and Higher Education [Sekcja Nauki i Szkolnictwa Wyższego], which on 7 June 1921 was changed into a department. The unit was devoted to the following: (a) organization and administration of universities, libraries, museums, and archives; (b) university staff, (c) students, and (d) academic curricula<sup>2</sup>. The reason for this is clear. It was a social and political necessity to create in Poland a coherent system of higher education, science, letters and learning throughout the country, partitioned earlier by the three occupiers: Russia, Prussia and Austria. And it is not an accident that this unit was managed by S. Michalski.

The science of science emerged in Poland in 1910s–1920 as a result of intellectual interactions between the Józef Mianowski Fund in Warsaw (S. Michalski) and the Lvov–Warsaw School of Philosophy. This branch of knowledge developed dynamically in Poland to 1 September 1939 (the outbreak of World War II): The Józef Mianowski Fund played the central part in this process. It published the first specialist journals in this branch of knowledge: *Nauka Polska. Jej Potrzeby, Organizacja i Rozwój* [Polish Science. Its Requirements, Organization and Development] (from 1919), and *Organon* (from 1936) (all edited by S. Michalski). It established its own library and documentary centre, cooperated with many universities in the country and abroad. It organized the first congresses in the world related to this field (1920, 1927) and the first cyclic seminar (from June 1928).

In 1918, Poland's government was the first in the world to establish a separate unit for development of science and the humanities (directed by S. Michalski).

In 1925, F. Znaniński was the first in the world who introduced the term *naukoznawstwo* (literally meaning *science connoisseurship* or *science studies*), and in 1935 M. Ossowska & S. Ossowski were the first in the world who introduced the term *nauka o nauce* [*science of science*].

## 2. World War II (1939–1945)

During World War II the invaders: Germany and the Soviet Union<sup>3</sup>, closed

<sup>1</sup> See F. Znaniński, *Przedmiot i zadania nauki o wiedzy*, p. 10.

<sup>2</sup> See M. Pollak, *Rozwój organizacji Ministerstwa Wyznań Religijnych ...*, T. Serafin, *Władze Szkolne w latach 1917/1918–1937/1938*, pp. 88–89, B. Jacewski, *Polityka naukowa państwa polskiego w latach 1918–1939*, p. 55, B. Jacewski, *Życie naukowe w Polsce Odrodzonej*, p. 206.

<sup>3</sup> Under the Molotov–Ribbentrop Pact (also known as the Ribbentrop–Molotov Pact or Nazi–Soviet Pact) of 23 August 1939, and the German–Soviet Treaty of Friendship, Cooperation and Demarcation (also known as the 2<sup>nd</sup> Ribbentrop–Molotov Pact) of 28 September 1939, the fourth partition of Poland took place. As a result of the pacts and warfare, Nazi Germany conquered the western, southern and northern part of Poland between 1

down all Polish universities, scientific societies, and scientific foundations and seized their property.

The invaders programmatically sought to exterminate the Polish intelligentsia. Suffice it only to mention:

1. Intelligenzaktion: the murder of the intelligentsia in the Polish lands annexed to the Third Reich, i.e. the western and north-western parts of the territory of the Second Republic of Poland from September 1939 to April 1940<sup>1</sup>;

2. Sonderaktion Krakau: the imprisonment of university professors on 6 November 1939<sup>2</sup>;

3. Außerordentliche Befriedungsaktion–AB: the murder of the intelligentsia in the central part of the Second Republic of Poland (with, among others, Warsaw, Kraków and Lublin) between May and July 1940<sup>3</sup>;

4. NKVD repressions against the Polish intelligentsia: imprisonment and murdered dozens of Polish researchers<sup>4</sup>;

5. The murder of professors in Lvov (execution of the Polish scientists, university lecturers of Lvov University and their families) by the security police of the Third Reich on 4 July 1941<sup>5</sup>.

Despite this, Polish scholars conducted research and teaching in secret<sup>6</sup>. Many of them were imprisoned, many were killed or – to protect their lives – fled Poland. It was estimated that the losses amounted to 30–40% of the Polish scholars. Polish science also suffered a great material losses<sup>7</sup>. Some Polish scholars developed Polish higher education and scientific research in exile<sup>8</sup>. The cultivation of the science of science was subjected to the same restrictions and obstacles. The invaders dissolved centres dealing with this subject matter: Lvov University and Warsaw University, where the Lvov–Warsaw School of Philosophy had been in operation (many of its Jewish members were killed), and the Mianowski Fund. S. Michalski and L. Fleck were imprisoned in German concentration camps: the former for his

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September and 6 October 1939, and the Soviet Union – its eastern part, from 17 September and 1 October 1939. The western part of Poland was annexed by the Third Reich (Germany), the central part, named General Government (with Warsaw and Kraków), was occupied by the Third Reich (Germany), and the eastern part (with e.g. the historical region Galicia with the city Lvov) was annexed to the Soviet Union. See *Wikipedia* 2013mrpa1, 2013mrpa2, 2013mrpa3, 2013gstr, 2013gsbt1, 2013gsbt2.

<sup>1</sup> See *Wikipedia* 2015intell1, 2015intell2.

<sup>2</sup> See *Wikipedia* 2015sond1, 2015sond2.

<sup>3</sup> See *Wikipedia* 2015akcj1, 2015akcj2.

<sup>4</sup> See *Wikipedia* 2015repr1, 2015repr2, 2015mord1.

<sup>5</sup> See *Wikipedia* 2015mord1, 2015mord2.

<sup>6</sup> See P. Hübner, *Polityka naukowa „państwa podziemnego” w Polsce 1939–1944*, S. Mauersberg, *Nauka polska i szkolnictwo wyższe w latach wojny (1939–1945)*, pp. 240–254.

<sup>7</sup> See S. Mauersberg, *Nauka polska i szkolnictwo wyższe w latach wojny (1939–1945)*, pp. 235–240, A. Bolewski & H. Pierzchała, *Losy polskich pracowników nauki w latach 1939–1945* (esp. pp. 162–163), G. Jasiński, *Polish Cultural Losses in the Years 1939–1945*, R. Herczyński, *Spełnana nauka ...*, p. 41, and on the fate of the members of the Lvov–Warsaw School see J. Woleński, *Logic and Philosophy in the Lvov–Warsaw School*, pp. 19–23 & J. Woleński, *Lvov–Warsaw School*, section 1.

<sup>8</sup> See S. Mauersberg, *Nauka polska i szkolnictwo wyższe w latach wojny (1939–1945)*, pp. 254–267.

conspiratorial research activities, and the latter because he was a Jew; F. Znaniecki did not return from the USA to Poland.

In 1940, Znaniecki published a fundamental work on the sociology of scientific knowledge: *The Social Role of the Man of Knowledge* (New York), which developed the theses expressed in his earlier paper of 1937 published in Poland<sup>1</sup>. Its basis was the following idea that concerns the serious limitation of the sociology of knowledge taken from the tradition of Kazimierz Twardowski's rational philosophy:

*The sociologist [...] is not entitled to make any judgments concerning the validity of any systems of knowledge except sociological systems. He meets systems of knowledge in the course of his investigation only when he finds that certain persons or groups that he studies are actively interested in them, that they construct, improve, supplement, reproduce, defend, or popularize systems which they regard as true or else reject, oppose, criticise, or, interfere with the propagation of systems which they consider untrue.*<sup>2</sup>

In consequence of the war, the Mianowski Fund suffered huge material losses, including its seat; houses of creative work; publications; cash equivalents; warehouses of books, archives and manuscripts; items in print with, among others, the printed volume 25 of *Nauka Polska*, volume 11 of *Guidance for the Self-taught*, and volume 3 of *Organon*<sup>3</sup>.

World War II has led to a serious weakening of scientific activity in the science of science in Poland, since this branch of knowledge was banned by the German and Soviet invaders, and it brought a loss of academic staff and enormous material losses.

### 3. From 1945 to 1993

#### 3.1. 1945–1954

After World War II, there was an urgent need in Poland to rebuild its infrastructure, economy, etc., to educate the public (that had limited possibilities to learn during the war in a systematic way), and to restore the Polish intelligentsia, including university staff. In order to attain these goals it was also necessary to rebuild a system of higher education.

<sup>1</sup> See F. Znaniecki, *Spoleczne role uczonych a historyczne cechy wiedzy*, pp. 523–523 (ed. 1984).

<sup>2</sup> F. Znaniecki, *The Social Role of the Man of Knowledge*, p. 5 (ed. 1986). In the 1940s (during the war years) the monograph (like many other achievements of Polish scholars) met with very favourable reception in the USA (Znaniecki was interpreted as a representative of a heroic and intelligent nation). One of its reviewers was a young Robert K. Merton, a future leading (or, arguably, the most important) American sociologist of scientific knowledge. See also R. K. Merton, *Review of The Social Role of the Man of Knowledge by Florian Znaniecki*.

<sup>3</sup> See W. Osińska, *Akademia platońska na piaskach mazowieckich osiadła ...*, P. Hübner, J. Piskurewicz & L. Zasztowt, *A History of the Józef Mianowski Fund*.

This was all the more the case in that Poland had lost in World War II the Eastern Borderlands [Kresy Wschodnie] with two university centers: Lvov and Vilnius, and regained its Western Borderlands [Silesia and Pomerania] with the university centre in Wrocław<sup>1</sup>.

The subject matter of the science of science (both its practical and theoretical parts) played an important role in this context. The scholars who survived the war and lived in Poland, including the members of the Mianowski Fund (S. Michalski, S. Ossowski, ...), the Lvov–Warsaw School of Philosophy (T. Kotarbiński, K. Ajdukiewicz, M. Ossowska, S. Ossowski, I. Dąbska, ...), and L. Fleck, resumed creative work at this branch of knowledge with great commitment. This interest was also cultivated by a new generation of scholars, including, for example, Mieczysław Choynowski, the organiser of the Science of Science Seminar [Konwersatorium Naukoznawcze] in Kraków, which operated from 20 March 1945 to December 1949.

However, all these activities happened in a new political situation caused by the fact that Poland had found itself (like other countries of Central and Eastern Europe) in the sphere of Soviet influence<sup>2</sup>. In consequence, the entire Polish state (starting from its government) was organised in accordance with the political paradigms of the Soviet state, based on the totalitarian communist ideology (with the idea of the revolutionary dictatorship of the Proletariat, and the idea of the leading role of the Communist Party of the Soviet Union). The bases of this system were: a planned economy (versus the market economy of the capitalist countries), the idea of social justice (a classless society), and ... a political and physical terror (based on well developed security forces and prison system) against all real or only imaginary enemies<sup>3</sup>.

Science, especially the humanistic and natural sciences, played a crucial role in the communist Soviet ideology, since it was treated as a necessary tool

<sup>1</sup> See A. Redzik, *Polish Universities During the Second World War*, Wikipedia 2013kres1, 2013kres2, 2015uniwi1, 2015lwow1, 2015low2, 2015sunwr.

<sup>2</sup> This decision of the victorious powers (the Soviet Union, the USA, and Great Britain) was taken during three conferences: at Teheran (28 Nov. – 1 Dec. 1943), Yalta (4–11 Feb. 1945), and Potsdam (17 Jul. – 2 Aug. 1945). See Wikipedia 2013teco1, 2013teco2, 2013yaco1, 2013yaco2, 2013poco1, 2013poco2 (with further references). The shamefulness of the act is even greater due to the fact that Poland had the highest percentage of fatalities in World War II: 22.2% of all citizens (the Soviet Union 11.6%, Holland 2.2%, France 1.5%, Great Britain 0.8%, Belgium 0.7%, and the USA 0.3% – see Wikipedia 2013ofia (with further references)), and Poland's military contribution to the victory with the Nazi Germany was only smaller than that of the USA, the Soviet Union, Great Britain and France. Furthermore, due to the decisions of these three powers, the borders of Poland were changed. In the West it was the line of the rivers Oder and Neisse, and in the East the so-called Curzon Line. In other words, Poland lost its eastern lands (including, among others, Lvov) in favour of the Soviet Union (about 5 600 000 Poles lived in that territory) and regained the western territories (including e.g. Wrocław and Gdańsk) from Germany (about 1 300 000 Poles lived in that territory), which, in majority, belonged to Poland before its partitions in the 8<sup>th</sup> century. See Wikipedia 2013krws1, 2013krws2 (with further references), M. Kokowski, *O wadliwości argumentacji za ostatecznym odkryciem szczątków Mikołaja Kopernika*, p. 259: *Mapa mniejszości polskiej w III Rzeszy Niemieckiej w 1934 roku [Map of the Polish minority in the Third Reich in 1934]* from *Tygodnik Ilustrowany* of 12 August 1934.

<sup>3</sup> See Wikipedia 2013dict, 2013socs1, 2013socs2, 2013demo, 2013mass1, 2013mass2. We should remember that such reorganization of political life happened in all countries subordinated to the Soviets, including all countries and nations of the Soviet Union, and the most oppressed citizens were people from this Union (millions of victims). See S. Courtois & al., *Livre Noir Du Communisme ...* [Engl. transl. *The Black Book of Communism ...*], K. Bar, *Doktryna i polityka wewnętrzna Józefa Wissarionowicza Stalina (1924–1953)*, ch. 3, Wikipedia 2013polr (with additional references).



to conduct the social revolution (that is to build a communist society), and to fight with the *bourgeois* culture and the superstitions of fideism. In this context, new ideas emerged, such as the idea of planning all the activities of science, the idea of the *frontline of science* [*frontline against fideism and bourgeois philosophy* – it was a system of management of all sciences (especially having ideological importance), including the careers of scientists and humanists], and the idea of the competition of communist countries with capitalist countries on the frontline of science<sup>1</sup>.

Therefore, in 1945–1954, *the guiding force of the Polish state* (i.e. the governing parties that accepted the communist–socialist ideology<sup>2</sup>) made a huge effort in order to change the philosophical interpretations of science and to rebuild the entire system of organization of Polish science according to the Soviet rules, which were entirely alien to the pre-war Poland.

From the late 1940s, Poland was invaded by the Marxist, Leninist and Stalinist ideological interpretations of all humanities and social sciences (philosophy, history, linguistics, etc.), and natural sciences (genetics, physics, etc.); all sciences and learning had to be interpreted in accordance with the Leninist principle of party partisanship, and became a weapon in the struggle for the victory of Communism in the world<sup>3</sup>.

It was connected with: i) translations of many fundamental works: first of all, of Karl Marx, Friedrich Engels, Vladimir Lenin, Joseph Stalin (1878–5 March 1953 in Moscow), Andrei Zhdanov (1896–1948), and then of Soviet scholars, including biologists: Olga Lepeshinskaya (1871–1963), an advocate of the spontaneous generation of life from inanimate matter, Trofim Denisovich Lysenko (1898–1976), author of the *new biology* or *creative Soviet Darwinism*, and his co-worker Ivan Evdokimovich Glushchenko (1907–1987) (who together with him negated the existence of genes), and physicists: Dmitrii Ivanovich Blokhintsev (1908–1979), Aleksandr Danilovich Aleksandrov (1912–1999), and Vladimir Aleksandrovich Fock (1898–1974) (who criticised the subjective Copenhagen interpretation of quantum mechanics)<sup>4</sup>;

<sup>1</sup> See S. R. Mikulinski/S. R. Mikulinsky, *Polityka naukowa krajów socjalistycznych*, J. Życiński, *Problem stosunku nauki do filozofii w materializmie dialektycznym*, P. Hübner, *Szyfowe prace*, P. Jaroszyński, *Naukoznawstwo*, P. Jaroszyński, *Kiedy koniec PRL-u w polskiej nauce?* & P. Jaroszyński, *Człowiek i nauka*.

<sup>2</sup> This applies in particular to the Polish Workers' Party [Polska Partia Robotnicza, PPR] (1942–1948), and the Polish United Workers' Party [Polska Zjednoczona Partia Robotnicza, PZPR] (1948–1989). See *Wikipedia* 2013pwa1, 2013pwa2, 2013puwp1, 2013puwp2 (with further references).

<sup>3</sup> See e.g. H. Jabłoński, *Marksowska metoda badania dziejów*, H. Jabłoński, *O bazę źródłową dla nowej historiografii*, A. Schaff, *Wstęp do teorii marksizmu*, A. Schaff, *Narodziny i rozwój filozofii marksistowskiej*, A. Schaff, *Zadania frontu filozoficznego ...*, A. Schaff, *Stalinowski wkład w filozofię marksistowską*, A. Schaff, *Józef Stalin a nauka*, A. Schaff, *W sprawie oceny poglądów filozoficznych Kazimierza Ajdukiewicza*, A. Schaff, *10 lat walki o zwycięstwo filozofii marksistowskiej w Polsce Ludowej*, A. Schaff, *Obiektywny charakter praw historii*, A. Schaff, *Aktualne zagadnienia polityki kulturalnej w dziedzinie filozofii i socjologii*, E. Adler, *Partyjność filozofii i nauki*, B. Burlikowski, *Transponowanie leninowskiej zasady partyjności ...*, B. Bińko, *Instytut Kształcenia Kadr Naukowych przy KC PZPR ...*, R. Sitek, *Warszawska szkoła historii idei*, pp. 30–33.

<sup>4</sup> See K. Marks & F. Engels, *Dziela Wybrane*, W. I. Lenin, *Materializm a empiriokrytycyzm*, J. W. Stalin, *Zagadnienia leninizmu*, J. W. Stalin, *Marksizm a zagadnienia językoznawstwa*, [NN1], *O sytuacji w biologii*, F. Engels, *Dialektyka przyrody*, A. A. Жданов, *Выступление на дискуссии по книге Г. Ф. Александрова*, *Wikipedia* 2012filo, 2013zdan, T. Lysenko, *O sytuacji w biologii*, T. D. Lysenko, *The Situation in the Science of Biology*, T. Lysenko, *Agrobiologia*, I. Głuszczenko, *Nauka Miczurina w walce z idealizmem w biologii*, A. D. Aleksandrov & al., *Zagadnienia filozoficzne mechaniki kwantowej*, D. I. Blohincev & al., *Zagadnienia*

ii) a promotion of studying these works in the original; iii) training visits of many Soviet scholars in Poland<sup>1</sup> and training trips for many Polish thinkers to the Soviet Union.

In this context, certain philosophical interpretations of, among others, Mendel's laws of inheritance, Weismann's *germ plasm theory*, and the chromosomal theory of heredity of Morgan, quantum mechanics and the theory of relativity (physics), and the theory of electron resonance (organic chemistry) were considered by Soviet scientists and philosophers to be a fruit of erroneous, idealistic, subjective philosophy (contrasted with the realistic, objective dialectical materialism). Moreover, the chromosomal theory was also treated as empirically and metaphysically erroneous, because, according to Lysenko and his advocates, the genes and chromosomes do not exist<sup>2</sup>.

The Polish proponents of these views treated them as authoritative in scientific and philosophical matters<sup>3</sup>. However, while the ideology of Lysenkoism found many supporters among Polish biologists between 1949 and 1955<sup>4</sup>, the reception of the Marxist interpretations of quantum mechanics

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*filozoficzne mechaniki kwantowej i teorii względności*, L. Infeld (ed.), *Konferencja ogólnopolska fizyków*, *Wiki-a* 2013lyse1, 2013lyse2, 2013lyse3, 2015lepe1, 2013alek1, 2013alek2, 2013blox, 2013fock1, 2013fock2 (with further references).

<sup>1</sup> For example, such was the case of Ivan Evdokimovich Glushchenko and Vladimir Aleksandrovich Fock. The former gave lectures in Kraków, Warsaw and Wrocław from 25–27 October 1948, he participated in the celebration of the 75<sup>th</sup> anniversary of the Polish Academy of Arts and Sciences, and on 26 October he delivered a paper titled *Doktryna Mieczurina w walce z idealizmem w biologii* [*Mieczurin's doctrine against idealism in biology*] – see P. Köhler, *Lysenkizm w botanice polskiej*, p. 88. The latter participated in Ogólnopolska Konferencja Fizyków (National Conference of Physicists) held on 1–14 September 1952, in Spała, Poland (see L. Infeld (ed.), *Konferencja ogólnopolska fizyków*).

<sup>2</sup> See W. Krajewski, *Skutki Marca dla filozofii polskiej*, p. 144.

<sup>3</sup> See W. Krajewski, *Materializm dialektyczny a współczesna fizyka*, W. Krajewski, *Introduction: Polish Philosophy of Science*, p. xv, W. Krajewski, *Skutki Marca dla filozofii polskiej*, p. 144 (Krajewski included to the group: C. Nowiński, Z. Kochański, H. Eilstein, S. Amsterdamski, and himself), J. Dembowski, *O nowej genetyce*, J. Dembowski, *O warunkach rozkwitu nauki polskiej*, W. Michajłow, *Niektóre zagadnienia biologii współczesnej ...*, W. Michajłow, *Stara i nowa biologia*, K. Petruszewicz, *Nauka Pawłowa a materializm dialektyczny*, [NN2], *Materiały Konferencji agrobiologów, biologów i medyków w Kuźnicach*, K. Petruszewicz, W. Michajłow & S. T. Skowron, *Zagadnienia twórczego darwinizmu*, W. Michajłow & K. Petruszewicz (eds.), *Materiały konferencji młodej kadry biologów w Kortowie*.

<sup>4</sup> The proponents of Lysenkoism in Poland were, among others, Jan Dybowski (1889–1963), Teodor Marchlewski (1899–1962), Jadwiga Lekczyńska (1899–1983), Stanisław Teofil Skowron (1900–1976), Włodzimierz Michajłow (1905–1994), and Kazimierz Petruszewicz (1906–1982). They all popularised it from 1949 as members of *Circle of Marxist Naturalists* [*Koło Przyrodników Marksistów*]. This scientific ideology ended in Poland in 1955. During all this period, professor Waclaw Gajewski (1911–1997), the greatest Polish expert on genetics, was actually the only one Polish geneticist who consistently and openly was against Lysenkoism (see P. Węgleński, *Profesor Waclaw Gajewski*). In consequence, he was not allowed to teach students in those years. Furthermore, the Polish biologists rejected Lysenkoism ten years earlier than the Soviet biologists. The initiator of this process was Leszek Kuźnicki. See K. Petruszewicz & W. Michajłow, *O obecnym etapie walk ideologicznych w biologii*, Z. A. Medvedev, *The Rise and Fall of T. D. Lysenko*, S. Amsterdamski, *Życie naukowe a monopol władzy: casus Lysenko*, W. Gajewski, *Lysenkoism in Poland*, A. Bikont & S. Zagórski, *Burzliwe dzieje gruszek na wierzbie*, P. Köhler, *Lysenkizm w botanice polskiej*, P. Köhler, *An outline of short history of Lysenkoism*, P. Köhler, *Lysenko affair and Polish botany*, P. Köhler (ed.), *Studia nad lysenkizmem w polskiej biologii*, L. Kuźnicki, *Przerwijmy złą milczenie*, L. Kuźnicki, *Autobiografia: w kręgu nauki*, L. Kuźnicki, *Polska Akademia Nauk w roku 1956*, L. Kuźnicki, *Ewolucjonizm w Polsce 1883–1959*, pp. 304–308, J. Wieczorek (ed.), *Teodor Marchlewski ...*, P. Pleskot & T. Rutkowski, *Spełniana Akademia*, vol. 2, p. 47, P. Węgleński, *Profesor Waclaw Gajewski*, *Wikipedia* 2012petr, 2013demb, 2013gaje, 2013lyse3.

was rather limited among Polish physicists<sup>1</sup>.

The leading role in this process of ideologisation of Polish science was played by the Institute for Education of Scientific Staff at the Central Committee of the Polish United Workers' Party [Instytut Kształcenia Kadr Naukowych przy KC PZPR] established in Warsaw in 1950 by the decision of the Central Committee of the Polish United Workers' Party [KC PZPR], and re-named in 1954 as the Institute of Social Sciences at the Central Committee [Instytut Nauk Społecznych przy KC PZPR]. Professor Adam Schaff (1913–2006) was its organiser and director, and the Chair of History of Philosophy [Katedra Historii Filozofii] was its most important unit. It was also a place where Tadeusz Kroński (1907–1958), A. Schaff, Henryk Holland (1920–1961), Bronisław Baczek (b. 1924), and Leszek Kołakowski (1927–2009) worked<sup>2</sup>.

These regime *thinkers* severely criticised the thought of the leading representatives of the *bourgeois thought* in Poland, especially the members of the famous Lvov–Warsaw School (including Ajdukiewicz, Kotarbiński, Twardowski, ...), the Polish Catholic school of philosophy (Neo–Thomism), and Znaniecki's school of sociology<sup>3</sup>.

In an analogous spirit, in 1951, the Editorial Office of the journal *Myśl Filozoficzna* [*Philosophical Thought*], with A. Schaff as the editor-in-chief, treated sociology, especially the one developed by the school of Znaniecki, as a reactionary discipline, *alien to the working class*<sup>4</sup>.

<sup>1</sup> It is worth noticing that, these interpretations did not deny, in principle, a physical sense to these theories (in contrast to Lysenkoism in genetics). Furthermore, the non-Marxist Polish physicist Cz. Białobrzęski (1878–1956) criticised the Copenhagen interpretation of quantum mechanics independently from the Soviet scientists. He did this already during the German occupation of Warsaw in World War II when he finished writing a three-volume monograph on this subject. Unfortunately the book was burnt during the Warsaw Uprising (1 Aug. – 3 Oct. 1944). The abridged version was prepared before the death of Białobrzęski (12 Oct. 1953), and was published in April 1956 (see Cz. Białobrzęski, *Podstawy poznawcze fizyki świata atomowego*). However, in contrast to the Soviet physicists, he criticised the Copenhagen interpretation from the point of view of spiritual monism and not of dialectical materialism. It is worth mentioning very interesting comments on this issue by a physicist Roman S. Ingarden. Namely, regarding physical matters, V. A. Fock's and Cz. Białobrzęski's interpretations differ in principle only in words (see R. S. Ingarden, *Przedmowa*, pp. 14–17, L. Infeld (ed.), *Konferencja ogólnopolska fizyków*).

<sup>2</sup> See B. Bińko, *Instytut Kształcenia Kadr Naukowych przy KC PZPR ...*, R. Sitek, *Warszawska szkoła historii idei*, p. 30 & pp. 57–59, B. Machalica, *Warszawa: Pogrzeb Adama Schaffa, „Godziemba”*, *Polis – Miaso Pana Cogito*, *Wikipedia* 2013scha (with further references). In 1952–1953, he was also director of the Institute of Philosophy of Warsaw University. For biographical facts, see *Wikipedia* 2012kron, 2013scha, 2013kola1, 2013kola2, 2013bacz1, 2013bacz2, 2013holl (with further references), R. Sitek, *Warszawska szkoła historii idei*, pp. 20–27.

<sup>3</sup> See L. Kołakowski, *Kilka uwag w sprawie „Przeglądu Filozoficznego”*, L. Kołakowski, *Metodologia ks. Kłósaka*, L. Kołakowski, *Filozofia nieinterwencji*, A. Schaff, *Zadania frontu filozoficznego ...*, A. Schaff, *Poglądy filozoficzne Kazimierza Ajdukiewicza*, A. Schaff, *Metoda dokumentów osobistych a społeczne badania terenowe*, A. Schaff, *W sprawie oceny poglądów filozoficznych Kazimierza Ajdukiewicza*, A. Schaff, *10 lat walki o zwycięstwo filozofii marksistowskiej w Polsce Ludowej*, B. Baczek, *O poglądach filozoficznych i społeczno-politycznych Tadeusza Kotarbińskiego*, T. Kroński, *O „Historii filozofii” W. Tatarkiewicza*, H. Holland, *Legenda o Kazimierzu Twardowskim*, Z. A. Jordan, *Philosophy and Ideology*, ch. 10, 11 & 12, A. Kołakowski, *Interpretacje i sytuacje mityczne I połowy lat pięćdziesiątych*, R. Jadcak, *Jeszcze o „Legendzie o Kazimierzu Twardowskim” H. Hollanda*, R. Sitek, *Warszawska szkoła historii idei*, pp. 35–45.

<sup>4</sup> See Redakcja *Myśli Filozoficznej*, [*O socjologii*], J. Chałasiński, *Drogi i bezdroża socjalizmu w nauce polskiej (1949–1954)*, pp. 30–32.

In 1950 and 1951, many university scholars (circa 1000), who did not surrender to the Soviet intellectual terror, especially the representatives of the Lvov–Warsaw School of Philosophy, were deprived of the right to educate students or even to work at universities<sup>1</sup>. For example, professor Tadeusz Kotarbiński (1886–1981), the rector of the Łódź University between 1946 and 1949, and head of the Department of Philosophy between 1946 and 1950, was forced to resign from these functions, and resigned (together with his wife Janina Kotarbińska) from further work at Łódź University in 1952 (they moved to Warsaw University); in 1950 professor I. Dąbbska was deprived of her job at Poznań University, and in 1951 professor S. Ossowski at Warsaw University<sup>2</sup>.

Then, in order to re-educate Polish academics to the new standards of thinking, the 1<sup>st</sup> Congress of Polish Science was held in Warsaw between 29 June and 2 July 1951 and attended by more than 1600 participants. The congress was a great political success of the communist government. The slogan to rebuild the entirety of Polish science on Marxist ideology in the contemporary Stalinist version was *unanimously* accepted and proclaimed<sup>3</sup>. During the congress the Organisational Committee of the new Polish academy, that is the Polish Academy of Sciences, was established. Then, on 30 October 1951, the academy was founded, and its structure modelled on the structure of the Soviet Academy of Sciences<sup>4</sup>. Furthermore, in 1952, all scientific societies, including the Polish Academy of Arts and Sciences (Polska Akademia Umiejętności, PAU) and the Warsaw Society of Sciences (Towarzystwo Naukowe Warszawskie, TNW), were dissolved, and their properties transferred to the Polish Academy of Sciences (Polska Akademia Nauk, PAN)<sup>5</sup>.

### The case of the Mianowski Fund

After being released from the German Concentration Camp in Auschwitz

<sup>1</sup> See P. Hübner, *Szyfowe prace*.

<sup>2</sup> See W. Krajewski, *Introduction: Polish Philosophy of Science*, p. xv, R. Sitek, *Warszawska szkoła historii idei*, p. 30, R. Kleszcz, *Filozofia na Uniwersytecie Łódzkim – zarys historyczny*, *Wikipedia* 2013damb, 2013osow3, 2013osow4, J. Perzanowski, *Izydora Dąbbska (1904–1983)*, Redakcja *Przeglądu Filozoficznego – Nowa Seria* & al.

<sup>3</sup> See B. Fijałkowska, *Polityka i twórcy (1948–1959)*, pp. 150–157, *Polska Kronika Filmowa, I Kongres Nauki Polskiej, I Kongres Nauki Polskiej*, P. Hübner, *I Kongres Nauki Polskiej jako forma ...*, P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 2, pp. 476–572, P. Hübner, *Kongres w kronice*.

<sup>4</sup> See P. Hübner, *I Kongres Nauki Polskiej jako forma ...*, P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 2, pp. 710–777 & pp. 797–828.

<sup>5</sup> See P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 2, pp. 778–796, P. Hübner, *Sila przeciw rozumowi*, pp. 222–278. These changes, however, were not so turbulent as they could seem on first sight, since the President of the Polish Academy of Arts and Sciences, and the President of the Warsaw Scientific Society had been vice-presidents of the Polish Academy of Sciences in 1952–1957, i.e. a linguist Kazimierz Nitsch (1874–1958) and a mathematician Waclaw Sierpiński (1882–1969), respectively. A biologist Jan Dembowski (1889–1963) was the first President of the Polish Academy of Sciences from 1952 to 1956. See in this context their talks given during the 1<sup>st</sup> Congress of Polish Science (29 Jun. – 2 Jul. 1951): J. Dembowski, *Przemówienie na otwarciu Kongresu Nauki Polskiej*, [K. Nitsch], *Przemówienie prof. Kazimierza Nitscha ...*, [W. Sierpiński], *Przemówienie prof. Waclawa Sierpińskiego ...*. See also J. Dembowski, *O warunkach rozkwitu nauki polskiej*.

II–Birkenau, S. Michalski stayed in Kraków (which was not destroyed during the war), and from this city directed the Scientific Division of the Mianowski Fund in Warsaw with the help of Janina Małkowska, who lived in Warsaw (severely destroyed during the war). Michalski was still the editor of the journals *Nauka Polska* and *Organon*. His intentions were as follows: to develop in Poland the science of science; to organise special conferences on the organization of different branches of knowledge; to create a book series entitled *Wiedza o nauce* [*The Knowledge of Science*]; to prepare a university textbook on the science of science, and to open courses on the science of science for academic decision-makers and university students<sup>1</sup>.

Moreover, the Council of the Fund (in the project of 2 June 1947, prepared by Czesław Białobrzewski) planned to restore the Fund as a *Social Ministry of Science*<sup>2</sup>. Unfortunately, for economic and political reasons, it was unable to implement this idea, nor to resume the activities of the pre-war Circle of the Science of Science of the Mianowski Fund (which provided the Fund project of 15 February 1946)<sup>3</sup>. Fortunately, in cooperation with Warsaw University, the library of the Scientific Section of the Fund, which partly survived the German occupation, was reorganised and reopened as the Library of the Science of Science. It gathered many new items through acquisition and exchange (with over one hundred institutions in 1949 alone). The library enabled in Warsaw research into the science of science, including bibliographical studies, organizational problems of the academic world in Poland and abroad, and the history of the Mianowski Fund.

Then, in 1947, the 25<sup>th</sup> volume of *Nauka Polska. Jej Potrzeby, Organizacja i Rozwój* was published by the Mianowski Fund. It was a special jubilee volume entitled *Perspektywy nauki polskiej w epoce dziejowej przemiany* [*The Perspectives of Polish Science at the Time of the Historical Transformation*]. However, since the entire volume was edited in the pre-war spirit and layout, without referring to the Marxist, Leninist and Stalinist ideology, it was severely criticised by the prominent party activists of the new communist regime: Vice-Minister of Education Eugenia Krassowska (1910–1986)<sup>4</sup> on

<sup>1</sup> See H. Radlińska & I. Lepalczyk, *Stanisława Michalskiego autobiografia i działalność oświatowa*, J. Hulewicz, *Michalski Stanisław*, J. Piskurewicz, *Refleksja naukoznawcza ...*, J. Piskurewicz, *Stanisław Michalski w dziejach nauki polskiej ...*, J. Piskurewicz, *Warszawskie instytucje społecznego mecenatu ...*, J. Piskurewicz, *W służbie nauki i oświaty: Stanisław Michalski 1865–1949*, P. Hübner, J. Piskurewicz & L. Zasztowt, *A History of the Józef Mianowski Fund*, L. Zasztowt (ed.), *Kasa Mianowskiego 1881–2011*, *Wikipedia* 2013mich (with further references), where there is more other additional information on Michalski.

<sup>2</sup> See P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 1, p. 388.

<sup>3</sup> See P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 1, p. 388.

<sup>4</sup> She was an activist of the Alliance of Democrats [Stronnictwo Demokratyczne] that after World War II was allied to the Polish Workers' Party [Polska Partia Robotnicza] and from 1948 to the Polish United Workers' Party [Polska Zjednoczona Partia Robotnicza]. See *Wikipedia* 2013kras, 2013adem1, 2013adem2, 2013pwpa1, 2013pwpa2, 2013puwp1, 2013puwp2.

27–29 November 1947 and January 1948, Stefan Żółkiewski (1911–1991)<sup>1</sup> in 1948, and Henryk Jabłoński<sup>2</sup> in 1948<sup>3</sup>.

The conclusion of these critiques was clear: from the point of view of communists there was no future in Poland for the Mianowski Fund as the publisher of this volume. As a consequence, the Ministry severely limited the financing of the Fund's activities.

Despite such political circumstances, on 4 May 1948 the Science of Science Commission of the Mianowski Fund [Komisja Naukoznawcza Kasy Mianowskiego] was established with the following members: T. Kotarbiński, Janina Małkowska, Stanisław Małkowski (the president of the Fund), S. Ossowski (the vice-president of the Fund), and Bogdan Suchodolski. The Commission supervised all activities of the Academic Section of the Mianowski Fund<sup>4</sup>.

However, due to very limited subsidies received from the government, the Board of the Mianowski Fund set to integrate the Fund with the Warsaw Society of Sciences (Towarzystwo Naukowe Warszawskie, TNW). This was finally carried out on 3 March 1951. Unfortunately, it did not bring the expected result. In 1952 the communist regime established the Polish Academy of Sciences as the chief scientific institution in the country, and the Warsaw Society of Sciences (TNW) as well as the Polish Academy of Arts and Sciences (PAU) in Kraków were integrated into the body of the new academy<sup>5</sup>.

<sup>1</sup> He was a co-founder of the Polish Workers' Party, and editor-in-chief of the journal *Kuźnica* (1945–1948), a Marxist literary critic, the manager of the Culture Faculty of the Central Committee of the Polish United Workers' Party, etc.

<sup>2</sup> He was then a professor of Academy of Political Sciences in Warsaw and the manager of the Faculty of Political Propaganda of the Warsaw Committee of the Polish Socialist Party, etc.

<sup>3</sup> See P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 1, p. 368, E. Krassowska, *Rola towarzystw naukowych typu akademickiego ...*, H. Jabłoński, *Nauka – zapalny odcinek frontu kultury*, S. Żółkiewski, *Na marginesie XXV tomu "Nauki Polskiej"*. From 1953 to 31 July 1954, Jabłoński was the Deputy Scientific Secretary of Faculty I of Social Sciences of the Polish Academy of Sciences; from 1 August 1954 to April 1955, the Scientific Secretary of this Faculty; from April 1955 to December 1965, Scientific Secretary of the entire Polish Academy of Sciences; in 1957 became the chairman of the Commission of Science of the Central Committee of the Polish United Workers' Party [Komisja Nauki przy KC PZPR], and in 1959 the chairman of the Sekcja Historyczna of this Commission (the Historical Division of the Commission of Science of the Central Committee of the Polish United Workers' Party), etc. For more biographic facts on Krassowska see *Wikipedia* 2013kras, *Parlamentarzyści RP, Krassowska Jodłowska Eugenia (1910–1986)*, and on Jabłoński see *Wikipedia* 2013jabl, *Parlamentarzyści RP, Jabłoński Henryk (1909–2003)*, L. Kuźnicki, *Polska Akademia Nauk w roku 1956*, T. P. Rutkowski, *Władze PRL i historycy ...*, J. Wieczorek (ed.), *Henryk Jabłoński – minister ...*, P. Pleskot & T. Rutkowski, *Spętana Akademia*, and on Żółkiewski see *Parlamentarzyści RP, Żółkiewski Stefan (1911–1991)*, L. Kuźnicki, *Polska Akademia Nauk w roku 1956*, J. Wieczorek (ed.), *Stefan Żółkiewski – wprowadzał ...*, P. Pleskot & T. Rutkowski, *Spętana Akademia*, *Wikipedia* 2013zolk.

<sup>4</sup> See P. Hübner, J. Piskurewicz & L. Zasztowt, *A History of the Józef Mianowski Fund*, L. Zasztowt (ed.), *Kasa Mianowskiego 1881–2011*, p. 139.

<sup>5</sup> See P. Hübner, J. Piskurewicz & L. Zasztowt, *Kasa im. Józefa Mianowskiego*, P. Hübner, J. Piskurewicz & L. Zasztowt, *A History of the Józef Mianowski Fund*, L. Zasztowt (ed.), *Kasa Mianowskiego 1881–2011*, P. Hübner, *Sila przeciw rozumowi*.

### The case of the Science of Science Seminar [Konwersatorium Naukoznawcze] in Kraków and two other centers in Poznań and Warsaw

After World War II the subject matter of the science of science was studied intensively in the Konwersatorium Naukoznawcze (Science of Science Seminar), established in Kraków on 20 March 1945 and operated until December 1949<sup>1</sup>. It was initiated and headed by Mieczysław Choynowski (1909–2001), a philosopher, psychologist, and artist<sup>2</sup>; Bogusław Leśnodorski (1914–1985), a historian of political doctrines, was his deputy<sup>3</sup>.

The aim of the seminar was *practice of the science of science, a struggle to bring science to the public and the public to science*<sup>4</sup>. In order to meet these targets, the members of the group discussed all aspects of the science of science, especially the organisation of science in Poland (and abroad, including the Soviet Union), and the idea of the popularisation of science.

Moreover, the Konwersatorium Naukoznawcze published the journal *Życie Nauki. Miesięcznik Naukoznawczy* [*Life of Science: Monthly Journal of the Science of Science*], subsidised by the Department of Science of the Ministry of Education. From January 1946 to December 1949 it appeared in eight volumes. M. Choynowski was the editor of the first two volumes, and B. Leśnodorski – of the following ones.

In those years the journal played a crucial role in the debate on all main issues of the science of science, including the methodological, sociological, historical, psychological, organisational, and political aspects of science, as well as the practical consequences of science as *the tool to rule the world and the base of the world view* (i.e. the utilitarian and world-view aspects). And both the scholars doing research into the science of science from all over Poland (e.g. M. Choynowski, K. Ajdukiewicz, L. Fleck), and the government authorities (e.g. B. Bierut, E. Krassowska) were interested in different aspects of the organisation of science in Poland, published their texts in this journal<sup>5</sup>.

The organization of the seminar and the journal by Choynowski was truly a great achievement. However, he had much bigger plans, namely, establishing a full institute for research into the science of science: the Institute for the Science of Science [Instytut Naukoznawczy] and furthermore the Polish Society for the Science of Science [Polskie Towarzystwo Naukoznawcze]<sup>6</sup>.

<sup>1</sup> It was affiliated to the Society of Assistants of Jagiellonian University in Kraków. When, in March 1948, the Polish Teachers' Union [Związek Nauczycielstwa Polskiego] was established, the Society of Assistants of Jagiellonian University was dissolved. Then the Science of Science Seminar became an independent unit, but it did not receive an official registration. See M. Choynowski, *O zakresie i znaczeniu naukoznawstwa ...*, M. Choynowski, *Przedmowa*, W. Rolbiecki, *Ruch naukoznawczy ...*, P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 1, pp. 380–384.

<sup>2</sup> See P. Pawlak, *Mieczysław Choynowski ...*.

<sup>3</sup> See *Wikipedia* 2013lesn.

<sup>4</sup> M. Choynowski, *Przedmowa*, p. v.

<sup>5</sup> See M. Choynowski, [*Założenia programowe czasopisma „Życie Nauki. Miesięcznik Naukoznawczy”*], M. Choynowski, *Nauka wobec społeczeństwa*, M. Choynowski, *Wychowawcza rola nauki*, M. Choynowski, *Nauka i uczone w Związku Radzieckim*, K. Ajdukiewicz, *Co to jest wolność nauki?*, L. Fleck, *Problemy naukoznawstwa*, B. Bierut, *Nauka polska i nasze odrodzenie narodowe*, E. Krassowska, *Ministerstwo Oświaty wobec nauki i szkół wyższych*, E. Krassowska, *Nowe zadania nauki i szkolnictwa wyższego*.

<sup>6</sup> See M. Choynowski, *Institute for the Science of Science ...*.

Unfortunately, since his political views were not in *full agreement* with the political orthodoxy of these years (read *Stalinism*), he was forced at the end of 1949 to resign not only from these plans, but also from chairing the seminar. As a consequence, the seminar ended its activities<sup>1</sup>, and the journal was moved to Warsaw and served other purposes. (This issue will be continued below in the section devoted to the Polish Academy of Sciences.)

Furthermore, the subject matter of the science of science was also researched in two other units. Namely, in the Science of Science Circle [Kóło Naukoznawcze], affiliated to Adam Mickiewicz University in Poznań and under the care of the Poznań Society of Friends of Science, headed by a historian Jan Rutkowski (1886–1949), established on 23 February 1946, and stopping its work after 22 May 1949; and the Science of Science Division [Sekcja Naukoznawcza], organised by the Society of Assistants of Warsaw University, headed by Stefan Ziemiński<sup>2</sup>.

### The case of Ludwik Fleck

After release from the German Concentration Camp in Buchenwald on 11 April 1945, L. Fleck returned to Poland in July 1945 and in a short time made a brilliant career in science (microbiology and bacteriology), becoming in 1954 a Corresponding Member of the Polish Academy of Sciences, and then the Member of the Presidium of this academy. In 1946–1947, L. Fleck continued his interests in the theory of the development of scientific knowledge and theory of cognition and published two papers on these subjects: *Problemy naukoznawstwa* [*Problems of the science of science*] (1946); and *Patrzeć, widzieć, wiedzieć* [*To look, to see, to know*] (1947). In the former paper, he formulated his own definition of the science of science:

*Naukoznawstwo* [the science of science] is a separate science based on observation and experiment, and historical and sociological investigations. It is a part of the science of thought–styles.<sup>3</sup>

Then in 1947 he presented his views about the science of science and theory of cognition during a seminar held in Lublin<sup>4</sup>. However, in the late 1940s and early 1950s his thought had not gained greater recognition in Poland. This was because Fleck assumed an overly *relativistic* idea of the truth, which could be accepted neither by the rational philosophers from Twardowski's school nor the dialecticians from the Marxist school.

### The case of Stanisław Ossowski

In 1947–1948, a sociologist S. Ossowski, a member of the Lvov–Warsaw

<sup>1</sup> See P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 1, pp. 382–384.

<sup>2</sup> See P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 1, pp. 384–386, W. Rolbiecki, *Ruch naukoznawczy ...*, pp. 20–22.

<sup>3</sup> A modified translation of R. S. Cohen & T. Schnelle (eds.), *Cognition and Fact*, p. 127. See also L. Fleck, *Problemy naukoznawstwa*, p. 336 [in: L. Fleck, *Psychosocjologia poznania naukowego*, p. 304].

<sup>4</sup> See T. Kielanowski, *Meetings with Ludwik Fleck in Lublin during the Years 1945–1950*, Z. Cackowski, *Wstęp do drugiego wydania polskiego ...*, p. 18.



School of Philosophy, as an expert in dialectical and historical materialism<sup>1</sup> became an open critic of the Soviet ideology<sup>2</sup>. For example, in 1950 he wrote the article *Walka klas i komplikacje dialektyczne* [*Class struggle and dialectical complications*], showing intellectual poverty of the Stalinist ideology in science and letters. Therefore, the *then political factors* did not allow him to publish this article. Furthermore, in 1951 he was deprived of his job at Warsaw University. (However, this difficult situation strengthened his beliefs.)

### The case of the Polish Academy of Sciences

The 1<sup>st</sup> Congress of Polish Science [I Kongres Nauki Polskiej], held in Warsaw, from 29 June to 2 July 1951, postulated that the Polish Academy of Sciences should be established. This was carried out on 30 October 1951. Then, in December 1952, the Polish Academy of Arts and Sciences and the Warsaw Scientific Society were incorporated into the new academy<sup>3</sup>.

The subject matter of the science of science (especially the science policy) played a crucial role in these changes, and was treated with great interest by the political and scientific authorities with regards to both organisational and research aspects.

Firstly, in 1950, the journal *Życie Nauki. Miesięcznik Naukoznawczy* [*Life of Science: Monthly Journal of the Science of Science*] was moved from Kraków to Warsaw. It was published there until 1952 as the authority of the 1<sup>st</sup> Congress of Polish Science. On the occasion, its name was modified: it was entitled *Życie Nauki. Miesięcznik poświęcony zagadnieniom nauki i nauczania w szkołach wyższych, społecznej roli nauki i jej organizacji oraz sprawom Sekcji Szkół Wyższych Z.N.P.* [*Life Science: Monthly Journal on the issues of Science and Teaching in Higher Education, the Social Role of Science and Its Organization and Affairs of the Higher Education Section of the Polish Teachers' Union*]. The journal was still sponsored by the Department of Science of the Ministry of Education, and its editor-in-chief was Bogusław Leśniordorski<sup>4</sup>. However, it became a journal dominated by Stalinist jargon. The very first article, entitled *Stalin – uczonego nowego typu* [*Stalin – a new type of scholar*], by a French communist Jean-Toussaint Desanti (1914–2002), established this explicitly and clearly<sup>5</sup>.

Nevertheless, very important texts were still published in this journal, such as the second article of the new edition of the journal, on the

<sup>1</sup> See S. Ossowski, *Doktryna marksistowska na tle dzisiejszej epoki* & S. Ossowski, *Teoretyczne zadania marksizmu*.

<sup>2</sup> It was not an accident, since he was an advocate of leftist and democratic views, that before World War II sympathised with the Polish Social Party, and after the war with the so-called humanistic socialism. See M. Ossowski, *Spoleczne funkcje nauki*.

<sup>3</sup> See *Ustawa z dnia 30 października 1951 r. o Polskiej Akademii Nauk*, W. Rolbiecki, *Geneza Polskiej Akademii Nauk (1930–1952)*, P. Hübner, *Polityka naukowa w Polsce w latach 1944–1953 ...*, vol. 2, pp. 778–796, P. Hübner, *Sila przeciw rozumowi*, pp. 197–255.

<sup>4</sup> In 1959, he became a member of the Historical Division of the Commission of Science of the Central Committee of the Polish United Workers' Party [Sekcja Historyczna Komsji Nauk przy KC PZPR]. See T. P. Rutkowski, *Wladze PRL i historycy ...*, P. Pleskot & T. Rutkowski, *Spętana Akademia*, vol. 2, p. 98.

<sup>5</sup> See J. T. Desanti, *Stalin – uczonego nowego typu*, *Wikipedia* 2013desa.

programmatic rules of the 1<sup>st</sup> Congress of Polish Science (that was to be organised in 1951) by J. Dembowski, and about the importance of science, culture and education in People's Poland by Bolesław Bierut<sup>1</sup>.

Then, in 1951–1952, when the new order of Polish science was formed, four crucial texts were issued: the speeches given during the 1<sup>st</sup> Congress of Polish Science (Warsaw, 29 June 1951) by Jan Dembowski (1889–1963), who became the first President of the Polish Academy of Sciences (1952–1956); Kazimierz Nitsch (1874–1958), President of the Polish Academy of Arts and Sciences, and Waclaw Sierpiński (1882–1969), President of Warsaw Scientific Society, who became the Vice-presidents of the Polish Academy of Sciences (1952–1957); and the speech *O warunkach rozkwitu nauki polskiej* [*On the conditions for the flowering of Polish science*] given by J. Dembowski, President of the Polish Academy of Sciences, during the 1<sup>st</sup> Session of the Council of the Polish Academy of Sciences (Warsaw, 24 January 1952).

Then, in 1953, the Polish Academy of Sciences began to issue the journal *Nauka Polska. Czasopismo poświęcone zagadnieniom rozwoju nauki w Polsce* [*Polish Science: A journal devoted to the issues of the development of science in Poland*]. Of course, this journal was a *dialectical continuation* of the journal *Nauka Polska. Jej Potrzeby, Organizacja i Rozwój* [*Polish Science: Its Needs, Organisation and Development*] published in 1918–1949 by the Mianowski Fund (incorporated in 1951 to the Warsaw Society of Sciences (TNW), and then, in 1952 to the Polish Academy of Sciences). Furthermore, in the same 1953, the journal *Życie Szkoły Wyższej* [*Life of the Higher School*] began to appear. These two journals were published to 1991 and 1993, respectively. Each of them was also a continuation of the journal *Życie Nauki. Miesięcznik Naukoznawczy* [*Life of Science: Monthly Journal of the Science of Science*]<sup>2</sup>. And it was a dialectical continuation of this journal from the period 1946–1950 (when Choynowski was the chairman of the Science of Science Seminar), as for several years the new journals adopted the Marxist–Stalinist rhetoric, totally alien to Choynowski's views<sup>3</sup>.

In May 1952 the Council of the Polish Academy of Sciences [Prezydium PAN] established the Committee of History of Science [Komitet Historii Nauki]. It was primarily affiliated at the Faculty of Social Sciences [Wydział Nauk Społecznych], and managed by a historian B. Leśnodorski<sup>4</sup>. Then, from 23 January 1953, the committee became an interfaculty unit affiliated to the Prezydium PAN, and the chairman of the committee was the economist Zygmunt Modzelewski (1900–1954)<sup>5</sup>, and the vice-chairmen were: the historian

<sup>1</sup> See J. Dembowski, *Pierwszy Kongres Nauki Polskiej*, B. Bierut, *O nauce, kulturze, oświacie w Polsce Ludowej* ...

<sup>2</sup> See K. Kowalczyk, A. Paszkowska & J. Wójcik., *Bibliografia zawartości „Życia Nauki”* ... , p. VII.

<sup>3</sup> See e.g. the articles: Redakcja *Nauki Polskiej*, *Od Redakcji*, J. Dembowski, *Józef Stalin*, Z. Modzelewski, *Znaczenie pracy J. Stalina* ... , J. W. Stalin, *Józef Stalin w sprawie pokoju*, A. Schaff, *Józef Stalin a nauka*.

<sup>4</sup> See W. Sygocki, *Z dziejów Instytutu Historii Nauki Polskiej Akademii Nauk*, pp. 54–56, W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, p. 17.

<sup>5</sup> See J. Wiczorek (ed.), *Zygmunt Modzelewski – ekonomista* ... , *Wikipedia 2013modz*, Instytut Pamięci Narodowej, *Zygmunt Modzelewski (1900–1954)*.

of science and culture Bogdan Suchodolski (1903–1992), the mathematician Stanisław Turski (1906–1986) and the aero–mechanician Jerzy Bukowski (1902–1982)<sup>1</sup>.

The committee united scholars engaged in research into the history of science in Poland, and it took over the dissolved units of the Polish Academy of Arts and Sciences in Kraków and the Warsaw Society of Sciences dedicated to the history of science. These were three Kraków commissions: the Commission on History of Education in Poland [Komisja do Dziejów Oświaty w Polsce], the Commission on the History of Medicine and Natural Sciences [Komisja Historii Medycyny i Nauk Przyrodniczych], and the Commission on Publishing the Works of Classic Scholars [Komisja Wydawnicza Dzieł Klasyków Nauki], as well as a Warsaw study with documentary centre: the Unit of the Science of Science [Pracownia Naukoznawcza], and the Documentation Centre of the Academic Section of the Mianowski Fund [Ośrodek Dokumentacji Działu Naukowego Fundacji im. Mianowskiego]. Furthermore, the committee began to issue the journal entitled *Studia i Materiały z Dziejów Nauki Polskiej* [*Studies and Proceedings of the History of Polish Science*], and became the Scientific Council of the Archive of the Polish Academy of Sciences<sup>2</sup>.

Then, on 10 November 1953 the Department of the History of Science [Zakład Historii Nauki] of the Polish Academy of Sciences was established<sup>3</sup>. B. Suchodolski, a historian of science and culture, became the head of the Department. The leading members of its Scientific Council were the same as the leading members of the Council of the Committee of History of Science<sup>4</sup>.

In 1953, Z. Modzelewski published an article entitled *O roli i znaczeniu nauki w Polsce Ludowej* [*On the role and importance of science in the People's Republic of Poland*], in which he explained clearly the crucial role of the subject matter of the science of science in a Marxist, socialistic country:

*Unlike the capitalist countries, where the economic life is ruled by the laws of anarchy and competition, the principles of narrow anti-scientific empiricism – the economic development of our country is based on socialist planning, which by its nature must have a very scientific character. What is more, the extent of planning and its precision are directly dependent upon the accuracy of our knowledge of the objective laws governing society. Recognition of the principle*

<sup>1</sup> See W. Sygocki, *Z dziejów Instytutu Historii Nauki Polskiej Akademii Nauk*, p. 180.

<sup>2</sup> See W. Sygocki, *Z dziejów Instytutu Historii Nauki Polskiej Akademii Nauk*, p. 181.

<sup>3</sup> In 1958–1974 Department of the History of Science and Technology [Zakład Historii Nauki i Techniki], 1974–1977 Department of the History of Science, Education and Technology [Zakład Historii Nauki, Oświaty i Techniki], 1977–1994 Institute for the History of Science, Education and Technology [Zakład Historii Nauki, Oświaty i Techniki], 1994–2011 Institute for the History of Science [Instytut Historii Nauki], from 17 May 2011 Ludwik and Aleksander Birkenmajer Institute for the History of Science [Instytut Historii Nauki im. Ludwika i Aleksandra Birkenmajerów], see W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, J. Schiller & L. Zasztowt (eds.), *Instytut Historii Nauki Polskiej Akademii Nauk w latach 1953–2003*.

<sup>4</sup> See W. Sygocki, *Z dziejów Instytutu Historii Nauki Polskiej Akademii Nauk*, p. 183.

*of planning means thus recognition of those laws. Therefore, the one that does not agree with the principle of planning, who denies the possibility of more accurate scientific cognition of the world, and the one who does not want to understand that this knowledge, expressed in the form of scientific laws, takes its origin in the practical activities of people and enriched by human thought, is inspected by this activity.<sup>1</sup>*

In 1954, it was again Z. Modzelewski who defined the aim of this new Department in the following *progressive* manner:

*Polish science<sup>[2]</sup> has not managed to work out its own history. We are no exception in this respect. This is not an accusation either. The history of science must be linked with the history of its nation, it must also be connected with the general history of scientific cognition, which, in turn, considering the contribution of individual nations to the development of science, must be associated with the historical situation of many countries. Such a synthetic approach can only be achieved by Marxist science, the science of the socialist era, which is based on the method of dialectical materialism and teamwork. Thus, such a history of science is only born in the Soviet Union.<sup>3</sup>*

After Poland found itself in the sphere of influence of the USSR, the Polish communists sought to eliminate the pre-war principles of organisation of science in Poland, including Polish science studies (which developed unrelated to the Marxist, Lenin's and Stalin's philosophy).

Therefore, after World War II, the government, dominated by communists, wanted to reconstruct Polish science according to Soviet principles. This process was started in the period 1945–1949 with: a) a serious limitation of the subsidies of the Józef Mianowski Fund, and, b) a support of the development of other institutions, including the Science of Science Seminar [Konwersatorium Naukoznawcze] in Kraków, to promote science studies not only interested in the theoretical aspects of science, but also its practical consequences, and c) a promotion of the Marxist, Leninist, Stalinist ideological interpretations of all humanities and social sciences by numerous translations of works by Soviet scholars.

However, along with the strengthening of socialistic power and the increase of Stalin's terror in the 1950s, the promotion of a moderate approach (I mean point b) has also been considered as retrograde and backward,

<sup>1</sup> See Z. Modzelewski, *O roli i znaczeniu nauki w Polsce Ludowej*, p. 55.

<sup>2</sup> We should remember that in Polish *nauka*, translated as *science* means in fact all sciences (formal sciences, natural science, social sciences, ... ) and humanities. In English, there is a sharp contrast between sciences (of all kinds) and humanities; practitioners of the former are scientists and practitioners of the latter – scholars.

<sup>3</sup> Z. Modzelewski, *O historii nauki*, p. 105.

because it was not programmatically hostile to the old tradition of Polish science studies.

Therefore the representatives of the leading political force intended to create in Poland a new Marxist science, socialistic science, modeled on Soviet science totally. In this spirit: scientific societies operating in Poland were liquidated and absorbed in December 1952 by the Polish Academy of Sciences (established on 30 October 1951), and an attempt to construct socialistic science studies in Poland was formulated clearly and emphatically. In spite of these political circumstances, in 1951–1954 the Polish Academy of Sciences laid a solid foundation for promotion and development of science studies in Poland.

### 3.2. 1955–1979

Throughout the period 1955–1979, the science of science was carefully researched by many Polish thinkers. However, it occurred in a new political context. In the years 1945–1954, after the centres that continued the Polish tradition of the science of science born in the 1910s were dissolved (such as the Academic Section of the Józef Mianowski Fund, and the Science Seminar in Kraków) and a significant weakening of the influence of the Lvov–Warsaw School of Philosophy followed<sup>1</sup>, the regime politicians with a large group of scientists – the followers of the new political order – began to lay new foundations of the discipline. In this approach, a clear divide between science policy and the theoretical reflection on the science policy began to disappear. It all happened in full agreement with the Marxist–Leninist approach, with however important corrections made in 1956 and 1968, sketched below.

#### The political context

The death of the Soviet communist leader Joseph Stalin, then the critic of Stalin's *achievements* in the field of internal politics (that is millions of fatalities) by his successor Nikita Sergeyevich Khrushchev (1894–1971)<sup>2</sup>, and the death of the Polish communist leader Bolesław Bierut (1892–12 March 1956 in Moscow), significantly weakened the hard-line Stalinist faction in Poland. Feeling a whiff of freedom, in 1955–1956 numerous Polish thinkers – mainly Marxists and political activists from the Polish United Workers' party, PUWP [PZPR], but also people not affiliated with the party – severely criticised the Stalinist terror in Poland (with its latest manifestation – the

<sup>1</sup> See above, section 3.1., sub-section *The case of the Mianowski Fund*.

<sup>2</sup> Several fundamental facts are worth listing: February 25 – Nikita Khrushchev delivers a speech about Stalin's crimes in a closed meeting of the 20<sup>th</sup> Congress of the CPSU; March 21 – in Warsaw, the Communist Party leadership, with the new party leader Edward Ochab, decided to replicate and widely disseminate Khrushchev's paper. April 12 – in Warsaw, a group of intellectuals wrote a letter to the President of the State Council, condemning the abuse of Communist courts and security. It reads: "The Polish nation demands an equitable country, respect for the law, and morality and purity in the exercise of state power, and cannot come to terms with the lawlessness legalised by a final court judgment." May 4 – Jakub Berman leaves the leadership of the party and the government; among the Stalinist crew he was responsible for the apparatus of repression, foreign policy, ideology, and propaganda. June – Khrushchev's paper is distributed in broadcasts of the Voice of America and Radio Free Europe (J. Skórzyński, *Od odwilży do restauracji*, [no page given]).

violent repressions of the Poznań protests in June 1956). This criticism covered the whole sphere of the state activity, including all culture and science (all sciences)<sup>1</sup>.

Among these critics of 1955–1956 several members of the PZPR (a part of whom is already known to us) are worth mentioning, i.e. the anthropologically oriented philosophers: A. Schaff<sup>2</sup>, B. Baczek, L. Kołakowski, and Krzysztof Pomian (b. 1934), a sociologist and historian of sociology Jerzy Szacki (b. 1929), and the science-oriented philosophers: Stefan Amsterdamski (1929–2005), and Helena Eilstein (1922–2009), and the non-Party advocates of socialistic ideas: philosophers T. Kotarbiński and M. Ossowska, and sociologists: S. Ossowski and Józef Chałasiński (1904–1979). The philosophical core of these critiques, especially made by the anthropologically oriented philosophers, was an analysis of the Marxism–Leninism in the light of the historical method (especially including the idea of historicism).

The movement caused a real political breakthrough of which a culmination was in October 1956, and is named *the Polish October* or *Polish thaw*, *Gomułka's thaw* or *the Polish October Revolution*<sup>3</sup>. In consequence, the communist government (with the *leading force of the state*, the PZPR) liberated policies related to all culture, including science, for a short period of time. However, already in 1957–1958, the Stalinist methods of control were restored again, and the wave of anti-semitism, initiated by the communists, swept through Poland<sup>4</sup>.

Then, in the middle of the 1960s, the PZPR, directed by Władysław Gomułka, changed its political course, seeking to strengthen *good relations* with the USSR. Further *modifications of the political strategy* in 1967–1972, including the struggle of factions of the PZPR and full agreement for *Soviet Anti-Zionism*, with the culmination in 1968, caused three reactions: 1) a suppression of the democratic student movement that demanded *uncensored independence* (a slogan framed by Karol Modzelewski) and *uncensored culture*; 2) a cleansing of the PZPR from revisionist elements, and 3) a real communist–fascist–anti-semitic hysteria. As a consequence, a) many students were removed from universities, b) many Marxist revisionists were expelled from the PZPR and lost their jobs at universities, and a part of them were

<sup>1</sup> See P. Śpiewak, *W pół drogi*, A. Walicki, *On Writing Intellectual History*, B. Fijałkowska, *Polityka i twórcy (1948–1959)*, pp. 332–352, *Wikipedia* 2013kola1, 2013kola2, 2013bac1, 2013bac2, 2013szac1, 2013szac2, 2013scha, J. J. Wiatr, *Profesor i polityk*, *Wikipedia* 2013socs1, 2013socs2, K. M., *Metodyk filozofii i historii nauki, socjolog wiedzy*, *Wikipedia* 2013eils, 2015pozn1, 2015pozn2, K. Biernacki, *Stefan Amsterdamski*, R. Sitek, *Warszawska szkoła historii idei* (esp. p. 107, n. 2), J. Kuroń & J. Żakowski, *Wynurzeni z PRL*, R. Herczyński, *Spętana nauka ...*, pp. 155–254.

<sup>2</sup> However, in 1953–1954, he was still a Stalinist. See A. Schaff, *Stalinowski wkład w filozofię marksistowską*, A. Schaff, *Józef Stalin a nauka*, A. Schaff, *W sprawie oceny poglądów filozoficznych Kazimierza Ajdukiewicza*, A. Schaff, *10 lat walki o zwycięstwo filozofii marksistowskiej w Polsce Ludowej*.

<sup>3</sup> See *Wikipedia* 2013poc.

<sup>4</sup> See J. Skórzyński, *Od odwilży do restauracji* & R. Herczyński, *Spętana nauka ...*, pp. 255–328.

forced to leave Poland; c) many Polish Jews (circa 15 000 people) were banished from Poland<sup>1</sup>.

In December 1970, after a political crisis (caused by a revolt of the workers on the coast protesting against the growing economic crisis, which was brutally suppressed by the police and the army), the new communist government of Edward Gierek (1913–2001) was established<sup>2</sup>. It assumed a so-called strategy for the accelerated socio-economic development of Poland. Unfortunately, the programme, supported by external loans in a context of an inefficient system of extensive economy, ended with a dramatic collapse and a huge foreign debt, accompanied by strikes and demonstrations (in June 1976). Again the strikes and demonstrations were brutally suppressed by the police and the army. This caused the creation in 1977 of an independent democratic opposition<sup>3</sup>.

### **The case of the Polish Academy of Sciences [Polska Akademia Nauk]**

In the spirit of the liberalization of all Polish culture of the period 1955–1956, many prominent scholars, among others, J. Chałasiński (Deputy Secretary of the Polish Academy of Sciences in 1952–1958) and Henryk Jabłoński (Secretary of the Polish Academy of Sciences in 1955–1965), criticised the *oppression of Polish science by Stalinism*, i.e. the ideologization of the management system of Polish science by Stalinists, and argued for restoration of the autonomy of all sciences in Poland and inner reforms of the Polish Academy of Sciences<sup>4</sup>. For example, Henryk Jabłoński, in his speech entitled *Polska Akademia Nauk autonomiczna organizacja uczonych* [*The Polish Academy of Sciences – an autonomous organization of scholars*] and given during the General Assembly of the Polish Academy of Sciences on 11 January 1957, stated:

*Non-scientific factors determined many issues of science, among other things many scientific concepts. It is enough to mention the imposing on the biologist the concept of Lysenko or the dogmatic approach to the concept of Pavlov (I do not judge whether these concepts were legitimated or false, because, in fact,*

<sup>1</sup> See J. Eisler, *Marzec 1968*, J. Karpiński, *Taternictwo nizinne*, R. Herczyński, *Spełnana nauka ...*, pp. 382–518, G. Berendt (ed.), *Spoleczność żydowska w PRL przed kampanią antysemitką i po niej*, *Wikipedia* 2013marz1, 2013marz2, 2013anti1 (esp. the chapter *Antysemitizm a komunizm* [*Anti-Semitism and Communism*]), 2013anti2, 2013soaz. What is more, in August 1968, the Polish People's Army [Polska Armia Ludowa] tainted the honour of the Polish soldiers taking part in the invasion of the Warsaw Pact Forces in the socialist Czechoslovak Republic (the aim of this invasion was to stop the political liberalization of the Prague Spring reforms led by Alexander Dubček). Hence, it is certain that 1968 was a year of *great successes* for Polish Communists. See *Wikipedia* 2013wpin1, 2013wpin2.

<sup>2</sup> See *Wikipedia* 2013gier.

<sup>3</sup> See *Wikipedia* 2013hipo1, 2013hipo2.

<sup>4</sup> See J. Chałasiński, *Zagadnienia kultury współczesnej w humanistyce polskiej*, J. Chałasiński, *O odrodzenie polskiej myśli naukowej*, J. Chałasiński, *Drogi i bezdroża socjalizmu w nauce polskiej (1949–1954)*, H. Jabłoński, *Osiągnięcia Polskiej Akademii Nauk w pierwszych trzech latach jej działalności*, H. Jabłoński, *Polska Akademia Nauk autonomiczna organizacja uczonych*, H. Jabłoński, *Polska Akademia Nauk a aktualne warunki rozwoju nauki w Polsce*, L. Kuźnicki, *Polska Akademia Nauk w roku 1956*.

*this is of secondary importance); it is enough to mention the philosophical, economic and historical sciences, where ones own research was often replaced by the search for arguments for the theses imposed from the outside; it is enough to mention the reducing to a minimum of the possibility of development of sociology under the influence of the theory proclaimed by non-scientific factors, that such learning did not exist.*<sup>1</sup>

As a consequence of the critiques of this sort, in 1956 the (*bourgeois*) sociology and (*bourgeois*) philosophy were recognised as valuable subjects of research. The result was not only the reinstatement of these disciplines at universities, but also the establishment of the Institute of Philosophy and Sociology [Instytut Filozofii i Socjologii] in the Polish Academy of Sciences. Furthermore, the scholars who had lost jobs in the early 1950s could work in their fields again.

The aforementioned institute was managed by A. Schaff. He employed the eminent scholars, among others, philosophers: T. Kotarbiński, Kazimierz Ajdukiewicz, and M. Ossowska, and sociologists: S. Ossowski, J. Chałasiński and Jan Szczepański (1913–2004)<sup>2</sup>. All of them were interested in different aspects of the science of science. Moreover, in 1957, a nationwide seminar on the philosophy of science was organised by the institute, and H. Eilstein became the head of the seminar<sup>3</sup>.

Then, on 4 February 1958, the Research Centre for the General Problems of Labour Organization, PAS [Pracownia Ogólnych Problemów Organizacji Pracy PAN] was established, and chaired by T. Kotarbiński (till his retirement in 1960). What constituted the theoretical basis of this centre was *praxeology*, i.e. the theory of efficient action, a field of research on all purposeful human activity<sup>4</sup>.

The science of science was also researched with great attention in the Department for the History of Science and Technology of the Polish Academy of Sciences, established in 1956 and chaired by B. Suchodolski<sup>5</sup>.

From the very beginning of the Department's existence, one of its workers was also Wanda Osińska, who had worked earlier at the Documentary

<sup>1</sup> See H. Jabłoński, *Polska Akademia Nauk autonomiczna organizacja uczonych*, pp. 13–14 [quoted after: L. Kuźnicki, *Polska Akademia Nauk w roku 1956*, p. 141].

<sup>2</sup> See Instytut Filozofii i Socjologii PAN, *Podstawowe informacje o IFiS PAN*, Wikipedia 2013szcz.

<sup>3</sup> See W. Krajewski, *Introduction: Polish Philosophy of Science*, pp. xiii–xiv. Furthermore, in 1959, Adam Schaff, after contacting the Catholic philosopher Stefan Świeżawski (1907–2004) (also from Lwów), organised the Unit for Research in Medieval Philosophy in the institute. Graduates of the Catholic University in Lublin were employed in the unit, such as Zofia Włodek; they were free to decide on their choice of research topics — see Wikipedia 2013swie, M. Bajer, *Ziemiańska rodzina naukowców ...*.

<sup>4</sup> See P. Hübner, *Krótką historia Zakładu Prakseologii i Naukoznawstwa*, A. Szpaderski, *Kalendarium życia i twórczości Tadeusza Kotarbińskiego*.

<sup>5</sup> See W. Osińska, *Les débuts de recherches systématiques ...*, B. Suchodolski, *Quelques souvenirs sur le Cercle Scientifique de la „Caisse Mianowski”*, B. Suchodolski, *Kilka wspomnień o Kole Naukoznawczym Kasy im. Mianowskiego*, N. Lietz, *Udział Bogdana Suchodolskiego ...*.



Centre affiliated to the Warsaw Society of Sciences that had been dissolved in 1956 – this Centre was a remnant of the former Academic Section of the Mianowski Fund, incorporated into this Society on 3 March 1951.

According to the perspective plans determined in the founding document of the Department of 1 July 1958, this subject matter was to be studied in the Centre for Research on the Science of Science [Pracownia Badań Naukoznawczych] or, alternatively two other units: the Centre of Theory and Organization of Science [Pracownia Teorii i Organizacji Nauki] and the Centre for Research on the Social Function of Science [Pracownia Badań nad Społeczną Funkcją Nauki]<sup>1</sup>. These plans were put into effect in 1964 and 1969, respectively (see below).

Furthermore, already earlier, the Scientific Secretary of the Polish Academy of Sciences had passed resolution 29/63, dated 16 July 1963, establishing the Commission of the Science of Science of the Polish Academy of Sciences [Komisja Naukoznawstwa PAN]<sup>2</sup>. The Centre for Research on the Science of Science [Pracownia Badań Naukoznawczych] of the Department for History of Science and Technology, PAS provided logistic and financial support of this Commission. By *naukoznawstwo* one understood then *the scientific discipline (a group of disciplines) whose subject is scientific activity and science as a store of knowledge*. The aim of the commission was to initiate and coordinate research linked with the problems of methodology of research work, classification of science, methodology of scientific research planning, development of the scientific staff and scientific–research staff, and the economics of science. These types of studies were aimed at creating a rational science policy both at the national level and at the level of individual academic institutions<sup>3</sup>. From 1967, the Commission of the Science of Science PAS [Komisja Naukoznawcza PAN] was renamed – the Committee of the Science of Science, PAS [Komitet Naukoznawstwa PAN]. (It still remains active.)

From 1963 to 1968, the chairman of the Commission and later of the Committee of the Science of Science PAS, was Ignacy Malecki (1912–2004)<sup>4</sup>, the secretary from 1963 to 1966 Stefan Chaskielewicz, and from 1966 to 1968 Bohdan Walentynowicz (1912–1984); the members were, among others, T.

<sup>1</sup> See W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, p. 21 & p. 22.

<sup>2</sup> According to B. Walentynowicz, *Profesor Ignacy Malecki*, p. 4, and to the best of my knowledge, it was the first commission of this kind in socialistic countries.

<sup>3</sup> See Zespół Redakcyjny *Zagadnienia Naukoznawstwa. Studia i Materiały, Nowy skład Komisji Naukoznawstwa*, S. Chaskielewicz, *Information Concerning the Organization of Polish Research ...*, p. 57, S. Chaskielewicz & A. Tuszko, *Polityka naukowa drugiej generacji*, p. 124.

<sup>4</sup> He was an electro–acoustician and expert in the science of science, a member of the Council of the Polish Academy of Sciences 1956–1980, and Deputy Scientific Secretary of the Polish Academy 1962–1968, etc. See B. Walentynowicz, *Profesor Ignacy Malecki*, P. Ranachowski, F. Rejmund & J. Etienne, *Spojrzenie na życie i twórczość ...*.

Kotarbiński, Jan Kaczmarek, Eugeniusz Olszewski<sup>1</sup>, B. Suchodolski, J. Szczepański, and Aleksander Tuszko<sup>2</sup>.

In 1964, I. Malecki, who was interested in the problem of the perspective planning of scientific activities and coordination of scientific research, published a programmatic paper rooted in the Marxist thought entitled *Z zagadnień metodologicznych nauki* [*On the methodological issues of science*], in which he emphasised the need to develop a practical attitude in the reflection on the science of science<sup>3</sup>:

*The modern science of science, called [...] naukoznawstwo, is [...] a discipline which puts [...] the practical purposes [next to the theoretical generalizations] [...] The question posed to the methodology of sciences by economic and industrial management focuses mainly on the research directions that would yield maximum benefit" [...] When choosing research directions one needs to look [...] also for means [...], which consists of financial expenditure, academic staff and organizational frameworks [...] the rapid development of the modern science of science is corroborated by the fact that now 29 magazines which almost exclusively deal with these issues appear in the world [...] Naukoznawstwo is not just a [...] descriptive theory, but [...] becomes an instrument of action, helping people who are in charge of scientific institutions and other scientists.*<sup>4</sup>

These kinds of practical hints were given also by politicians, including especially the authorities of the Ministry of Higher Education and Science, such as Henryk Jabłoński<sup>5</sup>.

Taking these hints into account, this approach was accepted in the Department for History of Science and Technology, where, in November 1964, the Centre for Research on the Science of Science [Pracownia Badań Naukoznawczych] was established. It was managed by Aleksander Tuszko (1901–1992) until 1 October 1968<sup>6</sup>. The unit conducted research into the subject matter of the current organization of science, funding of science,

<sup>1</sup> He was an engineer, a historian, a methodologist of technology, and an expert in the science of science. For his biography see J. Ruskiewicz, *Profesor Eugeniusz Olszewski ...*.

<sup>2</sup> See S. Chaskielewicz, *Information Concerning the Organization of Polish Research ...*, p. 57.

<sup>3</sup> See I. Malecki, *Problemy koordynacji badań naukowych*, I. Malecki, *Z zagadnień metodologicznych nauki*, P. Ranachowski, F. Rejmund & J. Etienne, *Spojrzenie na życie i twórczość ...*.

<sup>4</sup> I. Malecki, *Z zagadnień metodologicznych nauki*, quoted after: T. Kotarbiński, *Przegląd problemów nauk o nauce*, p. 5, n. 1.

<sup>5</sup> See e.g. H. Jabłoński, *Kryteria wyboru kierunków badawczych*.

<sup>6</sup> This is the date when A. Tuszko stopped working in the Department, not receiving – as a professor at the University of Warsaw – the authorization of the Minister of Education and Higher Education [Henryk Jabłoński] for additional employment in the Department. See W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, p. 21, J. Owczarek, *Pracownicy Instytutu Historii Nauki PAN w latach 1954–2004*, p. 435, [NN3], *Nowi zastępcy kierownika zakładu*, J. Bukowski, *Naukoznawstwo w Polsce*, pp. 179–180.

administration of science, and various applications of science and technology in development both in the Soviet Union and the Western countries, as well as UNESCO and the UN. It published a series entitled *Opracowania Wybrane* [*Selected Studies*] with translations of numerous studies.

Furthermore, on 18 February 1965 the Department for the History of Science and Technology, PAS, and the Centre for the General Problems of Labor Organization, PAS, established the PAS Seminar of the Science of Science [Konwersatorium Naukoznawcze PAN]. It continued the tradition of the pre-war Circle of the Science of Science of the Mianowski Fund and the post-war Kraków Seminar of the Science of Science. The seminar was managed by T. Kotarbiński<sup>1</sup>, who in 1965 published two programmatic papers entitled *Historia nauki jako źródło uogólnień metodologicznych* [*The history of science as a source of methodological generalizations*] and *Przegląd problemów nauk o nauce* [*Reviews of Questions in the Science of Science*]<sup>2</sup>. Then in 1968 and 1972, he published two further papers entitled *Wzajemne powiązania różnych aspektów badań twórczości naukowej* [*Interrelation of various aspects of the research of scientific creativity*] and *Zadania epistemologii pragmatycznej* [*Tasks of pragmatic epistemology*]. In all of them, he developed considerations on science in the tradition of the Lvov–Warsaw School of Philosophy. In addition, he positively referred to the Marxist idea to intensify the practical aspects of the science of science.

At the beginning, in 1965, Kotarbiński included the following disciplines in the science of science: epistemology (by which he understood *the familiarity with the world of science, which aims at preparing optimal support for scientific research by social institutions, especially institutions of public administration*<sup>3</sup>), logic (the sciences of the justification of theses), the theory of knowledge, the psychology of science, the psychology of thinking, the sociology of science, the history of science, the general methodology of science (synonymous with *praxeology* = the field of research *which explores ways of acting with the intention of devising the most effective ones*<sup>4</sup>), the organization of scientific research, the detailed methodologies of the sciences, the discipline dealing with the classifications of sciences, the economics of science, the politics of science, and philosophy (theory of human knowledge).

Next, on 25 May 1966, the Department for the History of Science and Technology, PAS organised a council on the study of the theoretical issues of the science of science, with, among others, the following participants: B.

<sup>1</sup> See Z. Kowalewski, *Konwersatorium Naukoznawcze PAN*, Z. Kowalewski, *Dalsza działalność Konwersatorium Naukoznawczego PAN*, Z. Kowalewski, *Z działalności Konwersatorium Naukoznawczego PAN w latach 1966 i 1967*, Z. Kowalewski, *Konwersatorium Naukoznawcze PAN w latach 1967–1968*, W. Osińska, *Posiedzenie Konwersatorium Naukoznawczego cd.* [1970–1976], T. Kotarbiński, Z. Kowalewski, E. Geblewicz & W. Osińska (eds.), *Problemy epistemologii pragmatycznej*, T. Kotarbiński, W. Osińska & E. Geblewicz (eds.), *Powstawanie nowych specjalności w nauce współczesnej*, T. Kotarbiński, W. Osińska & E. Geblewicz (eds.), *Nowe specjalności w nauce współczesnej*.

<sup>2</sup> See T. Kotarbiński, *Przegląd problemów nauk o nauce*, T. Kotarbiński, *Historia nauki jako źródło uogólnień metodologicznych*.

<sup>3</sup> T. Kotarbiński, *Przegląd problemów nauk o nauce*, p. 5.

<sup>4</sup> T. Kotarbiński, *Przegląd problemów nauk o nauce*, p. 20.

Suchodolski, Paweł Rybicki, A. Tuszko, Zygmunt Kowalewski, and E. Olszewski. During the council Paweł Rybicki and B. Suchodolski divided the science of science into two groups of issues: of a theoretical nature (researched especially by the philosophy of science, sociology of science and history of science) and of a practical nature (skills of rational planning, organizing and financing the development of science)<sup>1</sup>.

In effect, Polish authors later sometimes applied an analogous division into *the theoretical science of science* [*naukoznawstwo teoretyczne*] and *the practical science of science* [*naukoznawstwo praktyczne*] or *the applied science of science* [*naukoznawstwo stosowane*], or *the policy and organization of science* [*polityka i organizacja nauki*]<sup>2</sup>.

By contrast, A. Tuszko, who was manager of Centre for Research on the Science of Science at the Department for the History of Science, PAS, was an advocate of a utilitarian approach to the science of science. Therefore, in his article entitled *Science of Science as a Tool for Action*, he treated the science of science: *as a complex scientific discipline which investigates and analyses elements and factors which influence the development of science as well as the efficiency and the effectiveness of research activity*<sup>3</sup>. It is also worth emphasizing that Tuszko proposed doing statistical research on science.

Then, in 1967, the Research Centre for the General Problems of Labour Organization, PAS [Pracownia Ogólnych Problemów Organizacji Pracy PAN] was renamed the Department of Praxeology of the Faculty of Social Sciences, PAS [Zakład Prakseologii Wydziału Nauk Społecznych PAN], and the Centre for Pragmatic Epistemology [Pracownia Epistemologii Pragmatycznej], was established in this department with B. Walentynowicz as head.

In 1969, the Centre for Research on the Science of Science [Pracownia Badań Naukoznawczych] at the Department for History of Science and Technology, PAS was moved to the Centre for Documentation and Scientific Information, PAS [Ośrodek Dokumentacji i Informacji Naukowej PAN], and

<sup>1</sup> See J. Drewnowski, *Narada w sprawie badań nad teoretycznymi zagadnieniami naukoznawstwa*.

<sup>2</sup> See S. Amsterdamski, *Nauka jako przedmiot humanistycznej refleksji*, J. Szczepański, *Zagadnienie zwiększania efektywności wpływu nauki na rozwój społeczeństwa*, W. Rolbiecki, *Troska o integrację nauk o nauce*, p. 112, J. Zieleniewski, *Wstępna prognoza rozwoju naukoznawstwa do roku 1980 i 1990*, p. 319, p. 320 & p. 322, I. Malecki, *Zadania i zakres studiów nad polityką naukową*, W. Gasparski & K. Frieske, *Kierunki rozwoju naukoznawstwa w Polsce*, p. 475, S. Kwiatkowski, *Studia nad polityką naukową w Polsce*, p. 81, I. Malecki, *Prakseologia a naukoznawstwo*, p. 17, W. Gasparski, *Naukoznawstwo: ocena stanu dyscypliny*, G. Wrona, „*Nauka Polska. Jej Potrzeby, Organizacja i Rozwój*” ... , p. 31, P. Jaroszyński, *Człowiek i nauka*, ch. 4. This attitude is in agreement with the earlier works of Polish authors, starting with F. Znaniecki, *Przedmiot i zadania nauki o wiedzy* and M. Ossowska & S. Ossowski, *Nauka o nauce*, which express themselves on theoretical and practical issues or aspects of the science of science or the knowledge on science.

<sup>3</sup> A. Tuszko, *Naukoznawstwo jako narzędzie działania*, p. 156. This series was intended for business use (supposedly, it meant for the ministry and PZPR officials, the scholars from the Polish Academy of Sciences and universities). The editor-in-chief of the series was A. Tuszko, vice-editor: Stefan Chaskielewicz. The series continued the series *Materiały Informacyjne*, published earlier by the Centre for Planning and Coordination of Scientific Research, PAS [Ośrodek Planowania i Koordynacji Badań Naukowych PAN]. From 1961 to 1966 22 issues were published, including 7 issues between 1965 and 1966. See A. Tuszko (ed.), *Z zagadnień finansowania ...*, A. Tuszko (ed.), *Kadry i wydatki w działalności badawczej* & A. Tuszko, *Naukoznawstwo jako narzędzie działania*.

became the executive body of the Committee for the Science of Science, PAS [Komitet Naukoznawstwa PAN].

From 1968 to 1973 the chairman of the Committee for the Science of Science, PAS was Jan Kaczmarek, and then, from 1973 to 1989, I. Malecki<sup>1</sup>.

In 1968, in the article entitled *Science of Science as a Science and as a Practical Activity*, Malecki noticed that a *federation* of disciplines: the logic of knowledge, methodology of research, psychology of research, sociology of scientific activity, planning of scientific research, economics of science, and history of science, constitutes not only *practical epistemology* (i.e. a method of solving concrete problems of organization, co-ordination and research planning, and useful activity), but also a theoretical branch of knowledge. He listed two risks in this research: *an unprofessional approach and the urge to create a super-synthesis*, and, in order to avoid such mistakes, he postulated that a team of experts from different branches of the science of sciences work together<sup>2</sup>.

In the end of 1969, the Department of the History of Science and Technology established two units: the Centre of Theory and Organization of Science [Pracownia Teorii i Organizacji Nauki], chaired by Eugeniusz Geblewicz, and the Centre for Research on the Social Function of Science [Pracownia Badań nad Społeczną Funkcją Nauki]<sup>3</sup>, chaired by Zdzisław Kowalewski, and also two teams: the Team for Pragmatic Epistemology [Zespół Epistemologii Pragmatycznej], headed by professor T. Kotarbiński, and the Team for Pragmatic Methodology [Zespół Metodologii Pragmatycznej], headed by Zdzisław Kowalewski<sup>4</sup>. In January 1972 another team was established, namely the Team for the Theory of Science Policy [Zespół Teorii Polityki Naukowej], chaired by Zdzisław Kowalewski, and his deputy was Lech Zacher. During the first meeting of this team, on 12 January, Zdzisław Kowalewski gave a speech titled *Teoria polityki naukowej a naukoznawstwo* [*Theory of science policy and the science of science*]<sup>5</sup>. Moreover, the history of the organization of science was carefully studied by the workers from other units of the department, especially, by Zofia Skubała-Tokarska<sup>6</sup>. T. Kotar-

<sup>1</sup> See P. Ranachowski, F. Rejmund & J. Etienne, *Spojrzenie na życie i twórczość ...*.

<sup>2</sup> See I. Malecki, *Science of Science as a Science and as Practical Activity*, p. 5.

<sup>3</sup> The *social role of science* was understood as the role of science and technological achievements in forming social awareness and systems of values; the politics of science; and the use of scientific and technological achievements for the development of society. See Z. Kowalewski, *Sprawozdanie z działalności Zakładu Historii Nauki i Techniki PAN w roku 1970*, p. 722.

<sup>4</sup> See Z. Kowalewski, *Historia nauki a naukoznawstwo*, Z. Kowalewski, *Sprawozdanie z działalności Zakładu Historii Nauki i Techniki PAN w roku 1969*, B. Jaczewski, *Inauguracyjne posiedzenie Pracowni Historii i Organizacji Nauki*, W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, pp. 24–25, P. Jaroszyński, *Naukoznawstwo*, J. Bukowski, *Naukoznawstwo w Polsce*, p. 180, E. Tylińska, *Zespoły naukowe działające przy Komitecie ...*.

<sup>5</sup> See L. Zacher, *Zebranie Zespołu Teorii Polityki Naukowej*.

<sup>6</sup> See Z. Skubała-Tokarska, *Społeczna rola Wolnej Wszechnicy Polskiej*, Z. Skubała-Tokarska & Z. Tokarski, *Uniwersytety w Polsce: Rys historyczny*.

biński and his advocates also developed the science of science regarding practical sciences<sup>1</sup>.

In 1969, B. Suchodolski published the article entitled *Historyczne refleksje nad istotą nauki współczesnej* [*Historical Reflections on the Essence of Modern Science*], in which he postulated an integrated research programme of internal and external factors in the development of all sciences, not only exact sciences and natural sciences, but also social sciences. Then, in 1970, he published the article entitled *O podstawach polityki naukowej* [*On the foundations of the scientific policy*], and, on 18 August 1971, he gave a lecture entitled *Les fondements de la politique scientifique* at the 13<sup>th</sup> International Congress of History of Science in Moscow, during the Symposium/Colloquium C1 *The Science of Science and the History of Science* (chaired by Semion R. Mikulinsky)<sup>2</sup>. He understood the term *naukoznawstwo* in a broad sense, using it to denote all disciplines examining science (including its organizational aspects and the prediction of its development). However, according to him, this set of branches does not lead to a research programme that would have theoretical value and was practically useful. This is the reason why he maintained that: 1) the term *naukoznawstwo* in a broad sense was best avoided, 2) the term *nauka o nauce* [*science of science*] was used to designate this group of sciences, and 3) a three-fold distinction between these sciences could be made: a) theory of science (including the philosophy of science, sociology of science, and psychology of science) identified with *naukoznawstwo* in the narrow sense (which is the right sense), b) the history of science, and c) science policy. The first two disciplines have cognitive status (as they are engaged in studying reality), and the third has a practical status (because it deals with the transformation of the social reality)<sup>3</sup>.

Furthermore, in 1971, Barbara Stanosz and Adam Nowaczyk – while reviewing the first five volumes of the journal *Zagadnienia Naukoznawstwa. Studia i Materiały* – introduced a useful division of the science of science (*naukoznawstwo*) into two parts: *the descriptive and explanatory science of science* (*naukoznawstwo opisowo-wyjaśniające*) and the *praxeological science of science* (*naukoznawstwo prakseologiczne*). The *descriptive and explanatory science of science* is a collection of disciplines whose subject of study is science, such as: the *apragmatic methodology of science* (a discipline about the productions of science, that is the elements and the structure of scientific systems), psychology of science, sociology of science, economics of

<sup>1</sup> See T. Kotarbiński, *Elementy teorii poznania ...*, T. Kotarbiński, *Traktat o dobrej robocie*, T. Kotarbiński, *Sprawność i błąd (z myślą o dobrej robocie nauczyciela)*, T. Kotarbiński, *Zagadnienia metodologii nauk praktycznych*, T. Kotarbiński, *Pojęcie i zagadnienie metodologii ogólnej ...*, T. Kotarbiński, *Myśli o ludziach i ludzkich sprawach*, A. Podgórecki, *Charakterystyka nauk praktycznych*, T. Wójcik, *O naukach praktycznych*, W. Gasparski, *Metodologia nauk praktycznych Tadeusza Kotarbińskiego*, W. Gasparski, *Wiedza o organizacji i zarządzaniu oraz jej poznawcze ugruntowanie*, W. Gasparski, *Tadeusz Kotarbiński and His Philosophical Transitions*.

<sup>2</sup> See B. Suchodolski, *O podstawach polityki naukowej*, B. Suchodolski, *Les fondements de la politique scientifique*, W. Rolbiecki, *XIII Międzynarodowy Kongres Historii Nauki*, p. 730, W. Rolbiecki, *Troska o integrację nauk o nauce*, p. 107.

<sup>3</sup> See B. Suchodolski, *O podstawach polityki naukowej*, B. Suchodolski, *Les fondements de la politique scientifique*, B. Suchodolski, *Odpowiedź na troskę*.

science, philosophy of science, history of science, historiosophy of science, and futurology of science. The *praxeological science of science* is composed of such sciences as: the pragmatic methodology of science (the study of methods of scientific activity), theory of the organization of science, and theory of science policy. Both these parts were developed by Polish scholars<sup>1</sup>.

Then, in 1972, Waldemar Rolbiecki criticised Suchodolski's views. He noticed that Suchodolski neglects the creative idea of a moderate integration of the sciences on science, and, first of all, creates a dangerous myth that theory of science (which looks for the *essence* of science) and science policy can be creatively developed without a deep familiarity with the history of science<sup>2</sup>.

Despite this criticism, in 1972, T. Kotarbiński accepted Suchodolski's views (though he did not refer to him explicitly), and modified his own terminology. Now, he understood *naukoznawstwo* in the broad sense as the theory of science as a system of theses (it includes logic, the theory of knowledge and philosophy of science), and *naukoznawstwo* in the narrow sense (synonymous with *pragmatic epistemology*). According to Kotarbiński, the fundamental goal of the theory of science as a system of theses (especially the philosophy of science) is to implement the optimal cognitive value of scientific knowledge<sup>3</sup>. Furthermore, the *pragmatic epistemology* (*naukoznawstwo* in the narrow sense) deals with the analysis of research activities; its objectivity is such familiarity with the research activities that would best facilitate social welfare (the welfare of state institutions and welfare of social institutions) over them (i.e. research activities)<sup>4</sup>. In Kotarbiński's opinion, the initial works of pragmatic epistemology are the *Novum Organum* and the *Advancement and Proficiency of Learning Divine and Human* by Francis Bacon<sup>5</sup>.

In effect the approach of *pragmatic epistemology* and *praxeology* was assumed by many Polish scholars participating in the PAS Seminar on the Science of Science and the workers of the Department of Praxeology of the Faculty of Social Sciences, PAS, such as Zdzisław Kowalewski, Eugeniusz Geblewicz, Henryk Stonert, E. Olszewski, Waldemar Rolbiecki, and Stanisław Kamiński<sup>6</sup>.

<sup>1</sup> See B. Stanosz & A. Nowaczyk, *Recenzja z tomów I–V „Zagadnień Naukoznawstwa”*, pp. 507–509. The authors applied two terms in this classification: *apragmatic methodology* and *pragmatic methodology* coined by K. Ajdukiewicz, *Logika pragmatyczna*.

<sup>2</sup> See W. Rolbiecki, *Troska o integrację nauk o nauce*.

<sup>3</sup> See T. Kotarbiński, *Zadania epistemologii pragmatycznej*, pp. 32–33.

<sup>4</sup> See T. Kotarbiński, *Zadania epistemologii pragmatycznej*, pp. 32–33.

<sup>5</sup> See T. Kotarbiński, *Zadania epistemologii pragmatycznej*, p. 33.

<sup>6</sup> See T. Kotarbiński, Z. Kowalewski, E. Geblewicz & W. Osińska (eds.), *Problemy epistemologii pragmatycznej*, T. Kotarbiński, W. Osińska & E. Geblewicz (eds.), *Powstawanie nowych specjalności w nauce współczesnej*, T. Kotarbiński, W. Osińska & E. Geblewicz (eds.), *Nowe specjalności w nauce współczesnej*, W. Gasparski, *Metodologia nauk praktycznych Tadeusza Kotarbińskiego*, H. Stonert, *Metodologia nauk praktycznych Tadeusza Kotarbińskiego*, H. Stonert, *Twierdzenia nauk praktycznych w ujęciu Tadeusza Kotarbińskiego*, H. Stonert, *Uzasadnienie twierdzeń nauk praktycznych według Tadeusza Kotarbińskiego*.

In 1973, in conjunction with the 2<sup>nd</sup> Congress of Polish Science [II Kongres Nauki Polskiej], organised to commemorate the 500<sup>th</sup> anniversary of the birth of Nicolas Copernicus and the 200<sup>th</sup> anniversary of the National Education Commission (the world's first Ministry of Education), the Committee for the Science of Science (chaired by I. Malecki) and the Committee for the History of Science and Technology (chaired by B. Leśnodorski) proposed the initiative of creating the Institute for the Science of Science (within the Polish Academy of Sciences) that was to link the departments of the Polish Academy of Sciences that did research on different sciences from the metascientific point of view (including e.g. the history of science and technology, history of arts, history of literature, philosophy, etc.). However, the initiative failed:

*I will not disclose a secret by saying that the 2<sup>nd</sup> Congress of Polish Science disappointed the Committee for the Science of Science and the Committee for the History of Science and Technology by not laying the foundations for the creation of the Institute for the Science of Science.<sup>1</sup>*

And also:

*Perhaps this influenced the debate over the formulation of the science of science that was demonstrated at the 2<sup>nd</sup> Congress of Polish Science. The dispute was the consequence of the interests of the science of science concentrated on the history of science, just as it was cultivated at the Institute of History of Natural Sciences and Technology, the Academy of Sciences of the Soviet Union, and the science of science based on Kotarbiński's programme, hence the (despised) praxeological provenance. (What should be remembered from that period is the votum separatum of professor E. Olszewski during the formulation of the draft resolution of the Congress of Polish Science).<sup>2</sup>*

An active role in the course of events was played by B. Suchodolski, who was the chairman–rapporteur of the congress discussion group for *the science of science, history of science and technology*. He upheld the idea already formulated by him in 1969–1972, that the science of science is not one consolidated, well–defined discipline, but a federation of different disciplines that study the theory, history and praxis of science<sup>3</sup>. Thus, according to him, it is justifiable to distinguish three basic groups of sciences (regarding different research fields, methods and aims) that do research into science: the theory of science (philosophy, psychology, and sociology), the history of science, and

<sup>1</sup> B. Leśnodorski, *Historia nauki i techniki wśród nauk o kulturze*, p. 458.

<sup>2</sup> W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, pp. 383–384.

<sup>3</sup> See B. Suchodolski, *Historyczne refleksje and istotą nauki współczesnej*, B. Suchodolski, *O podstawach polityki naukowej*, B. Suchodolski, *Odpowiedź na troskę*.



the politics of science (which was identified with the science of science). Therefore, he postulated strengthening the organisational development of these three branches of knowledge, and then in future, depending on the course of events, to think about creating one comprehensive institution that would cover all of these research fields<sup>1</sup>.

Nevertheless, the 2<sup>nd</sup> Congress of Polish Science adopted a resolution expressing the desire to *ensure the development of rare disciplines and specializations, including the science of science*. In accordance with the Congress's postulates, a research institute for the science of science and a distinct centre for the theory of science policy were to be organised<sup>2</sup>.

However, something else happened. Namely, on 30 July 1973, the Institute of Science Policy, Technical Progress and Higher Education [Instytut Polityki Naukowej, Postępu Technicznego i Szkolnictwa Wyższego], affiliated to the Ministry of Science, Higher Education and Technology was established<sup>3</sup>. Hence, this unit had a political, not theoretical, character. What is more, almost immediately after the Congress, a serious organizational weakening of the theoretical science of science occurred in Poland. Namely, the separate Department of Praxeology, PAS, employing an over-a-hundred-person team, was dissolved and the research program PAS No. 32, *The organisation of modern scientific activity regarding research and design*, coordinated by this department for two years, was stopped. And, a residual department, with a dozen scholars, was moved to the Institute of Organization and Management, PAS and MS&HE [Instytut Organizacji i Kierowania PAN i MNiSW]. The new unit conducted research only into scientometrics and the methodology of practical sciences<sup>4</sup>.

In a strange coincidence, in 1974 B. Suchodolski (in an extended version of his article of 1970) finally suggested that the term *science of science* [*naukoznawstwo*] should be identified with a branch of practical knowledge named *science policy* [*polityka naukowa*] and even proposed that the very term *science of science* [*naukoznawstwo*] should be avoided in this context<sup>5</sup>.

What is more, on 24 May 1975, the Research Centre for History of Organisation of Science [Pracownia Historii Organizacji Nauki], established in that year and managed by Bohdan Jaczewski (1939–1992), held its first meeting<sup>6</sup>.

<sup>1</sup> See B. Suchodolski, *Stan i perspektywy rozwojowe naukoznawstwa ...*, see also B. Suchodolski, *Nauka a świadomość społeczna*, p. 122.

<sup>2</sup> See W. A. Werner & al., *Rozwój naukoznawstwa do roku 2000*, p. 320, W. Gasparski, *Przegląd problemów nauk o nauce po latach*, p. 456.

<sup>3</sup> It was organised on the basis of the Inter-university Department for Research of Higher Education (Międzyuczelniany Zakład Badań nad Szkolnictwem Wyższym). See Prezes Rady Ministrów, *Zarządzenie nr 53 Prezesa Rady Ministrów z dnia 13 lipca 1973 r. ...*, Prezes Rady Ministrów, *Zarządzenie nr 30 Prezesa Rady Ministrów z dnia 22 kwietnia 1977 r. ...*.

<sup>4</sup> See W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, p. 384.

<sup>5</sup> See B. Suchodolski, *Nauka a świadomość społeczna*, p. 141.

<sup>6</sup> See B. Jaczewski, *Inauguracyjne posiedzenie Pracowni Historii i Organizacji Nauki*, W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, J. Piskurewicz, *Moje wspomnienia ...*.

Then, after the dissolution of the Institute for the Organization and Managing, PAS and MS&HE [Instytut Organizacji i Kierowania PAN i MNiSW], on 29 September 1976, the Department of Praxeology [Zakład Prakseologii] was moved to the Institute of Philosophy and Sociology, PAS.

In 1977, the Department of History of Science and Technology became the Institute for the History of Science, Education and Technology (in full agreement with Suchodolski's hopes expressed in 1973)<sup>1</sup>.

In spite of certain organizational problems in the considered period 1955–1979, the different units of the PAS, its departments, centers, teams, seminars, commissions or committees mentioned above, were able to establish several journals for promoting the subject matter of the science of science. I list them below.

The Commission/Committee of the Science of Science published the journal *Zagadnienia Naukoznawstwa. Studia i Materiały* [*Problems of the Science of Science: Materials and Studies*] (the first editor-in-chief: Ignacy Małecki), distributed from March 1965 (from 1968 as a quarterly)<sup>2</sup>. From 1970 to 1977/1979, this Committee published also the international journal *Problems of the Science of Science* (issued irregularly and intended for authors from socialist countries), it had a status of special issues of the *Zagadnienia Naukoznawstwa. Studia i Materiały* (editor-in-chief: Jan Kaczmarek)<sup>3</sup>.

On the initiative of the Commission of the Science of Science PAS, the Centre for Documentation and Scientific Information, PAS [Ośrodek Dokumentacji i Informacji Naukowej PAN] published the bibliographic journal *Przegląd Informacji o Naukoznawstwie* [*Information Review on the Science of Science*], distributed from May 1964 (from 1966 as a quarterly).

The Committee for the History of Science, PAS, from 1956 to 1960, and then the Department for History of Science and Technology, PAS published the journal *Kwartalnik Historii Nauki i Techniki*, the first editor-in-chief was B. Suchodolski (the first 46 volumes are available in digital format)<sup>4</sup>. It considered all aspects of the history of science, the subject matter of the science of science (especially in the 1960s and 70s), and included the current bibliography of the literature.

The Department for History of Science and Technology, PAS also published the journal *Organon* issued since 1964 in international languages<sup>5</sup>.

<sup>1</sup> In 1994 the Institute for the History of Science, Education and Technology was renamed the Institute for History of Science. In 2003, the institute changed its structure, and on 17 May 2011 its name. Since 17 May 2011 the institute is named the Instytut Historii Nauki im. Ludwika i Aleksandra Birkenmajerów (Ludwik and Aleksander Birkenmajer Institute for the History of Science). See W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, J. Piskurewicz, *Moje wspomnienia ...*, Prezydium Polskiej Akademii Nauk, *Uchwała nr 25/2011 ...*.

<sup>2</sup> See K. Leski, *Pierwszy zeszyt „Zagadnień Naukoznawstwa”, Zagadnienia Naukoznawstwa. Studia i Materiały*, 1965–1979, J. Antoniewicz, *Dwadzieścia lat „Zagadnień Naukoznawstwa” ...*.

<sup>3</sup> S. Chaskielewicz (Poland), J. Farkas (Hungary), I. Iliev (Bulgaria), G. Kröber (GDR), S. Mikulinsky (USSR), R. Rădulet (Romania), L. Tandel (Czechoslovakia), B. Walentynowicz (Poland) and J. Kamecka (technical secretary, Poland) also belonged to this Editorial Board.

<sup>4</sup> See *Kwartalnik Historii Nauki i Techniki* 1956–2013.

<sup>5</sup> Earlier in 1936–1939 the Mianowski Fund issued *Organon. International review*.

It also considered all aspects of the history of science, including the subject matter of the science of science (especially in the 1960s and 70s).

Since 1966 the Library of the Polish Academy of Sciences in Warsaw, specializing in the science of science, has published the journal *Polska Bibliografia Naukoznawstwa i Technoznawstwa* [*The Polish Bibliography of the Science of Science and Science of Technology*]<sup>1</sup>.

Furthermore, in addition to activities in the field of publishing, from 1963 to 1967 Polish scholars organized or co-organized seven very important conferences. They were devoted to the following subjects:

1) *The International Symposium on the General Problems of the History of Science and Technology* (17–21 September 1963, Jabłonna (near Warsaw)), with 82 participants. The contributors were, among others, B. Suchodolski, E. Olszewski, Derek J. de Solla Price, Jerome R. Ravetz, René Taton, Gienadij M. Dobrov, Bonifati M. Kedrov, and Anatoli Zvorykine<sup>2</sup>,

2) The symposium *Assessing the Effectiveness of Research* (May 1964, Jabłonna), organised by the Commission for the Science of Science, PAS, with 70 participants<sup>3</sup>,

3) The symposium *Creating and Directing Research Teams* (21–22 May 1965, Jabłonna), organised by the Commission for the Science of Science, PAS and the Polish Ministry for Higher Education, with 100 participants<sup>4</sup>,

4) *The 11<sup>th</sup> International Congress of the History of Science*, organised by the Department for History of Science and Technology, PAS, in Warsaw and Kraków, 24–31 August 1965.

A crucial role of the science of science for the history of science, all culture, and the development of science and technology was emphasised during the last congress in three ways.

Firstly, it was done by a scholar and politician (a professor of biology at Wrocław University, and the Chairman of the Democratic Party and the Deputy Chairman of the State Council 1956–1969) Stanisław Kulczyński (1956–1969) in his Inaugural Address, entitled *Nauka – polityka – historia* [*Science – politics – history*] given on 24 August 1965 in Warsaw. He stated among other things:

*I have been entrusted with the honourable task of greeting the [11<sup>th</sup>] International Congress of the History of Science from the viewpoints of Polish science and Polish politics. I cannot do it from a position of science with its back turned on politics, nor from a position of politics with its back turned on science. I can do so from a position that combines science with politics. This position can be only a common and realistic method of thinking of*

<sup>1</sup> See *Polska Bibliografia Naukoznawstwa i Technoznawstwa* 1968–2000.

<sup>2</sup> See B. Suchodolski & al., *Le symposium consacré aux problèmes généraux ...*

<sup>3</sup> See I. Malecki & al., *Referaty i dyskusje ...*

<sup>4</sup> See E. Olszewski, *Symposium na temat zespołów badawczych*.

*politicians and scholars. Such a method will only have to be created. [...] The scholar can say about himself: Cogito ergo sum, and Dubito ergo sum. The politician cannot say that. The politician says: When I think, I am. When I doubt, there is no me. This is the heart of misunderstanding between the scholar and the politician, between the method of scientific thinking and method of political thinking. Is it possible they are linked to each other, the discovery of a common method of scientific and political thinking, the construction of politicised science and science policy covering each other? I think so. I also think that we are very close to that goal, since the method of historical thinking is crystallizing in science and politics.*<sup>1</sup>

Secondly, John D. Bernal and A. L. Mackay gave a plenary lecture *Towards the Science of Science* at the opening session of the congress<sup>2</sup>. Thirdly and finally, the international symposium *The Past and Future of Science* (30–31 August 1965, Kraków) was held at the end of this congress. The symposium was attended by 100 participants, and among the main speakers were Bonifatij Michajłowicz Kedrow (USSR), Gennadij Michajłowicz Dobrow (USSR), Derek J. de Solla-Price (USA), René Taton (France), I. Malecki (Poland), and E. Olszewski (Poland)<sup>3</sup>.

5) *The International Symposium on the Efficiency of Scientific Research* (16–17 March 1966, Jabłonna). It was organised by the Commission of the Science of Science, PAS. It had 40 participants from Poland and 20 participants from other socialist countries<sup>4</sup>.

6) The Soviet–Polish symposium *The Complex Problems of the Development of Science* (6–10 June 1966, Lvov (Ukraine)). It was organised by the committee established by the Academy of Science of the USSR and chaired by Dr S. R. Mikulinski (vice-director of the Institute History of Natural Science and Technology of the Academy of Science of the USSR), the Commission of the Science of Science, PAS, with the cooperation of the Society of Polish–Soviet Friendship. The symposium was attended by over 100 Soviet scholars and 11 Polish scholars, under the leadership of I. Malecki,

<sup>1</sup> See S. Kulczyński, *Nauka polityka historia*, p. 511.

<sup>2</sup> See J. D. Bernal & A. L. Mackay, *Towards a Science of Science* [Polish transl. *Na drodze do naukoznawstwa*].

<sup>3</sup> See B. M. Kedrow/B. M. Kiedrow, *Закономерности развития науки*, I. Malecki & E. Olszewski, *Some Regularities of the Development of Science in the Twentieth Century*, R. Taton, *L'histoire des sciences et la science actuelle*, G. M. Dobrow/G. M. Dobrow, *Тенденции развития организации науки*, D. J. de Solla Price, *Regular Patterns in the Organization of Science* [Polish transl. *Stale Wzorce w Organizacji Nauki*], B. Walentyńowicz, *Symposium „Przeszłość a przyszłość nauki” ...*, B. Suchodolski, *XI Międzynarodowy Kongres Historii Nauki*.

<sup>4</sup> See K. Leski, *Pierwszy zeszyt „Zagadnień Naukoznawstwa”*, I. Malecki et al., *Materials from the International Symposium on the Efficiency Scientific Research ...*, J. Kamecka, *Międzynarodowe sympozjum na temat ...*.

the chairman of the Committee of the Science of Science, PAS. Two main topics were discussed: the application of mathematical and statistical methods in the research of the science of science, and philosophical and sociological aspects of the science of science<sup>1</sup>.

7) The Polish–Soviet symposium *Scientific Creativity and Quantitative Gauges of Scientific Activity* (20–23 November 1967, Katowice (Poland)). It was organised by the Commission of the Science of Science, PAS, in cooperation with the Society of Polish–Soviet Friendship, and the Institute for the History of Natural Science and Technology of the Academy of Science of the USSR<sup>2</sup>. The chairman of the Organizing Committee was professor A. Tuszko. The symposium was attended by 51 Polish scholars and representatives of the state administration, 32 scholars from the Soviet Union and 14 scholars from other socialistic countries (Bulgaria, Czechoslovakia, the German Democratic Republic, and Hungary)<sup>3</sup>.

In addition, 10 years after the Symposium of the International Council for Science Policy Studies on *The Role of Science in Social Development and Science Policy* (28–29 March 1977, Jabłonna (Poland)), was organised by the Committee for the Science of Science, PAS and the Institute of Economic and Social Sciences of Warsaw Technological University<sup>4</sup>. The main speakers were, among others, Jan Kaczmarek, Siemion R. Mikulinsky, and Jean-Jacques Salomon<sup>5</sup>.

Furthermore, the Polish scholars specializing in the science of science were rather well familiarised with the achievements of international scholars, especially J. D. Bernal<sup>6</sup>, Derek de Solla-Price<sup>7</sup>, and particularly many Soviet scholars, including, for example, Semion R. Mikulinski, Naum J. Rodny, Bonifacij M. Kiedrow, Boris G. Kuzniecowa, Giennadij Michajłowicz Dobrow,

<sup>1</sup> See S. Chaskielewicz, *Polsko–Radzieckie Sympozjum Naukoznawcze w Lwowie*, E. Olszewski, *Radziecko–Polskie Sympozjum Naukoznawcze we Lwowie*, S. R. Mikulinski & al., *Materiały z Radziecko–Polskiego Sympozjum ...*.

<sup>2</sup> At the end of February 1967, Dr S. R. Mikulinski stayed in Warsaw at the invitation of the Commission of the Science of Science. The aim of this stay was to discuss the organization and subject-matter of the the 2<sup>nd</sup> Soviet–Polish Symposium of the Science of Science (Katowice, 20–23 Nov., 1967). See E. Olszewski, *Pobyt w Warszawie dra S. R. Mikulinskiego*.

<sup>3</sup> See S. Chaskielewicz, *Polsko–Radzieckie Sympozjum Naukoznawcze*, E. Olszewski, *Polsko–radzieckie Sympozjum Naukoznawcze w Katowicach*, I. Malecki et al., *Wybrane Materiały Polsko–Radzieckiego Sympozjum Naukoznawczego ...*.

<sup>4</sup> See L. Białoń, *Rola nauki w postępie społecznym a polityka naukowa*.

<sup>5</sup> See J. Kaczmarek, *Zarys polityki naukowej Polskiej Rzeczypospolitej Ludowej*, S. R. Mikulinski/S. R. Mikulinsky, *Polityka naukowa krajów socjalistycznych*, J.–J. Salomon, *Odchylenie wahadła nauki – kryzys postępu*.

<sup>6</sup> See J. D. Bernal, *The Social Function of Science*, J. D. Bernal, *Funkcja i zadania nauki*, J. D. Bernal, *Wybór artykułów*, W. Chałasiński, *Problem nauki i roli uczonego w społeczeństwie*, B. Suchodolski, *Nauka a rozwój społeczeństwa*, J. D. Bernal, *Science in History* [Polish transl. *Nauka w dziejach*], J. D. Bernal & A. L. Mackay, *Towards a Science of Science* [Polish transl. *Na drodze do naukoznawstwa*].

<sup>7</sup> See D. J. de Solla Price, *Science Since Babylon* [Polish transl. *Węzłowe problemy historii nauki*], D. J. de Solla Price, *Little Science, Big Science* [Polish transl. *Mala nauka – wielka nauka*], D. J. de Solla Price, *The history of science as training ...*, D. J. de Solla Price, *Contributions to Discussion ...*, D. J. de Solla Price, *Regular Patterns in the Organization of Science* [Polish transl. *Stale Wzorce w Organizacji Nauki*], D. J. de Solla Price, *Czym się różni nauka od techniki*.

Anatolij F. Zotow, Vasily Vasilevich Nalimov, Michał G. Jaroszewski, Borys A. Starostin, and Akhot T. Grigoryan. They knew the Soviet science of science not only by attending the Polish–Soviet conferences on this subject matter<sup>1</sup>, but also by reading the original works or translations of their works into Polish or English, and the reviews of many these works<sup>2</sup>.

On the other hand – as E. Olszewski showed – at least until 1968 the Soviet scholars were rather faintly familiar with the Polish post-war science of science (although nevertheless they were positively disposed towards the Polish achievements in this field)<sup>3</sup>.

Furthermore, contemporary foreign scholars, including the Soviet ones, and even the Polish ones, had a rather limited knowledge of the Polish pre-war science of science. For example, according to them, the beginning of the science of science was in principle the monographs *The Social Function of Science* (1939) and *Science in History* (1954) by the British Marxist John Desmond Bernal (1901–1971)<sup>4</sup>. However, the research of this kind, excluding scientometrics, had been developed in Poland by the Mianowski Fund at least from 1916 (but it was made in a non-Marxist spirit)<sup>5</sup>.

In all honesty, it must be noticed that this limited knowledge of the Polish pre-war science of science among foreign authors between 1945 and 1979 was caused in part by the same Polish post-war scholars, who insufficiently emphasised Polish priority in this field. On the other hand, Polish post-war scholars could not proclaim this thesis openly, since all Polish pre-war initiatives in the field of the science of science were made in a non-Marxist

<sup>1</sup> See S. R. Mikulinski & al., *Materiały z Radziecko–Polskiego Sympozjum ...*, I. Malecki et al., *Wybrane Materiały Polsko–Radzieckiego Sympozjum Naukoznawczego ...*.

<sup>2</sup> Many works of Soviet scholars, and even more numerous reviews of these works, were published in the following journals: *Zagadnienia Naukoznawstwa*, *Studia i Materiały*, *Kwartalnik Historii Nauki i Techniki*, and *Organon*. See e.g. G. M. Dobrow/G. M. Dobrov, *Badania historycznotekniczne a cybernetyka*, G. M. Dobrow/G. M. Dobrov, *Тенденции развития организации науки*, B. M. Kedrov/B. M. Kiedrow, *Закономерности развития науки*, W. Sokolski, *Międzynarodowy charakter rozwoju nauki ...*, I. Turnau, *Podstawowe problemy metodologiczne ...*, G. M. Dobrow/G. M. Dobrov, *Ludzie nauki radzieckiej*, G. M. Dobrow/G. M. Dobrov, *Nauka o naukie* [Polish transl. *Wstęp do naukoznawstwa*], B. G. Kuzniecowa, *Leopold Infeld a historia nauki*, S. R. Mikulinski & N. J. Rodny, *Science as an Object of Special Investigation*, D. Poliński, G. M. Dobrow, *Nauka o naukie ...*, S. Y. Plotkin, *The Main Developmental Trends ...*, B. M. Kedrov/B. M. Kiedrow, *Prognozy Lenina w dziedzinie przyrodoznawstwa*, M. G. Jaroszewski, *Nauka jako przedmiot badań psychologicznych*, B. G. Kuzniecowa, *Styl Giordana Bruno*, Z. M. Mul'chenko & W. W. Nalimov, *Wieża Babel w nauce*, V. V. Nalimov & Z. M. Mul'chenko, *Naukometria*, A. F. Zotow, *Zagadnienie kumulatywności wiedzy naukowej a „zasada komplementarności”*, B. M. Kedrov/B. M. Kiedrow, *Droga geniusza – drogą myśli ludzkiej ...*, W. Osińska, *Oczerki istorii i teorii nauki*, E. D. Lebedkina, *Б. И. Ленин и международное научное сотрудничество*, G. M. Dobrow/G. M. Dobrov, *Doświadczenia i problemy w kierowaniu nauką w Związku Radzieckim*, B. G. Kuznetsov & A. Grigoryan, *К вопросу о необратимости космической эволюции*, S. Zamecki, *Na marginesie książki N. J. Rodnego ...*, S. R. Mikulinski/S. R. Mikulinsky, *Polityka naukowa krajów socjalistycznych*, B. A. Starostin, *Ujęcie systemowe i jego rola we współczesnym naukoznawstwie*, A. T. Grigoryan & B. G. Kuznetsov, *К двухсотлетию со дня смерти Ньютона 1727–1977*, A. Grigoryan, *On the 75<sup>th</sup> Anniversary of Boris Kuznetsov*, S. Zamecki, *„Dialektika razwitiia chimii”*, W. I. Kuzniecowa ...

<sup>3</sup> See E. Olszewski, *„Struktura rewolucji naukowych”*, *Thomas S. Kuhn ...*.

<sup>4</sup> See e.g. W. Chałasiński, *Problem nauki i roli uczonego w społeczeństwie*, G. M. Dobrow/G. M. Dobrov, *Wstęp do naukoznawstwa*, p. 7, A. F. Zotow, *Zagadnienie kumulatywności wiedzy naukowej a „zasada komplementarności”*, p. 431, S. R. Mikulinski/S. R. Mikulinsky, *Jeszcze raz o przedmiocie i strukturze naukoznawstwa*, pp. 497–498, V. V. Nalimov & Z. M. Mul'chenko, *Naukometria*, p. 5.

<sup>5</sup> See this article, section I. From the 1910s to 1939.

spirit, and just this aspect was consequently contested by Polish communist activists from 1945.

In the middle of 1970s, the interest in the subject matter of the science of science weakened in Poland, especially regarding the practical part of the science of science (i.e. the organization of science, prognostics of science, and politics of science)<sup>1</sup>.

It was caused – in my opinion – by three main interconnected reasons. Firstly, after March 1968 Polish politicians (who were dominated by communists and were against the Polish intelligentsia) lost interest in promoting real scientific culture (including the science of science) and became sworn enemies of the so-called *socialism with a human face* (developed by the advocates of non-communist socialism)<sup>2</sup>. Since many Polish scholars proved to be opponents of communism and communist socialism, the media sketched the image of the science as being in a phase of deep crisis<sup>3</sup>. Secondly, in the 1970s an economic and political crisis was growing in Poland (linked with the political events referred to as *December 1970, June 1976, and May 1977*). Thirdly, in this context, many experts of the science of science dealt with issues of broader social activities of which science is only a small part; in effect, the majority of scholars studied the science of science only on the margin of their other interests, and thus this subject matter was dominated by historical and semantic approaches<sup>4</sup>. However, this trend resulted in important historical studies published in this period<sup>5</sup>.

<sup>1</sup> See J. Zieleniewski, *Wstępna prognoza rozwoju naukoznawstwa do roku 1980 i 1990*, pp. 317–318, W. Gasparski & K. Frieske, *Kierunki rozwoju naukoznawstwa w Polsce*, pp. 476–479, W. A. Werner & al., *Rozwój naukoznawstwa do roku 2000*, pp. 322–323. A good illustration for this thesis is the case of the Inter-University Department for Research on Higher Education [Międzyuczelniany Zakład Badań nad Szkolnictwem Wyższym], a special research unit for science of science affiliated with the Ministry of Science, Higher Education and Technology. It operated from 1960 to 30 July 1973, and employed 130 people. Then it was renamed, reorganised and employed much less people: from 30 July 1973 to 22 April 1977, it was called the Instytut Polityki Naukowej, Postępu Technicznego i Szkolnictwa Wyższego (Institute of Science Policy, Technological Progress and Higher Education), and then the Institute of Science Policy and Higher Education [Instytut Polityki Naukowej i Szkolnictwa Wyższego]. See Prezes Rady Ministrów, *Zarządzenie nr 53 Prezesa Rady Ministrów z dnia 13 lipca 1973 r. ...*, Prezes Rady Ministrów, *Zarządzenie nr 30 Prezesa Rady Ministrów z dnia 22 kwietnia 1977 r. ...*, W. A. Werner & al., *Rozwój naukoznawstwa do roku 2000*, p. 321, I. Białecki & A. Świć, *Potencjał implementacyjny*.

<sup>2</sup> It is worth remembering that this kind of socialism was at the core of the official programme of the Polish Socialist Party [Polska Partia Socjalistyczna, PPS] (1944–1948). See *Wikipedia* 2013ppso, B. Urbanowski, *Czerwona msza albo uśmiech Stalina*, pp. 318–320.

<sup>3</sup> See P. Hübner, *Nauka polska po II wojnie światowej – idee i instytucje*, pp. 165–174.

<sup>4</sup> Regarding the third point see S. Chaskielewicz & A. Tuszko, *Polityka naukowa drugiej generacji*, pp. 124–125. However, since the interest in this discipline decreased also in the 1970s in many other countries (excluding the USSR and the DDR), I suppose that it was caused by real troubles in developing this branch of knowledge (e.g. in creating realistic scientometric models and planning the development of science).

<sup>5</sup> For example, the workers of the Research Centre for History of Organization of Science in the Department for History of Science and Technology, PAS [Pracownia Historii Organizacji Nauki in the Zakład Historii Nauki i Techniki PAN], among others, Waldemar Rolbiecki (1927–2002) and Bohdan Jaczewski (1939–1992), in the 1970s published important works on the history of the organization of science, especially in Poland and abroad. See B. Jaczewski, *Inauguracyjne posiedzenie Pracowni Historii i Organizacji Nauki*, B. Jaczewski, *Polityka naukowa państwa polskiego w latach 1918–1939*, W. Rolbiecki, *Akademie włoskie w latach 1454–1667*, W. Rolbiecki, *Początek towarzystw naukowych jako typu instytucji*, W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, J. Piskurewicz, *Moje wspomnienia ...*. Furthermore, the authors from the Zakład Historii Nauki i Techniki PAN also published other important books on history of organization of science. See

Furthermore, throughout the period 1955–1979, Polish scholars formulated a real spectrum of views on the idea of the science of science<sup>1</sup>. Following Wojciech Gasparski, we can distinguish four basic understandings of this branch of knowledge. Polish scholars treated the science of science as *a consolidated branch of knowledge, a federation of sub-branches, a practical science* (studying science policy with respect to the organization of science), and *science studies* (researching the problems on the crossroads of the sub-branches of the science of science)<sup>2</sup>.

### The case of Ludwik Fleck

In 1957, for family reasons (after a diagnosis of cancer), L. Fleck decided to move with his wife to Israel (where their only son Ryszard had already lived from 1947). There he became the director of the Department of Experimental Pathology in Weizman Biological Institute in Ness Ziona, and professor of the Department of Microbiology of Hebrew University in Jerusalem. He also tried to publish articles on the science of science in Western magazines, however they were rejected. He died on 5 June 1961 in Ness Ziona<sup>3</sup>.

### The case of Florian Znaniecki

Although since World War II F. Znaniecki was in the USA, he kept in contact with scholars in Poland. After his death in 1958, his pupil J. Chałasiński, editor-in-chief of the Journal *Kultura i Społeczeństwo*, reissued the

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W. Rolbiecki, *Polskie towarzystwa naukowe ogólne ...*, Z. Skubała-Tokarska, *Społeczna rola Wolnej Wszelchnicy Polskiej*, B. Jaczewski, *Organizacja i finansowanie nauki polskiej w okresie międzywojennym*, Z. Skubała-Tokarska & Z. Tokarski, *Uniwersytety w Polsce: Rys historyczny*, and especially a monumental *Historia nauki polskiej [History of Polish Science]*, (eds.) B. Suchodolski & al., vol. 1: 1970, vol. 2: 1970, vol. 6: 1974, vol. 7: 1975, vol. 3: 1977.

<sup>1</sup> See e.g. I. Malecki, *Problemy koordynacji badań naukowych*, I. Malecki, *Z zagadnień metodologicznych nauki*, I. Malecki, *Science of Science as a Science and as Practical Activity*, I. Malecki, *Zadania i zakres studiów nad polityką naukową*, T. Kotarbiński, *Elementy teorii poznania ...*, T. Kotarbiński, *Przegląd problemów nauk o nauce*, T. Kotarbiński, *Historia nauki jako źródło uogólnień metodologicznych*, T. Kotarbiński, *Wzajemne powiązania różnych aspektów badań twórczości naukowej*, T. Kotarbiński, *Zadania epistemologii pragmatycznej*, J. Drewnowski, *Narada w sprawie badań nad teoretycznymi zagadnieniami naukoznawstwa*, A. Tuszek, *Naukoznawstwo jako narzędzie działania*, A. Tuszek & S. Chaskielewicz, *Badania naukowe: organizowanie i kierowanie*, B. Suchodolski, *O podstawach polityki naukowej*, B. Suchodolski, *Odpowiedź na troskę*, B. Suchodolski, *Stan i perspektywy rozwojowe naukoznawstwa ...*, B. Suchodolski, *Nauka a świadomość społeczna*, B. Stanosz & A. Nowaczyk, *Recenzja z tomów I–V „Zagadnień Naukoznawstwa”*, J. Szczepański, *Zagadnienie zwiększania efektywności wpływu nauki na rozwój społeczeństwa*, S. Zamecki, *Nauka jako przedmiot refleksji*, J. Kaczmarek, *On Principles of Science Policy*, J. Kaczmarek, *O zasadach polityki naukowej*, W. Rolbiecki, *Troska o integrację nauk o nauce*, B. Leśnodorski, *Historia nauki i techniki wśród nauk o kulturze*, A. Czekajewska-Jędrusiak, *Historia nauki i naukoznawstwo w nowym programie ...*, Z. Kowalewski, *Teoria praktyki naukowej jako nowa wyodrębniająca się nauka*, S. Kwiatkowski, *Studia nad polityką naukową w Polsce*.

<sup>2</sup> See B. Suchodolski, *Stan i perspektywy rozwojowe naukoznawstwa ...*, W. A. Werner & al., *Rozwój naukoznawstwa do roku 2000*, pp. 323–327, W. Gasparski, *Naukoznawstwo: ocena stanu dyscypliny*, pp. 10–12. In my opinion, these different visions of the science of science were caused by the real problems in defining the scope of this branch of knowledge.

<sup>3</sup> For further details of Fleck's biography, see T. J. Trenn & R. K. Merton, *Biographical Sketch*, L. Schäfer & T. Schnelle, *Einleitung: Ludwik Flecks ...*, T. Schnelle, *Ludwik Fleck – Leben und Denken ...*, S. Magierska & E. Tuszkiewicz, *Ludwik Fleck (1896–1961)*, Z. Cackowski, *Wstęp do drugiego wydania polskiego ...*, pp. 15–19, C. Zittel & F. Schmaltz, *Wstęp*, pp. 24–34, M. Ciesielska, *Ludwick Fleck – profesor mikrobiologii i filozof (1896–1961)*.



excerpt of Znaniecki's article of 1936 entitled *Uczeni polscy a życie polskie* [*Polish scholars and Polish life*] incorporating two attitudes: of a scholar and of a political activist, which it was impossible to link together<sup>1</sup>. In the post-war political reality of Poland, these words sounded shocking indeed.

### The repercussions of the events of October 1956 and March 1968

Between 1955 and March 1968, the Marxist philosophers and members of the PZPR: A. Schaff, B. Baczeko, L. Kołakowski, K. Pomian, S. Amsterdamski, H. Eilstein and many others who criticised Stalinists for abandoning the ideals of socialism were labelled by the Stalinists the (*Marxist*) *revisionists*. It was a very pejorative, essentially political label that was only given to persons who fell into disfavour with the political power, regardless of whether the doctrine they preached was philosophically different from the accepted interpretation of Marxism. This accusation meant as much as the Stalinist accusation of *idealism* in the late 1940s and early 1950s (which was the most serious accusation)<sup>2</sup>.

Furthermore, as the result of a real communist–fascistic–anti–semitic hysteria, many Marxist revisionists lost their jobs at universities, and a part of them was forced to leave Poland. Among others, B. Baczeko, L. Kołakowski, and K. Pomian lost their jobs in Warsaw University and H. Eilstein at the Polish Academy of Sciences, and they all were forced to go abroad<sup>3</sup>.

Moreover, A. Schaff lost his job at Warsaw University and the Institute of Philosophy and Sociology at the Polish Academy of Sciences, and S. Amsterdamski at Łódź University (where he worked from 1954 to 1968, and was the Dean of the History and Philosophy Faculty from 1967 to 1968)<sup>4</sup>.

It is worth adding that the latter played an especially important role in the reception of T. S. Kuhn's thought in Poland. In 1966 he translated *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* into Polish and wrote a postscript to this book. Two years later, he arranged the publication of the translation of *The Structure of Scientific Revolutions* (he improved and edited this translation) and wrote a *Postscript* to this book entitled *The History of Science and the Philosophy of Science*<sup>5</sup>.

<sup>1</sup> See F. Znaniecki, *Uczeni polscy a życie polskie*.

<sup>2</sup> See R. Sitek, *Warszawska szkoła historii idei*, pp. 68–83, W. Krajewski, *Czym był marzec dla polskiej filozofii*, S. Amsterdamski, *Marzec w filozofii i filozofia Marca*, p. 128, J. Wieczorek (ed.), *Stefan Amsterdamski ...*, W. Krajewski, *Skutki Marca dla filozofii polskiej* (esp. pp. 147–148), B. Fijałkowska, *Polityka i twórcy (1948–1959)*, pp. 332–352 & pp. 440–479.

<sup>3</sup> See M. Gumkowski & M. Ofierska (eds.), *Marzec 68*, W. Krajewski, *Czym był marzec dla polskiej filozofii*, W. Krajewski, *Skutki Marca dla filozofii polskiej*, S. Amsterdamski, *Marzec w filozofii i filozofia Marca*.

<sup>4</sup> In all these affairs, Henryk Jabłoński played a very negative role as the then Minister of Education and Higher Education [Minister Oświaty i Szkolnictwa Wyższego]. It was he who in 1968 decided to expel many scholars and students from university, including B. Baczeko, L. Kołakowski, S. Amsterdamski, H. Eilstein. See J. Wieczorek (ed.), *Henryk Jabłoński – minister ...*, *Archiwum opozycji: Kolekcja środowisk Jacka Kuronia ...*.

<sup>5</sup> See T. S. Kuhn, *The Copernican Revolution ...* [Polish transl. *Przewrót kopernikański*], M. B.–N., “*The Copernican Revolution ...*”, M. Borzyszkowski, *Przewrót Kopernikański*, A. Machalski, *Przewrót Kopernikański*, J. Drewnowski, „*Przewrót kopernikański. Astronomia planetarna w dziejach myśli*” ..., I. Nowak & L. Nowak, *Kuhn, Thomas S. ...* & T. S. Kuhn, *The Structure of Scientific Revolutions* [Polish transl. *Struktura rewolucji naukowych*], E. Olszewski, “*The Structure of Scientific Revolutions*”, *Thomas S. Kuhn ...*, M. Władysław, *Z seminarium metodologicznego ...*, E. Olszewski, „*Struktura rewolucji naukowych*”, *Thomas S. Kuhn ...*, M. J.

However, from October 1969, S. Amsterdamski was employed in the Department for the History of Science and Technology of the Polish Academy of Sciences<sup>1</sup>. He was the manager of the team, researching the issue of values in science, i.e. such matters as *the value judgments about the content of a scientific theory, the role of value systems in cognitive activities of scholars, the ethos of science as a social institution, the influence of the value systems recognised outside the scientific community on the development of science, the 'value-killing' and value-creating functions of science in social life, and the problem of the value of science*. Amsterdamski himself linked all these matters with the science of science in his lecture *Nauka współczesna a wartości* [*Contemporary Science and Values*] given on 23 October 1970 at the seminar of the Team for the Issues of Scientific and Technological Revolution at this department<sup>2</sup>.

Then, in 1973, Amsterdamski published a book about the philosophy of science: *Między doświadczeniem a metafizyką, z filozoficznych zagadnień rozwoju nauki* (1973) [Engl. transl. *Between Experience and Metaphysics: Philosophical Problems of the Evolution of Science* (1975)], in which he analyzed the thought of Carnap, Popper, Kuhn, Lakatos, etc.

Finally, from 24 May 1975, he was affiliated with the Research Centre for History of Organization of Science [Pracownia Historii Organizacji Nauki] of this department. And throughout this period, starting in 1969, he was still an activist of the political opposition in Poland<sup>3</sup>. (This issue will be continued below.)

### **A new political context and the emergence of the independent institutions of science and letters in the late 1970s**

In the late 1970s the independent democratic opposition was growing in Poland<sup>4</sup>. This movement was expanded by the scientists themselves and their own professional activities: the organization of science, education and

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Siemek, *Autodestrukcja mitu nauki*, L. Budrecki, *Paradygmat i rewolucje naukowe*, E. Olszewski, *Historia nauki przekracza barierę dźwięku*. According to G. Trela, "The Structure of Scientific Revolutions", Thomas S. Kuhn ... , p. 543: *It is an open secret that the person who made the publication of The Structure of Scientific Revolutions of 1968 possible is indeed Amsterdamski. This book came out and played a leading role in the liberation of Polish humanities from the shackles of Marxist-Leninist ideology only due to the fact that Amsterdamski published the translation under a pseudonym. His output as a writer was destroyed at the time, and his works were censored, not only in terms of publication but also in terms of citation [!]. It is worth noting that no tradition existed at the time – not only in Poland – to think about science in the way proposed by Kuhn. What is more, the Polish language did not even have the philosophical terminology that would allow for articulation of Kuhn's ideas in the language of Słowacki and Mickiewicz.*

<sup>1</sup> See K. M., *Metodyk filozofii i historii nauki, socjolog wiedzy*, J. Owczarek, *Pracownicy Instytutu Historii Nauki PAN w latach 1954–2004*, p. 428, J. Wieczorek (ed.), *Stefan Amsterdamski ...*, K. Biernacki, *Stefan Amsterdamski*.

<sup>2</sup> See S. Amsterdamski, *Nauka współczesna a wartości*, p. 58.

<sup>3</sup> Another Marxist revisionist, who was employed in this Department from 1963 to 1992 was Tadeusz Kowalik (1926–2012), an economist and historian of economics. See T. Kowalik, *To były całkiem znośne lata*, T. Kowalik, *Musztarda przed obiadem ...*, *Wikipedia* 2013kowa.

<sup>4</sup> The election of Karol Wojtyła (1920–2005) to the papacy (16 Oct. 1978), and his visit to Poland between 2 and 10 June 1979 resulted in strengthening of the independent democratic opposition in Poland. See *Wikipedia* 2013hipo1, 2013hipo2.

popularization of science. In Autumn of 1977, the so-called Flying University [Latający Uniwersytet] was formed, and since 1978 the Society for Academic Courses [Towarzystwo Kursów Naukowych] has continued the activities of this university. Both institutions were independent educational associations whose aims were to break the monopoly of state teaching at the university level, that is, to disclose different *terrae incognitae of the official Polish culture*<sup>1</sup>.

One of the leading people of these institutions was S. Amsterdamski. He gave at least three lectures regarding the problems of science: *Społeczne problemy nauki współczesnej* [Social problems of modern science] (1977/1978), *Filozofia wiedzy* [Philosophy of knowledge] (1978/1979), and *Etyczne problemy nauki* [Ethical problems of science] (1979/1980). He also published two articles, *Życie naukowe a monopol władzy: casus Łysenko* [The scientific life and the monopoly of power: the Lysenko case] (1979/1980?)<sup>2</sup> and (together with Aldona Jawłowska and Tadeusz Kowalik) *Język propagandy* [The language of propaganda]<sup>3</sup>.

### The case of the Mianowski Fund

In January 1957, Stanisław Małkowski, the last President of the Mianowski Fund, addressed a special letter to the President of the Polish Academy of Sciences regarding the restoration of the Mianowski Fund. However, he never received a reply<sup>4</sup>.

### The case of Ludwik Fleck

The views of L. Fleck became famous in the 1970s and 1980s, albeit not in Poland, but in the USA, Switzerland and Germany. It only happened, when Thomas S. Kuhn discovered Fleck's monograph as one of main bases for his world bestseller *The Structure of Scientific Revolutions* (1962)<sup>5</sup>. However, Kuhn's statements regarding Fleck's views were very strange and limited by the Cold War climate<sup>6</sup>.

<sup>1</sup> These institutions took the names of historical institutions that acted in the 19<sup>th</sup> and 20<sup>th</sup> centuries. See Z. Skubała-Tokarska, *Społeczna rola Wolnej Wszechnicy Polskiej*, R. Terlecki, *Uniwersytet Latający i Towarzystwo Kursów Naukowych*, M. Kunicki-Goldfinger, *Towarzystwo Kursów Naukowych*, Wikipedia 2013tkna, 2013tkna.

<sup>2</sup> See R. Terlecki, *Uniwersytet Latający i Towarzystwo Kursów Naukowych*, S. Amsterdamski, *Życie naukowe a monopol władzy: casus Łysenko*, Wikipedia 2013tkna.

<sup>3</sup> See S. Amsterdamski, A. Jawłowska & T. Kowalik, *Język propagandy*.

<sup>4</sup> See P. Hübner, J. Piskurewicz & L. Zasztowt, *Kasa im. Józefa Mianowskiego ...*, p. 50.

<sup>5</sup> See W. Baldamus, *Ludwik Fleck and the development of the sociology of science*, T. J. Trenn & R. K. Merton, *Biographical Sketch*, L. Schäfer & T. Schnelle, *Einleitung: Ludwik Flecks ...*, T. Schnelle, *Ludwik Fleck – Leben und Denken ...*, T. Schnelle, *Ludwik Fleck – A Classical Scholar ...*, R. S. Cohen & T. Schnelle (eds.), *Cognition and Fact*, I. Löwy (ed.), *The Polish School of Philosophy of Medicine*, I. Löwy, *Polska szkoła filozofii medycyny*, I. Löwy, *Medical acts and medical facts ...*, R. Egloff (ed.), *Tatsache – Denkstil – Kontroverse ...*, E. Hedfors, *Medical Science in the Light of Flawed Study ...*, O. Amsterdamska & al., *Medical Science in the Light of Holocaust ...*.

<sup>6</sup> See R. K. Merton, *Przedmowa Autora do wydania polskiego*, R. K. Merton, *Florian Znaniecki: A Short Reminiscence*, P. Rossi, *Ludwik Fleck e una rivoluzione immaginaria* [Polish transl. *Ludwik Fleck a urojona rewolucja w epistemologii*], E. B. Babich, *From Fleck's Denkstil to Kuhn's paradigm ...*, E. B. Babich, *Paradigms and Thoughtstyles ...*.

In the period 1955–1956 of a political thaw in Poland after the death of Joseph Stalin (1953), Polish science was partly destalinised. The Polish Academy of Sciences played an important role in this process. It undertook intensive studies in philosophy and sociology (previously considered as bourgeois sciences), the history of science, and – in this interdisciplinary context – naukoznawstwo [*science studies* and *science of science*]. This studies were continued with great successes until 1979.

In 1968, due to a political turning point linked with Soviet Anti-Zionism, many Polish scholars (the so-called Marxist revisionists) lost their jobs at universities, and a part of them were forced to leave Poland, but a part of them got new jobs in the research institutes of the Polish Academy of Sciences; among them was S. Amsterdamski, a propagator of the thought of T. S. Kuhn.

In the early 1970s, an independent social scientific movement started its activities within the sphere of the political opposition. S. Amsterdamski, among others, belonged to this movement. The group promoted the rejection of the Soviet patterns in science and higher education in Poland and a strong opening to the currents of Western thought (K. Popper, I. Lakatos, T. S. Kuhn, ...).

### 3.3. 1980–1993

#### **Political context: from communist government to a recovery of full political independence**

The period under consideration was a time of great political transformations in Poland. It began from the wave of protests and strikes of the Polish people, which led in September 1980 to the creation of the Independent Self-governing Trade Union *Solidarity* [Niezależny Samorządny Związek Zawodowy *Solidarność*], the first independent trade union in all socialistic countries. On 8 September 1981, the First National Congress of Delegates of the ISTU *Solidarity* proclaimed in Gdańsk *A message to the working people of Eastern Europe*, calling on the working people of the Soviet bloc countries to struggle together for the right to freedom of association. The communists of all socialistic countries, led by Leonid Brezhnev (First Secretary of Communist Party of the USSR) protested against this message<sup>1</sup>. Then, on 13 December 1981, Wojciech Jaruzelski, the PZPR secretary and prime minister of the Polish government, declared martial law in Poland, which lasted until 22 July 1983. During this period activists of *Solidarity* were imprisoned and in October 1982 *Solidarity* was outlawed. From that moment on this trade union operated as a conspiracy. In May and August 1988, a new wave of riots and protests spread in Poland. They resulted in the Communist Party deciding to approach the leaders of *Solidarity* for formal talks. From 6 February to 4 April, 94 sessions of talks between 13 working groups, including 3 teams (the so-called *stoliki*) and 10 sub-teams

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<sup>1</sup> See Wszechnica Solidarności, *Posłanie I Zjazdu Delegatów ...*, G. Majchrzak, *18 dni w gdańskiej Olivii*, Wikipedia 2013niez, 2013soli.

(the so-called *podstoliki*) – which became known as the *Round Table Talks* [*Rozmowy Okrągłego Stołu*] – were organised<sup>1</sup>. In effect, in December 1988, the government allowed the establishment of a political movement called the Solidarity Civic Committee [Komitet Obywatelski Solidarność], and on 4 April 1989, Solidarity was legalised again. Furthermore, the Communist Party allowed the Solidarity Civic Committee to participate in semi-free elections on 4 June 1989, which were decisively won by this Committee. In the summer of 1991 the Warsaw Pact was dissolved. On 27 October 1991 the first entirely free Polish parliamentary elections since the 1920s took place. Then, in 1993, the Soviet troops left Poland, which is considered as the recovery of the full political independence of Poland<sup>2</sup>.

### Polish leaders of the science of science in 1980–1993

During the period considered, several scholars who played a crucial role in the science of science in Poland passed away. Among them were: T. Kotarbiński, the main promoter of praxeology and pragmatic epistemology in Poland<sup>3</sup>, B. Walentynowicz, the manager of the Department of Praxeology and the Science of Science affiliated to the Institute of Philosophy and Sociology, PAS, and a promoter of praxeology and pragmatic epistemology<sup>4</sup>, B. Suchodolski, the author of the first lecture given at the Seminar for the Science of Science in the Mianowski Fund in 1928, the director of the Institute for the History of Science, and Technology, PAS (1958–1976), the honorary chairman of the Committee of History of Science and Technology (from 1975), and an advocate of a moderate cooperation of history of science with the science of science<sup>5</sup>, and B. Jaczewski, the manager of the Research Centre for History of Organization of Science from the Institute for the History of Science, and Technology, PAS.

Another leader, I. Malecki, having been the chairman of the Committee for the Science of Science, PAS, from 1963 to 1968 and again from 1973 to 1989, became the honorary chairman of this Committee in 1990<sup>6</sup>.

### Different understandings of the science of science in 1980 –1993

Scholars and politicians still debated on the understanding of the idea of

<sup>1</sup> See *Postanowienia Okrągłego Stołu*, K. Dubiński, *Okrągły Stół*, M. Jarosiński, *Postanowienia Okrągłego Stołu*, M. Jarosiński, *Obrady Okrągłego Stołu*.

<sup>2</sup> See *Wikipedia* 2013hipo1, 2013hipo2.

<sup>3</sup> His achievements in the field of the science of science were sketched by S. Zamecki, *Nauka jako przedmiot refleksji*, S. Zamecki, *Koncepcja nauki w szkole lwowsko-warszawskiej*, S. Zamecki, *Typy desygnatów terminu „nauka” ...*, S. Zamecki, *Tadeusz Kotarbiński – twórca epistemologii pragmatycznej*, S. Zamecki, *Tadeusz Kotarbiński jako naukoznawca*.

<sup>4</sup> See W. Gasparski, *Prof. Bohdan Walentynowicz 1912–1984*, W. Gasparski, *Słowo o Profesorze Bohdanie Walentynowiczu*, T. Dąbrowski, *Profesor Bohdan Walentynowicz ...*, D. Miller, *Bohdan Walentynowicz*.

<sup>5</sup> See K. Opałek, *Bogdan Suchodolski jako historyk nauki*, B. Jaczewski, *Z prac Komitetu Historii Nauki i Techniki PAN w 1975 r.*, I. Wojnar, *Bogdan Suchodolski (27 XII 1903 – 2 X 1992)*, N. Lietz, *Udział Bogdana Suchodolskiego ...*.

<sup>6</sup> See B. Walentynowicz, *Profesor Ignacy Malecki*, P. Ranachowski, F. Rejmund & J. Etienne, *Spojrzenie na życie i twórczość ...*.

the science of science. They applied four basic understandings of this branch of knowledge, observed by Wojciech Gasparski, and mentioned earlier in this paper. The science of science was treated as *a consolidated branch of knowledge, a federation of sub-branches, a practical science* (studying science policy together with the organization of science), and *science studies* (researching the problems on the crossroads of sub-branches of the science of science). For example, I. Malecki noted in the article entitled *Dyscyplinowe i problemowe podejście do naukoznawstwa oraz jego przyszłego rozwoju* [*A disciplined and problematic approach to the science of science and its future development*] that the subject matters of praxeology and the science of science, developed by T. Kotarbiński and his students, overlap each other:

*The interests of praxeology and the science of science overlap. This applies to that part of the science of science that Tadeusz Kotarbiński called the practical science of science. We have here a convergence of research purposes, because the main objective of the praxeological inquiries is to provide efficient action, and the science of science has the same interest, although in a slightly different aspect. The works of the science of science and praxeology complement each other. From the point of view of praxeology, the general methodological aspects of conducting scientific research are the most important, whereas the science of science deals mainly with the specific features of these studies.<sup>1</sup>*

Furthermore, the same author warned against equating science policy with the science of science:

*The studies of science policy are sometimes identified with the science of science, but this is not right because of the scope and methods of operation. The science of science includes the basic research of a cognitive character, regardless of its practical importance, for example, an important place in the science of science is occupied by philosophy, methodology and the history of science that for the study [of science policy] are of little importance. Science policy studies, however, include the applied research aimed at improving science policy, and thus have a different method and a narrower scope than the science of science.<sup>2</sup>*

(However, the author did not mention in this context his own works from the 1950s that neglected these distinctions in favor of science policy!)

<sup>1</sup> I. Malecki, *Dyscyplinowe i problemowe podejście do naukoznawstwa ...*, p. 334 [quoted after: W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, p. 393].

<sup>2</sup> I. Malecki, *Dyscyplinowe i problemowe podejście do naukoznawstwa ...*, pp. 333–334 [quoted after: W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, p. 387].

By contrast, in 1988, Ryszard Mierzejewski – taking into account a long discussion on the scope of the science of science in Polish culture<sup>1</sup> – introduced a new classification of this branch of knowledge. According to him, it is composed of three components: the *general science of science* (or *philosophy of science*), the *particular science of science* and the *methodology of research in the science of science*. Then, the general science of science is composed of the general history of science and the general methodology of science, and the particular science of science is composed of the psychology of science, sociology of science, praxeology of science and other particular sciences of science. In addition, the general methodology of science and the particular sciences of science constitute the theory of science.

### The organisational ups and downs of the science of science 1980–1993

The Research Centre for the History of the Organization of Science at the Institute for the History of Science and Technology, PAS, established in 1975, still worked very hard, systematically publishing serious elaborations. Unfortunately, one of the creative workers of this department, namely Zofia Skubała–Tokarska (b. 1919), died in 1987<sup>2</sup>. S. Amsterdamski was still employed at this department to June 1991, but several years spent on scholarships abroad<sup>3</sup>. In 1983, he published two books on philosophy of science: *Między historią a metodą: spory o racjonalność nauki* [Engl. transl. *Between History and Method: Disputes about the Rationality of Science*] (1992), and *Nauka a porządek świata* [*Science and the Order of the World*].

The authors from other departments, centres and teams from this institute continued publishing important works on the history of the organization of science, including especially the subsequent volumes of the monumental *Historia Nauki Polskiej* [*History of Polish Science*] edited by Suchodolski & al.: vol. 9 (1986), vol. 4 part 1–3 (1987), and vol. 5 (1992).

Then, on 1 January 1980, the Unit for Research on the Science of Science of the Centre for Documentation and Scientific Information, PAS [Pracownia Badań Naukoznawczych Ośrodka Dokumentacji i Informacji Naukowej PAN], directed then by B. Walentynowicz, was linked with the Department of Praxeology of the Institute of Philosophy and Sociology, PAS [Zakład Prakseologii Instytutu Filozofii i Socjologii PAN]. The new unit was called

<sup>1</sup> See section I, sub-section *The case of the Polish Academy of Sciences*, esp. from n. 32 on.

<sup>2</sup> See B. Jaczewski, *Inauguracyjne posiedzenie Pracowni Historii i Organizacji Nauki*, D. Rederowa, B. Jaczewski & W. Rolbiecki, *Polska Stacja Naukowa w Paryżu w latach 1893–1978*, B. Suchodolski, Zofia Skubała–Tokarska (1919–1987), B. Jaczewski (ed.), *Życie naukowe w Polsce w drugiej połowie XIX i w XX wieku*, W. Rolbiecki, *Geneza Polskiej Akademii Nauk (1930–1952)*, J. Piskurewicz, *Stanisław Michalski w dziejach nauki polskiej ...*, J. Piskurewicz, *Warszawskie instytucje społecznego mecenatu ...*, J. Piskurewicz, *W służbie nauki i oświaty: Stanisław Michalski 1865–1949*, J. Bardach, *In memoriam Bohdan Jaczewski (1938–1992)*, J. Skarbek, *Waldemar Rolbiecki (1927–2002)*, W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, J. Piskurewicz, *Moje wspomnienia ...*, *Wikipedia* 2012pisk.

<sup>3</sup> See K. M., *Metodyk filozofii i historii nauki, socjolog wiedzy*, J. Owczarek, *Pracownicy Instytutu Historii Nauki PAN w latach 1954–2004*, p. 428, J. Wieczorek (ed.), *Stefan Amsterdamski ...*, K. Biernacki, *Stefan Amsterdamski*. Presumably, his opposition political activity facilitated obtaining these scholarships. See the clear remarks of T. Kowalik, *To były całkiem znośne lata*, pp. 281–283 (a colleague of Stefan Amsterdamski, a political oppositionist employed in the same department) on his own scholarships abroad).

the Department of Praxeology and the Science of Science [Zakład Prakseologii i Naukoznawstwa]<sup>1</sup>.

It was in this context that B. Walentynowicz with his co-workers planned to develop a real centre for the science of science (with doctoral studies and research programmes with appropriate funds). However, these ideas were not recognised by the authorities of the PAS. They soon concluded that its statute does not encompass the science of science. Unfortunately, B. Walentynowicz (b. 1912) died in 1984. In this situation, many employees left this Department, and the few who continued to work there, especially Wojciech Gasparski, researched, in principle, only the methodology of the practical sciences<sup>2</sup>.

Moreover, in 1992, the Institute of Science Policy and Higher Education [Instytut Polityki Naukowej i Szkolnictwa Wyższego], affiliated to the Ministry of Science and Higher Education, was dissolved, and replaced by the Centre for Science Policy and Higher Education [Centrum Badań Polityki Naukowej i Szkolnictwa Wyższego], affiliated with the University of Warsaw, and employing a dozen people<sup>3</sup>. And in 1993 two other units were dissolved: the Department of Praxeology and the Science of Science affiliated to the Institute of Philosophy and Sociology, PAS<sup>4</sup> and the Research Centre for the History of Organization of Science affiliated to the Institute for the History of Science, and Technology, PAS<sup>5</sup>.

These two units were closed by the Polish academic authorities (the Polish Academy of Sciences and the Ministry of Science and Higher Education), and no new unit of this kind was established at the PAS. This decision was a great organizational mistake. Firstly, the authorities of the PAS showed in the 1980s–1990s a true lack of interest in the subject matter of the science of science developed in Poland<sup>6</sup>. As a result, they had wrong opinions on the subject matter of the science of science. What is more, it seems that in the 1990s Polish academic authorities assumed wrongly that not only the programmes of these units, but also the whole discipline of the science of science were, in principle, directed entirely by the old-fashioned political vision of science which originated in the ideologically communistic and

<sup>1</sup> See P. Hübner, *Krótką historia Zakładu Prakseologii i Naukoznawstwa*, p. 164.

<sup>2</sup> See W. Gasparski, *Metodologia nauk praktycznych Tadeusza Kotarbińskiego*, W. Gasparski, *Słowo o Profesorze Bohdanie Walentynowiczu*, W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, pp. 385–386, W. Gasparski, *Naukoznawstwo: ocena stanu dyscypliny*, W. Gasparski, *Przegląd problemów nauk o nauce po latach*, *Wikipedia* 2013gasp.

<sup>3</sup> See I. Białecki & A. Świć, *Potencjał implementacyjny*. The new unit was established at the beginning of the current political transformation.

<sup>4</sup> See P. Hübner, *Krótką historia Zakładu Prakseologii i Naukoznawstwa*, W. Gasparski, *Naukoznawstwo: ocena stanu dyscypliny*, A. Szpaderski, *Kalendarium życia i twórczości Tadeusza Kotarbińskiego*. The Department of the Praxeology and the Science of Science, after linking with the Department of Logic [Zakład Logiki], was replaced by the Department of the Logic of Language and Action [Zakład Logiki Języka i Działania], and affiliated at the same Institute of Philosophy and Sociology, PAS.

<sup>5</sup> See B. Jaczewski, *Inauguracyjne posiedzenie Pracowni Historii i Organizacji Nauki*, W. Sygocki, *Instytut Historii Nauki PAN w latach 1952–2003*, J. Piskurewicz, *Moje wspomnienia ...*.

<sup>6</sup> This was noticed by, among others, W. A. Werner and W. Gasparski. See W. A. Werner & al., *Rozwój naukoznawstwa do roku 2000*, W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, W. Gasparski, *Naukoznawstwo: ocena stanu dyscypliny*, W. Gasparski, *Przegląd problemów nauk o nauce po latach*.



socialistic era. In this manner, they neglected real achievements of all science of science in Poland from the very beginning of this branch of knowledge until the 1990s.

On the other hand, the Research Centre for the History of the Organization of Science at the Institute for the History of Science and Technology, PAS, was closed mainly because of the death of its leader, B. Jaczewski in 1992, and the fact that a few workers of this unit, especially S. Amsterdamski and Jan Piskurewicz, had other duties connected with their new jobs in the new governments<sup>1</sup>.

### Journals on the science of science in 1980–1993

The Committee of the Science of Science, PAS, still published the journal *Zagadnienia Naukoznawstwa. Studia i Materiały* [*Problems of the Science of Science: Materials and Studies*] (the first editor-in-chief Ignacy Małecki)<sup>2</sup>.

However, in 1980, the Committee ceased publishing the international journal *Problems of the Science of Science* (issued irregularly and intended for authors from socialist countries), and started to publish the international quarterly *Science of Science: An International Journal of Studies on Scientific Reasoning and Scientific Enterprise* (also intended for authors from socialist countries). It was published in 1980–1993 [1990]<sup>3</sup>.

The Department for the History of Science and Technology, PAS, still published two journals devoted to all aspects of the history of science, including (especially in the 1960s and 1970s) the subject matter of the science of science: *Kwartalnik Historii Nauki i Techniki* (the first editor-in-chief B. Suchodolski)<sup>4</sup> and *Organon* (the first editor-in-chief B. Suchodolski) – the latter with a hiatus from 1989 to 1994<sup>5</sup>.

Specializing in the science of science, the Library of the Polish Academy of Sciences in Warsaw still published the journal *Polska Bibliografia Naukoznawstwa i Technoznawstwa* [*The Polish Bibliography of the Science of Science and the Science of Technology*]<sup>6</sup>.

However, in 1992, the Centre for Documentation and Scientific Information, PAS [Ośrodek Dokumentacji i Informacji Naukowej PAN] ceased issuing the bibliographic journal *Przegląd Informacji o Naukoznaw-*

<sup>1</sup> From 1991–1993 Piskurewicz was the head of the Wydział Współpracy ze Społecznymi Instytucjami Nauki (Department for Cooperation with Social Science Institutions), affiliated with the Komitet Badań Naukowych (Committee for Scientific Research). See J. Piskurewicz, *Moje wspomnienia ...*, p. 336. *Wikipedia* 2012pisk. On Amsterdamski, see below.

<sup>2</sup> See K. Leski, *Pierwszy zeszyt „Zagadnień Naukoznawstwa”, Zagadnienia Naukoznawstwa. Studia i Materiały* 1965–2013; Antoniewicz 1984. It still exists: up till now 49 volumes have been issued.

<sup>3</sup> See *The Science of Science: An international journal of studies on scientific reasoning and scientific enterprise* 1980–1993 & 1985.

<sup>4</sup> It still exists. Up till now 58 volumes have been issued (the first 46 volumes are available electronically). See *Kwartalnik Historii Nauki i Techniki*, 1956–2013.

<sup>5</sup> It is still extant. Up till now 45 volumens have been issued. See *Organon*, 1968–2013.

<sup>6</sup> It was issued until 2002, and included the literature from 1963 to 2000.

stwie [Review of Information on the Science of Science], distributed from May 1964 (from 1966 as a quarterly) in a total of 29 volumes.

Moreover, since March 1993 the Centre for Science Policy and Higher Education [Centrum Polityki Naukowej i Szkolnictwa Wyższego], affiliated with the University of Warsaw, started to issue the semi-annual *Nauka i Szkolnictwo Wyższe* [Science and Higher Education]<sup>1</sup>.

### **From independent scientific, educational and popularizing institutions to government institutions**

In October 1980, the Society for the Promotion and Propagation of Science [Towarzystwo Popierania i Krzewienia Nauki] was established on the wave of the Solidarity movement. It aimed at healing the science policy in Poland. The initiator and co-founder of this society was the mathematician Ryszard Herczyński (1929–2009)<sup>2</sup>.

In Winter 1981/1982, the Social Science Committee [Społeczny Komitet Nauki] came into being as an informal body. Then, from 1983 to 1989 it operated formally, but was an independent, nationwide underground institution. The members of this committee came from the illegal Society for Academic Courses [Towarzystwo Kursów Naukowych], the semi-legal Experience and Future Seminar [Konwersatorium Doświadczenie i Przyszłość], which became legal in 1980–1981, and from the legal but opposition structures: the Society for the Promotion and Propagation of Science, and the Academic Solidarity. The group of members of this committee, Ryszard Herczyński, Klemens Szaniawski, Witold Karczewski, Grzegorz Białkowski, Antoni Mączak, Janusz Sławiński, and J. Szacki worked out the ethical code of scientists. Tadeusz Baszyński and his team created another such code. Then, in 1988, the other team, comprising Barbara Skarga, S. Amsterdamski, Witold Karczewski, Władysław Kunicki–Goldfinger, and Andrzej Ziabicki, worked out the project of the organization of science in Poland, which was put into effect from 1989 pursuant to the resolutions of the Round Table<sup>3</sup>.

Then, for example, S. Amsterdamski took part in the Round Table agenda in the sub-assemblies for science, education and technical progress. From 1989 to 1991, he served in the government of Tadeusz Mazowiecki as the Deputy State Secretary in the Office for Scientific and Technical Progress and Implementation [Urząd Postępu Naukowo–Technicznego i Wdrożeń], and from 12 January to 22 March 1991, as the State Secretary of this office. After the office had been dissolved (22 March 1991), the Committee of Scientific Research [Komitet Badań Naukowych] was established. From 1991 to 1995 it was headed by Witold Karczewski (1930–2008)<sup>4</sup>.

It is not a coincidence that the Committee for Scientific Research since the 1990s began to promote *scientometric* analyses, referring to the American

<sup>1</sup> See I. Białecki & A. Świć, *Potencjal implementacyjny*.

<sup>2</sup> See A. G. Kister, *Ryszard Herczyński*, J. Wieczorek (ed.), *Ryszard Herczyński matematyk ...*.

<sup>3</sup> See M. Kunicki–Goldfinger, *Społeczny Komitet Nauki*.

<sup>4</sup> See *Wikipedia* 2013rtm, 2013rjkb, 2013karc.

bases of the Institute for Scientific Information in Philadelphia (founded by Dr. Eugene Garfield in 1960, then acquired in 1992 by the private company Thomson Scientific & Healthcare, and from 17 April 2008 by a consortium of Thomson Reuters)<sup>1</sup>.

Finally, it is a symbolic fact that in 1994 in a modified version of his article about the issue of values in science, which was originally printed in 1971, S. Amsterdamski removed the term *naukoznawstwo* [science of science]<sup>2</sup>.

### **A defense of the pre-communist achievements in the science of science**

In the new political situation, some Polish scholars finally dared to point out the fact that the first research of the science of science in the world was carried out in pre-war Poland in the Scientific Section of the Mianowski Fund (Warsaw), led by S. Michalski<sup>3</sup>, and the research was revived in Poland after World War II in 1948–1950 at, among other places, the Seminar for the Science of Science in Kraków, which was led by M. Choynowski<sup>4</sup>.

However, other Polish researchers, especially I. Malecki, consistently emphasised only (a) the pioneer character of the research done in the Scientific Section of the Mianowski Fund, and that (b) unfortunately, they were not known internationally, and (c) therefore, the date of the beginning of science studies was to have been the release date of the books by J. D. Bernal: *The Social Function of Science* (1939) and *Science in History* (1954)<sup>5</sup>. What these types of researchers forgot to add in this context was what they themselves made and did in the years 1945–1979, and thus the great merits of the pre-war Polish researchers were overlooked in international forums. The reason was very simple. The thought of the pre-war Polish scholars did not grow out of marxist and communist thought.

In 1989, Wojciech Gasparski based on the statements made by several brave Polish scholars such as Jan Zieleniewski (1967), Zbigniew Wasiutyński (1970), and the comments sent in 1988 by Adam Kotarbiński and Salomea Kowalewska, made a fundamental critique of the Polish science policy and the ideologization of the Polish science of science during the communist and

<sup>1</sup> See J. Kozłowski, *Miejsce nauki polskiej w świecie ...*, J. Kozłowski & Z. Kopka, *Miejsce nauki polskiej w świecie 1990–1995 ...*.

<sup>2</sup> See S. Amsterdamski, *Nauka współczesna a wartości*, p. 58 (a modified version: *Nauka a wartości*, p. 129).

<sup>3</sup> See B. Suchodolski, *Kilka wspomnień o Kole Naukoznawczym Kasy im. Mianowskiego*, R. Mierzejewski, *Wstęp. O naukoznawstwie ...*, J. Piskurewicz, *Refleksja naukoznawcza ...*. These works stemmed from earlier works by, among others, Z. Kowalewski, *Teoria praktyki naukowej jako nowa wyodrębniająca się nauka*, B. Jacewski, *Polityka naukowa państwa polskiego w latach 1918–1939*, B. Suchodolski, *Quelques souvenirs sur le Cercle Scientifique de la „Caisse Mianowski”*.

<sup>4</sup> See P. Hübner, *Instytucje i programy naukoznawcze w Polsce w latach 1945–1949*, W. Rolbiecki, *Ruch naukoznawczy ...*.

<sup>5</sup> See I. Malecki, *Prakseologia a naukoznawstwo*, p. 17, I. Malecki, *Ewolucja koncepcji naukoznawstwa w ostatnim półwieczu*, p. 437.

socialistic era<sup>1</sup>. He did so to promote the idea of true non-ideological research in the science of science.

On 29 March 1990, during a meeting at the Centre for the History of the Organization of Science, affiliated to the Institute for the History of Science, Education and Technology, PAS, Jan Piskurewicz devoted his lecture to the post-war activities of the Mianowski Fund and the attempts to restore this Fund. As a result, the participants of the meeting, Andrzej Biernacki, Zbigniew Ciok, Piotr Hübner, Barbara Kuźnicka, Jan Piskurewicz and Leszek Zasztowt took measures to reactivate this fund as an independent organization. The initiative received support from the Warsaw Society of Sciences and the Polish Academy of Sciences. On 20 May 1991, the Józef Mianowski Fund, with the additional designation: a Foundation for the Promotion of Science [Kasa im. Józefa Mianowskiego – Fundacja Popierania Nauki], was reestablished. The official act was signed by Edward Potkowski (on behalf of the Warsaw Society of Sciences), Jerzy Kołodziejczak (on behalf of the Polish Academy of Sciences), and the initiative group consisted of Andrzej Biernacki, Stefan Bratkowski, Piotr Hübner, Barbara Kuźnicka, Jan Piskurewicz, and Leszek Zasztowt. Finally, on 11 October 1991, by the decision of the City of Warsaw District Court, the Mianowski Fund was inscribed into the official register of foundations<sup>2</sup>. However, the Fund did not take upon itself continuing the science of science research.

### The case of Florian Znaniecki

During the period 1980–1993, many of Znaniecki's works were reprinted and translated into Polish, including a translation of his monograph *The Social Role of the Man of Knowledge* (1940) in 1984, and a collection of his philosophical papers in 1987 and 1991<sup>3</sup>.

### The case of Ludwik Fleck

Only from 1981(!) did Fleck's views become famous in Poland, and only in 1986 was the first translation of his *opus magnum* published<sup>4</sup>.

In this context, a natural question arises: why were Fleck's views not widely known and accepted in Poland between 1945 and 1980 (although between 1945 and 1957 in Poland he was a prominent researcher, microbiologist and a scholar)? It seems that this was caused by the following factor: his sociological, historical and philosophical views simply did not

<sup>1</sup> See W. Gasparski, *O aktualnym stanie badań naukoznawczych w Polsce*, pp. 387–391.

<sup>2</sup> See P. Hübner, J. Piskurewicz & L. Zasztowt, *Kasa im. Józefa Mianowskiego*, P. Hübner, J. Piskurewicz & L. Zasztowt, *A History of the Józef Mianowski Fund*, L. Zasztowt (ed.), *Kasa Mianowskiego 1881–2011*.

<sup>3</sup> See F. Znaniecki, *Spoleczne role uczonych*, F. Znaniecki, *Pisma Filozoficzne*, vol. 1, F. Znaniecki, *Pisma Filozoficzne*, M. Z. [M. Ziolkowski], „*Spoleczne role uczonych*” ...

<sup>4</sup> See J. Gierasimiuk, *Socjologia poznania naukowego Ludwika Flecka*, J. Gierasimiuk, *Logos in Science*, T. Kielanowski, *Meetings with Ludwik Fleck in Lublin during the Years 1945–1950*, V. N. Porus, *Ludwik Fleck's Epistemological Conception ...*, S. Symotiuik, *Two Sociologies of Knowledge* [Polish transl. *Dwie socjologie wiedzy*], L. Fleck, *Powstanie i rozwój faktu naukowego ...*, B. Płonka-Syroka, *Ludwik Fleck (1896–1961)*, L. Fleck, *Psychosocjologia poznania naukowego*, A. Derra, *Sprawa Hedfors, czyli o tym, co Ludwik Fleck robił w Buchenwaldzie*.

attract the attention of academia, since they were incompatible with different versions of idealism, positivism (including a sort of positivism developed by the Lvov–Warsaw School of Philosophy) and dialectic materialism that dominated in this period. To illustrate this thesis, it is worth quoting an excerpt from his article *Crisis in Science: A Discussion of Science and Welfare* of 1960, published posthumously, which summarises his opinion very well:

*The history of science, and of thought generally, considered as the evolution of communal styles of thinking, and based on structural changes in the respective communities, ceases to be a collection of ridiculous anecdotes and sentimental apotheosis. The genesis of ideas becomes explicable. The historical evolution of some fundamental concepts like 'compound', 'element', 'reality', 'cause', 'existence', and 'individual' indicates that their present stage needs by no means be the final one. The realization of this will help scientists to be bolder in their creative conceptions. The sterile problem of idealism and materialism will vanish. Scientific truth will turn from something stiff and stationary into dynamic, developing, creative human thought.*<sup>1</sup>

In my opinion, S. Amsterdamski played a mediating role in this reception, by his promotion of T. S. Kuhn's thought as a translator and commentator on his monographs *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* [1957] in 1966, *The Structure of Scientific Revolutions* [1962] in 1968 and, finally, *The Essential Tension. Selected Studies in Scientific Tradition and Change* [1977] in 1985<sup>2</sup>.

### **Why did naukoznawstwo [the science of science] decline organizationally in Poland in the early 1990s?**

It is common knowledge that the era of the Cold War was the period of the struggle between two separate political, economic and military systems that began in 1945–1949 and ended in 1991 with the dissolution of the Soviet Union and of the Warsaw Pact, or two years later with the withdrawal of Soviet troops from Poland.

Taking into account the history sketched out in this article, I claim that an institutional decline of *naukoznawstwo* [the science of science] in Poland in the period 1992–1993 is also one of the repercussions of the end of the Cold War.

To clarify this view, it can be added that the Polish politicians and scientists who in the 1990s equated all the science of science with a Stalinist version of this branch of knowledge – and neglected the protests of a few

<sup>1</sup> L. Fleck, *Crisis in Science. Discussion on "Science and Human Welfare"*, p. 157 (underlining mine).

<sup>2</sup> Several Polish authors also made reviews of Kuhn's *Essential Tension*, both of the original version and of its Polish translation. See e.g. A. Łodyński, *Thomas S. Kuhn ...*, M. Perek, *Thomas S. Kuhn ...*, J. Rosicka, *Kaczko–królik Thomasa S. Kuhna*.

opponents, such as I. Malecki or W. Gasparski – made a great intellectual mistake! This mistake is comparable to the mistake made in 1945–1949 by the communist politicians who negated the great achievements of the pre-war science of science in Poland.

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The great political transition of the period 1980–1993 in Poland ended with a very serious organizational weakening of the science of science in the early 1990s, since the Polish science policy-makers mistakenly equated the science of science with the outworn, old-fashioned Soviet patterns. Thus, in doing that they threw the baby out with the bathwater.

### **Concluding remarks**

The paper has attempted to sketch the changing fate of the science of science in Poland from the times before World War I (the 1910s), through the times of the German and Soviet invasions of Poland during World War II, the initial period of Soviet dominance in Poland (1944–1954), and simultaneously the beginnings of the Cold War (1947–1954), the later period of Soviet dominance in Poland (1955–1979), to the times of Solidarity and the end of the Cold War (1980–1993).

Based on the study, it is claimed that these changes to a large extent were caused by macro-political factors. From the late 1910s to 1939 (when the Polish state was being reconstructed, after the times of the partitions by Russia, Prussia and Austria), Polish scholars founded the mature basis of the science of science. However, World War II interrupted that research. In the initial period of Soviet dominance in Poland in 1944–1954 Polish communists rejected the achievements of the pre-war Polish science of science. Then, in the later period of Soviet dominance in Poland (1955–1979), Polish scholars developed a socialistic version of the science of science (with great interactions with the Soviet science of science, but also with interactions with the American and British science of science and the older pre-war Polish tradition). Finally, in 1980–1993, when Poland recovered a full political independence of Soviet Union and Russia, the science of science in Poland collapsed, since it was equated with the old-fashioned Soviet way of thinking.

These political determinants are the great misfortune of the Polish science of science in the post-war period. Unfortunately, the consequences of these decisions are still current in Poland. Their current manifestation is Polish science policy-makers' uncritical fascination with the American databases: Web of Science and Scopus; it is no accident that this fascination started in the early 1990s.

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