

AN OUTLINE OF SHORT HISTORY OF LYSENKOISM IN POLAND

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ABSTRACT – The paper demonstrates the unfamiliar history of Lysenkoism in Poland. The analysis shows that Lysenkoism was a Stalinist interference in the country's scientific life, but despite the political support and promotional activity, as well as the enthusiasm of a few scientists, it was never truly accepted by the majority of scientists, and was publicly abandoned as soon as it became safe to do so.

Lysenkoism, initially called “new biology”, “creative Soviet Darwinism”, “Michurin’s genetics” etc., was a set of ideas partly created and partly taken over from other naturalists by Trofim D. Lysenko (1898–1976).¹⁾ So far much attention has been devoted to Lysenkoism in the Union of Soviet Socialist Republics.²⁾ The “new biology” in the remaining Eastern Block countries has not aroused much interest among Western historians of science. This may have been caused by the lack of local studies on Lysenkoism in the former satellite countries of the Soviet Union, the linguistic barrier or the conviction that the history of Lysenkoism was everywhere identical and thus the “new biology” in countries other than the Soviet Union is unworthy of attention. Among the countries which, following the example of the USSR, introduced Lysenkoism, was Poland.³⁾ However, in this country the methods of introducing Lysenkoism and its history were different. Here, the “new biology” was soon abandoned and its demise took place much earlier than in the USSR.

Lysenkoism was intended to be a modern evolutionary theory expounding the development of living matter, formulating laws governing this development and describing the regularities of appearance as well as transformation of biological species – at the same time taking into consideration all previous achievements of biology as well as agricultural practice and being in accord with the philosophy of dialectic materialism. The main theses of Lysenkoism were the following:

- a species is an objectively existing biological unit,
- a species as a whole struggles for survival,
- the source of variability and heredity is a dialectic unity of opposites between an organism and conditions of its existence that are obtained [*sic*] by the organism from its environment,
- an organism evolves in direct response to the conditions of its environment,
- the characters acquired by an organism during its lifetime are hereditary,
- evolution is a chain of abrupt, qualitative transformations that are conditioned by the accumulation of quantitative changes in species.⁴⁾

At its session of 31 July–7 August 1948, the Vladimir I. Lenin All-Union Academy of Agricultural Sciences adopted Lysenkoism as the only legitimate theory in biological and agricultural sciences in the Union of Soviet Socialist Republics.⁵⁾ The session ended

a dozen or so years' period of controversies between Trofim D. Lysenko and his supporters on one side, and opponents on the other. For the next sixteen years Lysenkoism became an official theory in Soviet biology. Cautious criticism of some aspects of the "new biology" in that country began around 1952. (The critics included N. D. Ivanov and N. V. Turbin). Yet, Lysenkoism ruled Soviet biology almost absolutely for about the next ten years. It was not until Nikita S. Khrushchev (1894–1971) was ousted from his post of general secretary of the Communist Party and premier in 1964 that Lysenkoism lost its backing of the Soviet authorities.⁶⁾

Lysenkoism was not an autonomous phenomenon in Polish science. It was mainly caused by extra-scientific factors, primarily political ones. A number of events contributed to the appearance and demise of Lysenkoism in Poland. The sequence consisted of the following stages:

(1) WORLD WAR II (1939–1945)

The War of 1939, subsequent German (in 1939–1941 also Soviet) occupation of Poland and the military activities of 1944–1945 caused huge losses in Polish science. All universities were closed down. Many scientists were sent to concentration camps (e.g. *Sonderaktion Krakau* on 6 November 1939) or executed by firing squad (e.g. professors of Lwów University and Lwów Polytechnic on 3/4 July 1941). As a result, after the end of World War II there was a severe shortage of scientific staff at universities; more advanced students were even employed to deliver lectures. The military actions and occupation caused severe losses in scientific equipment and libraries.⁷⁾ Research and contacts with foreign scientists were hardly possible.⁸⁾

(2) COMMUNIST TAKEOVER AND THE FIRST YEARS OF COMMUNIST REIGN (1945–1948)

After the end of World War II the Communists took over the power. They established new universities (e.g. in Lublin, Łódź, Toruń), but also decreed preventive censorship in 1946. The property of the Polish Academy of Sciences and Letters⁹⁾ as well as that of the Academic Society of Warsaw¹⁰⁾ was nationalized. Both the Polish Academy of Sciences and Letters, and the Academic Society of Warsaw had been academies (in the West European sense). As a result of nationalization both institutions became fully dependent on state subsidies. Shortly afterwards it became clear that neither of the academies was willing to act in compliance with the authorities' directives. In such a situation the Communist authorities decided to organize their own academy of sciences.

The philosophy favoured by those in power was dialectic materialism. In the spring of 1948 the Association of Marxist Naturalists¹¹⁾ came into existence attached to the editorial staff of the Journal "Nowe Drogi" [New Ways]. It was an official organ of the Central Committee of the Polish Workers' Party (Communist party).¹²⁾ The main tasks of the Association included struggle against "the penetration of the capitalist countries' reactionary ideas in natural history by means of the achievements of the leading progressive Soviet science".¹³⁾ The Association at first organized seminars. They were sessions in principle closed to outsiders. Only members of the Association and very few invited guests participated in them. The main objectives of the sessions included defining concepts of natural history in the light of dialectic materialism and critically evaluating research activities from the perspective of Marxist philosophy. After becoming firmly established, the Association started to organize open sessions. Lectures on Lysenkoism

raised particular interest. Many outstanding Polish biologists and intellectuals were invited to those meetings.¹⁴⁾

Around 1948 the Communists started to introduce changes into higher education and scientific institutions. The alterations at universities involved separating some faculties and creating new higher education units based on them. Agricultural faculties were transformed into higher schools of agriculture. Medical faculties were transformed into medical academies. Theological faculties were liquidated.

Contacts with Western science, interrupted by World War II, were hardly resumed after 1945.¹⁵⁾ Only selected items of most recent literature were imported, and that in a very limited number of copies. Scientists seldom obtained permission to travel to Western countries to take part in congresses.¹⁶⁾ (Such permissions were granted mostly to persons enjoying the Communists' confidence.¹⁷⁾ At the same time, Poland was overstocked with translations of Soviet publications (sometimes presenting an embarrassingly low standard¹⁸⁾). This was accompanied by a propaganda magnifying each achievement of Soviet science. After the adoption of Lysenkoism by the Vladimir I. Lenin All-Union Academy of Agricultural Sciences, the propaganda started to present Lysenkoism as a theory already verified by practice and already bringing gigantic economic effects.

At the end of the period, all the signs of Stalinist terror could already be felt: the overwhelming atmosphere of intimidation and uncertainty, preventive censorship, limited sphere of freedom, political show trials, the omnipotence of the apparatus of constraint (including the Security Service), propaganda and denunciations.¹⁹⁾ The situation in Poland of those days was later described in 1956 by a member of the Polish Academy of Sciences as follows: "the terror of the Security Service and lawlessness ruled the state. The rector of the university disappeared from the university for several months and came back broken down".²⁰⁾ Polish science was "manually controlled" by the Communists.²¹⁾ All the above-mentioned factors contributed to a situation in which few Polish scientists adventured to protest against Lysenkoism.

(3) FULLY DEVELOPED STALINISM AND BEGINNING OF INTRODUCING OF LYSENKOISM (1949–1953)

The beginning of propagating of Lysenkoism happened in autumn 1948, thus at the end of previous period. Initially Lysenkoism was introduced step by step into teaching. Already at the session of 26 January 1949 organized by the Association of Marxist Naturalists a proposal was put forward to make Lysenkoism (parallel with genetics) part of the syllabus at schools.²²⁾ Five months later, in June 1949, the Association organized two courses in the "new biology" for teachers from the whole country.²³⁾ These courses contributed to the initiation of far-reaching alterations in the biology syllabus. Lysenkoism replaced genetics in schools.²⁴⁾ At universities and other higher education institutions lectures in genetics were done away with.

The everyday mass media propaganda for Lysenkoism, initiated already in autumn 1948, was aimed at everybody, and the Association organized conferences intended for scientists. The first of them, Conference of Biologists and Agrobiologists, took place on 30 March 1949 in Warsaw. Over four hundred participants attended it. At the conference a lecture was delivered on Lysenkoism as a new theory in biology. The motions tabled at the sessions were symptomatic:

1. "Efforts to popularize Lysenkoism should be continued. As much Soviet literature on Lysenkoism as possible should be published.
2. The education of young biologists and agrobiologists should be based on Lysenkoism. It should be lectured on at schools and universities.

3. Higher agricultural schools should conduct their research and education in accordance with the spirit of Lysenkoism".²⁵⁾

Following one of the above motions, the treatise "On the situation in biology", a compilation of the lectures delivered and discussions held during the 1948 session of the Vladimir I. Lenin All-Union Academy of Agricultural Sciences, was translated into Polish and published in 1949. By 1953 the volume had five editions. From 1949 on, numerous books and papers by Soviet theoreticians of Lysenkoism were translated into Polish and published, most of them in 1950. The next conference organized by the Association, Theoretical Conference of Biologists, Agrobiologists and Physicians, took place on 27 December 1950–13 January 1951 in Kuźnice, a quarter of Zakopane (in the Tatra Mountains).²⁶⁾ The conference was intended to be a recapitulation of the first stage of the development of the "new biology" in Poland and was to chart the ways for the future.²⁷⁾

The First Congress of Polish Science took place on 20 June–2 July 1951. It opened a new stage in the history of Polish science: development delineated according to the Soviet model of the organization of scientific institutions. The model consisted of three sectors. Its basic element, the sector of science and research, was to take the form of a new planned academy of sciences. The sector of science and teaching was to consist of universities and higher educational institutions. The sector of science and technology was to be made up of institutes and ministerial institutions of science and research. In the same year, on 30 October 1951, the Communist authorities established the new Polish Academy of Sciences²⁸⁾ following the model of the Academy of Sciences of the USSR. The hitherto existing academies, i.e. the Polish Academy of Sciences and Letters (with traditions going back to 1815) and the Academic Society of Warsaw, had to cease their activity by the end of 1952. Biological sciences were incorporated into the Second Division of the new Academy. One of the main objectives of the Second Division was the propagation of Lysenkoism. The goal was achieved through conferences at which the principles of Lysenkoism were lectured on. On 2 March 1952, the Association of Marxist Naturalists united with the Polish Copernican Naturalist Society²⁹⁾ of long traditions going back to 1875. After the fusion the united society (still bearing the name of the Polish Copernican Naturalist Society) became the main propagator of Lysenkoism.

Another course in the "new biology" took place on 7 July–7 August 1952 in Dziwnów (on the Baltic coast, north-western Poland).³⁰⁾ Next, such a course for young biologists was organized on 18–28 August 1953 in Kortowo (near Olsztyn).³¹⁾ After completing both courses, the participants were supposed to organize "seminars" with an aim to spread the ideas of Lysenkoism among scientists and students in all Polish university centres.³²⁾

(4) AFTER STALIN'S DEATH (1954–1956)

Disseminating the ideas of Lysenkoism so far did not produce the results expected by the authorities. The Evolution Committee of the Polish Academy of Sciences at a meeting held on 9 May 1955 even admitted that the propaganda for the "new biology" had been a fiasco. Yet, the Committee tabled a motion to further struggle to introduce Lysenkoism into Polish science.³³⁾ At one of the next meetings of the Committee, special groups were created. The teams were to take care of Lysenkoist research in the following three areas: 1) inheritance of acquired characters, 2) stadiality of the development of organisms and 3) process of speciation.³⁴⁾

The last conference on the "new biology" took place on 17–25 August 1955, again in Kortowo. The conference ended the action of teaching Lysenkoism to young biologists. One of the leading Lysenkoists admitted during the conference that many mistakes had

been made in the management of Polish science by the Communist party. They included: “dogmatism, giving orders, half-heartedness as well as deficient activism and deficient aggressiveness on the part of the organizers of science in the struggle for the new biology. When the leaders were not able to win others over to Lysenkoism, they resorted to ordinary commanding, exerting administrative pressure and closing down journals that published expressions of opposing views”.³⁵⁾ Nevertheless, the organizers of the conference still declared their faithfulness to Lysenkoism.

(5) POLITICAL THAW AND ABANDON OF LYSENKOISM (1956–1958)

Emerging gradually, the political thaw in Poland had its culmination in October 1956. Personal changes on the highest posts in the government (and the Communist party) took place. Lysenkoism was given up without special declarations and fanfares. The Michurin–Lysenko theory that was introduced into the school syllabus in 1949 was abandoned in teaching by the end of the school year 1956/1957.³⁶⁾ The year 1958 witnessed the publication of a popular history of evolutionism, in which Lysenko’s theory was rejected.³⁷⁾ The author of another paper, published at the end of 1958, expressed the following view in connection with Lysenkoism: “perhaps it will be appropriate to say a few words about the issue of the so-called Michurin–Lysenko genetics and the whole chaos that arose in Poland in connection with it in so recent past. I do not wish to bring up the undoubtedly existing aspect of the question connected with politics and the party. On the basis of facts I want to state that the one-sided unrealistic formulations by some Soviet authors who proposed certain practical agricultural activities (doomed to failure from the start) caused many difficulties [...]”.³⁸⁾

The sentences cited above are of special significance: their author, a zoologist, was one of the promoters of Lysenkoism in Polish science. His words indicate that in 1958 Lysenkoism was a matter of the past in Poland.

A few years after 1956 the new authorities gave up the more liberal politics, however Lysenkoism was not reintroduced.

At first Lysenkoism found a narrow circle of enthusiastic and uncritical popularises in Poland. Propagating Lysenkoism was considered an all-important task. As a result, discussions, lectures, conferences and sessions as well as journalistic output constituted almost the only form of scientific activity connected with this kind of biology. Research activity did not arouse the curiosity of the adherents of the “new biology” if it did not relate in one way or another to Lysenkoism.³⁹⁾ With the realization that the theory came to naught the group of enthusiasts quickly decreased.

Lysenkoism turned out to be only a brief and unimportant episode in the history of Polish science. The period of its influence was much shorter than in the USSR. There could have been at least a few reasons for that:

1. The political thaw. In order to shake off the straitjacket of Lysenkoism imposed by the Communists, Polish scientists made use of both the first symptoms of criticism of the “new biology” in the USSR and the political thaw in Poland, which appeared soon afterwards.
2. Historical experience. Poland, as the only country among the satellites of the USSR, conducted numerous wars with Russia in the past, and even won some of them (e.g. those in seventeenth century, 1919–1920). The Polish negative attitude to Stalinism sprang from the fact that for a long time (1772–1918), as a result of partitions, a sizable part of Poland had been under oppressive Russian rule. Consequently, the attitude of Poles toward Russians differed from that of Germans or Czechs: Polish people knew

Russians better and, at that, as oppressors. Poles fought against them in national uprisings and made attempts on the lives of czars (in the case of Alexander II the attempt in 1881 was successful). Thus, tradition and historical experience played an important role in the Polish approach to the new system.⁴⁰⁾

3. Scepticism. In many memoirs from the early 1950s one can find statements that Poles treated the imposed system with scepticism or irony. Reportedly, it was pointed out even to Khrushchev during his experiments with maize⁴¹⁾ that in Poland they would fail because Poles laughed at them.⁴²⁾ In Poland people also laughed at the imposed experiments with acclimatization of exotic plants, e.g. rice, and their cultivation in the fields.⁴³⁾ (Of course those who were ordered to cultivate them did not laugh. The latter ones, expecting no positive effects, rather feared accusations of sabotage.)
4. Disappointment with Lysenkoism. Lysenkoism promised immediate results, e.g. creating frost-resistant varieties or producing entirely new, economically useful, species. When during the first few years the experiments carried out in Poland did not confirm the assumptions of the “new biology”, the biologists who converted to Lysenkoism began to return to classical biology and genetics.⁴⁴⁾
5. Greater liberty of science in Poland than in the USSR. Polish Communists, busy with the country’s economic problems or faction conflicts within their party, did not strictly enforce their decision to introduce Lysenkoism. Thanks to that, the more courageous botanists continued to lecture on Mendel–Morgan genetics, but did so using different labels, e.g. plant cytology. One of them was Maria Skalińska at the Jagiellonian University in Cracow.⁴⁵⁾

The history of Lysenkoism in Polish science shows that a totalitarian state could wield a great influence on science, even impose methodology and research topics. The “new biology” was introduced in Poland by means of administrative measures supported by propaganda. Those measures lacked in subtlety and the propaganda was devoid of finesse.⁴⁶⁾ Lysenkoism was imposed in Poland because the ruling Communist party was dependent on its headquarters in Moscow. The Soviet Communist Party was convinced that its ideology, programme and practice were based on one single universal truth. The alleged truth was linked not only with political, social and economical issues, but also with theories, hypotheses and methods of science.⁴⁷⁾ When the administrative pressure in Poland abated, science returned to its well-trying methods of work. When in the late 1950s the political thaw in Poland ended, there was no return to Lysenkoism. This situation differed considerably from that in the USSR, where Lysenkoism lasted till 1964.

The opinion of reviewers and editors, who were obliged to obey the Communist party, was crucial in the rejection or acceptance of papers for publication. The final layout and contents of published articles also depended on those holding such posts. (Things are similar nowadays, but such persons are less often coerced into making their decisions by the machinery of the ruling party and the state, I hope.) As a result of their interventions, the authors were forced to place the then obligatory quotations from the classics of Marxism and Lysenkoism in their texts. The reviewers’ interference was not marked in the publications, however it is known that a paper could be published only if it contained suitable quotations. Such a practice was referred to at a council held by the editorial staff of the journal “Po prostu” (17 April 1956)⁴⁸⁾ and Leszek Kuźnicki wrote about it in his memoirs.⁴⁹⁾

The history of the short era of Lysenkoism in Polish science resembles the course of other historical processes or political phenomena in Poland in that period, and it is different from those in the USSR. As examples of the processes halted by the political thaw

one can mention compulsory collectivisation of agriculture and nationalisation of retail trade. That is why in Poland (as opposed to the USSR) the basis of agriculture was private homesteads, and trade in terms of numbers was dominated by small private shops. This difference was called “the Polish road to socialism”.⁵⁰ The history of Lysenkoism in Polish science is yet another example of the above mentioned dissimilarity.

From a distant perspective the history of science behind the Iron Curtain may seem homogenous. However, as the case of Lysenkoism in Polish science demonstrates, on close scrutiny the homogeneity turns out to be illusory. Perhaps all branches of science in each of the satellite countries had their own individual histories differing from those in the Soviet Union.

Introducing of Lysenkoism can be easily explained with subjection of Poland from the Soviet Union. The mechanisms, which resulted in introduction of Lysenkoism, have not been yet detailed researched and described. The introducing of it could not be an initiative of few persons. The decisions must have been come by proper stages of Communist party. But fingering actual persons could be more difficult. At those times the Communist party was divided (not officially but effectively) into many factions mutually fighting, and decision of whole party depended on variable configurations of interfaction alignments.

Explanation of abandon of Lysenkoism is much difficult. Perhaps, rejection of Lysenkoism could also be a result of kind of contract among the faction. The relationship between the political thaw and the abandonment of Lysenkoism in Poland requires further studies and exceeds the scope of this paper.

NOTES AND REFERENCES

- ¹⁾ Trofim Denisovich Lysenko graduated (in an extramural mode of study) from Kiev Agronomical Institute (1925). Then he worked in Gandzhe in Azerbaijan, and subsequently in the All-Union Institute of Selection and Genetics in Odessa. In 1940 he became head of the Institute of Genetics at the Academy of Sciences of the USSR. In 1948–1955 and 1961–1964 he was president of the Vladimir I. Lenin All-Union Academy of Agricultural Sciences. For more information on him see (a small selection of the most important Polish language publications of those days): F. Dworjankin, *Trofim Lysenko* (Warszawa, 1950); Włodzimierz Michajłow, Kazimierz Petruszewicz, *Iwan Miczurin i Trofim Lysenko* (Warszawa, 1952), 59.
- ²⁾ Huge literature on the subject has been published so far but there is no need to cite it here.
- ³⁾ Lysenkoism in Poland has lately been an object of scientific interest. In 1999 Zbigniew Kępa published a book *Marxizm i ewolucja. “Twórczy darwinizm” jako narzędzie propagandy antyreligijnej w latach 1948–1956* [Marxism and evolution. “Creative Darwinism” as a tool of antireligious propaganda in 1948–1956] (Kraków, Tarnów, 1999), 199. In 2005 William deJong–Lambert defended his doctoral thesis *The New Biology: Lysenkoism in Poland* at Columbia University, USA (published under title: *The new biology: Lysenkoism in Poland* (Saarbrücken, 2008)). (In this connection, I should like to express my gratitude to him for sending me his thesis in 2007.) The other papers of the author on Lysenkoism in Poland: William deJong–Lambert, “Szczepan Pieniążek, Edmund Malinowski, and Lysenkoism in Poland”, *East European Politics and Societies*, 21(3) (2007), 403–423; William deJong–Lambert, “From Eugenics to Lysenkoism: The Evolution of Stanisław Skowron”, *Historical Studies in the Natural Sciences*, 39(3) (2009), 269–299; William deJong–Lambert, “The new biology in Poland after the Second World War: Polish Lysenkoism”, *Paedagogica Historica*, 45(3) (2009), 403–420. I have done research on Lysenkoism in Polish botany since 2004. I presented part of the results in a lecture *Lysenkoism in the satellite countries of the Soviet Union – the case of botany in Poland* at the 22nd International Congress of History of Science (24–30 July 2005, Beijing, China) ([in:] *XXII International Congress of History of Science “Globalization and Diversity: Diffusion of Science and Technology Throughout History”, Beijing, 24–30 July. Book of Abstracts* (Beijing, 2005), p. 419). Further results of my research have been published lately: Piotr Köhler, “Łysenkizm w botanice polskiej” [summ.: Lysenkoism in Polish botany], *Kwartalnik Historii Nauki i Techniki*, 53(2) (2008), 83–161.
- ⁴⁾ Włodzimierz Michajłow, *O twórczym darwinizmie radzieckim* [On Soviet creative Darwinism] [in:] Kazimierz Petruszewicz, Włodzimierz Michajłow, Stanisław Skowron (eds), *Zagadnienia twórczego darwinizmu. Materiały*

- Kursu Biologii w Dziwnowie 7 VII – 7 VIII 1952 r.* [Issues in creative Darwinism. Proceedings of the Course in Biology, Dziwnów, 7 July – 7 August 1952] (Warszawa, 1952), 721–730.
- 5) Trofim Lysenko, *O sytuacji w biologii. Referat wygłoszony na sesji Wszzechwiązkowej Akademii Nauk Rolniczych im. W. I. Lenina 31 lipca 1948 roku* [On the situation in biology. A lecture delivered at a session of the Vladimir I. Lenin All-Union Academy of Agricultural Sciences on 31 July 1948] (Warszawa, 1948), 54 (translated into Polish by H. Birecka).
 - 6) During those sixteen years many important events affecting Lysenkoism took place, e.g. 5 March 1953: death of Joseph V. Stalin (1878–1953), 25 IV 1953: James Watson and Francis Crick published a paper reporting the discovery of the DNA double helix (James D. Watson, Francis H. C. Crick, “A Structure for Deoxyribose Nucleic Acid”, *Nature*, 171(4356) (1953), 737–738), 1953: Nikita S. Khrushchev came to power in the Soviet Union, 1955: the centenary of I. Michurin’s birthday was solemnly celebrated in the Soviet Union and the whole Eastern Block, February 1956: The 20th Congress of the Communist Party of the Soviet Union and the beginning of the criticism of personality cult, June 1956: a session of the Central Committee of the Soviet Communist Party and condemnation of personality cult; political thaw in the USSR and in the Eastern Block countries; its culmination in Poland in October 1956.
 - 7) Aleksandra Putrament describes, on the basis of her own experiences, the state of Polish education after World War II; see: Aleksandra Putrament, “The grim heritage of Lysenkoism: four personal accounts. III. How I became a Lysenkoist”, *The Quaternary Review of Biology*, 65(4) (1990), 435–445, p. 436.
 - 8) Compare: *Wykaz prac z działy nauk matematyczno-przyrodniczych wykonanych w Polsce w okresie okupacji niemieckiej w latach 1939–1945. List of the works achieved in the field of mathematics and sciences in Poland during the German occupation, 1939–1945* (Kraków, 1947), 289.
 - 9) Polska Akademia Umiejętności.
 - 10) Towarzystwo Naukowe Warszawskie.
 - 11) Koło Przyrodników–Marksistów, and next: Zrzeszenie Przyrodników–Marksistów.
 - 12) From December 1948: Polish United Workers' Party [Polska Zjednoczona Partia Robotnicza].
 - 13) K. Świątkowska, “Z działalności Zrzeszenia Przyrodników–Marksistów” [From the activity of the Association of MarxistNaturalists], *Wszechświat*, 1(1845) (1955), 41–42.
 - 14) Włodzimierz Michajłow, Kazimierz Petruszewicz, “Dziesięć lat rozwoju biologii w Polsce Ludowej” [Ten years of development of biology in People’s Poland], *Kosmos ser. A Biologiczna*, 3(6) (1954), 703–723, p. 716.
 - 15) For the number of foreign institutions with which the Polish Academy of Sciences and Letters was in contact before and after World War II see Piotr Köhler, *Botanika w Towarzystwie Naukowym Krakowskim, Akademii Umiejętności i Polskiej Akademii Umiejętności (1815–1952). Botany at the Academic Society of Cracow, Academy of Sciences and Letters and the Polish Academy of Sciences and Letters (1815–1952)* (Kraków, 2002), 373, p. 185–189.
 - 16) Władysław Szafer, “O niektórych niespełnionych zadaniach Polskiej Akademii Nauk” [On some tasks of the Polish Academy of Science that have not been carried out], *Kultura i Społeczeństwo*, 1(1) (1957), 56–63, p. 61.
 - 17) See a statement by Aleksandra Putrament at a council organized by the editorial staff of the journal “Po prostu” on 17 April 1956 in *Biologia i polityka. Materiały narady biologów zorganizowanej przez „Po prostu”* [Biology and politics. Proceedings of a council of biologists organized by “Po prostu”] (Warszawa, 1957), 160, p. 137–138.
 - 18) Statement by T. Neuman at a council organized by the editorial staff of the journal “Po prostu” on 17 April 1956 in *Biologia i polityka*, (ref. 17), 43–44.
 - 19) Compare e.g. Julian Dybiec, “Uniwersytet Jagielloński wobec stalinizmu 1945–1956” [The Jagiellonian University in the face of Stalinism 1945–1956], *Prace Komisji Historii Nauki Polskiej Akademii Umiejętności*, 3 (2001), 5–20, and the discussion after the lecture, p. 20–33; Stanisław Salmańowicz, “Między strachem a manipulacją: inteligencja polska wobec stalinizmu” [Between fear and manipulation: Polish intelligentsia in the face of Stalinism], *Prace Komisji Historii Nauki Polskiej Akademii Umiejętności*, 7 (2006), 81–94, and the discussion after the lecture, p. 95–104. The atmosphere at Polish universities and other higher educational institutions in those times is mentioned also by a zoologist, see Gabriel Brzęk, *Z Błazowej ku źródłom wiedzy* [From Błazowa to the sources of knowledge] (Lublin, 1992), 446, p. 377, 383–386.
 - 20) “VI Sesja Zgromadzenia Ogólnego członków Polskiej Akademii Nauk” [The 6th Session of the General Assembly of members of the Polish Academy of Sciences], *Sprawozdania z Czynności i Prac Polskiej Akademii Nauk*, 4(3) (1956) 184, p. 79, statement by Józef Chałasiński.
 - 21) Józef Chałasiński, “Drogi i bezdroża socjalizmu w nauce polskiej (1949–1956)” [Paths and roadless tracts of socialism in Polish science (1949–1956)], *Kultura i Społeczeństwo*, 1(1) (1957), 7–43; Kazimierz Petruszewicz, Włodzimierz Michajłow, “O obecnym etapie walk ideologicznych w biologii” [On the present stage of ideological struggle in biology], *Nowe Drogi*, 9(9) (1955), 11–27, and *Kosmos ser. A Biologiczna*, 4(6) (1955),

- 729–748, p. 737, 740. “Manual control” over science was mentioned at the council organized by the editorial staff of the journal “Po prostu” on 17 April 1956, *Biologia i polityka*, (ref. 17).
- 22) Włodzimierz Michajłow, *Nowy kierunek rozwoju biologii współczesnej (teoria Miczurina–Lysenki). Stenogram odczytu wygłoszonego na wieczorne dyskusyjnym zorganizowanym staraniem Koła Przyrodników–Marksistów przy Redakcji “Nowych Drog” dn. 26. I. 49 r.* [A new direction in the development of contemporary biology (Michurin–Lysenko theory). Shorthand notes of a lecture delivered at a discussion evening organized by the Association of Marxist Naturalists attached to the Editorial Staff of “Nowe Drogi”, 26 January 1949] (Warszawa, 1949), 24 [separatum].
- 23) Journal *Biologia w Szkole*, 2(4) (1949): texts of lectures and pronouncements.
- 24) Helena Sikorska, “Nowa biologia w programie szkolnym” [The new biology in the syllabus], *Biologia w Szkole*, 2(4) (1949), 116–130.
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