THE ROLE OF ISAAK PREZENT IN THE RISE AND FALL OF LYSENKOISM

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ABSTRACT. The establishment of an "official" biology in the Soviet Union is often associated with the rise of Trofim D. Lysenko and with the unbridled power that he exercised with the active complicity of Stalin. However, Lysenko did not apply his tyrannical methods with the same effectiveness and to the same ends throughout his career. The institutionalization of the new agronomy involved a complex combination of factors, and the power and charisma of those who surrounded Lysenko greatly facilitated his indoctrination of this branch of science. One of the most influential collaborators of Lysenko was the Marxist ideologist and Party official Isaak Izrailevich Prezent, whose relationship with Lysenko is crucial to understand Lysenko's development from a simple plant breeder to a political force of the Soviet Union.

KEY WORDS. Trofim D. Lysenko, Isaak I. Prezent, official biology, genetics, Academy Session, Alexander A. Malinovskij, science and politics, Soviet science, Stalinism, agricultural sciences.

LYSENKO COMES TO POWER

In a report published in 1944, the distinguished Soviet geologist Alexander E. Fersman was eager to demonstrate to the Western world the scientific advances achieved by the Soviet scientists thanks to the advent of Communism. His words sounded flattering especially in the field of biological sciences:

> In the study of the organism and its cells T. D. Lysenko was right when he wrote in the columns of the *Herald* of the Academy of Sciences that the nature of an organism is unusually pliant and inconstant, that changes in it may occur in the course of not only several generations but even during several days of its life, and that these changes may be caused artificially. Proceeding from this theory, which might be called the theory of "directed change" in the inherited nature of vegetable organisms, Lysenko by analyzing and generalizing from a vast amount of experimental data, was able to turn this idea to account in

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> resolving practical farming problems [...] of socialist agriculture. In this he based himself on the great ideas of Darwin and upon the experiments of the Michurin school, for the first time in history taking up cudgels against the old prejudices and boldly applying what were previously thought to be improper methods to influence plant life and the formation of species (Fersman, 1994: 39).

For Fersman, the success of the new agronomy was an example of the importance of practical applications for the progress of natural sciences. "In Marxist world philosophy, science was not required to fly the self-complacent flag of 'science for science's sake' but was called upon to engage in creative activity." According to Fersman, this was also a characteristic of official biology (Medvedev, 1979: 11). In fact, things had not been so different fifteen years earlier, when, in 1929 the botanist Nikolaj I. Vavilov had become the first president of the All-Union Academy of Agricultural Science in Moscow, a place he obtained easily (Fersman, 1944). As a matter of fact, university research work was greatly encouraged during those years, so that given a charismatic attitude, good skills and the desire to make a contribution to the progress of the country, scientists could obtain what they needed from the authorities, and work freely in their field of research [2]. The number of research institutes, schools and universities increased sharply after the revolution, in a dramatic departure from the repressive and conservative educational policy of the previous régime. This was reflected especially "in the rapid growth of the number of scientific journals, papers and books" (Medvedev, 1979: 17). Even so, there were two sides to this coin. At the beginning of the Soviet era "members of the prerevolutionary scientific elite were persecuted in spite of the fact that this could not fail to undermine the large-scale program of expansion in education, science and technology" (Medvedev, 1979: 9).

The rise of Lysenko needs to be placed in the context of the development of the biological sciences. His denial of the Mendelism-Morganism was not completely outlandish, for Lysenkoism was constructed in the Soviet Union before the revolution in modern genetics had occurred in Western society. Moreover, "in the 1930's when Lysenko built his power, the role and structure of DNA were not yet understood [...] in other words, it was possible in the 1930's to deny the existence of the gene and still pursue agriculture" (Graham, 1998: 23). Equally, whilst the sciences of physiology and biology played their part in the Soviet Union, as elsewhere, in developing the idea of a "new human being", and of a new ethnicity that correspond to political and social practice, it was not Lysenko, as one might think, who believed in and propagated this idea. In fact, "Lysenko never claimed that his views on heredity were applicable to human beings. Indeed, he castigated eugenics and all other attempts to alter human heredity as examples of bourgeois influence on science"

(Graham, 1998: 18). In a letter to Stalin dated back to 1947, Lysenko expressed the view that "Mendelism-Morganism, Weismannist neo-Darwinism was a bourgeois metaphysical science of living bodies, of living nature developed in Western capitalist countries not for agricultural purposes but for reactionary eugenics, racism and other purposes" (Lysenko, 1947, cited in Pollock, 2006). It is by now acknowledged that the work of Lysenko was hailed by prominent scientists during the 1930s, because the mission of discovering new ways of improving crops, by working on plant breeding and selection, was seen as being not only valuable in itself, but also as a continuation of the esteemed Michurin tradition in agronomy (Pollock, 2006). Vavilov had valid reasons looking upon Lysenko as, in the first instance, a skilled scientist; he worked (during the years 1921-1925) for the Belotserkovskaya Selection Station in the Ukraine, which was renowned for its high level of performance and special classes, where the remarkable geneticist Grigorij A. Levitsky also taught (Levina, 1997). According to Levina, it is important to stress that vernalization was not at variance with agricultural contemporary practices and that a great number of other techniques had been embraced in those years. Lysenko's work had to do with the study of plant physiology—the theory of stages, and vernalization as one stage in plant development (Levina, 1997). Experimentation with vernalization (which is what Vavilov and his collaborators successfully did in the study of cultivated plants varieties from all over the world) made it possible to gain more than one generation per season (Levina, 1997). As Pollock has written, "Lysenko promised dramatic improvements in agricultural production to a state that periodically suffered from famine." From their side, geneticists with an evident rhetorical disadvantage worked on *drosophila,* having no way to show practical results (Pollock, 2006: 43). These scientists were unable to provide the country with the real fruits of their labor in the short term as Lysenko could [3]. Further, Lysenko was conducting his fieldwork at the time when Soviet agriculture was in crisis as a consequence of the recent mass collectivization (Graham, 1998). For Soviet scientists and experts, the gains promised by Lysenko were sufficient justification for patronizing his work in agriculture or, at least, to provide him with the opportunity to prove his abilities.

In 1933, at the outset of Lysenko's career, Isaak Izrailevich Prezent, from the Sector for Assistance to Scientists of the Council of People's Commissars of the USSR, issued the following announcement [4]:

> The Sector for the Promotion of Science will award a prize in 1933 to the most important scientific research works, and it has in mind, in particular, to discuss the work of agronomist Lysenko, tied to the vernalization of the crops [...]. Since neither Lysenko, nor other scientific research organs have proposed his

> works to compete for the award, we have decided to ask the most competent comrades about the importance of those researches, and in case of high positive ratings, to put before, in the Commission Premium KSU [5], the question of the prize destined to Lysenko. Please send your opinions on this matter (Prezent cited in Volkov, 1997).

The response of Boris A. Keller, one of the leading specialists in the field of dynamical plant ecology, was fully supportive to the request:

> Dear comrade Prezent! I very welcome the idea of awarding T. D. Lysenko for his scientific research. His work really deserves this. Find enclose a brief recommendation. If more detailed remarks are needed, I can compose them right now, with the participation of leading specialists. [...] In late April, I will travel to a meeting at the Uzbekistan Academy of Sciences, and then to an expedition. Is it possible to speed up the case? I send you sincere regards (Keller, cited in Volkov, 1997).

Vavilov, at that time the director of the Lenin All-Union Academy of Agricultural Sciences (VASKhNIL [6]), also responded positively, and was even more fulsome in his support:

> I propose as a candidate for our prize of 1933 the agronomist T. D. Lysenko. His work which is called vernalization of plants is without doubt over the last decades, the major achievement in the field of plant physiology and its related disciplines. For the first time, with an exceptional depth and breadth, comrade Lysenko has been able to find the way to master the control of plants. To understand the phase (stage) shifts of the plants, transforming winter plants, into spring plants [...]. His discovery is of primary importance because it opens up a new and accessible field of research. Certainly, on the work of Lysenko, resides the development of the entire branch of plant physiology; his discovery opens the possibility of using the world's range of plants for hybridization, promoting them in the more northern areas. Both the theoretical and the practical aspects of the discovery made by Lysenko, even in this phase display an extraordinary potential, and we should consider Lysenko one of the first contenders for the award in 1933. If more data are needed, they can be provided by myself. Academic N. Vavilov (Vavilov, cited in Volkov).

Why did this nomination come from Prezent? Who was he and how did he come to confer his patronage upon Lysenko?

THE CONVERGENCE OF LYSENKO AND PREZENT

The son of a Ukrainian peasant family, Trofim D. Lysenko (1898-1976) had learned to read and write when he was thirteen years old. In 1913, after a two-class village school, he entered the Lower Institute of Horticulture in Poltava. In 1921, he graduated in gardening from the Uman Town High

School [7], and worked side by side with the peasants (Graham, 1987). Unlike most Russian university personnel of the 1930s, Lysenko was not well educated and had no university background. He had never been passionate about philosophy, never joined public discussions about Dialectical Materialism and never developed his own political viewpoint before meeting Prezent. Lysenko was never a member of the Party, as Prezent had been since 1921. It was after their encounter that he began to familiarize himself with these matters, and take part in the debates over Marxism, science and society.

Generally considered a Soviet scientist, active especially in the fields of pedagogy and philosophy, Isaak Izrailevich Prezent (1902-1969) was a convinced Marxist. According to the biography that appears on the web archive of the Russian Academy of Science, Prezent was a biologist, although his higher educational background is unclear. Sources differ as to whether he attended law in the university, graduated in biology, or took a degree in social sciences in 1926, thereafter specializing in the philosophy of life sciences (Medvedev, 1969; Weiner, 1988; Krementsov, 1997; Birstein, 2001). In Soviet sources, biographical references are scarce and there are only two diplomas in the archives of the Russian Academy of Science: one received in Leningrad in 1925 as "doctor of science", and the certificate of professor dated 1948. What does seem certain is that Prezent had previously joined the section of Natural Sciences founded in 1919 by the Marxist Society (*Nauchnaya Obschestvo Marksistov*) giving lectures at the Russian State Pedagogical University A. I. Gerzen (*Rossijskij Gosudarstvennij Pedagogichevskij Universitet A. I. Gerzen*) in 1926 and 1927. In 1930, he was professor of "dialectics of nature and evolutionary studies" at the Leningrad State University, and became the closest collaborator of Lysenko in the propagation and dissemination of Experimental Michurinist Biology. The work of his department was to connect biology with Marxist Dialectic Materialism and to introduce the Party control in biology (Birstein, 2001). He was a scientific advisor for the Soviet Institute of Genetics and Selection in Odessa from 1935 to 1938, and the editor of the scientific journal *Iarovizatsiya* (*Vernalization*) published in Moscow and Odessa from 1935 to 1941. It seems that Prezent could be regarded as a philosopher of science who observed at first hand developments in experimental agronomy, as an academic affiliated to Lenin All-Union Academy of Agricultural Sciences of the Soviet Union since 1948 [8]. Highly intelligent and with a sharp mind (Pringle, 2008) he became simultaneously a professor of philosophy of nature; Darwinism and developmental biology, and the dean of the School of Soil Biology—a position he held until the 1950s—at the Moscow State University, named after M. V. Lomonosov, the most prestigious university in Russia [9].

Prezent was fairly productive; he published over forty articles focusing primarily on Darwinism, Historical Materialism and plant selection. It is difficult to ascertain what influence he had on the formation of Lysenko. Some historians consider that it was Lysenko who influenced Prezent. For example, we are told that Prezent was originally a Mendelian-Morganist and changed his mind only after making the acquaintance of Lysenko (Weiner, 1988, Medvedev, 1969). According to others, it was Prezent who was responsible for Lysenko's total ignorance of the principles of classical genetics (Krementsov, 1997; Birstein, 2001). Literally, he used to pride himself on not having read the latest research on genetics (Pringle, 2008). Whatever the truth on the matter, Lysenko was not openly anti-Mendelian when he first met Prezent. It was only after their partnership was established that both embarked upon their denunciation of genetics (Medvedev, 1969).

For his part, Prezent admitted that it was his good fortune to have met Lysenko in 1934, when they both realized that they needed each other. The two had met for the first time in 1929, at the Congress of Geneticists and Breeders, and again in Odessa in 1934, when Lysenko had been appointed to the chair of the Institute of Genetics and Breeding. A few years later Prezent became a close associate of the "main Michurinists" and the ideologue of the theory (Joravskij, 1970). From this time the speeches of Lysenko acquired a self-celebratory tone that had been absent before.

It seems that Lysenko admired Prezent not only for his intellectual but for his practical abilities. Around 1935, Lysenko began to introduce Marxist dialectics into his pronouncements on agronomy and, more broadly, to biology. He began also display signs of developing a cult of his own personality.

It is most likely that Lysenko had less influence on Prezent than Prezent had on him. Lysenko was aware of his weakness in theoretical biology and admitted several times that he had been helped by Prezent in making good this deficiency, especially, in relation to Darwinism and genetics. As Pringle wrote, when they first met in 1929, "Lysenko asked Prezent who Darwin was and when he could meet him" (2008: 177). Stalin also contributed in no small way to the "education" of Lysenko: "Stalin wrote memos, held meetings, and offered editorial comments in order to support attacks against Mendelian genetics" (Pollock, 2006: 1). Stalin was much more eager to join the academic world than has been acknowledged in the literature, that describes him primarily as a megalomaniac, interested only on utilizing the cultural debates in order to consolidate his political power; "[...] archives reveal that he was determined—at times even desperate—to show the scientific basis of Soviet Marxism" (Pollock, 2006: 3). It was in this way that opposing the authority of Lysenko and Prezent became equivalent to challenging the status of Dialectical Materialism and of the Soviet

government (Esakov, 1994). As Birstein has pointed out, biology was more vulnerable to the Party interference than other scientific disciplines. This may happened because, to the layman, biology did not seem to require as much training as, say, physics and it was sufficient to have read Engels' *Dialectics of Nature* and to know something of the theory of Darwin to be familiar with its principles. Although neither Prezent and Stalin had studied biology, they participated in debates and discussions with experts (Birstein, 2001).

A very interesting picture, and perhaps the fullest one, of Prezent is provided by Douglas Weiner in his book, *Models of Nature*, where the author deals with the history of environmental movements and the protection of nature in Russia during the first half of the twentieth century. According to Weiner, Prezent played a central role in the suppression of ecological conservation. As Weiner writes: "What may come as an even greater revelation is that ecology, and not genetics, was Prezent's first target in his campaign for a proletarian biology" (Weiner, 1988: 129). The intervention of Prezent into the field of genetics began when he joined the All-Union Institute of Plant Breeding (*Vsesoyuznyj institut rastenievodstva*), upon the recommendation of Vavilov, although their friendship soon ended and Prezent left the institute (Weiner, 1988). At this time, Prezent was a supporter of the Mendelian and Morganist theories attacking, together with the Deborinites [10], neo-Lamarckism (Weiner, 1988). He had already created a formidable reputation as a leading arbiter in biology several years before Lysenko and Vavilov met.

The information we have on Prezent is sparse, yet every historian who has enquired into his political role in Soviet culture has concluded that every field of study that Prezent touched upon, he ruined. Prezent was frequently cold-shouldered for his disruptive behavior. One example was when he transferred his interests from ecology to biology. During a lecture by professor Vladimir V. Stanchinskij at the Fourth Congress of Zoologists, in 1930, he emerged as a critic of biocenology, expressing doubts about ecology's right to call itself a science (Weiner, 1988). Stanchinskij, who was a leading figure in ecology and zoology, replied curtly and paid no attention to Prezent's criticism. Nevertheless Prezent's intervention had a great impact on the congress since he had extended his power base to the Communist Academy. "The shadow of Prezent was moving rapidly across Soviet biology. Natural science education had already been darkened by it, and now it was poised to eclipse the young and vital field of community ecology" (Weiner, 1988: 133). Lysenko was suitable for Prezent, easily "brain washed" for Prezent's objective to dominate Soviet biology. In 1933, three years after Stanchinskij's lecture, Prezent who had not forgotten his humiliation, went with Lysenko to Aksanya Nova, a nature reserve where ecologists conducted complex research on the ecosystem, to investigate

the work of its director, Stanchinskij. In 1934, the director was arrested. He was released only two years later. In 1941 Stanchinskii was again arrested, and this time accused of being socially "harmful" (Birstein, 2001).

THE BATTLE FOR THE TRUTH: ACADEMY SESSIONS

Prezent was a "destroyer" who was able gradually to curry favor with Stalin. Even so, not all the scientists involved in the battle for the freedom of scientific research stood by and watched.

The Soviet geneticist Alexander A. Malinovskij, the only son of the old Bolshevik, philosopher, economist and pioneer in exchange blood transfusion, Alexander A. Bogdanov, graduated in medicine in 1931, working in the field of psychiatric genetics. From 1931 to 1948, the period of the establishment of Lysenko's dictatorship, he was a researcher at the Institute of Experimental Biology, Cytology, Histology and Embryology of the Soviet Academy of Science. Nikolaj K. Kol'tsov, under whose supervision Malinovskij worked in the laboratory, had been arrested and condemned in 1920, due to his past as a *Cadet*. Luckily, Kol'tsov was able to avoid his sentence thanks to direct intercession of Maxim Gor'kij, who was close to Lenin. Once acquitted, Kol'tsov became the director of the Institute of Cytogenetics and he was the first biologist to develop, in 1927, the revolutionary concept of the gene "as a giant protein molecule which can be reproduced by a template mechanism—a concept that linked genetics with biochemistry [11]" (Medvedev, 1979: 19). Along the same lines of the research of Max Delbrük and Paul Dirac, Kol'tsov made an original contribution to the study of the replication of molecules on the basis of innovative physico-chemical models of chromosomes and genes (Timofeev-Resovsky, 1980).

Malinovskij grew up professionally in the environment of an open and lively laboratory where he could focus on the study of the inner functional correlations of the organism and on comparative anatomy. In 1935, he became associate professor in biological sciences, analyzing negative and positive connections in relation to the capability of the organism to regain equilibrium. Malinovskij obtained worthwhile experimental results, in both biology and medicine, by using a highly original cybernetic approach based on his view of the organism as a whole (Babkov, Sadovskij, 2000). As Babkov and Sadovskij have shown, the emphasis on the concept of "organization" in open biological systems was very close to the theories that the leading biologist Ivan I. Shmal'hausen had conceived during those years. However, the Section of Human Genetics of the Kol'tsov's Institute and the Section of Genetics directed by Serghej S. Chetverikov, founder of experimental and population genetics were both dismissed

during this period, and Chetverikov was arrested and deported to a remote corner of the Urals [12].

As a member of an "evolutionist" research team working on population and developmental genetics, Malinovskij spoke against Lysenko and Prezent in the controversy over the importance of genetics, Darwinism and natural selection.

Between 1935 and 1936, the great scientific debates chaired by Stalin and known as the "Academy Sessions" took place. They provided the platform for the contraposition of the differing views regarding genetics and the control of heredity that later crystallized into an opposition between two schools, Geneticists and Lamarckists. Paradoxically, only five years earlier, Prezent and Lysenko had actively supported the very concepts of genetics against which they later battled so vigorously, asserting the affinities between Marxism and Morganism (Medvedev, 1969).

For the two founders of the new official biology, the supporters of Lamarckism were such Materialists and Darwinists as Ilya I. Metchnikoff, Kliment A. Timirijazev and Vladimir O. Kovalevskij who had accepted the importance of Darwinian theory and endeavored to develop his thought in a number of directions. This school was headed by academician Lysenko. The school of Geneticists consisted in pupils of the reactionary and idealistic Darwinians—Morgan, Weismann and the Mendelists in general—who had smothered and distorted Darwin's scientific insights (Lecourt, 1977). According to Lysenko and Prezent, the Soviet followers of this current were, in particular, Schmal'hausen, Kol'tsov, Anton R. Zhebrak, Nikolaj P. Dubinin, A. S. Serebrovskij, and Mihail S. Navashin [13]. One of the main attacks of Prezent and Lysenko was directed against Kol'tsov and Schmal'hausen on the grounds that neither had anything in common with Dialectical Materialism. Prezent argued that Schmal'hausen's theory on the factors of evolution was pseudoscientific, and that Kol'tsov's theory of heredity was based on idealistic Weismannist assumptions (Birstein, 2001).

The "Academy Sessions" culminated with the sixth session held at the VASChNIL in December 1936. On that occasion, Kol'tsov and Malinovskij argued the case for genetics, while on the other side was represented by Lysenko and his promoter, Prezent. "The geneticists did not surrender, even at the end of the meeting, when the hall had turned into a theater where the Lysenkoist party delivered its agitprop show in the middle of the crowd" (Babkov, Sadovskij, 2000: 9). In view of the "scandal" that had occurred during the plenary session, Lysenko and Prezent canceled the seventh international congress that was to be dedicated to the achievements of Russian genetics, planned for August 1937 in Moscow. When the Soviet government proposed moving the date to 1938, the international

committee disagreed, and rescheduled the congress for Edinburgh in 1939.

The controversies continued until 1939, when the main discussions focused on the immutability of gene and the real importance of Lysenko's procedures as an alternative to genetics. As Prezent said in that occasion, the practices devised by Lysenko ushered in a new era in the development of biology as a science: "these works pursued the thread of Darwin's work to new levels of progress" (Prezent, 1939: 3).

Babkov and Sadovskij wrote that in 1948, almost ten years later, in the first of a three volume publication issued from the Institute of Cytology, Histology and Embryology, Malinovskij provided an explanation of the constitution of species that was based strictly upon Darwin, and in the second and third volumes, the geneticist Iosif A. Rapoport explained the chemical basis of mutagenesis. The book, they wrote, had an unfortunate fate. It ended with a critical review of the work of Lysenko and Prezent. As a consequence, later in the year, Malinovskij was expelled from the party and distribution of the book was quickly halted [14]. Lysenko also tried frantically to oppose the publication of the physicist Shrödinger's *What Is Life?*, which had been translated into Russian by Malinovskij the previous year [15]. During the notorious Academy Session of 1948, Lysenko raged against the translator, denouncing Malinovsky and Shrödinger as supporters of Idealism [16].

As a Bolshevik and a fighter by nature, Malinovskij had always participated actively in all of the meetings organized by Lysenko (Mirzojan, 2009). He was one of the founders of the field of systems research. In 1949, he began working on the book *Issues of Cybernetics* (*Problemy kibernetiki*) that was published in a short version only in 1960 (Babkov, Sadovskij, 2000). His later interests in cybernetics applied to evolutionary biology, embryology and genetics, remind us of another committed adversary of Lysenko, Ivan I. Schmal'hausen, especially in his active defense of genetics. The two scientists cooperated on more than one front. Schmal'hausen had several battles with Lysenko; in 1947 they openly clashed during a meeting at the Lomonosov University where Schmal'hausen was head of the Department of Darwinism (Pollock, 2006). As the leading Soviet biologist of his time, he represented, in 1948, a special danger to Lysenko at the beginning of his career. Schmal'hausen was acquainted with Malinovskj and kept him informed on his research in cybernetics. Malinovskij, for his part, regarded Schmal'hausen, together with Kol'tsov, as his mentor (Klebaner, 2009). In their view, biological correlations were better understood using terminology adopted from cybernetics. One of the main topics which preoccupied Malinovskij throughout his life was the role of positive feed-back in biological systems which is important in two instances: in indicating certain pathologies, and the relationship between the develop-

mental history (ontogeny) of an organism and its evolutionary development (phylogeny) (Bagotskij, 2009).

During the plenary session of the Academy Sessions of August 1948, Lysenko argued that the key notion of Darwinism was the theory of natural and artificial selection by adaptation. In his view, "with his theory of selection, Darwin has given a rational explanation of the adaptation of living nature, thus generalizing the results obtained empirically over centuries by agriculturalists and breeders. Agricultural practice, explained Lysenko, served Darwin as the material basis for the elaboration of his theory of evolution" (Lecourt, 1977: 27). Furthermore, natural selection had come to be regarded, together with the discovery of the cell and the transformation of energy, as one of the most noteworthy achievements in science. However, Darwin had committed a number of errors in the elaboration of his theory, errors that were due mainly to the inappropriate application of the reactionary theory of Malthus (Lecourt, 1977). As Lecourt has shown, Lysenko was able to invoke the authority of Engels in order to justify his disapproval of those aspects of Darwinism that he chose not to accept. He argue in front of a large audience that "the entire Darwinian teaching on the struggle for existence merely transfers from society to the realm of living nature Hobbes' teaching on *bellum omnium contra omnes* and the bourgeois economic teaching on competition, along with the population theory of Malthus" (Lecourt, 1977: 28).

All the arguments advocated by Lysenko during the session had been formulated in collaboration with Prezent, his most devoted supporter and principal ideologist. Prezent's speech was shorter than that of Lysenko, and they were the principle speakers of the session. According to Krementsov, "Prezent was the one primarily responsible for giving Lysenko the language he needed to present his theories as Marxist science" (Krementsov, 1997; DeJong-Lambert, 2012).

One noteworthy event that took place during the Academy session was that Prezent was almost silenced by the geneticist Rapoport. He had learned about the meeting at VASKhIL by chance and at the last moment. With some difficulty, he managed to gain admittance to the building and was one of the very few who raised a dissenting voice. Rapoport defended the status of genetics as science (Manevich, cited in Kojevnikov, 2004) and argued that a correct and general knowledge of the work of foreign scientists (some of whom worked in the Soviet Union and were active in genetics and cytogenetics research in its laboratories) could only benefit the development of science. The Lamarckism advocated by Lysenko, Rapoport insisted, was not only an old theory, it was also incorrect and experimentally flawed. The most important thing was that not only Soviet chemistry and Soviet physics, but biology, too, should acquire high international prestige (Esakov, 2004).

After Prezent was appointed chair of the Department of Darwinism in Moscow University in 1948, all serious scientists were replaced by Lysenkoists (Birstein, 2001). In a short time, Lysenko and Prezent reduced the VASKhNIL to ruins. The main body of academics left the Academy of Agricultural Sciences, which became a refuge for charlatans (Esakov, 2004). Scientific workers who were considered to be 'sympathetic' to genetics were fired. The same measures were adopted in the institutes of the Academy of Sciences and of the USSR Academy of Medical Sciences, as well as the universities.

The slow decline in the influence of Prezent began in 1949, when the Ministry of Higher Education began to receive all sorts of complaints about his exercise as professor in the Department of Darwinism. Even so, it was 1969 before he was expelled from the Agricultural Academy. "Despite his importance in the Lysenko affair... [Prezent] has remained for us a drab, gray figure, reluctant to move out of history's shadows". Perhaps, Prezent's association with Lysenko was one of the Soviet's science most fateful partnerships, although one of the least understood (Weiner, 1988: 129). A few days after his dismissal Prezent died of cancer. He had spent the last years of his life avoiding encounters with people whom he had condemned to long periods of suffering.

NOTES

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2 This was true only in part when Stalin came to power and not all disciplines had the same status. For example, physicists were not to be distracted by political conferences and they were not required to attend seminars on the universal applicability of Dialectical Materialism. "Let them devote all their time to professional work"— Stalin suggested—and as a result "Soviet physics was much more successful then biology" (Medvedev, 1979: 46).

3 "Only later it would become obvious that this research had great agricultural value, producing many agricultural innovations, such as hybrid corn" (Graham, 1998: 19).

4 Prezent's announcement and the responses of Keller and Vavilov, cited in Volkov (1997), are to be found in the State Archive of the Russian Federation (GARF): F.P.-4737. Op. 2., D1514.

5 KSU is the acronym for *Komiccya sodejstviya uchenym*—the Commission for the Assistance to Scientists.

6 "Vsesoyuznaya akademiya sel'skohozyajstvennyh nauk imeni V. I. Lenina".

7 Now, "Umanskij natsional'nyj universitet" – Uman National University of Horticulture at the arboretum "Sofievka".

8 For a biography of Prezent' see the on-line Archive of the Russian Academy of Science http://www.arran.ru/?q=ru/pubpage&dir=8&pagenom=83

9 Many people admired Prezent. When he lectured on biology it was as if a whirlwind had burst into the room, charging all of the students with his energy. He was a great speaker and all of his students were enraptured by his lectures. However, to pass the exam was not so easy. Students never knew in advance what questions would be asked; he could ask any question he wished (Shenberg, 2006). Others hated Prezent. According to Esakov (1994), "the notorious Isaia Prezent, was repeatedly slapped when became the official philosopher of agricultural sciences and this was due to his insolent behavior." Birstein wrote in his book that Prezent had a bad reputation among students. He preferred to invite female students to his house for the exam. Knowing this, male students used to accompany their female classmates and wait in the flat of the professor until the end of the exam (2008).

10 The Deborinites were the followers of Abram M. Deborin, a Marxist philosopher who first belonged to Bolshevism, and then switched to Menshevism. He left the Menshevik faction after the October Revolution and became the prominent figure of the "Dialecticians."

11 Kol'tsov represented this theory at the Zoologists' Union Congress, held in December 1927, in advance of experimental validation of the theory only several years later (Medvedev, 1979).

12 He was welcomed back to his place of birth, only in the 1955, by now quite old, blind and seriously sick (Medvedev, 1979; Babkov, Sadovskij, 2000).

13 In fact, some of these argued for the compatibility of Morganist and Lamarckist ideas and sought a reconciliation between the two points of view. By contrast, militant Morganists, like Dubinin, insisted on the absolute irreconcilability of Morganism and Lamarckism (Sheehan 1993). On the rise of genetics and the struggle with Lamarckism in the Soviet Union, see also Gaissinovitch, 1980.

14 Sadovskij and Babkov have not specified the title of the book. Perhaps it was because it entered the black list already before spreading up, and this could have prevented the circulation of the volume.

15 The title of the Russian translation was *Chto takoe zhizn' s tochki zreniya fisiki* (1947).

16 When Malinovskij was fired, his family was deprived of financial resources. But there is no doubt that the work undertaken by Malinovskij in the translation of Schrödinger's book, stood him in good stead, especially after the dismissal of Lysenko. Later, the vicepresident of the Russian Academy of Science and Nobel Prize winner, N. N. Semenov, invited Malinovskij into his office to serve as an advisor on biology. Malinovskij held this position from 1965 into the 1970s (Zholnerovich, et al., 2000).

BIBLIOGRAPHY

Babkov V.V., Sadovskij V.N. (2000), «Aleksandr Aleksandrovich Malinovskij (1909-1996): vekhi, zhizni i tvorchestva», in Malinovskij A.A., *Tektologiya. Teoria sistem. Teoreticheskaya biologiya*, Moskva: Editorial URSS.

Bagotskij S.V. (2009), «Stoletie so dnja rozhdenija Aleksandra Aleksandrovicha Malinovskogo», *Moskovskoe obshestvo ispytatelej prirody* http://www.moip.msu.ru/?p=210.

Birstein V. (2001), *The Perversion of Knowledge*, Cambridge MA: West View Press.

DeJong-Lambert W. (2012) *The Cold War Politics of Genetic Research*, Dordrecht, Heidelberg, London, New York: Springer.

Esakov V.D. (1994), «Novoe o sessij VASKHNIL», *Repressirovnaya nauka vyp II, SPB: Nauka*, pp: 57-75. (http://www.ihst.ru/projects/sohist/papers/esak94os.htm).

Fersman A.E. (1944), *Twenty-Five Years of Soviet Natural Science*, Moscow: Foreign Languages Publishing House.

Gaissinovitch A. E. (1980), «The origin of Soviet genetics and the struggle with Lamarckism», 1922-1929, *Journal of the History of Biology* 13, 1: 1-51.

Graham L. (1987), *Science, Philosophy and Human Behaviour in the Soviet Union*, New York: Columbia University Press.

Graham L. (1998), *What Have we Learned about Science and Technology from the Russian Experience?* Stanford: Stanford University Press.

Joravskij D. (1970), *The Lysenko Affair*, Chicago: The University of Chicago Press.

Klebaner V.S. (2009), «Stoletie so dnja rozhdenija Aleksandra Aleksandrovicha Malinovskogo», *Moskovskoe obshestvo ispytatelej prirody* (http://www.moip.msu.ru/?p=210)

Kojevnikov A. (2004), *Stalin's Great Science,* London: Imperial College Press.

Krementsov N. (1997), *Stalinist Science*, Princeton: Princeton University Press.

Lecourt D., (1977), *Proletarian Science? The Case of Lysenko*, London, New York: Verso Books.

Levina E. C. (1997), «Nekotorye Utochnenia» in Volkov V.A., «Esho raz o N.I. Vavilove i T.D. Lysenko. U istokov "Lysenkovshiny"», *Priroda*, n. 11. http://vivovoco.rsl.ru/VV/PAPERS/ECCE/LYSVAV.HTM.

Medvedev Zh. (1969), *The Rise and Fall of T. D. Lysenko*, New York: Columbia University Press.

Medvedev Zh. (1979), *Soviet Science*, Oxford: Oxford University

Mirzojan E.N. (2009), «Stoletie so dnja rozhdenija Aleksandra Aleksandrovicha Malinovskovo», *Moskovskoe obshestvo ispytatelej prirody* (http://www.moip.msu.ru/?p=210.)

Pollock E. (2006), *Stalin and the Soviet Science Wars*, Princeton: Princeton University Press.

Prezent I. I. (1939), *Zamechatel'niy novator Trofim Denisovich Lysenko*, Rostov: Knigoizd-vo.

Prezent I.I. (1986), (fond. 1593) //Archiv Akademii nauk CCCP. «Obozrenie Archivnich Materialov. T. VIII. Trudy Archiva». Eds., Levshin B.V., Moskovchenko N.Ya., *Hauka* – c. 86. *On-line Archive of Russian Academy of Science* http://www.arran.ru/?q=ru/pubpage&dir=8&pageno=83 http://www.tver-life.ru/news/61694.htm

Pringle P. (2008) *The Murder of Nikolai Vavilov*, New York, London, Toronto, Sidney: Simon & Schuster.

Sheehan H. (1993) *Marxism and the Philosophy of Science: A Critical History*, New Jersey: Humanities Press International.

Shenberg V. A. (2006), «Khranitelij Tradizij» *Sankt Peterburskij Universitet*, n. 22.

Schrödinger E. (1944), *What Is Life?*, Cambridge: Cambridge Univeristy Press.
Timofeev-Ressovsky N.V. (1980), «Genetics, evolution and theoretical biology and three props», *Piroda* 9.
Volkov V. A. (1997), «Esho raz o N.I. Vavilove i T.D. Lysenko. U istoko "Lysenkovshiny"», *Priroda*, n. 11.
http://vivovoco.rsl.ru/VV/PAPERS/ECCE/LYSVAV.HTM.
Vorob'ev V. (2012), *Progromschik genetiki*,
http://www.tverlife.ru/news/61694.html
Weiner D.R. (1988), *Models of Nature: Ecology, Conservation and Cultural Revolution in Soviet Russia,* Bloomington and Indianapolis: Indiana University Press.
Zholnerovich L.S., Zbandut N.C., Ivchenko L.P., Kopp O.P. (2000), «A.A. Malinovskij v Ukrainskom glaznyh boleznej i tkanevoj terapii imeni akademika V.P. Filatova (1951-1965)» in Malinovskij A.A., *Tektologiya. Teoria sistem. Teoreticheskaya biologiya*, Moskva: Editorial URSS.