

Logic and Ideologized Science Phenomenon (Case of the URSS)

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abstract. The paper analyses the reasons of negative attitude against logic in the USSR under ideologized science phenomenon and describe the process of deliberation of formal logic from Marxist-Leninist ideology.

Since very early years of Soviet Russia existence the phenomenon of ideologized science emerged. Under ideologized science we understand the process of transformation of science typical for every totalitarian regime which has the goal of establishing of novel science, adjusted to mastering ideology, the attempts of rehandling of existing scientific achievements in order to make them congenial to this ideology. Dominant ideology depress objective content of science and unprejudiced quest for truth succumbs the selection of some statements due to mentioned ideology and first if all those which provide it continuous triumph.

Recognition of social nature of science presupposes that society and its functioning has some impact upon academic activity, the style of scientific reasoning, the form of scientific results representation, or the goals of scientific quest. Nevertheless, this recognition do not contradict the claim that science develop to large extent autonomously placing its springheads 'inside' the body of science. Totalitarian regime prevents autonomous flux of science for the totalitarian values, playing central role in State existence (class - in Marxism-Leninism; religious - in fundamental Islam; racial - in Nazism), suppress natural academic stances.

Disbelief of new ideology adherents, pushing society toward revolutionary renewal, was shared in Russia not only by Marxists but, say, anarchists like Mikhail A. Bakunin or Peter A. Kropotkin who repel official, "State", bourgeois science objective content. Their hostility toward the political pluralism generated the

program of making novel - proletarian - science, capable of modernization of economics under the new business principles. New revolutionary society enchanted with the new ideology often doing its best to rebuild science according to new basic principles. Such attempts seldom happened to be successful. We can mention only psychological theory of Lev S. Vygotsky and Alexander R. Luria (see: [8], [13]) and relevant logic idea of I. Orlov (see: [4]) based upon certain Marxist aspirations which occurred to be weighty contribution to science). Usually ideological press leads to the radical politicization of scientific community, pulling out those scholars who try to oppose appetence of neophytes and making so called repressive science. At the surface remain those scholars who architect research as direct embodiment of new ideology and promises immediate practical results or breakthrough in science (T. Lysenko phenomenon).

Forcing supreme authority of one person ('leader') in all spheres of politics and science, the faith in collective reason of the 'Party', dogmatization of Marxist ideology, the only 'scientific world-view', the strengthening of political purges in the USSR lead to ideologized science phenomenon, seethed almost all fields of knowledge - mathematics, physics, biology, chemistry, not speaking of the Humanities. Academic style of reasoning and argumentation gave up the place to the political accusations often with direct political implications, arrests, and even purges. Nazi Germany pursued and eliminated Jews; after the World War II the relay of anti-Semitism was caught up by the USSR and only the death of Joseph Stalin safe Soviet Jews from the large-scale purges.

Notable by-product of ideologized science phenomenon was the goal to establish blighty authorities in all fields of research and, hence, the struggle with cosmopolitanism.

At late 1950-s this phenomenon passed off but some rudiments are still alive up to the date (like the reverence toward persons close or within State power and prescribing them with academic degrees).

On December 14, 1922 Central Committee of Russia's Communist Party (bolsheviks) issue the Decree related to the activity of Party cells at the Universities: the main goals declared were the training of 'red' specialists conquer Higher School for bourgeois scholar and bourgeois ideology still reigning there and even fights Marxist world-view. Many old Professors were ousted from their positions, Academic Councils were jolted, new Universities charters fixing leading role of Communists were adopted. At the first Academic Council of Kazan University in early March, 1923 Communists proposed to rename University by Vladimir I. Lenin (who was, by the way, alive). In August of 1922 the large group of most well-known Russia's scientists and scholars (about 200 persons) was expelled out of the country for West Europe on so called 'philosophical ships'. Soviet Russia began exporting natural resources, starting with most brilliant Russian minds. In 1923 Nadezhda K. Krupskaya, Lenin's spouse, banned from the libraries the writings of Plato, Kant, Schopenhauer, Vladimir Solov'ev, Nietzsche, Leo Tolstoy, etc. Dozens of years passes until classic writings got back their vested rights, Russian philosophers like Vl. Solov'ev only at late 1980's with 'perestroika era'.

Since autumn 1917, October upheaval, and to the late 1940 philosophical tradition in the USSR was crashed. The monolithic State ideology did not admit any standpoints which differed from the official one. Elementary logic was taught at Russia's schools before 1917 but the first steps toward the reconstruction of Secondary (school) education disabled logic from the school and University curriculums. For the Marxist ideology was based upon the dialectical, mainly Hegelian ideas, formal logic was treated as metaphysical heritage, alien to the revolutionary proletariat. A campaign against formal logic was officially launched (see: [1], [2], [11], [12], [Orlov, 1925]).

Formal logic laws considered contradictory to dialectics, formal logic study petrified and zoolith; materialistic dialectics shows invalidity of this formal logic standpoint. The law of contradiction ignores the fact that all sorts of evolvement presupposes contradiction; the law of excluded middle just inane.

The accusation of ignoring Marxist dialectics become the most pervasive in the ideological discussions in 1930's (see: [5], [9]). Soviet government insisted on purely practical goals of higher education; thus even at Moscow State University all departments of humanities were abolished. Logic was not taught for a decades. 'The logic of terror didn't leave any place for logic', as Alexander S. Karpenko described the situation in pre-War World II USSR ([7], p. 63). Logical investigations were conceivable only as purely mathematical; moreover, logic might survive under the mantle of mathematics in the milieu of orthodox Marxist-Leninist ideology. Thus, 1920's and 1930's were marked by original logical works by such officially treated persons as mathematicians as Andrey N. Kolmogorov, Valerii I. Glivenko, Moisei I. Schoenfinkel, Ivan I. Zhegalkin, Victor I. Shestakov, Dmitrii A. Bochvar.

The author of this paper in 1979 heard the narrative of one person (Georgii P. Shchedrovitsky) who in his turn heard the tale of Russian/Soviet philosopher and logician Valentin F. Asmus who, in late 1940 was awaked at night and taken to Soviet dictator Joseph Stalin. Stalin bewailed that his military commissioners have no experience in well-formed reasoning, and they should be taught logic (this story independently reiterated by Vladimir A. Smirnov [10]). By the way, almost all highest military commissioners (often with good military education) were purged and many killed during late 1930's and, hence, the new commissioners often lack good military training. Valentin F. Asmus in early 1930's was deeply engaged in fight against formal logic himself, but soon changed his mind and later did a lot to restore the logic as University major. His textbook on formal logic is among the first textbooks related to the formal logic published in the USSR.

Valentin F. Asmus hardly delivered only few lectures on logic to high military commissioners when the World War II began and commissioners were forced to fight still unable to proper reasoning. Nevertheless, the idea of logic as beneficent discipline preserved in Stalin's mind (being a theology seminar listener when he was young, Stalin was taught a bit of elementary logic). On his direct prescription on December 1946 Central Committee of the Communist Party approved the resolution concerning 'the teaching of logic and psychology at secondary schools'.

The content of this resolution is interesting enough to quote from it:

Teaching of logic and psychology at secondary schools

Central Committee of the Communist Party discussed the problem of teaching logic and psychology in secondary schools and acknowledged absolutely abnormal that logic and psychology are not taught at secondary schools.

Logic and psychology should be introduced as majors for senior students since 1947/48. Logic and psychology should be taught by mighty and skilled teachers with special base training. These majors should be introduced at 200 schools in most populated cities like Moscow, Leningrad, Gorky, Saratov, Sverdlovsk, Kuibyshev, Novosibirsk, etc.;

Ministry of Higher Education of the USSR and Ministries of Education of Allied republics must organize at the Universities and Pedagogical Institutes lecturers training in order to 1950/51 totally assure secondary school with experienced teachers;

Institute of Philosophy of the Academy of Sciences of the USSR should publish until March 1, 1947 the textbook for the Universities and until July 1, 1947 the popular textbook for the secondary schools.

Institute of Philosophy of the Academy of Sciences of the USSR and Academy of Pedagogical Sciences of Russian Federation until October 1947 should expand post-graduated students (students, working on PhD Thesis, 'aspirantura' - V. B.):

on logic up to 50 persons.

Some State newspapers instantly began to praise logic for it provides well-formed and orderly thinking, impede fallacies in argumentation, make justification more solid. Logic is a good gymnastic for mind. Central Committee of the Communist Party resolution should be promptly implemented and fill the lacuna in people's education.

Logic and psychology departments were opened at the number of Universities (as the matter of fact they existed for pretty short period). Textbooks on logic were published, first even pre-revolutionary (1917) as well as foreign works on logic, like D. Hilbert, W. Ackermann. 'Grundzüge der theoretischen Logik' (1947), C. Serrus. 'Essai sur la signification de la logique' (1948), A. Tarsky 'Introduction to Logic and to the Methodology of Deductive Sciences' (1948), etc. All these works were supplemented with extensive Prefaces where the Editors, say, Sophia A. Yanovskaya (see: [3]) stressed that publications of books on formal logic enables Soviet philosophers to study the works of their ideological enemies, that enemies should be known 'by face', and these works demonstrate the superiority of dialectical materialism.

Despite Central Committee of the Soviet Communist Party resolution Bela Fogarasi, President of Hungarian Academy of Sciences, in Russian language edition of his textbook claimed that 'dialectical logic relates to formal logic as higher mathematics to elementary one', 'Aristotelian logic lays solid foundation under

the idealism' ([6], p. 45, 116). Moreover, 'the results of Skolem, Goedel, Church, etc.: show that axiomatic theory, being closed system, *could not resolve contradictions in mathematics*. The reason might be revealed only by materialistic dialectics which disclose the relationship between mathematics and reality' ([6], p. 100-101). In first edition Hungarian edition of this textbook (1951) Bela Fogarasi argued that 'logic reflects class struggle'. In the revised and expanded Hungarian edition of his textbook (remained unpublished) Bela Fogarasi blamed logicians not only with metaphysical thinking but with support of Hungarian counterrevolution and Imre Nagy though dialectics were always with Communist Party (facts about Hungarian logic was passed to the author by Professor Katalin Havas).

Central Committee of the Soviet Communist Party resolution almost forgotten soon after its appearance (with Stalin still alive!) played a great role in the liberation of thinking from the orthodox and rigid Marxism. Logic opened the horizons of studies beyond the reigning ideology. This resolution was even more important for the Humanities (including logic) thought than mere deliverance of logical and psychological research: it made legitimized intellectual niches free of any ideological injections and opened vast areas of science neutral to the Marxist-Leninist ideology and political environment. In the USSR and the rest totalitarian countries we observe the action of certain 'compensation principle': the lack of political freedom and freedom in social studies was recovered by brilliant minds flow into ideologically neutral fields of science where research sometimes even exceeded the worldwide level. Especially this statement has value towards mathematics (mathematical logic included).

Central Committee of the Soviet Communist Party resolution finally has impact for any Soviet bloc country - Poland, Hungary, German Democratic Republic, Romania, etc. This resolution made its contribution to the development of sciences and philosophical research to large extent or absolutely free of Marxist-Leninist ideology.

Several prominent Soviet scholars (Valentin F. Asmus, Pavel S. Popov, Igor S. Narsky) did their best to prove that formal logic and its laws do not contradict materialistic dialectics. Surely, these works we known to East European philosophers and scientist, and they made profit of these ideas. Sandor Szalai, influential Hungarian scholar published in one of leading magazines 'Magyar Tudomány' in 1957 about the seminar on mathematical logic at Moscow State University under the guidance of Sophia A. Yanovskaya, Communist Party member since pre-October 1917 times who preserved his high authority within the Central Committee of the Soviet Communist Party members and about the standard University textbook in the USSR (published in 1956; editors Dmirii P. Gorsky and Peter V. Tavanets) which contained the elements of mathematical logic. Hostile milieu towards formal logic gradually dispersed.

A lot of East European students graduated from the Soviet Universities. Later they actively participated in the conferences held in the USSR and subsequent publications promoting the spread of formal logic ideas within their States. Some Soviet logicians were sent to the East European Universities to teach phi-

losophy and logic (like Eugenii K. Vojshvillo to Budapest University) and they brought unbiased attitude towards formal logic with themselves. Once logic was authorized it was impossible to ban it anymore. As Soviet experience show that despite logic was twice forbidden (after October 1917 upheaval and on the frontier of 1940's - 1950's) but didn't squelched. Anti-Semitism which have had adverse effect on Soviet mathematics was not so open and rabid in philosophy and logic.

For decades management of Soviet/Russian society was based upon the principal of patriarchal hostel where one worker doing all types of labor. Lenin's principle of lady-cook capable of govern the country still in use in nowadays New Independent States, and no wonder when War general suddenly commended to marshal an order in agriculture. This sort of governing competence surely negatively reflected upon science in the USSR or Russia but did not have any essentially negative effect upon logical education or research. Much more adverse effect upon Russian logical community furnish and still furnishing scarce fiscal funding.

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