

**HISTORY OF SCIENCE AND HIGHER  
EDUCATION****ZINĀTŅU UN AUGSTSKOLU VĒSTURE**

**XX CENTURY – THE AGE OF DECISIVE EVENTS AND TURNING POINTS FOR THE  
BALTIC STATES. HISTORY, SCIENCE, NATIONAL STATE**

**20. GADSIMTS – IZŠĶIROŠU NOTIKUMU UN PAGRIEZIENA PUNKTU LAIKMETS  
BALTIJAS VALSTU VĒSTURĒ. VĒSTURE, ZINĀTNE UN NACIONĀLA VALSTS**

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The article examines the historical path traced by the societies of Baltic countries in the XX century while developing their culture, science, and institutions of national state. The author of the research shows that national language, societal education and teaching systems, as well as fundamentals of statehood developed during the years of independent life (after the First World War), had a decisive role in determining national survivability problem while under Soviet occupation. The research data and their analysis indicate that Lithuanian Academy of Sciences provided (a) “a safe heaven” to work during the war years for surviving scientists, (b) created favorable conditions for raising a new generation of scientists, and (c) assisted the activities of “silently” blockading the so called *Soviet industrial colonialism*, whose secret aim was to build gigantic enterprises into which large streams of immigrants from Russia would be directed.

The article is based on the author’s research of recent years, which further expand the themes previously investigated in his books [1, 2] and articles [3, 4]. He also critically evaluates the deliberations of other authors that relate to his themes [5, 6]

At the beginning of the 20<sup>th</sup> century vital changes for the societies of Estonia, Latvia, Lithuania and Finland were initiated by matured collisions of societal life which were stimulated in their own way by the European movements for national self-determination and independence.

The impact of national liberation movements in Europe began to fundamentally affect the disposition and behavior of the public in the Baltic countries. The national organizations and various structures seeking sovereign governance began to appear rapidly. They, as it was later revealed, became the drivers of the national statehood. In 1907 two organizations appeared in Lithuania that had particular significance in the development of national science and education, and the political life of state. There I mean *The Lithuanian Learned Society* and *Lithuanian Art Society*. Before going any further several points of contention need explaining.

When the Empires after World War I were collapsing, the quest of national movements within the Baltic countries became the concrete objectives of national sovereign states. The movements of the early 20<sup>th</sup> Century were based on three cultural values of national rebirth and consolidation: **national language, ethnic tradition, and learning**. Concerning the last notion I must point out: there the “learning” is attainable through education and science.

Learning and erudition – in other words - the education, knowledge and scientific competence worked as the point of reference for creation of the institutions of national statehood. This implication sounds like that: the idea of **national state becomes a cherished value** for educated peoples.

Most importantly it means that the path founded upon four cultural values – *language, tradition, erudition and idea of national state* – was begun by perfectly educated people. In 1906-1907 a team of educated individuals established and developed the *Lithuanian Learned Society*.

I would like to remind you that the Act of Declaration of Independence of 1918 is with the signature of the *Lithuanian Learned Society* members. Also among the Society's members were three state presidents and two prime ministers.

Now while jumping ahead I remind you that in the end of the last decade of the 20th Century (two decades ago) during the collapse of the Soviet Empire the above mentioned four values became key factors in the liberation movement striving for the existence of the Baltic independent statehood. Then the erudite people guided by language and ethnic heritage permeating their cultural expression aroused the national Baltic peoples to take the first bold steps for liberation.

The national movements of Europe in the beginning of the 20<sup>th</sup> century, accelerating socialization and concurrent industrial expansion, prepared favorable conditions for maturing modern societies. Simultaneously, the requirements for active educational projects appeared, demanding universal literacy and education, which would be impossible without a state-wide educational system.

The founders of *Lithuanian Learned Society* understood that the objective of reaching national unity can occur only if they succeed in raising a society with strong intellectual potential. Thus it became apparent that education, erudition and science were in the centre of attention of *Lithuanian Learned Society*, which contemplated a national state. These goals were realized through the initiatives of its members: in 1922 the University of Lithuania was founded; a network of schools was actively developed, as well as the publishing of books, tutorials and manuals. The just mentioned initiatives accomplished a meaningful role, unifying the nation and preparing it for the contemporary tasks of modern times. History that followed confirmed the meaningfulness of such endeavors.

Furthermore, it became clear, that *the Lithuanian Learned Society* prepared competent state activists. They created not only the University of Lithuania and other schools, but most importantly, established a viable Lithuanian state which at least for two decades was capable to develop and preserve the economy, culture and citizenry.

We can thus assert that today the Baltic States have a great network of libraries, reading rooms, museums, schools, and theaters. They all operate like systems of arteries and nerves embracing various ethnic communities to meet their wishes, meaning that the above mentioned properties of life and culture are the heritage of our short independent history of the Baltic States.

In texts describing the historical experience of Lithuania connected with the activities of *the Lithuanian Learned Society* we can find the descriptions of facts that are of interest not only to Lithuanian public, but also to Baltic historians. Here, in our historical experience we can distinguish four periods of educational, scientific and organizational development work, directly connected with the historical establishment of the 20th century state, its development and its demise later. The beginning of all these stages experienced political and social upheavals with dramatic effects on society. They should be of interest to researchers of history of the three Baltic States, because of their common features.

The beginning of **the first** period starts with the first steps of *Lithuanian Learned Society*. **The second** period starts with the Declaration of Independence, together with the initiation of state functions and the reestablishment of the university. The beginning of **the third** period coincides with the occupation of Lithuania, Latvia and Estonia as well as events of war, when deliberate dismantling of independent statehoods began. **The fourth** period emerged during the collapse of Soviet Union. Let us talk more about each of them.

**The First Period.** It was the time of formation of frameworks for national activities, which laid the foundations for national state institutions, including the Academy of Science, which in the middle of the century became the unifying center for science. During the first period this was a significant supporting step that raised a nation oriented generation.

**The Second Period.** While founding and developing schools of higher education, the research institutions successfully created academic and scientific foundations. Native language also was

modernized and Lithuanian terminology was standardized. This normalizing and further improving of literary language, together with terminology for various activities, laid a firm foundation for verbal culture. All this input was effective later: during the years of occupation it became a particularly important instrument of self-defense.

Between World Wars there were no large scale in-country accomplishments of scientific research here. It could not have been otherwise, because scientists and lecturers in schools of higher education dedicated their intellectual prowess to organizational work: they were taken up by building of laboratories, research stations, educational faculties and departments, as well as administrative decision making. In Lithuania the core of the professorial and lecturer personnel virtually had to start from nothing. They had to write manuals, books, and instruct the people. Most important – they had to prepare and foster future scientists and educators. Between the wars natural resources of country were explored, original buildings had to be constructed and built; best students and graduates were sent to universities in Europe.

During World War I successive foreign occupations destroyed the emerging scientific perspectives. The society experienced great material and spiritual losses. During the time of the first occupation, as you know, educated and active members of the society were persecuted and exiled. When the Eastern front approached again, many of the best prepared intellectual workforce moved to Western Europe. The second Soviet occupation brought new waves of exile and terror, undercutting national intellectuals and destroying the principles of stable agricultural work.

During the **Third period** the Lithuanian society having suffered physical and moral attrition and persecution came into eye to eye contact with a particularly compulsive phenomenon which could be called *Soviet Industrial Colonialism* in the Baltic republics. Only then the meaning and value of the pre-war input of Lithuanian science became apparent and could be appreciated.

Now I would like to point out a meaningful fact for the audience of our Conference.

Historical experience and the remarkable lessons of the Soviet time initiated two important steps in research of the history of science and technology. It is necessary to say a few words on that.

**First:** only in 1952 thanks to the efforts of the distinguished Lithuanian scientist and talented organizer of science educators Paulius Slavenas it was possible to officially establish a framework for the research of the history of science – Committee for the History of Science and Technology incorporated in the Lithuanian Academy of Sciences. Here were laid down the foundations for research in history of science and philosophy, such a necessary full fledged organized activity. This was the organization which was determined to continue under the conditions of the occupation one of the *Lithuanian Learned Society* goals. The organization for research of the history and technology of Science, for tactical reasons, changed their name several times, thus adjusting itself to the situation created by the Soviet system. Now it is called *Lietuvos mokslo istorikų ir filosofų bendrija* (*Lithuanian Association of the History and Philosophy of Science*).

**Second:** In 1958 according to the agreement among scientific elite of Latvia, Estonia and Lithuania a tradition of Conference on History of Science in Baltic Republics was established. Its mission was to organize forums for historians of science utilizing joint forces available in the republics using the principle of rotation. The second intention of the Baltic forums was to discuss the research of history of science and technology, to initiate publications and to deal with other matters of mutual interest.

The table bellow contains summarized data, obtained from analysis of activities of *Lithuanian Academy of Science*. Here the role of the Academy of Sciences as an organizer and skillful strategist of science becomes apparent. The table shows the feature of Lithuanian historical experience. But I am sure, that the trends shown by these data, as universal model, should be of interest not only to Lithuanian historians but also to all Baltic historians.

PERIODS of behavioral changes of Lithuanian society having experienced coercion	PERIODS describing the character of science in Lithuania
<b>I. 1940-1944.</b> The loss of independence of the Baltic States and efforts to re-gain it.	<b>I. 1941-1945.</b> The establishment of Lithuanian Academy of Sciences during the years of war.
<b>II.1945-1952.</b> Terror, and Lithuanian armed resistance; efforts to find means of survival.	<b>II. 1945-1956.</b> Encouragement of applied research. <i>Formation of Lithuanian Association for the History of Science (1949-1952).</i>
<b>III.1953-1957.</b> Lithuanian society activating by adjusting to the regime. Appearance of cultural activity.	<b>III. 1957-1963.</b> Formation of direction for fundamental research. <i>Regular conferences of Baltic republics on the History of Science begin.</i>
<b>IV.1958-1967.</b> Changes in Lithuania. Disagreements emerge stimulated by <i>industrial colonialism</i> and political events.	<b>IV. 1964-1975.</b> Directives and declarations attempt to merge theory and practice.
<b>V. 1968-1984.</b> Culturally oriented society rejects dogmas; dissent rises.	<b>V. 1976-1988.</b> Intensive research; the qualification among researchers becomes more visible.
<b>VI.1985-1991.</b> New changes in activity direction. Baltic States liberalize themselves.	<b>VI.1989-1991.</b> Years of breakthrough change the principles of science organization.

The left side of the above table shows periods of changes in society's characteristics, which were shaped as a result of occupations, coercion and war time destructions. On the right side – periods depicting the changing nature of scientific activities of institutes (unified by systemic networking of Academy of Sciences). Here we could see the behavior of Lithuania's science under the conditions of dependence on coercive foreign system.

**The first** two periods as depicted in the respective parts of the table are very similar on both sides, because they are closely connected with the dramatic events of Lithuanian history. The Academy of Sciences – this organizing center of scientific research was established in January 16, 1941, i.e., five months before the act of violence (massive deportations) committed by the Soviets. During this period the significant changes occurred in Lithuanian science: its foundations were created, which after the loss of independence fruitfully contributed to the fostering of investigations in the Baltistics. Military and political events accelerated the appearance of four institutes of Lithuanistics. (Paradoxically, the destructive forces against civilization – war, occupation, destruction – in this case induced a creative action for establishing institutions which fostered self-defensive condition for national culture).

A noteworthy uplift for the Academy of Science occurred during the time when independence was lost. This fact stimulated an illusory hope to regain some autonomy. Lithuania's intellectual potential took a position of wait and saved strength, while avoiding showing full obedience.

**Second** period, as depicted in the table, though marked by acts of armed resistance as well as national destruction, can be characterized as a period for development of applied research (the first decade after the war). This was necessary in order to recover from wartime damage and for rehabilitation of economy. The institutional base was also reinforced by newly raised generation of specialists, thus filling in gaps of shortages within their ranks. These were important acts that countered the new substitutes sent-in from Moscow to fill these rarefied ranks, and spread their ideological mission. Soon began attacks against the national leaders aimed at its demise.

The subsequent three periods on both sides of the summary table (i.e. III, IV,V) bypass each other. That is understandable because the left side depicts specific Soviet-time societal condition, while the right side – that of Lithuanian Academy of Sciences, which by being a subordinate part of the centralized imperial system, reflected the policy of Soviet Academy of Sciences and its variations in accordance with Kremlin directives.

During the second post-war decade after demise of armed resistance, after dictator's death and weakening of active sovietization by dominance of Russian language signs of some autonomy appear in culture and administration. Inside this infrastructure the graduates of Lithuanian schools of higher education, which were fostered by teachers who still adhered to pre-war traditions, commenced their work. These facts as revealed by our further research had noticeable effect on hidden quest for autonomy.

Approximately in 1954 a new form of Lithuania's sovietization – already mentioned earlier as coercive *industrial colonialism*, initiating construction of new gigantic plants and opening convenient conditions for influx of immigrants, under the disguise of apparent demand for new specialists.

It is remarkable that graduates of Lithuania's schools of higher education (engineers, technologists, economists) began to modify and weaken the industrial coercion. They succeeded to spread uniformly throughout the territory the rapidly expanding industrial units thus slowing down their concentration. By this trick was blocked the industrial coercion, and was revealed a characteristic of the new generation of technocrats which appeared to hold a certain hidden intolerance for the system. This was a phenomenon that matured when society adjusted to the regime by choosing the path of compromise. Then the active quest for autonomy was quietly proclaimed: "We will make it without outsiders".

Summarizing my presentation I offer the following: The Lithuanian Academy of Sciences is the concrete result of an idea of Lithuanian Learned Society founded a century ago. The Academy is also a creation formed by events of the Soviet era, accomplishing scientific coordination and guidance functions. The Academy unfolds not only the path of Lithuanian science, but also the successes and failures of national culture.

In the end I would like to propose the conclusion: **historical experience contributed significant values to national culture, which should shape a rational program for Baltic future, and a strategy for action.**

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**Krikštopaitis J. A. 20. gadsimts - izšķirošu notikumu un pagrieziena punktu laikmets Baltijas valstu vēsturē. Vēsture, zinātne un nacionāla valsts**

*Rakstā aplūkots vēsturiskais ceļš, kuru Baltijas valstu sabiedrības gājušas 20. gadsimtā, kad attīstījās šo valstu kultūra, zinātne un nacionālo valstu institūcijas. Autors parāda, kā neatkarības gados (pēc I. Pasaules kara) attīstījās nacionālā valoda, kā tika veikta sabiedrības audzināšana un veidota mācību sistēma, kā arī valstiskums. Tam visam bija izšķiroša loma, lai nacionālā izdzīvošana būtu iespējama piecdesmit padomju okupācijas gados.*

*Pētījuma dati un to analīze liecina, ka Lietuvas ZA bija: a) „droša osta” izdzīvojušiem zinātniekiem kara laikā; b) jauno zinātnieku paaudzes veidošanas centrs, radot labvēlīgus nosacījumus; c) vieta, kur veidojās idejas padomju industriālā koloniālisma “klusajai” blokādei, kas palīdzēja bloķēt gigantisku uzņēmumu celtniecību un liela skaita imigrantu ieplūšanu Lietuvā no Krievijas. Pētījumā parādīta neatkarības idejas attīstība kopš 20. gadsimta sākuma, Lietuvas ZA loma tās saglabāšanā padomju laikā.*

**Krikštopaitis J. A. XX century – the age of decisive events and turning points for the Baltic States. History, science, national state.**

*The article reviews the historical path of the society of the Baltic countries during the 20th century – the time when culture, science and national institutions was in development in these countries. The author tells about the development of national language, education of society, establishment of educational system as well as statehood during the years of independence (after WWI). These were the decisive factors for national survival during the 50 years of the Soviet occupation.*

*The research data and their analysis prove that Lithuanian Academy of Sciences was ) a safe place for the scientists who survived during the war; b) the centre providing favourable environment for educating the new generation of scientists; c) the place giving birth to the initiative to „silently“ blockade the so called „Soviet industrial colonialism“, the aim of which was to build gigantic enterprises with big numbers of workforce brought from Russia.*

**Крикутопайтис Ю.А. XX век – эпоха решающих событий и поворотных пунктов в истории Прибалтийских государств. История, наука и национальное государство**

*В статье рассмотрен исторический путь, пройденный обществом Прибалтийских стран в XX веке, когда происходило становление культуры, науки и национальных государственных институций этих стран. Автор исследует, каким образом в годы независимости (после первой мировой войны) осуществлялось развитие языка, как осуществлялось воспитание общества и как была организована система образования, а также государственность. Все это имело огромное значение для того, чтобы нация могла выжить и перенести пятидесятилетнюю советскую оккупацию.*

*Полученные в ходе исследования данные свидетельствуют о том, что Академия наук Литвы была: а) „надежной гаванью” для выживших ученых во время войны; б) центром воспитания молодого поколения ученых, где для этого были созданы благоприятные условия; в) местом, где вырабатывались идеи „тихой” блокады советского индустриального колониализма, с помощью которых блокировалось строительство гигантских промышленных предприятий, а также блокировался приток большого количества иммигрантов из России в Литву. В статье освещается развитие идеи независимости с начала XX века и роль Академии наук в ее сохранении в период советской власти.*