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SCIENTIFIC CONTACTS BETWEEN LATVIA AND SCANDINAVIAN COUNTRIES IN 17—20 CENTURIES

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In the past, scientific centres of Latvia have been most closely linked with Germany and Russia, they frequently acted as a bond between these two countries.¹ Scientific community of Rīga and Mitau (Jelgava) consisted of a considerable part of German scientists and scholars the same as Dorpat (Tartu) University, which can be considered during the 19th century as the main scientific centre common for the three Baltic provinces of Russian Empire. Scientific contacts with Scandinavia (especially, with Sweden, partly with Denmark) were less pronounced; nevertheless, there existed some not negligible traditions in this respect². As the central part of Latvia — Livland belonged, during 17th century (1632—1721), to the Kingdom of Sweden, which accomplished an important mission in educating Latvians at that time, so intellectual contacts with this Northern country continued henceforth.

The famous Danish astronomer Tycho Brahe (1546—1601) had some contacts with Livonia, and planned to install his famous astronomical observatory in the island of Dahlen (Doles sala), near Rīga, in 1597.³

Swedish chemist Urban Hiaerne (1641—1724), who worked as a physician in Rīga, and his brother — the historian of Livonia, Th. Hiaerne (1638—70), should also be mentioned.⁴ The first Professor of Natural History in Academia Petrina (founded by the last duke of Courland Peter Biron in 1775) was Johann Jakob Ferber (1743—1790) from Karlskrona,

¹ Stradiņš, J. Etides par Latvijas zinātņu pagātņi. Zinātne, Rīga, 1982; Stradiņš, J. Die Deutschen in der Kulturgeschichte Lettlands unter besonderer Berücksichtigung der Wissenschaftsgeschichte. — In: Nordost-Archiv. Neue Folge. 1992. I, H. 1, 123—156.

² Stradiņš, J. Scientific contacts between Latvia and Scandinavian countries in the past. — In: Baltic and Nordic Symposium of the History of Science. Tallinn/Tartu, 21.—23. Apr. 1992. Summaries. S.I. S.a., 7—10.

³ For details see: Dreyer, J. L. E. Tycho Brahe. Karlsruhe; Stradiņš, J. Lielā zinātnes pasaule un mēs. Zinātne, Rīga, 1980.

⁴ Åberg, B. Urban Hiaerne — the first Swedish chemist. — Journ. Chem. Education, 1950, 27, 6, 334—337; Urban Hjærnes Själfbiografi. — In: Inbjudningsskeift till åhånande af den oifentliga föreläsning, med hvilken A.K. Phialén a. H. Schüze, 1916, 137—179 (about stay in Rīga see: pp. 149—152).

à pupil of C. Linné, J. Wallerius and A. Cronstedt.⁵ He wrote the first description of Courland from the viewpoint of a naturalist *Einige Anmerkungen zur physischen Erdbeschreibung von Kurland* (1784). A similar description of Livland has been edited by another pupil of Linné — amateur scientist from Riga, Jacob Benjamin Fischer (1731—1793). Johann Gebhard Koenig (1728—1785) became famous as a naturalist in the service of the King of Denmark.⁶ The well-known man of letters and outstanding representative of Enlightenment in Latvia, Gotthard Friedrich Stender (1714—1796), tried to start a scientific career (unsuccessfully!) at the court of the Danish King in 1763—1765.⁷ The chemist Theodor v. Grotthuss (1785—1822) had corresponded with J. J. Berzelius in Stockholm.

Certain scientific links with Sweden (and to a minor extent — with Denmark) had Riga Polytechnicum (Riga Polytechnical Institute), founded in 1862. A professorship in Chemistry in 1881—1887 was held by Wilhelm Ostwald (1853—1932), who later (1909) got a Nobel prize in Chemistry for his work in catalysis and investigation of chemical equilibria and rates of reactions (these investigations were started in Dorpat and Riga).⁸ Ostwald worked in close contact with the young Swedish scientist Svante Arrhenius (1859—1927), who arrived in Riga in 1886 to investigate in Ostwald's laboratory problems of chemical kinetics and the theory of solutions. The basic principles of the new theory of electrolytic dissociation (free ions) have been discussed in Riga as well.⁹ Later Arrhenius kept scientific contacts with Paul Walden (1863—1957), who continued Ostwald's traditions in the field of Physical Chemistry in Riga. The correspondence between both scientists, as well as a reference of Arrhenius concerning the nomination of Walden's candidature for Nobel prize in Chemistry (1914) are kept in the archives of Stockholm, at the Swedish Royal Academy of Sciences. Arrhenius has been elected Honorary Member of Riga Polytechnical Institute (1912), Paul Walden, in his turn, became Foreign Member of the Swedish Royal Academy of Sciences (1928) and Honorary Member of the Finnish Academy of Sciences (1932).¹⁰

After the proclamation of the independent Latvian Republic (November 18th, 1918) former Riga Polytechnical Institute — a high school profiling in Engineering and Agriculture was replaced by the University of Latvia in 1919, where Humanities and Social Sciences, Medicine, Natural Sciences and Theology were represented as well.¹¹ The new university united the majority of Latvian-born scientists dispersed earlier throughout the former

⁵ Stradiņš, J., Strods, H. Jelgavas Pētera akadēmija. Pirmās Latvijas augstskolas likteņgaitas. Zinātne, Rīga, 1975 (about J. J. Ferber see: pp. 178—194).

⁶ Грицкевич В. П. Врач, естествоиспытатель и путешественник Иоганн Гебхард Кёниг (1728—1785). — In: Из истории естествознания и техники Прибалтики, 1. Зинатне, Рига, 1968, 99—104.

⁷ Копелевич Ю. X., Ченакал В. Л. Готхард Фридрих Стендер и Петербургская Академия наук. — In: Из истории естествознания и техники Прибалтики, 1. Зинатне, Рига, 1968, 81—98; Stradiņš, J. Stenderi un "Augstas gudribas grāmata" latviešu kultūras vēsturē. — In: Stenders, G. F. Augstas gudribas grāmata no pasaules un dabas. 1796. g. izdev. teksts ar komentāriem. Liesma, Rīga, 1988, 9—43.

⁸ Страдынь Я. Рижский период деятельности Вильгельма Оствальда и становление классической физической химии. — Изв. АН Латв. ССР, 1979, 7, 33—44.

⁹ Körber, H. G. Aus dem wissenschaftlichen Briefwechsel Wilhelm Ostwalds. II Th. Briefwechsel mit Svante Arrhenius und Jacobus Hendrickus Van't Hoff. Akademie-Verlag, Berlin, 1969; Соловьев Ю. И. Сванте Аррениус, 1859—1927. Наука, Москва, 1990.

¹⁰ Страдынь Я. П., Соловьев Ю. И. Павел Иванович (Пауль) Вальден. Наука, Москва, 1988; Zott, R. Wilhelm Ostwald und Paul Walden in ihren Briefen. ERS-Verlag, Berlin, 1994.

¹¹ Stradiņš, J. Etīdes par Latvijas zinātņu pagātņi; Urban Hjārnes Själfbiografi; Latvijas Universitāte divdesmit gados 1919—1939, I, II. Rīga, 1939; Latvijas Universitāte 75. LU, Rīga, 1994. •

Russian Empire and foreign countries.¹² Now a lot of scientist from abroad were invited to work at the new university, among them some from Scandinavia, e. g. the anatomist and anthropologist Gaston Backman (1883—1964) from Sweden, entomologist Embrik Strand (1876—1947) from Norway.

Data concerning scientific contacts between Latvia and the Scandinavian countries during the period of independent Latvian State (1918—1940) have been gathered from the archives in Riga and analysed. During the period mentioned traditional contacts between Riga and Northern countries (universities and research centres) got closer than in the previous epoch. A trend manifested itself — to reorientate Latvia from former dominating contacts with Germany and Russia to more close collaboration with Scandinavia (mainly with Sweden).

G. Backman organized an anatomical theatre in Riga at the newly-founded Faculty of Medicine of the University, and started investigations on anthropology of Latvians¹³, which were later widely and successfully developed till 1944 by his pupil and co-worker, a Latvian anatomist Prof. Jēkabs Prīmanis (1892—1971).¹⁴

E. Strand, who formerly had investigated the fauna of Norway, edited in Latvian *Folia Zoologica et Hydrobiologica* and began (together with Viktors Ozoliņš) hydrobiological investigations of the Gulf of Riga and the Baltic Sea.

A relatively wide and broad collaboration began to develop with Swedish historians and theologians. An expert in the History of Arts and Culture, Tor Helge Kjellin, held professorship in Latvian University in 1929—31, before returning to his homeland as Director of the Museum in Karlstad.

Among the *honoris causa* doctors of the Latvian University were the King of Sweden Gustav V (1929), Professor of Forestry of Helsinki University Aimo Kaarlo Kajander (1935), Professor of Agriculture from Norway, Emil Korsmo (1933), Professor of the Helsinki Technical University Hjalmar Brotherus (1929), Swedish scientists Rihard Ekblom (1929), Hugo Hammar, Eugene Backman (brother of G. Backman, 1929), Sigurd Curman (1934), Johny Roosval (1929), Gustav Jakobson (1938), Robin Fähræus (1939), Arvid Odenrants (1939), Danish scientists Torvald Madsen (1933), Svend Lomhold (1937), Simon Brofeld from Helsinki University (1939) — about 15 scientists from Scandinavia.¹⁵ When on June 29, 1929, King Gustav V received his honorary doctorate in History, Rector of Latvian University emphasized the significance of the “good Swedish times” for Latvian history and culture.¹⁶ The appropriate materials have been searched and prepared for publication in *Latvijas Vēstures Instituta Žurnāls*.

Latvian Professors Janis Endzelīns (1932), Peteris Šmits (1927), Augusts Tentelis (1927), Martin Sihle (1927), Kārlis Kāspars (1932) have been promoted to *Doctor honoris causa* of the Uppsala University.¹⁷

Some Finnish and Swedish scientists (J. Mikkola, K. Krohn, S. Curman, S. Tunberg) have been elected Foreign Corresponding Members of

¹² Stradiņš, J. Latvieši zinātnē un zinātnē Latvijā. — *Atklājums* (Rīga), 1991, 2, 3—11.

¹³ Вискна А. А., Мауринь А. М. Гастон Бакман — анатом, антрополог, основоположник концепции органического времени. — In: Из истории естествознания и техники Прибалтики, 7. Зинатне, Рига, 1984, 181—184.

¹⁴ Lindberga, R. Jēkabs Prīmanis and Anthropological Studies Carried out at ... the University of Latvia during the Period 1920—1944. — In: *Acta Medico — Historica Rigensia*, II (XXI). Zinātnē, Rīga, 1994, 209—219.

¹⁵ Latvijas Universitāte divdesmit gados 1919—1939; LVVA 7427. f., 6. apr., 247. l., 448.—452. lp.; 409. l., 4., 5. lp.

¹⁶ Latvijas Valsts vēstures arhivs (LVVA), 7427. f., 6. apr., 245. l., 151., 152. lp.

¹⁷ LVVA, 7427. f., 6. apr., 3. l., 51. lp.; 13. apr., 447. l., 175. lp.

the Scientific Committee of the Riga Latvian Society (*Academia Scientiarum Latviensis S.R.L.*), founded in 1932 — the first, private Latvian Academy of Sciences.¹⁸

In 1920—40 serious attempts were made to bring Latvian science closer to Scandinavia in opposition to the former German orientation, to create a Scandobaltic scientific community. This trend manifested itself in the Conference of Baltic Archeologists (1930) and in the Congress of Historians of the Baltic-Sea Countries (1937), both held in Riga. The same concerns conferences of Baltic hydrologists, also regular conferences on Baltic—Scandinavian intellectual co-operation, held since 1935, as well as in the Conference of Physicians of the Baltic States and Finland (Helsinki, 1938). A pronounced activity in this field was demonstrated by the well-known Latvian archeologist Prof. Francis Balodis (1882—1947), Chairman of Latvian—Swedish Society, Corresponding Member of the Swedish Royal Academy of Literature, History and Antiquities. An invitation from Swedish State Antiquarian S. Curman in July 1940 gave F. Balodis an opportunity to leave Latvia after Soviet occupation.¹⁹

Among scientific study tours that of Latvian physicist Alfons Apinis to the Copenhagen Institute of Theoretical Physics headed by Niels Bohr, in 1936—37, should be noted especially. A. Apinis worked (together with V. F. Weisskopf) on problems of nuclear forces between heavy elementary particles (protons and neutrons) in the frame of the Fermi theory, as well as on superconductivity problems.²⁰ Mathematician Nikolajs Braza (Brauer) worked in Copenhagen together with Harald Bohr. There are numerous examples of the exchange of students, books etc. at that time.

Yet, such course of development of the scientific co-operation was interrupted by World War II. The epoch of Soviet domination in the Baltics was not favourable for contacts with Scandinavia. However, episodic contacts of the scientists of the Soviet Latvia with Sweden, especially in ecology, went on, also the co-operation, predominately in the field of natural sciences.

Some notable Latvian scientists in exile acted as professors in Sweden (Professors H. Skuja, A. Vegis, O. Mellis, L. Aboliņš in Uppsala University, Prof. Velta Ruke-Dravina in Stockholm). Prof. E. Kanavins worked in Norway. F. Balodis, A. Švabe, U. Germanis, H. Biezais, A. Aizsilnieks, A. Johansons continued their investigations in the history of Latvia, and edited monographs (in Latvian) on these topics in Sweden. From the younger generation of Latvian-born scientists the astronomer Dainis Darvins (Foreign Member of the Latvian Academy of Sciences), chemist Ivars Neretnieks from among several should be mentioned.

An organization of Latvian academic people in Sweden (*Latviešu akadēmiskā organizācija Zviedrijā, LAOZ*) has been founded in 1949 in Stockholm, mostly by the economist Arnolds Aizsilnieks and the architect Pauls Kundziņš, Member of the Gustav Adolf Academy.²¹ Since 1951 this organization has been the central academic organization for exile Latvians in Western Europe. It gives some support to academic science in the contemporary Latvia, e.g. Heinrichs Skuja Prize (in biology) and Arveds Švabe Prize (in history) have been founded with the aid of this organization by the Latvian Academy of Sciences.

Historical traditions build foundation for contemporary contacts, which progress remarkably. In June 1990 the first meeting of the Presi-

¹⁸ Stradiņš, J., Cebere, Dz. Rīgas latviešu biedrības Zinātņu Komitejas darbība — sasniegtais un nepaveiktais. 1932—1940. — Latvijas Vēstures Institūta Zurnāls, 1993, 3, 88—111.

¹⁹ LVVA, 7427. f., 13. apr., 123. l., 114. lp.

²⁰ LVVA, 7427. f., 13. apr., 66. l., 2., 7., 10., 12., 15., 55. lp.

²¹ Veigners, I. Latvieši Arzemēs. Latvijas Enciklopēdija, Rīga, 1993.

dents of the three Academies of Sciences of the Baltic Republics and Swedish Royal Academy of Sciences took place in Tallinn, where a special emphasis was on ecological problems.²² Since that collaboration has become more extensive. In 1992 the Science Council of Denmark has accomplished an international evaluation of science in Latvia²³, the results of which may lead to wider contacts between Latvia and the European (Northern) communities. The President of the Danish Royal Academy of Sciences, Henning Sørensen, has been elected Foreign Member of the Latvian Academy of Sciences in 1992.

In 1994 Danish Research Council established 20 grants for Latvian scientists (5000 US dollars each) in order to facilitate their work in Latvia for two years and so avoid brain drain from Latvia.

Although the scientific contacts of Latvia with Finno-scandic scientific community are not as close as those of Estonia, they play a considerable role in the contemporary and will also do so in the future development of science in this country.

²² Stradiņš, J. Baltijas valstu zinātņu akadēmiju vaditāju apspriede Tallinā. — Latv. ZA Vēstis, 1990, 11, 142—143.

²³ Latvian Research. An International Evaluation. Forskningsrådene. The Danish Research Councils. Copenhagen, December. 1992.

TEADUSKONTAKTID LÄTI JA SKANDINAAVIAMAAD E VAHEL

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Varasematel aegadel olid Lättil tihedad teaduskontaktid Saksa- ja Venemaaga. 16. sajandist on täheldatavad sidemed Skandinaaviamaadega, eeskätt Rootsiga. Näiteks olid 16.—18. sajandil läti teadlastel kontaktid taani astronoomi T. Brahega, rootsi keemiku ja meediku U. Hiaernega, rootsi loodusteadlase J.J.Ferberiga ja valgustaja G.F.Stenderiga. «Vana» Riia Polütehnilise Instituudi (1862—1919) professorid N. Ostwald ja P. Walden olid seotud kolleegidega Rootsist. 1886. aastal oli teadustööl Riias S. Arrhenius.

Kontaktid Skandinaaviamaadega elavnesid Läti iseseisvusaastail (1918—1940). Siis töötas Läti ülikoolis hulk norra ja rootsi professoreid. Läti ülikooli audoktoriks sai 15 Skandinaavia ja Soome teadlast, sealhulgas Rootsi kuningas Gustav V 1929. aastal. Samal ajal valiti läti teadlasi Uppsala ülikooli audoktoriteks. Lätis toimusid esinduslikud ajaloolaste konverentsid Skandinaaviamaade teadlaste osavõtul. Läti noored teadlased stažeerisid Skandinaavia teaduskeskustes, sealhulgas ka N. Bohri juures. Paljud läti haritlased ja ülikooli professorid leidsid 1944—1945 endale varjupaiga Rootsist.

НАУЧНЫЕ КОНТАКТЫ МЕЖДУ ЛАТВИЕЙ И СКАНДИНАВСКИМИ СТРАНАМИ

Ян СТРАДЫНЬ, Дзинтра ЦЕБЕРЕ

Ранее в научном плане Латвия была более тесно связана с Германией и Россией. Тем не менее научные контакты, хотя и эпизодические, Латвии со Скандинавскими странами, прежде всего со Швецией, прослеживаются начиная с XVI в. Так, в XVI—XVIII вв. латышские ученые имели контакты с датским астрономом Т. Браге,

шведским химиком и медиком У. Иерне, шведским естествоиспытателем И. Я. Фербером, а также с просветителем Г. Ф. Стендером. Из профессоров «старого» Рижского политехнического института (1862—1919) поддерживали связи со шведскими коллегами В. Оствальд и П. Вальден, а в 1886 г. С. Аррениус занимался научной деятельностью в Риге.

Латвийско-скандинавские связи особенно активизировались в период независимости Латвии (1918—1940), когда ряд профессоров шведского и норвежского происхождения работали в Латвийском университете. Пятнадцать ученых Скандинавских стран и Финляндии стали почетными докторами Латвийского университета (включая короля Швеции Густава V в 1929 г.), в свою очередь латышские ученые были избраны почетными докторами Упсалаского университета. Проводились представительные конференции историков с участием ученых Скандинавии. Молодые ученые Латвии стажировались в научных центрах Скандинавии, в том числе у Н. Бора. В 1944—1945 гг. немало интеллектуалов Латвии и профессоров Латвийского университета нашли пристанище в Швеции.