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THE ROLE OF THE DEUTSCHBALTEN IN THE CULTURAL AND ECONOMIC DEVELOPMENT OF RUSSIA’S BALTIC PROVINCES IN THE 19th CENTURY

Keywords: 19th century; Baltic Germans, Latvia, Estonia, culture, economy

The Russian Empire was a conglomerate of various lands, nations, cultures and religions. Among the nations living in Russia some were of high cultural and political standards who took much pride in their centuries-old history. What was of paramount importance was that they belonged to Western civilization, so no wonder they constituted an alien element in the Russian state. Above all, were the Baltic Germans and the Poles.

As far as the former were concerned, they inhabited the three Baltic Provinces: Kurland, Livland and Estland, encompassing almost all of present-day Estonia and Latvia. Baltic Germans living in these provinces took a dominant position in all spheres of life. The term „Baltic” came into use in the 1830s in connection with the preparation of the codification of local laws. In the 1860s, the local Germans began to be called Balts (Balten) or German Balts (Deutschbalten), but I have also employed the more modern term which spread gradually after 1918: Baltic Germans (die baltischen Deutschen). Besides, it will be borne in mind that the old terms, Estländer, Livländer and Kurländer, were being used at least until 1905.

In spite of their numerical paucity (about 180 000 or 10% of the population in the region in 1881), the Baltic Germans played an enormous role in the development of almost all spheres of public life. The Deutschbalten took a predominant position for instance in education, science and culture, and undoubted achievement was the promotion and development of elementary education on an unprecedented scale all over Russia. In Livland, the resolution of the Diet of 1765 on rural elementary schools was taken only two years later than in Prussia and their great development took place in the 19th century, notably in its second half. Thanks to this process, illiteracy was conquered in the Baltic lands as revealed in the table below (the figures concern 1897).

1 R. Wittram, Deutsch und baltisch, Baltische Monatsschrift (BM), Bd. 64: 1933, pp. 195–197.
2 W. Wachtsmuth, Von deutscher Schulpolitik und Schularbeit im baltischen Raum, von ihren Anfängen bis 1939, Deutsches Archiv für Landes- und Volksforschung, Jg. 7: 1943, H. 1/2, p. 49.
Table 1. Literacy Rates in the Baltic Provinces in 1897

<table>
<thead>
<tr>
<th>Province</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
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<tbody>
<tr>
<td>Estland</td>
<td>95%</td>
<td>97%</td>
<td>96%</td>
</tr>
<tr>
<td>Livland</td>
<td>92%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td>Kurland</td>
<td>86%</td>
<td>85,5%</td>
<td>85,5%</td>
</tr>
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The somewhat lower figures in the case of Kurland were occasioned by the fact that in the Illuxt district there were Orthodox as well as Catholic Belarusians, Old-Believer Great Russians and Poles, who of course were Catholics. In turn, in the towns of Kurland a major part of the population were Jews (the Baltic educational system in the countryside had a religious character). A large percentage of the influx of Russian residents could not write or read, e.g. in Riga there were 26,235 Russians, of whom 45% were illiterate. By comparison, out of the 47 other provinces of European Russia in 44 less than 40% of their population could write and read. Only St Petersburg (62%), Kovno (54%) and Moscow (49%) provinces had better results. It was conspicuous in the Baltic area that the literacy rate for women was equal to that for men, and in Estland was even a little higher, whereas in Russia proper this proportion was only one in two. All in all, the only all-Russian census of 1897 disclosed that just 21% of the total population were literate (men – 23%, women – 13%, townspeople – 45%, rural folk – 17%). As for other European countries, the data were: Sweden – 99,1%, Germany – 96,7%, Switzerland – 95,4%, Holland – 87,7%, France – 83,9%, Belgium – 75%, Austria – 52,4%, Italy – 48%, Hungary – 45,1%.

Let us pay attention to the number of schools in relation to the population. For example in Livland in 1886/1887, there was one school for every 920 inhabitants, an enormous achievement. By comparison, in Austria there was one school for 1200 inhabitants, in Holland for 945, in Sweden for 900 and in Prussia for 682 at that time. Regarding this ratio, both Livland and Estland had the best figures in the whole of the Russian Empire, while in Kurland there was one school for 1070 inhabitants at the time. What is more, in 1885 Livland, had the highest number

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3 И. Богданов, Грамотность и образование в дореволюционной России и в СССР: историко-статистические очерки, Москва 1964, p. 61.
4 Revaler Beobachter, Nr. 259 (November 7, 1886).
5 И. Богданов, оп.цит., p. 61.
8 F. von Jung-Stilling, Statistische Materialien zur Beleuchtung livländischer Bauer-Verhältnisse, St. Petersburg 1868, pp. 49–51.
9 С. Золотарев, О начальном образовании в Прибалтийском крае, Русская школа, Т. 15: 1904, но. 9, p. 168.
of rural schools – 1917 (Kiev province was second with 1424) and enrolment – 125 160 children (Samara province was second with 74 673 pupils)\(^{10}\).

The educational system was divided into three stages: obligatory learning at home under the supervision of a pastor, a three-year elementary school and thereafter every year repeat until confirmation. The medium of instruction was Latvian or Estonian. After leaving a district school (\textit{Gemeindeschule}), a small number of children attended a two-year „parish“ school. If the children did not go to school their parents had to pay fines which were, in turn, earmarked for purchasing textbooks for the poorest pupils\(^{11}\).

The schools were free, apart from the parish ones in Kurland. The maintenance cost of those in rural areas was borne by both landowners and the peasantry, the state did not participate. For instance, in Livland in 1887/1888, the nobility and villagers each covered 47% of these expenses, with other sources providing 6%. In Kurland in 1885, 24% of the costs were paid by the nobility\(^{12}\), who also gave plots and construction materials free for the erection of schools\(^{13}\).

The administration and supervision over this system was in the hands of Lutheran ministers and squires, so in general those of German nationality. In Kurland and Estland, rural elementary education was not even placed under the Ministry of Education until the 1880s\(^{14}\) and neither were most of the local seminaries (training colleges) – in Irmlau, Kürland; Kuda, Estland; and in Dorpat and Walk, Livland\(^{15}\). Incidentally, the first was founded in 1828, the original such institution in the whole of Russia\(^{16}\).

Apart from these rural elementary schools and seminaries, Orthodox ones existed, too, chiefly for the Latvian and Estonian Orthodox peasants. For example, in the late 1880s, 18% of Estonian rural schools in northern Livland and Estland were run by the Orthodox Church\(^{17}\). Nonetheless, it should be stressed that Orthodox education in the Baltic countryside had plenty of difficulties and was of poor standard, especially in comparison with Lutheran schools.

\(^{10}\) И. Аугскальна, Народное образование в Прибалтийском крае, Образование, Т. 8: 1899, но. 7–8, p. 90.

\(^{11}\) Latvijas PSR vēsture: no vissenākajiem laikiem lidz mūsu dienām, red. A. Drizulis, 1. sējums, Rīga 1986, p. 216.

\(^{12}\) A. Stryk, Der Einfluss des Deutschen auf die estnische Sprache, Wissenschaftliche Beihefte zur Zeitschrift des Allgemeinen Deutschen Sprachvereins, H. 48: 1933, pp. 20, 40.

\(^{13}\) Rigasches Kirchenblatt, Jg. 39 (September 26, 1886), p. 381.

\(^{14}\) F. von Jung-Stilling, Materialien zur Kenntnisse des evangelisch-lutherischen Landvolkschulwesens in Livland, Riga 1884, pp. X, XVIII.

\(^{15}\) И. Я. Рудченко, И. А. Янович, Земское устройство Прибалтийских губерний. Исследование законодательного современного положения земских повинностей, С.-Петербург 1890, pp. 443–444.

\(^{16}\) История Латвийской ССР, ред. Я. П. Крастьны, Т. 2, Рига 1954, р. 378.

\(^{17}\) Извлечение из всеподданнейшего отчёта министра народного просвещения за 1886 год, С.-Петербург 1891, pp. 236-237.
In the city, education through the medium of German prevailed almost everywhere until the late 1880s. There were state and private German schools, but the term „state” meant that both teachers and pupils had the same rights as their Russian equivalents. Baltic public schools on the whole were not maintained and administered by the state.

Most of the schools were German. For example, in Riga, there were 33 German and just two Russian, and not until 1884 did the first two such Latvian institutions come into being there\(^\text{18}\).

Obviously, the most important educational institutions were „high” schools – Gymnasien – of which there were twelve, using German of course, seven in Livland, three in Kurland and two in Estland. They were fashioned on the Prussian model, and the curriculum was similar with less Latin and more mathematics than in Russian „high” schools\(^\text{19}\). Some of the Gymnasien were very famous, notably the cathedral School (Domschule) in Reval, established in 1319 it was the oldest German school in Europe\(^\text{20}\). There were neither Latvian nor Estonian „high” schools and only three Russian: two in Riga and one in Reval.

It is worth noting that in the Baltic area, there were six schools for the deaf – all of them German (by comparison, in Finland there were six, in Warsaw one, in inner („Russian”) Russia 13, of which four were German, too)\(^\text{21}\).

Now, let us pay attention to higher education. In Dorpat, which was frequently called the „Athens on the Embach”, a university was founded (or rather refounded) on Baltic German initiative in 1802. Its formal name was Landesuniversität and it was fashioned on the German model. Although, it was placed under the Ministry of Education, no Russian university law concerned it until the 1890s. A specific law of 1865 guaranteeing autonomy to the seminary, regulated the status of Dorpat University. Its rector, deans and professors were chosen by the university board and confirmed by the Ministry of Education. The university had a judiciary of its own, exercised by an official called the Syndyk with students, lecturers and their families were under its jurisdiction. Special rights were guaranteed to German, the language of education as well as of business\(^\text{22}\). In Russia proper, the situation was different. In 1884, a new university law that markedly limited the autonomy of seminaries, was put into operation\(^\text{23}\).

The University of Dorpat was a large centre for the education of students of various nationalities. Aside from Baltic Germans–Polish, Lithuanian, Russian,

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\(^{19}\) *Vergangenheit und Gegenwart der Baltischen Provinzen Russlands*, Berlin 1896, p. 126.


\(^{21}\) *Rigasche Zeitung*, Nr. 112 (May 6, 1881).


Jewish, Armenian, and of course Latvian and Estonian students came to study here. There were two reasons for this. First, the high standard of education in at least some faculties, but most of all in medicine and pharmacy, those most readily taken up by students. Second, Dorpat University was, until Russification, a veritable island of freedom in a sea of reactionary policy towards the remaining Russian universities.

In spite its international mosaic, the student body was, by and large, of German character. The Polish, Lithuanian, Armenian and Russian students constituted closed groups, while the Latvians and Estonians gravitated to the Baltic Germans. At first, they more or less Germanised themselves although later this changed, but German traditions and language continued to be uppermost among them. Most student songs were performed in German until the outbreak of World War I and the German repertoire still dominated in the independent Estonian republic, at least until the 1920s\textsuperscript{24}.

The Deutschbalten were proud of their university, since it led to the development of science in Russia. The founders of Dorpat University set themselves the following tasks: it should serve not only the Baltic Provinces but connect Russia with the West as well and become a channel by means of which the knowledge and experience of Western Europe would penetrate Russia more easily. It would be a guide to Western culture throughout the Romanov Empire\textsuperscript{25}.

These goals were not groundless. Dorpat University played a paramount role for the Baltic region and Russia alike. It gloried in a number of world-renowned scientists, among whom was Friedrich Georg Wilhelm Struve, professor of astronomy at Dorpat in 1813–1838, whose publications included (in 1827) a catalogue of 3112 double and multiple stars, of which he had discovered 2343. Likewise, he published the most accurate tables of astronomical constants\textsuperscript{26}. Another famous Dorpat scientist was Karl Baer, creator of the modern embryology of animals. In 1828, he discovered the egg cell of mammals and Baer proved the similarity of the first developmental stages of vertebrates\textsuperscript{27}.

In the second half of the 19th c., one of the most noted faculties of Dorpat University was that of medicine and it was here that the number of students was largest from the 1870s on\textsuperscript{28}. Incidentally, the first university mental clinic in Russia came into being at this faculty\textsuperscript{29}. One can mention famous names here, too. Werner Zöge

\textsuperscript{29} История Тартуского университета. 1632–1982, ред. К. Сийливаск, Таллинн 1982, p. 117.
von Manteuffel, a surgeon performed pioneer operations on the kidneys and the heart, was instrumental in basic examinations in the field of the illnesses of blood vessels and gangrene, and performed many operations in field hospitals which gained him fame both in Russia and Europe. Few people nowadays remember that it was Zöge von Manteuffel who first applied rubber gloves during operations in 1902.

Of course, there were other noted scholars at the faculty of medicine. One of them was Alexander Schmidt who examined blood coagulation, discovering thrombin the main enzyme in the process. Another physician-scholar, Arthur Boettcher was known to the world by dint of his work on the development and structure of the labyrinth of the ear.

Now several words about Karl Schmidt, a world-renowned chemist, who devoted the first part of his scientific career to blood research. It was he who was the first to carry out blood analyses in great quantities, with the test results being generally accessible. Together with Friedrich Bidder, he issued Untersuchungen über den Stoffwechsel des Menschen which became a fundamental work on the subject. He discovered that sugar was a normal ingredient of blood which, in turn, was of over-riding importance for diabetes examinations. Likewise, Karl Schmidt discovered free hydrochloric acid in stomach juices and expounded the role of iron in the organism. His other area of scientific interest was soil composition. He conducted research into a large number of soil samples from both southern Russia and Dorpat which were, in fact, the first chemical analyses of soils in the world. In the field of pharmacology, Dorpat University was the centre for the whole of Russia and it was here that the overwhelming majority of Russian chemists were trained.

In the middle of the 19th c., a famous scientist from Germany, named Buchheim, installed the first laboratory of experimental pharmacology in the world (the next did not come into being until 20 years later). His manual became a fundamental text of modern pharmacology, while his successor, Alexander Dragendorff, raised...
the quality of training to a world standard. Preparations were sent to Dorpat from all over the world, from Yokohama, Detroit and St Petersburg. Likewise, chemists from the West came to prepare their dissertations at the University\textsuperscript{39}.

It was due to Dorpat University that various branches of science in the Baltic Provinces were created and developed. Karl Krause established the archaeology of the Baltic Provinces, and Walerian Russow was the founder of the region’s ornithology\textsuperscript{40}. August Oettingen started a network of precipitation stations, numbering 350, the best in Russia\textsuperscript{41}. Likewise, he was the first to conduct regional meteorological observations over an extended period\textsuperscript{42}.

Another higher education institution – Riga Polytechnic – was not only founded on Baltic German initiative but was also maintained locally. Incidentally, it was the only polytechnic in the Russian Empire until 1898 when other such institutions were started in Warsaw and Kiev. The idea of creating a polytechnic was generated in 1857 and found acceptance among the local merchant and industrial interests. The Riga Stock Exchange Committee drafted its statute so that it would have a private character\textsuperscript{43} and was maintained by Baltic society as well as by the state. In addition, the Germans bore the expenses of building the polytechnic\textsuperscript{44}.

In the 1880s, the Riga Polytechnic was the largest such institution in Europe. In 1885/1886, it numbered 856 students, whereas the Polytechnic of Zurich had 600, and the Polytechnic of Munich 400\textsuperscript{45}.

The Riga Polytechnic was world famous due to two chemists, Wilhelm Ostwald and Paul Walden. The former worked here in the years 1881–1887, invented several laboratory tools and laid down a number of significant theses in the field of electrochemistry. He published the world’s first textbook on physical chemistry and is regarded as its founder\textsuperscript{46}.

As for Paul Walden, he was a splendid example of a Latvian who rose in status and Germanised himself thoroughly while dissociating himself from his Latvian origin. He saw his spiritual home in Germany\textsuperscript{47}. He created the first centre for

\textsuperscript{39} Л. Еригсон, Преподавание истории в тартуском университете, Tartu Üikooli Ajuloo Kũsimu, 1975, no. 1, pp. 114–115.

\textsuperscript{40} Ibid., pp. 113; Биографический словарь деятелей и естествознания и техники, ред. А. А. Зворыкин, т. I, Москва 1958, p. 181.

\textsuperscript{41} История Тартуского университета, p. 116.

\textsuperscript{42} Биографический словарь профессоров и преподавателей Императорского Юрьевского, т. I, p. 421.


\textsuperscript{44} Die Polytechnische Schule, pp. 44–46; E. Jarvesoo, op.cit., p. 239.

\textsuperscript{45} Kraj, no. 47 (November 23, 1886), p. 13.

\textsuperscript{46} Я. Страдынь, Основные этапы развития естествознания в Латвии, [in:] Из истории естествознания и техники Прибалтики, т. VI, Рига 1980, p. 15; Наука в Прибалтике в XVIII – начале XX века, Москва 1962, p. 84.

\textsuperscript{47} У. Витт, Новые данные к биографии и научной деятельности Паула Вальдена, [in:] Из истории естествознания и техники Прибалтики, т. VII, Рига 1984, p. 63.
stereochemistry in Russia and his works had first-rate significance for the development of classical stereochemistry while creating a new branch, dynamic stereochemistry. Thanks to Walden, Riga became a worldwide centre for this branch of science⁴⁸.

The Riga Polytechnic was the scientific and pedagogic base for local industry. The engineering and design works of some Riga factories were up to global standards. For instance, graduate engineers from the Polytechnic were employed in the rubber factory, *Provodnik*, which had patents in almost all the countries of Europe and North America⁴⁹. Of 21 senior technicians in the same factory, 15 were Germans who had received their higher education from the Polytechnic. In „inner” Russia, only a small number of technicians educated locally were employed in factories⁵₀.

The institution also concerned itself with the dissemination of agronomic knowledge. The professor of agriculture, Woldemar Knieren, organised evening academic discussions at home where scientists, as well as estate owners and farmers, gathered to listen to lectures and to exchange views⁵¹. The agricultural faculty not only trained students for farming, but contributed to the extension of knowledge about the value of fertilizers for agriculture. It was the Riga Polytechnic that imported the first superphosphate into Russia⁵².

The third Baltic institution of higher education was the Veterinary Institute opened in Dorpat in 1848. It was a state institution with German as its language of instruction, however students of the institute were mostly Poles and Russians⁵³.

The institute contributed to the development of hygiene. Karl Happich, its professor, succeeded in making Dorpat the first city in Russia having a station for the examination of dairy products. Similar stations, fashioned on the Dorpat model, were installed in many Russian cities, and Happich himself became their greatest authority⁵⁴.

It is necessary to emphasize that apart from the Baltic Germans there were plenty of others with higher education. As early as the 1830s, there were 300 students for every 100 000 Baltic Germans, the highest ratio then in Europe. In Germany, it was 35 at the time and only 50 in 1882. Both in Germany and France, this

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⁴⁸ Я. Страдынь, Рига как центр исследования по стереохемии на рубеже XIX–XX веков и работы Паула Вальдена, [in:] Из истории естествознания и техники Прибалтики, т. VII, p. 49.
⁵¹ Rigasche Rundschau, Nr. 13 (January 16, 1935).
⁵² Beiträge zur Geschichte der Industrie Rigas, Bd. 3, Riga 1912, p. 58.
⁵⁴ М. Лисицын, Десятъ летъ в Прибалтийском крае, Русская старина, т. 120: 1904, p. 658.
figure was reached only after World War II\textsuperscript{55}. At the start of the 20\textsuperscript{th} c., up to 10, 3\% of Baltic Germans had received higher education (17 035), while in Estland, the figures were 24,9\% and 3910, respectively\textsuperscript{56}. Baltic German newspapers even complained of an „overproduction” of intelligentsia. For example, in 1894 the „Mitausche Zeitung” came out against the intelligentsia axiom: „father studied, son must study”, and grumbled about the overproduction of physicians\textsuperscript{57}.

Academic activity in the Baltic region was connected not only with institutions of higher education, but with independent academic societies as well, some of which devoted most of their works to the language and folklore of Latvians and Estonians. Above all, the „Latvian Literary Society”, established in Riga in 1824, and the „Learned Estonian Society”, founded in Dorpat in 1838, should be mentioned\textsuperscript{58}. Several others were devoted to the history of the Baltic countries; incontestably, the most notable was the „Society for the History and Antiquities of Riga” („Gesellschaft für Geschichte und Altertumskunde zu Riga”). It was modelled on the German „Gesellschaft zur Herausgabe der Monumenta Historica” („Society for the Publication of Monumenta Historica”), established by Freiherr von Stein in 1819. The founders of the Riga society were Pastor Gustav Reinhold Taubenheim and Karl Eduard von Napiersky with the latter being the editor of as important a collection of sources as \textit{Monumenta Livonae Antiquae} in 1835–1837\textsuperscript{59}. The society’s other source collections were \textit{Liv-, Est- und Kurländisches Urkundenbuch}’s and \textit{Akten und Rezesse der livländischen Ständetage}\textsuperscript{60}. It also issued its own journals, „Mitteilungen aus dem gebiete der Geschichte Liv-, Est- und Kurlands“ from 1840 onwards, and „Sitzungsberichte” from 1873\textsuperscript{61}. The society possessed a library of its own with valuable holdings of manuscripts and books on Livonian history\textsuperscript{62}. Another achievement was the opening of the „Domuseum” (Cathedral Museum) on 2 January 1891 with exhibits from Baltic archaeology and history\textsuperscript{63}. Beyond this, the „Gesellschaft” strove for the development of Baltic history on a large scale. Among its achievements were two Baltic Historical Congresses (\textit{Historikertage}) held under the society’s auspices, the first in Riga in 1908, and the second in Reval in 1912 (a third, planned in Mitau in 1915, did not take place)\textsuperscript{64}. For a local aca-

\textsuperscript{56} Düna-Zeitung, Nr. 1 (January 2, 1907).
\textsuperscript{57} Mitausche Zeitung, Nr. 1 (January 1, 1894).
\textsuperscript{58} A. Kasekamp, \textit{A History of the Baltic States}, New York 2010, p. 76.
\textsuperscript{60} A. Feuereisen, \textit{Die Gesellschaft für Geschichte und Altertumskunde zu Riga vor und nach Weltkriege}, Kalender und Jahrbuch des Deutschen Elternverbands in Lettland, 1923, p. 66.
\textsuperscript{61} 75. Jahre Arbeit der Gesellschaft für Geschichte und Altertumskunde der Ostseeprovinzen Ruβlands zu Riga, Rigaer Almanach, 1910, p. 112.
\textsuperscript{63} H. Loeffler, \textit{Das Dommuseum zu Riga}, BM, Bd. 64: 1934, p. 484.
\textsuperscript{64} A. Feuereisen, \textit{Die Gesellschaft}, p. 66.
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In Estland, the „Estonian Literary Society“ („Estländische Literarische Gesellschaft“) was founded in 1841. Among a variety of interests, it had a section for Baltic history with a journal „Archiv für die Geschichte Liv, Est- und Kurlands“, created by Friedrich von Bunge. The society’s collection was exhibited in the provincial museum from 1864, and like the „Gesellschaft“ possessed its own library with more than 40,000 volumes in 1891. The society was in touch with as many as 26 foreign such institutions.

In turn, in Kurland, there was the „Kurland Society for Literature and Art“ („Kurländische Gesellschaft für Literatur und Kunst“), founded in 1816. Despite its name, the society paid attention above all to history and archaeology with Julius Dörning and A. & S. Seraphim being the most celebrated. It sponsored the Kurland provincial museum which became the centre for the collection of historical documents in the province.

Among the less well-known academic societies of rather local importance were the „Literary Association“ („Literärisch-praktische Bürgerverbindung“ – which issued, from 1810, „Rigasche Stadtblätter“, a valuable source on local history), the „Society for Ösel Research“ („Gesellschaft für Untersuchung Ösel“), the „Fellin Literary Society“ („Fellinsche literarische Gesellschaft“), and the Pernau „Society for Antiquity Research“ („Altertumsforschende Gesellschaft in Pernau“). For example, the latter possessed its own museum and even published seven volumes of „Sitzungsberrichte“ between 1896 and 1914. Needless to say, all the societies were Baltic German.

The Deutschbalten were instrumental in creating regional archives and in 1874, the Livland Ritterschaft came to a decision to establish an archive in the Ritterhaus. To this end, a special circular was sent to all the landowners and likewise, consistories were to furnish all the parish registers from before 1834. Hermann von Bruinningk was put in charge of the whole operation, and it was thanks to his industry and, when necessary, obstinacy that the undertaking was successful. His requests were difficult to refuse, so those who did not want to submit original documents made copies. This turned out to be a far-sighted policy because a large number of

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68 P. Jordan, Geschichte der Estländischen Literärischen Gesellschaft für die Zeit von 1842 bis 1892, Reval 1892, pp. 21, 50, 71.
69 Известия, p. 25
70 P. Kennedy Grimsted, op.cit., p. 177.
71 Известия, p. 27.
private archives were burned together with manorial buildings in the tumultuous year of 190573.

The Estland Ritterschaft started its archive in 1909 under the directorship of Paul von Osten-Sacken. The „Kurländisches Landesarchiv” was organised under Oskar Stavenhagen in 190374.

Academic research was also conducted in other fields, for instance in forestry where the most notable was unquestionably Eugen Ostwald – brother of the famous chemist – who held the post of head-forester in Riga from 1889 and he organised wide-ranging research into the forest under his management (some of its results were still taught in the 1970s, at least in the Soviet Union). Baltic specialists in forestry participated actively in a number of international organisations including the International Union of Forestry Research Organisations75.

The Baltic Germans played a leading role in all spheres of cultural life in the region throughout the 19th c. First, let us consider painting where the central role was taken by artists of German extraction. Baltic painters derived motifs mostly from surrounding nature, e.g. Julius von Klever – *Die Inseln Nargen, Waldeinsamkeit*; Reinhold von Moeller – *Sturm am estländischen Strande*; Heinrich Korsakovsky – *Strandbei Tischer*; Eugen Ducker – *Sonnenaufgang auf Rügen*. They also presented the life of Latvian and Estonian folk, e.g. Oskar Hoffmann – *Estnischer Bauer*; Gregor von Bockmann – *Estländischer Pferdermarkt*; Rudolf von zur Mühlen – *Fischer am estländischen Strande*. Others sought subjects in the past of their Baltic Heimat, e.g. Leopold von Pezold – *Hausandacht auf einem estländischen Edelhofe im 16. Jahrhundert*76.

Likewise, architecture was dominated by Baltic Germans. To be sure, in the mid-19th c., most architects were „imported” from St Petersburg or Berlin, yet from the 1860s they were gradually replaced by natives. Forty architects worked in Riga in 1890, a considerable number of whom were graduates of Riga Polytechnic. Their professional organisation was the Riga Society of Architects which organised numerous competitions and issued publications. It was chiefly composed of German architects77 of whom the best known were Wilhelm Bocklaff – *Börsenkommerzschiule* in Riga and many Livland churches; Harald Bosse – the Riga Stock Exchange; and Julius Hagen – the reconstruction of Riga castle and the building of Pernau „high” school78.

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77 Энциклопедия Рига, Рига 1986, p. 637.
The excellent renovation work in Riga was also the result of the Baltic Germans. In comparison with such undertakings in the West, the reconstruction of Riga’s centre was complete\textsuperscript{79}. Architecturally, Baltic cities recall those in Germany, apart from more wooden structures, notably in small towns.

In the field of literature, the writings of Baltic German men of letters were of critical significance for the region in the second half of the 19\textsuperscript{th} c., the more so because the first Latvian novel \textit{Mērnieku laiki} („Land-Surveyor’s Times”) was issued as late as 1879\textsuperscript{80}. To be sure, books of fiction were published in Latvian, but they were only translations of German romances because such novels were in demand among Latvian villagers. It was similar in the Estland countryside\textsuperscript{81}. Let us go back to Baltic German writers and poets of whom Theodor Pantenius – \textit{Wilhelm Wolschid, Allein und frei}; and Johanna Conradi, the author of the first Baltic social novel – \textit{Georg Stein oder Deutsche und Lette} (1864) were noteworthy. Among lyric poets, Karl von Fircks – \textit{Eilt Sonetten} and Carl Hunnius – \textit{Zu höheren Sternen}, distinguished themselves\textsuperscript{82}.

Concerning the press the sheer number of German dailies, weeklies and monthlies must be stressed, with the two latter in Latvian and Estonian as well. This flowering of the Latvian and Estonian press was undoubtedly associated with the fact almost all Latvians and Estonians were literate at the end of the 19\textsuperscript{th} c. Newspapers and journals in the hands of agricultural labourers was the rule; no wonder the number of journalistic publications was ever-growing. However, in terms of dailies and their circulations, the German press led the way. The „Revalische Zeitung” was the first daily in Estonia, and the „Rigasche Zeitung” in Latvia,\textsuperscript{83} with the first dailies in Estonian and Latvian published as late as the 1890s. Among other Baltic German newspapers were the „Zeitung für Stadt und Land”, a daily issued from 1866 onwards; „Neue Zeit für Stadt und Land” appearing from 1876, but from 1882 titled „Rigaer Tagesblatt”; „Düna Zeitung”; „Revaler Beobachter”; „Mitausche Zeitung”; „Libausche Zeitung”; and „Neue Dörptsche Zeitung” from 1866, transformed into „Nordlivländische Zeitung” in 1897. The city of Riga possessed its own weekly – „Rigasche Stadtblätter”, and there were weeklies in some smaller towns, e.g. „Arensburger Wochenblatt”, published between 1875 and 1888. The most noted Baltic German monthly was „Baltische Monatsschrift”\textsuperscript{84}.

\textsuperscript{79} Энциклопедия Рига, p. 87.
\textsuperscript{82} \textit{Grundriß einer Geschichte der baltischen Dichtung}, hrsg. v. A. Behrsing, Leipzig 1928, pp. 94–95, 103.
\textsuperscript{83} 400 лет русского книгопечатания, р. 446.
Theatrical life was also dominated for a long time by the Baltic Germans. The first Baltic theatre was opened in Riga in 1772 staging plays and operas alike, including all of Richard Wagner’s operas, which of course was a great undertaking possible only on large stages\(^{85}\). The remaining German theatres were in Reval, Mitau and Libau. The first Russian one was started in Riga in 1883, and the first Latvian in 1902, likewise in the Livland capital. But the Riga Latvian Association had held its own amateur theatre from 1870 onwards\(^{86}\). Likewise the Estonian “Vanemuine” society in Dorpat\(^{87}\).

Among Baltic Germans, there was a considerable development of singing clubs which later, exerted a great impact upon the development of singing culture among Latvians and Estonians. Out of the numerous Riga clubs, the oldest, „Musikalische Gesellschaft” (1761), „Rigasche Liederkranz” (1851), and „Rigasche Sängerkreis” (1859) can be mentioned. From the mid-19\(^{th}\) c., the Germans organised song festivals, both regional and all-Baltic. For example, such German festivals were held in Reval in 1857 and in Riga four years later\(^{88}\). Soon, the tradition was taken over by the Latvians and Estonians and is continued today in both their homelands and abroad alike.

Museums and libraries were other fields of German preponderance. At the turn of the century, 22 museums existed in the Baltic area, of which six, state, were naturally Russian; one, urban, the „Kunstmuseum”, German; 15, private, all but three German; the remaining three being small Latvian and Estonian ethnographic ones. In terms of libraries, five were for research: Dorpat University, Riga Polytechnic (50 000 volumes), Goldingen, Mitau and Riga „Gymnasien”. Obviously, they must be regarded as German, at least before the Russification of these institutions. Beyond this, there were 23 public libraries, all but one German, that one being Estonian in Dorpat. The city library of Riga is noteworthy, numbering as many as 96 000 volumes, being one of the oldest both in Russia and Europe (it had been founded in 1524)\(^{89}\).

The development of the health service on a large scale by 19\(^{th}\) c. standards was down to the Baltic Germans as well. In terms of the countryside, the greatest achievements were in Estland, which became the model for the whole of Russia. Nowhere in the entire Romanov Empire was the rural health service as well organised as in this small province. The reform was effectuated by the Reval „Gesellschaft praktischer Ärzte” with the help of the Estland Ritterschaft in 1902. The gentry earmarked as many as 300 000 rubles per year for a newly created health service in the country. The administration was run by the Countryside Sanitary

\(^{85}\) Энциклопедия Рига, p. 509.
\(^{86}\) Latvijas PSR vēsture, 1. sējums, p. 242.
\(^{87}\) K. Kāsk, Das estnische Theater und die Zeit des nationalen Erwachens, [in:] National Movements, p. 483.
Commission („Landes-Sanitätskommission”) with a *Ritterschaftshauptmann* at its head. It established sanitary districts (*Sanitätsbezirken*) and filled the positions of district sanitary doctors (*Landschaft-Sanitäts Ärzte*), fought against epidemics, exercised sanitary surveillance over schools, and founded and subsidized hospitals. In 1914, there were 31 such physicians and 13 rural hospitals with 104 beds\(^90\). Midwives for the villagers were not forgotten either and there were 52 prior to the First World War. Those manors in whose territory they were located received a subsidy of 100 rubles for their upkeep. In 1901, an institution training midwives was started in Reval, incidentally, with no state support, and maintained by the *Ritterschaft* and the city\(^91\).

In this regard, the two remaining provinces were backward. For example, in the Livland countryside, midwives were tiny in number, so a school for training them was established by Riga hospital at the cost of a corporation of the gentry\(^92\). In Kurland, as well, small hospitals were set up in the countryside, e.g. in Dondangen, Dauben, Gross-Eckau and Erwahlen\(^93\).

In the cities the situation was better, especially in Riga and Reval. Some Riga hospitals were famous not only in the Baltic area; the Institute for the Blind established by the distinguished surgeon Karl Waldhauer in 1872 being one\(^94\). Even better known was the first city hospital in Riga with 700 beds, the centre for medicine for the whole of the Baltic region. It was here that the first operation under narcosis in Russia was performed in 1847\(^95\). The first surgical ward of the hospital was, due to Adolf von Bermann, one of the most modern surgical clinics in Europe\(^96\). All in all, the city of Riga possessed 41 hospitals with 2500 beds in 1903\(^97\).

As for the Reval health service, one fact is noteworthy, namely a hospital with 330 beds, set up on private initiative, and among its founders the *Ritterschaftshauptmann* Otto von Budberg. By 1899, it admitted up to 250 peasant patients a year, taking from them just 15 rubles per month. In return, the hospital received a subsidy\(^98\).

Two further phenomena should be emphasised. It was in the Baltic lands that the first dentists in Russia appeared\(^99\), while the region stood out too from the rest.

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\(^{91}\) Ibid., pp. 58–59, 64.


\(^{94}\) *Deutschbaltisches Biographisches Lexikon*, p. 846.

\(^{95}\) Энциклопедия Рига, p. 544.

\(^{96}\) Deutsche Zeitschrift für Chirurgie, Bd. 124: 1913, pp. V–VI.

\(^{97}\) Энциклопедия Рига, p. 110.

\(^{98}\) I. Brennsohn, *Die Ärzte Estlands*, p. 73.

\(^{99}\) Ibid., p. 65.
of the empire in the number of pharmacies. They were located not only in cities, but in small towns and in the countryside as well. In Estland in 1913, there were 55, of which 29 were in the countryside\textsuperscript{100}, while in Livland in 1904, there were 165 and 87, respectively\textsuperscript{101}. Kurland was famous for its old pharmacies. In its small towns, they already existed in the 18\textsuperscript{th} c., some being much older. For example, the tiny town of Bauske had possessed two pharmacies as early as 1600\textsuperscript{102}. In this regard, to some extent, the Estland capital competed with Kurland towns as its oldest pharmacy dated back to 1420\textsuperscript{103}.

Several organisations associated with the world of medicine were active in the Baltic area. Some of them were professional organisations, others were devoted to combating dangerous illnesses. To the first group belonged the Riga „Association of Practising Doctors“ („Gesellschaft praktischer Ärzte zu Riga“), established in 1822, which fostered medical contacts between the West and Russia\textsuperscript{104}. Likewise, it was the co-organiser of the Livland „Doctor’s Day” conferences (Ärztetage) from 1888 onwards, which questionnaires to all the three provinces. Their findings were an important factor in combating those awesome diseases of the time such as tuberculosis or venereal diseases\textsuperscript{105}. Another organisation of this type was the Riga Pharmacist Society („Chemie-pharmakologische Gesellschaft zu Riga“), started as early as 1803 and was the oldest in all Russia. Its professional journal was the first such publication in the Russian Empire, too\textsuperscript{106}.

As has been said, there were also organisations combating disease. One of them was the „Society for the fight against Leprosy in the Baltic Provinces“ („Gesellschaft zur Bekämpfung der Lepra in den Ostseeprovinzen“), started on the initiative of Prof. G. von Wahl in 1889. As the very name indicated, the society’s aim was to treat, or rather isolate those ill with leprosy. In 1903, it ran five leprosoria with 236 beds\textsuperscript{107}. In turn, the „Society for the Care of the Nervous Diseases and the Mentally Ill“ („Gesellschaft der Fürsorge Nerven- und Gemüthkranken“), with its establishment in Seewald, Estland\textsuperscript{108}, focused on the problems of mental illness.

The development of sport in the region was due to the Baltic Germans. In 1889, physical exercises were made obligatory in Baltic schools. This situation was much better than in Russian schools where physical exercises were not a distinct subject at the time, being done only in the corridor during the longest break\textsuperscript{109}.

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{100} Ibid., p. 62.
\item \textsuperscript{101} Idem, \textit{Die Ärzte Livlands}, p. 38.
\item \textsuperscript{102} Idem, \textit{Die Ärzte Kurlands}, p. 47.
\item \textsuperscript{103} Idem, \textit{Die Ärzte Estlands}, p. 60.
\item \textsuperscript{104} Энциклопедия Рига, p. 636.
\item \textsuperscript{105} R. Engelhardt, \textit{Die deutsche Universität Dorpat in ihrer geistesgeschichtlichen Bedeutung}, Reval 1933, p. 279.
\item \textsuperscript{106} Энциклопедия Рига, p. 637.
\item \textsuperscript{107} I. Brennsohn, \textit{Die Ärzte Livlands}, pp. 52–53.
\item \textsuperscript{108} Idem, \textit{Die Ärzte Estland}, p. 60.
\item \textsuperscript{109} Энциклопедия Рига, p. 112; \textit{Mitausche Zeitung}, Nr. 55 (July 12, 1889).
\end{enumerate}
\end{footnotesize}
The first Baltic sports organisation was the Riga Gymnastic Society („Rigaer Turnverein”), fashioned on the West European model and founded in 1862. Its members were primarily Baltic Germans – 100 in 1863 – and the society had a splendid record, for example those members who took part in the All-Russian Gymnastic Competition in St Petersburg in 1891 won 12 prizes out of 18\textsuperscript{110}.

Another important sports organisation was the Rowing Club („Ruderklub”) founded in 1872, which 17 years later numbered 190 members, mainly Germans. It organised regular international races in 1880–1913. In 1886, the Riga Cyclists’ Society („Rigaer Velozipedistenverein”) came into being, members in general being German numbering 245 in 1896\textsuperscript{111}. The „Shooting Society” must also be mentioned, since it had the first public rifle-range in Russia, opened in 1865\textsuperscript{112}.

The Germans held a very strong position in all spheres of economic life in the Baltic Provinces. At first, let us look at agriculture. The German landowners looked after the economic development of their estates as well as the Baltic countryside as a whole. First and foremost, their manors were characterized by high output levels with average crop yields higher than in other Russian provinces, including the black-earth ones in the Ukraine. In 1881–1900, the average productivity of the Livland and Kurland estates amounted to 74,9 poods of rye per \textit{desiatina} (1 \textit{desiatina} = 1,1 ha), 84,1 poods of oats per \textit{desiatina} and 76,4 poods of barley (1 pood = 16,38 kg). For black-earth Ukrainian estates, the data were as follows: 67,6, 72,6 and 66 poods, respectively\textsuperscript{113}.

As early as the 1870s, the Baltic Provinces took a leading position in the production and usage of agricultural machinery in Russia. For instance, 415 000 rubles’ worth of agricultural machinery was produced in Kurland, Livland and Estland in 1876, whereas in the largest Ukrainian provinces – Don, Ekaterynoslav and Kherson – it was only 280 000 rubles\textsuperscript{114}. In Livland itself, there were 20 agricultural machinery factories, however these machines were on the whole sold to „inner” Russia, whereas imported agricultural machinery was employed on the Baltic manors. The three provinces had the largest number of threshing-machines in the Russian Empire, e.g. 1720 in Livland in 1910\textsuperscript{115}. In Kurland in 1874, 73 steam-driven machines worked on the land, all of them on manors, while in the whole of

\textsuperscript{110} Энциклопедия Рига, р. 634
\textsuperscript{111} Ibid., pp. 636, 638.
\textsuperscript{112} B. Berker, \textit{Aus der Bautätigkeit Rigas und dessen Umgebung in den zweiten Hälfte des XIX Jahrhunderts}, Riga 1898, p. 11.
\textsuperscript{113} G. H. Schlingensiepen, \textit{Die Strukturwandel des baltischen Adels in der Zeit vor dem ersten Weltkrieg} (Wissenschaftliche Beiträge zur Geschichte und Landeskunde Ost- Mitteleuropas, Bd. 41), Marburg 1959, p. 80.
\textsuperscript{114} Экономические очерки Латвии 1860–1900, ред. М. Козин, Рига 1972, p. 231.
In European Russia there were 1,351. The squires themselves tried to manufacture agricultural machinery in the countryside, e.g. A. von Stryk in Grös-Köpp near Fellin, Livland.

The German gentry developed dairying on a large scale. Nicolai Essen was the first to establish model creameries in the Baltic Provinces which were even famous in Russia. What is more, Essen was an active promoter of peasant dairying. Another creamery, solely employing specialists from Denmark, was arranged at Charlottenhal, Estland, by Alexander Eggers, while Alexander Klot obtained very good results in the output of fresh milk on his estate of Engelhardshof, Livland. These were equal to the successes achieved in Western Europe and a large number of guests from Russia came to his manor to learn modern techniques of husbandry. Erich von Oettingen’s creamery at Janses, Livland, provided St Petersburg and Moscow with buttermilk and was the only one throughout Russia to supply milk sugar to pharmacies. Dairying was especially well developed in Estland which, with 21 cows for every 100 inhabitants, was the highest in Russia.

Another contribution was to the development of cattle and horse breeding. Alexander Middendorff bred a race of cattle that spread widely all over the Baltic area and also reared a race of horses notably valued by villagers. On his initiative the Society of Baltic Breeders of Livestock („Gesellschaft der Baltischen Viehzüchter”) came into being in 1885. Horse breeding was developed chiefly in Kurland where stud farms existed on 25 manors.

Now, let us pay attention to fish breeding. In 1885, Max Mühlen set up the Society for Fish Breeding and Fisheries („Verein für Fischerzucht und Fischerei”) which established many fishponds. Their number increased to 200 in all of the three provinces (by comparison, in the Kingdom of Poland and nine western provinces including Lithuania, Byelorussia and the western Ukraine where, on an area several times larger, there were 221 ponds and in the rest of Russia only 51). Mühlen was also an outstanding promotor of knowledge about fishery and fish breeding.

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117 Zeitung für Stadt und Land, Nr. 155 (July 12, 1901).
118 Düna-Zeitung, Nr. 255 (November 9, 1900).
119 Revalsche Zeitung, Nr. 231 (October 10, 1923).
120 Rigasche Rundschau, Nr. 119 (May 30, 1925).
124 H. Foelkersahm, Die Entwicklung der Agrarverfassung Livlands und Kurlands und die Umwälzung der Agrarverhältnisse in der Republik Lettland (Greifswalder staatswissenschaftliche Abhandlungen, Bd. 22), Greiswald 1923, p. 54.
among villagers\textsuperscript{125}. As the „Moskovskie Vedomosti“ („Московские ведомости“) – otherwise notable for its anti-German position – wrote in 1895, many squires of Baltic German stock were gradually transforming their pastures and meadows into ponds and lakes for the purpose of breeding fish not only for commercial purposes but also for scientific goals\textsuperscript{126}.

In the field of horticulture, we must pay heed to three matters. Since Kurland’s climate was milder than Livland’s and Estland’s, little wonder that the number of orchards was the greatest in this province. Some of the plantations of fruit trees were of considerable size, for instance, that on the manor of Lestsen covered 55.7 hectares. The squires obliged their tenants to plant fruit trees so that there were more than two for every Lofstelle (= 0.37 ha)\textsuperscript{127}. Of great moment for Baltic horticulture, and not only there, was the nursery of Karl Wagner started in Riga in 1816, one of the oldest in Russia and famous both in the Empire and abroad. It educated a lot of fruit growers from the whole of Russia, but above all it had a commercial side, including the sale of trees for Moscow boulevards. Purchasers included private citizens, numerous institutions and cities. In Riga itself, the Horticulture Society („Gartenbaugesellschaft“) was founded in 1873 with its task to organise and sell flowers, seedlings and fruit\textsuperscript{128}.

The Baltic German gentry combined agricultural with industrial activity on their manors. In 1876, Baron Harald Toll established on his estate of Kuckers, Estland, an oil-shale mine whose output was earmarked either for factories or, as fuel, for locomotives\textsuperscript{129}. In 1867, Christoph Lieven built a cement factory at Poderaa, near Riga. A great number of saw-mills and cellulose works sprouted up due to the fact that huge areas of forest were in the possession of landowners. The first steam-powered saw-mills came into being on the manors of Tuda, Tschorna and Torna after 1867, and at the close of the 19\textsuperscript{th} c. there were roughly 100 in Livland and Estland\textsuperscript{130}.

The distillery industry enjoyed great popularity among the gentry, notably in Estland. One of the pioneers was Alexander Eggers who came to the conclusion that potatoes yielded a very good crop on the poor soil of Estland and they could be utilized for the manufacture of alcohol. Hence, he set out the idea that each and every manor should have a distillery\textsuperscript{131}. In the afore-mentioned Charlottenhal, he founded a huge such establishment and managed to centralize in his hands the

\textsuperscript{125} Korespondenzblatt des Naturforscher-Vereins zu Riga, Bd. 59: 1927, pp. 5–6.
\textsuperscript{126} Московские ведомости, no. 141 (May 25, 1895).
\textsuperscript{127} Ibid., no. 9 (January 9, 1891), p. 4.
\textsuperscript{128} Mitausche Zeitung, Nr. 44 (May 31, 1886).
\textsuperscript{130} Ibid., pp. 463–470.
\textsuperscript{131} Revalische Zeitung, Nr. 230 (October 9, 1933).
selling of Estland spirits to Russia and Germany\textsuperscript{132}. In Reval in 1870, the Union of Distillery Owners was founded with Baron Arvied Rosen at its head and most Estland spirits were sent to „inner” Russia or exported\textsuperscript{133}.

One more industrial sector should be mentioned, namely textiles. On the manors of Wockenhof, Wierland and Torgel there were linen mills processing Estonian flax, the manors of Tali and Wandenstein had silk mills, and the estate of Alt-Fückel manufactured hats\textsuperscript{134}.

Thus, the manors were multi-sectoral businesses, and most of them earned their income from livestock breeding, timber selling, spirits production and local undertakings of an industrial character\textsuperscript{135}.

The development of various agricultural organisations was due to the German gentry. Some of them have already been mentioned, but unquestionably the most significant was the Livland „Economic and Public Welfare Society” („Livländische Ökonomische und Gemeinnützige Sozietät”), started as early as 1792. From the 1840s its branches began to develop in the countryside, with local estate owners as well as farmers joining them. The chairman of a branch was for the most part a local landowner and by 1899, 21 branches existed in Livland\textsuperscript{136}. From 1877, the society had a seed inspection station which the majority of Baltic manors availed themselves of. On the society’s initiative, plenty of economic organisations sprang up\textsuperscript{137} but its activities were miscellaneous. It supported cattle breeding among peasants, brought in specialists from Denmark, carried out drainage work e.g. in Livland and on Ösel in 1874–1885, constructed ferro-concrete bridges, conducted assessments of forests and organised a lot of public debates about forestry, published a professional magazine, „Baltische Wochenschrift” from 1868, and staged famous agricultural exhibitions in Dorpat beginning in 1857\textsuperscript{138}. The society possessed its own library, founded animal hospitals and instituted the position of district veterinary surgeon in 1897\textsuperscript{139}. It also helped villagers establish distinct agricultural associations at district level in the 1870s, in Dorpat, Werro, Pernau and Fellin\textsuperscript{140}. In 1901, the society chairman, Max von Sivers was right to state that it was not

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\textsuperscript{132} Ibid., Nr. 231 (October 10, 1933).
\textsuperscript{134} H. Pönicke, op.cit., pp. 480–486.
\textsuperscript{137} Ibid., pp. 82, 118–119.
\textsuperscript{138} Ibid., pp. 78, 93, 94, 97; Baltische Wochenschrift, Nr. 4 (January 25, 1896), p. 51.
\textsuperscript{139} H. D. von Engelhardt, H. Neuschäffer, op.cit., p. 73.
\textsuperscript{140} Ibid., p. 98.
only an agricultural organisation, but an institution helping organise all aspects of
economic life\textsuperscript{141}.

Likewise, similar societies existed in the two other provinces, though they were
of less importance. The Kurland Economic Society („Kurländische Ökonomische
Gesellschaft”) differed from its Livland counterpart in that it admitted peasants as
members directly, not via branches\textsuperscript{142}. In the 1880s–90s, the society devoted most
of its activities to livestock rearing, imported cattle for breeding to be sold at fairs,
organised special fairs for breeders, and agricultural exhibitions from the 1860s
onwards at which the best livestock were on display, while popularising husbandry
achievements in „Land- und Forstwirtschaftliche Zeitung”\textsuperscript{143}. The „Estland Ag-

cultural Union” („Estländischer Landwirtschaftlicher Verein”), structured in
branches, was started in 1839\textsuperscript{144}. In 1888, it created a Dairy Union („Meierber-
band”), the first in the Baltic Provinces, acting as an agent for the selling of milk
products abroad\textsuperscript{145}.

The societies organised plenty of agricultural exhibitions. In Reval, ten exhibi-
tions took place without any financial support from the government while the state
did not participate in the expenses for four Riga exhibitions either in 1865, 1871,
1877 and 1880. The Russian authorities only assigned 60 rubles to the organisation
of eleven Dorpat exhibitions (1860–79) and 300 rubles for nineteen in smaller
towns\textsuperscript{146}.

Agricultural „circles” were developed on a large scale in the Baltic region. They
came into being similar to those in the Rhineland, namely by parishes, and at first
were only started on the initiative of local landowners\textsuperscript{147}, with the first being estab-
lished in 1866 by its founder E. Sivers\textsuperscript{148}. In the Baltic Provinces, there were more
agricultural „circles” than anywhere in Russia\textsuperscript{149}.

Due to the \textit{Deutschbalten}, the cooperative movement put down roots early in
the three provinces. Of great moment was Heinrich Zschke’s cooperative novel,
\textit{Der Goldmarscherdorf}, translated into Latvian (\textit{Ciema kur zelta taisa}) by Pastor
Jakob Florentin Lunberg. In 1871, the Governor of Kurland, the Baltic German
Paul Lilienfeld, sent model rules for credit cooperatives to all rural councils in his
province and advised them to see to it that such institutions were founded. The
first were established in 1874. Here and there (as e.g. in Rudbahren) the manorial
lords recommended that peasants start a credit cooperative, and in some places

\begin{itemize}
\item \textsuperscript{141} Baltische Wochenschrift, Nr. 5 (January 31, 1901), p. 44.
\item \textsuperscript{142} Л. Балевица, Сельскохозяйственные общества в Ливляндской и Курляндской губерниях в начале XX в., Проблемы истории 1962, т. 6: 1962, p. 66.
\item \textsuperscript{143} А. Меринь, op.cit., p. 210.
\item \textsuperscript{144} Baltische Wochenschrift, Nr. 43 (October 27, 1888), p. 441.
\item \textsuperscript{145} Ibid., Nr. 15 (April 14, 1888), p. 152.
\item \textsuperscript{146} Mitausche Zeitung, Nr. 44 (May 31, 1886).
\item \textsuperscript{147} G. Stryk, \textit{Die Landwirtschaft in Livland}, [no place and date], p. 9.
\item \textsuperscript{148} Экономическое, p. 275.
\item \textsuperscript{149} П. Рутский, Общества Либавляндской губернии, Рига 1900, p. I.
\end{itemize}

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(e.g. in Puhren) they were even managers of these institutions from the very beginning. Almost all of them were of the Schultze-Delitzsch type\textsuperscript{150}. The number of cooperatives grew continuously, a phenomenon that did not exist anywhere else in the Russian countryside before 1905, at least on such a scale. For example, at the outset of the 20\textsuperscript{th} c., the financial deposits of the Livland and Kurland peasant cooperatives constituted as much as 47.4\% of all deposits in peasant cooperatives throughout Russia, 13.1 million from 27.6 million rubles\textsuperscript{151}.

It is evident that Baltic German activity influenced Latvian and Estonian farming whose standard was equal to that in the West. At first, in the 1860s and 70s, the villagers themselves were interested in maintaining cooperation with the German gentry who were helping them purchase machinery and fertilizers. Even in the 1890s, when many peasant organisations existed, sometimes estate owners participated in their work, especially in the Estonian section of the Baltic region. There were also cases where the villagers chose a local manorial lord for the post of chairman or honorary member. Due to this, they could count on obtaining the money for the purchase of agricultural machinery and fertilizers from either him or German organisations\textsuperscript{152}.

In the 1840s–60s, the three-field system on the manors was quickly replaced by crop rotation. Since the peasant holdings were increasingly involved in competition with the noble estates, they were bound to implement new agricultural technology to be in a position to compete successfully, or at least not to go bankrupt. Beyond this, the manorial lords themselves obliged their tenants to employ crop rotation. No wonder it was the sole system of farming in Kurland and southern Livland as early as the outset of the 1880s, e.g. in 1883 up to 92.84\% of the peasant farms – 758 – had implemented it. In the same year, the governor of Kurland wrote that the peasant sokoха (wooden plough) had already vanished everywhere in his province\textsuperscript{153}. It was quite the opposite in Russia proper, where even at the beginning of the 20\textsuperscript{th} c., the three-field system was widespread not only on farms, but also on estates, and the sokoха continued to be the main symbol of backward Russian husbandry\textsuperscript{154}.

True, the growth in peasant farming was not visible in one of the Kurland districts – Illuxt. As late as 1900, the three-field system dominated, more modern implements were seldom found, and out of the 17 districts, nine had no school at all\textsuperscript{155}. This was, however, not accidental. This south-eastern district of Kurland had a very small number of Baltic German landowners, most manors were in the pos-


\textsuperscript{151} Ibid., p. 13.

\textsuperscript{152} A. Анфимов, op.cit., p. 58.

\textsuperscript{153} М. Козин, \textit{Латышская деревня в 50–70 годы XIX века}, Рига 1975, p. 298.


\textsuperscript{155} Düna-Zeitung, Nr. 9 (January 18, 1900).
session of the Polish gentry, and the villagers were Catholic or Orthodox Byelorussians. This district was a splendid example demonstrating that where the presence of Germans was not clearly marked, economic and cultural standards were much lower.

Latvian and Estonian peasants, if they moved elsewhere as colonists, were respected in Russia itself. For instance, the record of the St Petersburg zemstvo of 1893 found peasants coming to the province from those in the Baltic outgrowing their social class economically and culturally. Their agricultural techniques were different from those used in Russia, more similar to German or Irish farmers. The Latvian and Estonian colonists could be considered pioneers in the forests and swamps of St Petersburg province\textsuperscript{156}. In turn, „Сибирская жизнь” („Сибирская жизнь”) wrote in 1889 that Latvian colonies in Siberia could even be an example for Russian estate owners\textsuperscript{157}.

The Baltic German community took a very strong position in industry, commerce and banking which was especially conspicuous in Livland’s capital. On the whole, German dealers and bankers were the pioneers of Riga’s industry, namely Pilchaus (ships), Schepelers (electro-mechanical), Becks (textile industry), Hollanders (tobacco), and Brandenburgs (sugar)\textsuperscript{158}. It is important to note that in the Baltic region, unlike Russia, the role of foreign capital in the creation of industry was meagre. Not until the 1890s, when Baltic industry was developed on a large scale, did foreign investors begin to buy shares in the existing factories and companies, possible thanks to a strong credit system. The Riga Stock Exchange Committee („Börsenkomitee”) established the Stock Exchange Bank in Riga in 1864. It became the chief credit institution in the Baltics with its profit in part being assigned to the development of Riga’s trade\textsuperscript{159}.

The role of the „Börsenkomitee” was of tremendous importance for the economic development of the Livland capital. Aside from starting the bank, it planned and constructed railways, the first telegraphic line in Russia, established the polytechnic and subsidized various schools, staged exhibitions, promoted the arts and the theatre, and erected churches. The regulation of the Dvina (but only between Riga and the sea), the erection of a breakwater and port embankments was also due to the Stock Exchange Committee. Its multifarious activities were regulated by the law of 1866, incidentally, later, in 1923, it was voted in by the Latvian parliament, so was in force in independent Latvia too. As a consequence, the Stock Exchange Committee represented the local business community in all matters connected with trade, industry and sea navigation in relation to state and local govern-

\textsuperscript{156} Baltische Chronik (August 30, 1899), p. 302.
\textsuperscript{157} Düna-Zeitung, Nr. 99 (May 2, 1901).
\textsuperscript{158} Ю. Н. Негесин, op.cit., pp. 67, 73.
\textsuperscript{159} E. Stieda, Der Rigaer Börsenbank 1864–1914. Ein Bild ihres Werdens und ihrer Wirksamkeit im Laufe eines halben Jahrhunderts, Riga 1914, pp. 13–19, 150.
ment institutions. Similar institutions were later founded in other Baltic port cities — Reval, Libau, Windau, Pernau — but were not of such significance. Riga was one of the biggest industrial centres throughout the Russian Empire. In the number of workers, it was third as early as 1879 after St Petersburg and Moscow playing a pioneer role in the development of Russian industry. In 1886, a bicycle factory, the first in the Russian Empire, was founded by Alexander Leutner, later it became the only one in Russia to produce cars. The Livland capital produced the highest quality cigarettes in the Empire through the firms of A. Kuchtenberg, Mündel & Leo Wissor, A. Hellwig and F. Kress, while those of „Rigasche Zigarren” were especially famous. M. Hüfflinger established a superphosphate factory there, the first in Russia. In 1884, Heinrich Dettman started the first Russian factory for the construction of electro-mechanical machines — the Russian Baltic Works. On the eve of World War I, it was the only one in Russia to manufacture aeroplane engines. Naturally, beside plants being in outright or partial possession of the Baltic Germans, there were firms with capital from other national sources including Russia. To the latter group belonged „Provodnik”, globally fourth in the output of rubber and second in rails.

Nonetheless, most Riga undertakings belonged to the Baltic Germans. For example, of six large producers of glass, porcelain and ceramics, five were German. Of eight tanneries, seven were in German possession.

Apart from Riga, there were two other industrial centres in the Baltic Provinces, namely Reval and Libau. In the Estland capital, some German noble families participated in the creation of industry: the Tysenhausens, Unger-Sternbergs, and zur Mühlens. The most noted Reval businessman was Etienne Girard de Saccoun, who was in 1882 head of the local Stock Exchange Committee in 1880–1910, owner of the famous merchant enterprise Thomas Clayhills & Son, and founder of the Black Sea Company for Cement Production. The family of Girard de Saccoun was instrumental in the foundation of the famous portland cement works at Kunda Port, the first in Russia.

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161 Рига. Очерки по истории города, ред. М. Степерманис, Рига 1967, p. 113.
162 Beiträge zur Geschichte Industrie Rigas, H. 2, Riga 1911, pp. 29–31; H. 3, Riga 1912, pp. 14–19, 37, 56, 64.
163 Ibid., H. 2, p. 60.
164 Г. К. Цверава, Выдающийся электротехник Ею Арнолд, [in:] Из истории естествознания и техники Прибалтики, т. VII, p. 9.
165 Ю. Н. Нетесин, op.cit., p. 74.
166 A. Henrikson, op.cit., p. 71.
168 Н. Торпан, Монополистический капитал в Эстонии (70 годы XIX в.–1917 год), Таллин 1984, pp. 139–141.
Another Reval industrial tycoon was Alexander Luther (timber industry) whose products gained them worldwide fame, while mention can also be made of Richard Meyer (chemical industry) and Otto Eggers (including ship-yards)\textsuperscript{169}.

A considerable part of Libau's industry was also in the hands of Germans. In 1881, 79 plants (40.5\%) were in their possession, 24 (30.4\%) belonged to Jews, 17 (21.5\%) were in the hands of Latvians, and with just 4 (2\%) being the property of Russians and those of other nationalities\textsuperscript{170}. Let us mention two Baltic German enterpreneurs, the Thielitz (furniture mill) and C. Strupp (machine works)\textsuperscript{171}.

In the remaining Baltic towns, industry was not developed on such a scale, albeit undertakings of great importance were occasionally to be found there, for example the famous „Wulkan” match factory at Goldingen, Livland, whose products were even exported to the United States\textsuperscript{172}. It should be borne in mind that the Baltic region was one of the main centres for the match industry in Russia. It was here that the first match factory in Russia, and for a long time the only one, was started in 1830. The only plant manufacturing machines for this sector was, incidentally, located in Kurland\textsuperscript{173}.

As was said, foreign capital took an interest in Baltic industry relatively late when the economic life of the region was already flowering. In 1905, of 72 limited companies located in the Latvian part of the Baltic, 66.7\%, and 49.5\% of their capital, were in the possession of Russian citizens or the state, the rest belonging to foreigners. As regards private companies, as much as 91\% – 290 factories – and 74.7\% of production were the property of Russian nationals. Of this, 46.4\% of the Russian limited and 80\% of the output of the private companies, belonged to the Deutschbalten. Yet, even in cases with a preponderance of foreign or Russian capital, the Baltic Germans retained considerable independence, „tacking” between various financial and industrial groups\textsuperscript{174}.

The Baltic Germans were also uppermost in commerce, notably in foreign trade and by 1885 about 69\% of all large merchant enterprises in Riga were their property. In 1900, of 37 export firms, 31 belonged to them\textsuperscript{175}; eight years later, of the ten largest export enterprises, as many as eight were German. Riga’s exports were worth, at the time, 127 514 060 rubles, of which 60\% belonged to Baltic German firms\textsuperscript{176}. In the retail trade, they held a primary position, too and in 1867, roughly 54\% of such traders, mainly grocers, were German, and in 1881, 50\%. Soon, however, the situation began changing and Latvians gained the upper hand\textsuperscript{177}.

\textsuperscript{169} W. Dehio, op.cit., pp. 70–75.
\textsuperscript{170} Dz. Ozolina, Liēpajas pilsēta pašvaldība 1877–1913, Rīga 1990, p. 63.
\textsuperscript{171} E. Bauer, Die Entwicklung der Fabrikindustrie Libaus, Libau 1919, pp. 8, 24, 26.
\textsuperscript{172} W. Dehio, op.cit., p. 76.
\textsuperscript{173} Mitauische Zeitung, Nr. 7 (February 21, 1878).
\textsuperscript{174} Ю. Н. Нетесин, op.cit., p. 134.
\textsuperscript{175} A. Henrikson, op.cit., pp. 68–69.
\textsuperscript{176} O. Stavenhagen, op.cit., p. 273.
\textsuperscript{177} A. Henrikson, op.cit, pp. 68–69.
The pride of the Germans was Riga harbour, maintained by them alone with no state financial support. By the end of the 19th century, Riga had become the largest port in the Russian Empire, and in terms of timber exports, was the biggest in the world.

Large German merchant firms also existed in Reval, e.g. Thomas Clayhills & Son, founded in 1633, one of the oldest in the world. Concerning Estland province itself, out of its 1378 dealers and brokers in 1881, 861 were Germans, while in small towns there were a lot of German traders as well. For instance, out of 90, in four Estland districts, 50 were Germans.

In Kurland, however, it was a different story. The main reason for this was undoubtedly the fact the province's cities and towns had a large population of Jews. Little wonder that it was they who possessed themselves of commerce to a great degree. This can be traced in the case of Libau, Kurland's biggest city and trading centre: in 1881, of its 1437 commercial enterprises, 838 (58.3%) were in possession of the Jews, and only 437 (30.4%) were in the hands of Germans, the rest being the property of Latvians – 99 (6.9%), of Russians – barely 26 (1.8%), and those of other national background – 37 (2.6%).

Banking was perhaps the most important factor which decided the economic power of the German middle class. On the eve of World War I, of 59 banks, 23 were, outright or chiefly, with Baltic German capital or management, 12 were Russian, but these were generally only bank branches, and 14 belonged to Latvians. They were savings-banks, or companies of mutual credit, three were the property of Jews, and eventually seven were nationally mixed institutions.

First, the „Rigasche Kommerzbank” must be mentioned. With 5,983,519,319 rubles worth of annual turnover, it was one of the biggest credit enterprises in tsarist Russia. It remained in German hands on the proviso that its board of directors was transferred to St. Petersburg in 1905. Among other large banks in Riga were the aforementioned „Rigasche Börsenbank”, whose profit was 343,922 rubles, „Rigasche Hypothekenverein” whose 10,792 mortgage bonds were worth 9,544,600 rubles, „Kreditverein der Hausbesitzer” whose 5,212 mortgage bonds were worth 5,043,000 rubles, „Rigasche Stadtdiscontobank” with a turnover of...
533 465 754 rubles, „Stadtsparkasse” with 19 488 519 rubles worth of deposits and 54 995 rubles of net profit. All the data concern the year 1905.\textsuperscript{187}

Likewise, the \textit{Deutschbalten} were the masters of the most significant banking houses in Libau – the „Kurländische Stadthyphoheken Verein”, „Libauer Börsenbank”, „Filiale der Rigaer Kommerzbank”. In Mitau, where they were the owners of seven banks including the „Kurländischer Kreditverein and Kurlänmdische Gesellschaft gegenseitigen Kredts”. The Latvians possessed five banks, four of which were for savings, the Jews had a savings bank, too, and the Russians were represented by two branches.\textsuperscript{188}

The Baltic Germans were pioneers in the field of the cooperative movement in Riga. In 1862, Riga German artisans started the credit cooperative „Die Vor-
schußkasse für Handwerker zu Riga” an example of the Schultze-Delitzsch type. This was the first officially registered credit cooperative not only in the Baltic area, but in Russia as well. Its rules were copied almost word for word from those of the „Consumer Cooperative Society” in Stuttgart which had been started just one year earlier. Among its members were teachers, officials, professionals and artisans, and it had its own shop. From the mid-1880s, Latvians established such cooperatives (they were 70 in 1914).\textsuperscript{189}

Until the mid-19\textsuperscript{th} c., crafts were one of the main pillars of German economic strength in the city. True, Latvians and Estonians became apprentices increasingly frequently, but their Germanisation process was similar to that of those with higher education.\textsuperscript{190}

Of course, the significance of crafts began to gradually diminish in the second half of the 19\textsuperscript{th} c., a process inevitably brought on by the development of industry, as well as by a new Russian craft law introduced in the Baltic Provinces in 1866 which abolished the vocational privileges of crafts. Incidentally, the law sparked off wide discussion and dissatisfaction among German artisans, who intended even to intervene with the government in order to have it repealed.\textsuperscript{191} Some crafts vanished totally, some maintained a meagre existence, but others grew.\textsuperscript{192} Examples include the Pernau tailor craft numbering between 15 and 20 masters in the first part of the 19\textsuperscript{th} c., but merely 3–4 in the second half,\textsuperscript{193} while the craft of Riga fishermen had 30 members in 1869, but nonetheless survived until the turn of the century.\textsuperscript{194} Only those crafts whose products were earmarked for clients of the middle and

\textsuperscript{187} K. Stavenhagen, op.cit., p. 272.
\textsuperscript{188} Ibid., pp. 272–273.
\textsuperscript{189} A. P. Aizsilnieks, op.cit., pp. 13–14, 16.
\textsuperscript{191} В. Е. Калнынь, \textit{Очерки истории государства и права Латвии в XI–XIX вв.}, Рига 1980, p. 159.
\textsuperscript{192} A. Henrikson, op.cit., p. 159.
\textsuperscript{194} Энциклопедия Рига, p. 645.
upper classes, mostly of course of German extraction, could count on survival and even prosperity and it was in these that the Germans continued to be uppermost. Nevertheless, in Reval in 1881, all of the nine goldsmiths were Germans, so were all the photographers, 9 of 10 furriers, 34 of 37 upholsterers and 16 of 20 watchmakers\textsuperscript{195}. It was the same in small Estland towns outside Reval, in 1881, all of the six goldsmiths, four furriers, three upholsterers and the photographer were Germans, so were 5 of 6 milliners, and 5 of 6 watchmakers\textsuperscript{196}.

Not only industry, trade, banking and crafts but the possession of most real estate demonstrated the economic might of the Germans in the cities. Let us illustrate this with the example of Reval.

<table>
<thead>
<tr>
<th>Table 2. Owners of Reval Real Estate by nationality\textsuperscript{197}</th>
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<tr>
<td><strong>Nationality</strong></td>
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<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Germans</td>
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<tr>
<td>788</td>
</tr>
<tr>
<td>Estonians</td>
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<td>Russians</td>
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Thus, the Germans, who constituted less than 25\% of Reval’s residents at the time, were in possession of nearly two-thirds of its real estate. It was characteristic that German property was increasing not only in quantity but in percentage terms as well. What was more important however was that the Baltic German townspeople owned the most valuable real estate. Taking this factor into consideration, in 1871, 83,8\% of the value of real estate was German property, 11,3\% was in the hands of Russians and merely 4,5\% for Estonians\textsuperscript{198}.

The Baltic region stood out from the rest of the Empire by its very splendid network of railways, roads and bridges. The idea to build the first railway line was put forward in Livland in the 1840s, but was rejected by the government. After a long struggle, and thanks to Gustav Harnack, the Germans succeeded in obtaining a concession for the Riga–Dünaburg railway in 1853. The Crimean war delayed its construction and finally, it was opened in 1861\textsuperscript{199}.

In Estland, the merchants and gentry combined their efforts to build a railway. The first project of 1858 provided a line that would connect Reval with Pskov by way of Dorpat. However, the idea was dismissed by the state authorities. Eventu-

\textsuperscript{195} Ergebnisse der baltischen Volkszählung vom 29 Dezember 1881, Theil 2, Bd. 1, Lieferung 1, pp. 16–19.

\textsuperscript{196} Ibid., Theil 2, Bd. 2, pp. 9–11.

\textsuperscript{197} Р. Пуллат, Городское население Эстонии с конца XVIII до 1940 года: историко-демографическое исследование, Таллин 1976, p. 76.

\textsuperscript{198} Ibid., p. 176.

\textsuperscript{199} Rigascher Almanach, 1882, p. 40.
ally, the Estland Germans won a concession for the Reval-Gatchina railway and the first train ran in 1870. The line was very important for the development of dairying in Estland as every night a train took milk from stations neighbouring the manors and farms, and supplying St. Petersburg with it in the morning.

Alas, sometimes the resistance of Russian officials to the attempt of Germans to construct new lines was much more difficult to overcome. This was in the case of a railway which was to connect Riga with Windau. In 1867, several Baltic Germans, with Baron Karl Mirbach in the forefront, applied to the Committee of Ministers for permission to build such a line, but to no avail. Fourteen years later, the request was repeated by the Riga Stock Exchange Committee with the same effect. The two cities were connected by railway only when the Moscow–Riga line was constructed.

In the 1870s and 80s, further lines were built on Baltic German initiative: Riga–Mitau (1873), Riga–Tuckum (1877), Riga–Walk–Pskov (1889), Walk–Dorpat (1889). Later on the whole, narrow gauge railways were constructed, e.g. Walk–Penau (1896) and Walk–Stackmannhof (1902). In the Baltic Provinces, track density was the highest in Russia and at the beginning of the 20th c., there were 23 metres for every sq km, whereas in European Russia only six metres.

Until Russification all the railways were in private ownership and Germans constituted many of those employed there, for instance, of 304 railway clerks in Reval in 1881, 162 were German.

The German gentry developed other means of transport on a large scale, namely cabotage. Estates situated on the coast sent their produce to Baltic harbours or St. Petersburg by sea, and in this way, whole fleets sprang up. The Baltic German people also contributed to the development of motor transport and before the First World War, regular motor routes linking Baltic cities and towns had been established. In June 1914, the Germans even founded the Society of Automobile Transport („Gesellschaft für Automobilverkehr”), the first in Russia.

In addition they were responsible for the building of a dense network of roads and bridges. In Livland and Estland their administration was in the hands of Ger-

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205 Ergebnisse der baltischen Volkszählung vom 29 Dezember 1881, Theil 2, Bd. 1, Lieferung 1, pp. 8–9.
206 Mitausche Zeitung, Nr. 33 (July 5, 1889).
207 Rigasche Zeitung, Nr. 139 (June 21, 1911).
208 Ibid., Nr. 150 (June 14, 1914).
mans, but in Kurland it belonged to the state. Yet, all regulations were laid down by diets and parish councils, and it is important to note that they were worked out in detail and imposed many duties on the owners of crossroads: the arrangement of verst markers, cleaning, shovelling snow, and the repairing of a given road section.\textsuperscript{209}

The roads were hard surface, not sandy. In Livland, the estate owners supplied material and money, and the districts the manpower. In Estland, so-called „road capital” was created on the initiative of the gentry, consisting of payments from both nobility and peasants proportional to the area of land possessed by them.\textsuperscript{210}

As mentioned, the network of roads was very dense in the Baltic region. In continental Livland, there were 10 586 verst of roads (1 verst = 1066.8 m), and on Ösel 594 verst.\textsuperscript{211} In Kurland, there were 21.1 kms for every 100 km\textsuperscript{2}, whereas in Russia it was barely 4.3 km.\textsuperscript{212}

In Estland and Livland, the gentry also maintained bridges. In Estland in 1888, there were 98 district bridges under control of the Commission of Roads and Bridges („Straßenbrückenkomissionen”) chaired by a gentry delegate. In Livland, approximately 600 bridges and ferries were maintained by estate owners, on the understanding that in this province the old custom of paying a toll was kept up. Livland bridges were under the control and supervision of the manor administration.\textsuperscript{213}

Another area where the Germans made great achievements was in the post and telephone. The former was maintained and run by the Livland and Estland gentry because they did not pay any state taxes on land. However, in 1881 a tax was introduced in these provinces which meant the need for further upkeep by the gentry vanished. Nonetheless, the landowners preferred to continue rather than to hand the post over to the state administration. It was characteristic that there were many more relay stations than necessary for state needs. Of 27 Estland relay stations, 14 served the treasure post, and the others for local purposes. In Livland, 35 stations for state needs existed and as many as 37 for private purposes. By comparison, in Kurland, where the post was maintained by the state, there were 25 stations, but they only had 188 horses, whereas the 27 Estland stations had 488, and the 72 in Livland up to 1000.\textsuperscript{214}

The Baltic Germans created a dense telephone network in the city as well as in the countryside. As early as the 1880s, just a few years after its invention in 1875, many manors had telephones, an unprecedented phenomenon in the whole

\textsuperscript{209} Земское устройство Прибалтийских губерний, С.-Петербург 1890, p. 356.

\textsuperscript{210} Земское хозяйство Прибалтийского края, С.-Петербург 1908, pp. 36–44.

\textsuperscript{211} Ibid., pp. 36–44.

\textsuperscript{212} P. Mayer, Kurland. Eine allgemeine Siedlungs- Verkehrs- und Wirtschaftsgeographie, Hamburg 1920, p. 103.

\textsuperscript{213} Земское хозяйство, pp. 337–340, 347–348, 351.

\textsuperscript{214} Ibid., pp. 299, 304, 313.
of Russia at the time\textsuperscript{215}. Sometimes, these private initiatives encountered the dis-
like of the Russian bureaucracy afraid of competition to the state owned telegraph. For instance, in 1898, the Germans succeeded in winning consent to link the tele-
phone network of Iurev district with that of Walk and Werro districts on condition that they had to pay 3000 rubles to the treasury because of competition to the tele-
graph\textsuperscript{216}.

At the beginning of the 20\textsuperscript{th} c., the peasants also began following the Germans’ example with special unions, consisting of both farmers and local Lutheran min-
isters, collecting money for this purpose. First and foremost, district governments had telephones, but sporadically farms had them, too\textsuperscript{217}. In 1903, a map was pub-
lished showing that the Baltic Provinces had the densest telephone network in all Russia, with Finland coming second\textsuperscript{218}.

Let us mention the voluntary fire brigade. The first brigade came into being in Reval in 1862 and was thus the first unit of its kind in the whole of Russia where until then only so-called „fire columns” had existed. As early as 1871, the voluntary fire brigades acted in 22 Baltic cities and towns\textsuperscript{219}.

Finally, the achievements of Deutschbalten in the area of municipal life should be looked at. At the beginning of the 20\textsuperscript{th} c., out of 20 Latvian cities and towns, including Latgalian, eight possessed sewerage, i.e. 40%, but no Latgallian town had it. By comparison, a mere 3.5% of Russian cities had a sewage system\textsuperscript{220}. Prior to World War I, seven of the twenty Latvian cities, or a third of them, had electric light. For Russia proper, the ratio was a mere one to eight\textsuperscript{221}. In terms of pavements, Baltic cities had the best throughout Russia at the turn of the century\textsuperscript{222}.

Baltic cities likewise achieved the most in the field of sanitary care and the health service, and the city authorities took the initiative in the development of a free health service for the poor\textsuperscript{223}.

Some Baltic mayors were really men of merit and two at least should be named: Otto Engelhardt and Georg Armitstead. The former held the position of mayor in Pernau for 19 years from 1898 to 1917. Under his mayoralty, the city flourished becoming one of the most beautiful Baltic towns. It was he who initiated a modern sewage system, a slaughter-house, power station, water supply, parks, and „steps” to the sea\textsuperscript{224}. As for Armitstead, he was the mayor of Riga in 1901–1912 and was anxious that the city should develop according to a plan. In 1907, the mayor start-

\begin{thebibliography}{99}
\item\textsuperscript{215} Московские ведомости, no. 44 (February 15, 188).
\item\textsuperscript{216} Baltische Chronik (December 10, 1898/1899), pp. 87–88.
\item\textsuperscript{217} Rigasche Zeitung, Nr. 182 (July 18, 1912).
\item\textsuperscript{218} Mitausche Zeitung, Nr. 38 (May 10, 1903).
\item\textsuperscript{219} Düna-Zeitung, Nr. 80 (April 2, 1908).
\item\textsuperscript{220} Очерки экономической истории Латвии 1900–1917, Рига 1968, p. 468.
\item\textsuperscript{221} Экономически, p. 150.
\item\textsuperscript{222} Очерки, p. 468.
\item\textsuperscript{223} К. Василев, Ф. Григориш, Состояние врачебного дела в Латвии в епоху капитализма, [in:] Из истории медицины, т. II, Рига 1960, pp. 78, 81–82.
\item\textsuperscript{224} Düna-Zeitung, Nr. 80 (April 2, 1908).
\end{thebibliography}
Undoubtedly, the Germans played an important role in stimulating and speeding up the economic and cultural development of the Baltic area. Due to them, the provinces took a leading position in many spheres of life all over Russia.

225 Latvijas Valsts Vēstures Archivs (LVVA), fonds 1423, apraksts 1, lieta 105, pp. 78–80.
226 Baltische Köpfe, Bovenden 1953, p. 121.
227 LVVA, fonds 1423, apraksts 1, lieta 105, p. 80.
ROLA NIEMCÓW BAŁTYCKICH W KULTURALNYM I GOSPODARCZYM ROZWOJU BAŁTYCKICH PROWINCJI ROSJI W XIX WIEKU

Streszczenie

Słowa kluczowe: XIX wiek, Niemcy bałtyccy, Łotwa, Estonia, gospodarka, kultura

Niemcy bałtyccy – niewielka lecz wpływowa grupa stanowiąca około 10% ogółu mieszkańców guberni bałtyckich: kurlandzkiej, inflanckiej, estlandzkiej – odegrali wielką rolę w rozwoju kulturalnym i gospodarczym Łotwy i Estonii w XIX w. Przyczyniły się walnie do tego, że ziemie te wysunęły się, niejednokrotnie, na czoło w rozwoju cywilizacyjnym w skali całego Cesarstwa Rosyjskiego. To właśnie na Łotwie i w Estonii (a ścisłej mówiąc, wśród Łotyszy i Estończyków), dzięki postawie niemieckich pastorów i właścicieli ziemskich, został całkowicie zlikwidowany analfabetyzm, rzecz niespotykana w całym Imperium Rosyjskim (poza Finlandią). Pod względem wydajności rolnictwa, mimo bardzo słabych gleb, Łotwa i Estonia także znalazły się w czołówce Rosji. W pierwszej kolejności dotyczyło to majątków ziemskich, ale później również i gospodarstw chłopskich. Niemcy bałtyccy mieli ponadto znaczące osiągnięcia w rozwoju przemysłu, handlu i szeroko pojętej, infrastruktury. Słusznie więc określił siebie mianem Kulturträger. Tam gdzie ich nie było, np. w Inflantach polskich (inaczej Łatgalii – cztery powiaty guberni witebskiej – pozostającej pod wpływem kulturalnym polskiego ziemiaństwa), sytuacja przedstawiała się diametralnie odmiennie. Łatgalia, też w dużej mierze zamieszkaną przez Łotyszy, była jedną z bardziej zacofanych części Rosji europejskiej.