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The Theatre of the Hobby Horse Invention

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Introduction

After much discussion about the background of the invention of the hobby horse, I think it makes sense to take a closer look at the theatre. Karl von Drais lived in

Mannheim, located in the tiny grand duchy of Großherzogtum Baden, which is located within the territory of today's Germany. While the United States ratified its constitution in 1789, followed

by France in 1791, there was not even a German State at that time. A great number of smaller and larger kingdoms and duchies formed the so called Rheinbund, which had no constitution. This makes it nearly impossible to draw a general picture of this region. [Figure 1]

The Napoleonic Wars and the rise of sports

The weak bonds holding the Rheinbund together made it quite easy for Napoleon to conquer big parts of central Europe. One effect of the Napoleonic Wars (1800–1814) was a new movement of nationalist students. Until then, sports were quite unpopular in central Europe, and physical labor had been regarded as a social flaw for a long time. This changed with the rise of fencing fraternities and gymnastic clubs. The first gymnastic club was founded in Berlin in 1811 by Friedrich Ludwig Jahn.¹ Both movements had a paramilitary background and were aimed at physically training young men from the middle class and aristocracy. However, these fraternities and clubs also began to advocate for a united German state, and one with a constitution.

Besides these new types of sports, skating had been quite popular in western Europe for a long time. However, skating mostly was not practiced in a competitive way, only for pleasure. In 1814, Aloys Mayer published his book: *Das Schlittschuh-Laufen* (ice skating), which can



Figure 1. Countries of the Rheinbund in 1806. Source: Putzger – *Historischer Weltatlas*, 89. Auflage, 1965; Westermanns *Großer Atlas zur Weltgeschichte*, 1969; Haacks *geographischer Atlas*. VEB Hermann Haack Geographisch-Kartographische Anstalt, Gotha/Leipzig, 1. Auflage, 1979. https://commons.wikimedia.org/wiki/File:Rheinbund_1806,_political_map.png (Used under GNU Free Documentation License.).

¹ Christian Jansen with Henning Borggräfe. *Nation – Nationalität – Nationalismus*, 2007, p. 44.

be considered another indicator of the rise in popularity of sports in central Europe.²

Another effect of the Napoleonic Wars was a significant decline in the population of horses in some areas. Statistics from Prussia show that the regions of Brandenburg and Westpreußen suffered horse population declines of 35% and 70%, respectively.³ [Figure 2]

While sports were becoming established and while the number of horses was decreasing in some regions, Karl von Drais applied to Großherzogtum Baden for a patent for a horseless, human-powered carriage with four wheels on October 27, 1813. At the time, France already had a modern patent law; patent-seekers in German-speaking lands were at the mercy of local authorities. The duke's reviewers, Weinbrenner and Tulla (the engineers responsible for the straightening of the Rhine), rejected Drais' application. One of their arguments was that the slightest hill would present a problem for the carriage. This construction obviously had a problem with its power-to-weight ratio.⁴

² These numbers based on the winter counting; Hans Wolfram Graf Finck von Finckenstein. *Die Entwicklung der Landwirtschaft in Preußen und Deutschland, 1803–1930* (The Development of Agriculture in Prussia and Germany, 1803–1930), 1960, accessed June 17, 2024, https://search.gesis.org/research_data/ZA8305?doi=10.4232/1.8305.

³ *Salzburger Zeitung*, January 24, 1814, p. 107.

⁴ Michael Rauck. *Karl Freiherr Drais von Sauerbronn, Beiträge zur Wirtschafts- und Sozialgeschichte* (Karl Freiherr Drais von Sauerbronn, Contributions to Economic and Social History), 1983, p. 295.



Figure 2. Horse population in tons. Graph based on the winter counting. Data source: Hans Wolfram Graf Finck von Finckenstein: *Die Entwicklung der Landwirtschaft in Preußen und Deutschland, 1803–1930, 1960.*

The rise of the steam age

Progressive people had hoped that after the Napoleonic Wars a united Germany would be founded. But these hopes were disappointed after the *Deutsche Bund* was established in 1815. The Bund was not a federal state, but a kind of inter-governmental military alliance. The number of its members varied. On July 7, 1817, there were 41 members, each with different currencies, laws and taxes. However, the newspapers continued reporting news from the modern world. The *Grazer Zeitung* wrote in 1815 that steam-boats were being established on the rivers Thames and Clyde in the United Kingdom and were replacing stagecoaches.⁵ In the following year, the British steam-boat *Defiance* crossed the English Channel and arrived in Cologne on June 12, 1816.⁶ Five days later the English steam-boat *Lady of the Lake* reached the harbour of Hamburg.⁷

⁵ *Grazer Zeitung*, May 9, 1815, p. 2.

⁶ *Wiener Zeitung*, June 23, 1816, p. 691.

⁷ *Brünner Zeitung der k.k. priv. mähr. Lehenbank*, July 4, 1816, p. 726.

In the same year, John Humphreys finished construction of a steam-boat close to Berlin, which embarked on its first test ride on September 3.⁸ Also, reports about steam locomotives were being published in German. One report described how steam locomotives had been in use in British mines for around three years.⁹

Bad weather

In 1816, the weather in Europe turned cold because of the eruption of the volcano, Tambora, in Indonesia one year before. In the territory of today's Germany, the amount of aerosols (sulfates and others) emitted into the stratosphere led to an average temperature of one to three degrees lower than usual. In some regions, dramatic weather phenomena

⁸ *Österreichischer Beobachter*, October 25, 1816, p. 1584.

⁹ *Morgenblatt für gebildete Stände*, August 17, 1816, p. 791.

occured.¹⁰ For example, Lindau and Upper Swabia recorded snow-fall on June 8, 1816.¹¹ As a result of bad harvests and speculation, food prices exploded, especially for potatoes, a major source of nourishment for Europe's poor. A statistic from Ettlingen (70km from Mannheim) shows that the price of potatoes went up ten times and, on some days, as much as 37 times, while wheat or beef experienced lower price rises.¹²

[Figure 3]

Several newspapers reported that hunger took hold in hilly, less-fertile regions with lower average temperatures than other parts of today's Germany: Aar, Hunsrück, Inn, Mosel, Erzgebirge, Voigtland and Westerwald.¹³ One report from Niederzwönitz (Erzgebirge)

10 Susanne Haeseler. Der Ausbruch des Vulkans Tambora in Indonesien im Jahr 1815 und seine weltweiten Folgen, insbesondere das „Jahr ohne Sommer“ 1816 (The Eruption of the Volcano Tambora in Indonesia in 1815 and its Worldwide Consequences, Especially the “Year without Summer” in 1816), Studie des Deutschen Wetterdienstes (Study by the German weather service), July 27, 2016, accessed June 17, 2024, https://www.dwd.de/DE/leistungen/besondereereignisse/verschiedenes/20170727_tambora_1816_global.html.

11 Vereinigte Laibacher Zeitung, July 5, 1817, p. 1.

12 Peter Joseph Schneider. Versuch einer medizinisch-statistischen Topographie von Ettlingen und deren nächsten Umgebungen (Attempt at a Medical-Statistical Topography of Ettlingen and its Immediate Surroundings), 1818, p. 161, 165, 167, 168.

13 Klagenfurter Zeitung, July 13, 1817, p. 2; Leipziger Zeitung, May 12, 1817, p. 1124; Leipziger Zeitung, November 9, 1816, 2373f; Linzer Zeitung, January 20, 1817, p. 20f; Morgenblatt für gebildete Stände, December 27, 1817, p. 1.

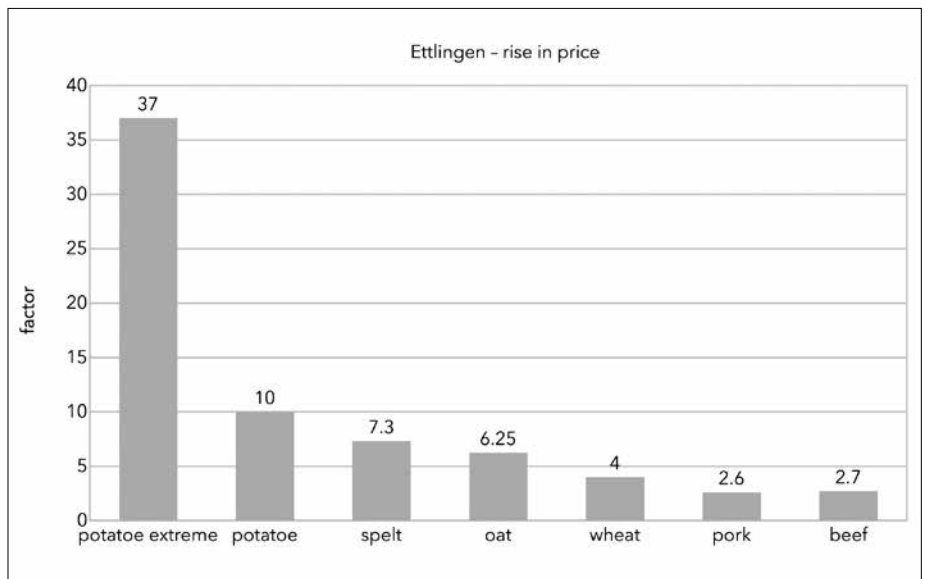


Figure 3. Rise in price in Ettlingen in 1816 (70 km from Mannheim). Data Source: Peter Joseph Schneider: *Versuch einer medizinisch-statistischen Topographie von Ettlingen und deren nächsten Umgebungen*, 1818, p. 161, 165, 167, 168.

mentions that the poorest suffered from hunger: the unemployed weavers, the visually impaired and mentally disabled and old people who were unable to work.¹⁴ Another report from Moosbach am Neckar (80 kilometers from Mannheim) said that some people “verschmachtet,” which may mean to starve or to suffer severe hunger.¹⁵ But statistics from Ettlingen am Rhein (70 kilometers from Mannheim) show no significant rise in mortality for 1816.¹⁶

[Figure 4]

14 Leipziger Zeitung, May 12, 1817, p. 1124.

15 Morgenblatt für gebildete Stände, December 27, 1817, p. 1; Deutsches Wörterbuch von Jacob Grimm und Wilhelm Grimm (German dictionary by Jacob Grimm and Wilhelm Grimm), Leipzig 1854–1961, volume 25, split 1116–1121.

16 Peter Joseph Schneider. Versuch einer medizinisch-statistischen Topographie von Ettlingen und deren nächsten Umgebungen (Attempt at a Medical-Statistical Topography of Ettlingen and its Immediate Surroundings), 1818, additional print 4.

Despite all the drama, those people who could afford to buy a horse seem to have been able to keep them and this can be proven for Prussia and the Münster region.¹⁷ [Figures 5 & 6]

The Laufmaschine

Karl von Drais continued to improve his vision of a human-powered vehicle. As his first four-wheeled construction had a driving gear and was too heavy, he decided to reduce the new construction to the minimum. Leaving off any driving gear and giving the construct only

17 Hans Wolfram Graf Finck von Finckenstein. Die Entwicklung der Landwirtschaft in Preußen und Deutschland, 1803–1930 (The Development of Agriculture in Prussia and Germany, 1803–1930), accessed June 3, 2024, https://search.gesis.org/research_data/ZA8305 (Stand 3 June 2024); Nitsch / R. Gudermann: *Agrarstatistik der Provinz Westfalen 1750–1880*, 2009, accessed June 3, 2024, https://search.gesis.org/research_data/ZA8523.

two wheels in line, Drais wrote that his idea was taken from ice skating.¹⁸

He undertook the first reported public ride with his new invention on June 12, 1817.¹⁹ The time for a human-powered vehicle seemed to be right, as sports were gaining increasing acceptance. In 1818, some 150 gymnastic clubs, with an estimated 12,000 active members, existed in German-speaking countries. However, on January 2, 1820, gymnastics were forbidden and classified as subversive in Prussia.²⁰ It is not clear if the ban had an impact on the popularity of hobby horses. Nevertheless, Drais developed an improved version of his machine, which was presented in a journal in June 1820 under the category: “Luxury and fashion.”²¹ This seems to be the right category because a hobby horse from the Austrian manufacturer Burg cost between 66 and 100 Gulden – 80 Gulden being then equal to twice the yearly income of a capable spinner.²²

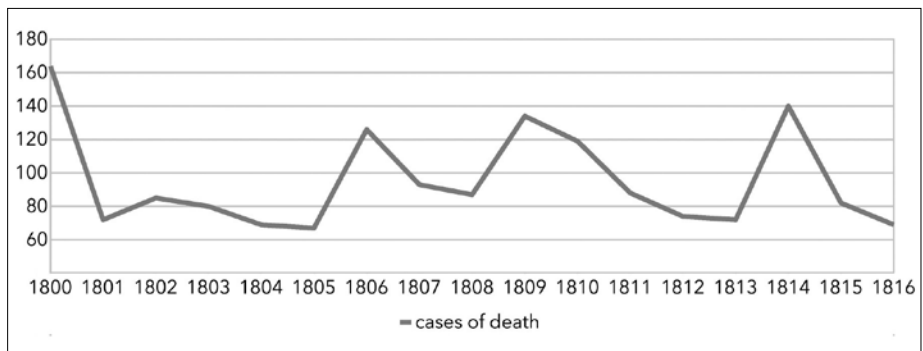


Figure 4. Mortality in Ettlingen (70 km from Mannheim). Data Source: Peter Joseph Schneider: *Versuch einer medizinisch-statistischen Topographie von Ettlingen und deren nächsten Umgebungen*, 1818, additional print 4.

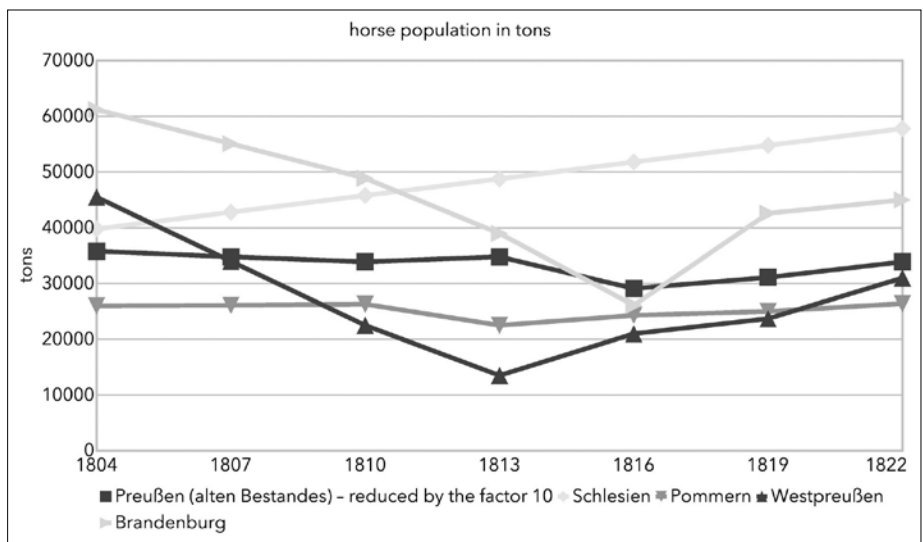


Figure 5. Horse population in the Prussia Region in tons. Graph based on the winter counting. Data Source: Hans Wolfram Graf Finck von Finckenstein: *Die Entwicklung der Landwirtschaft in Preußen und Deutschland, 1803–1930*, 1960.

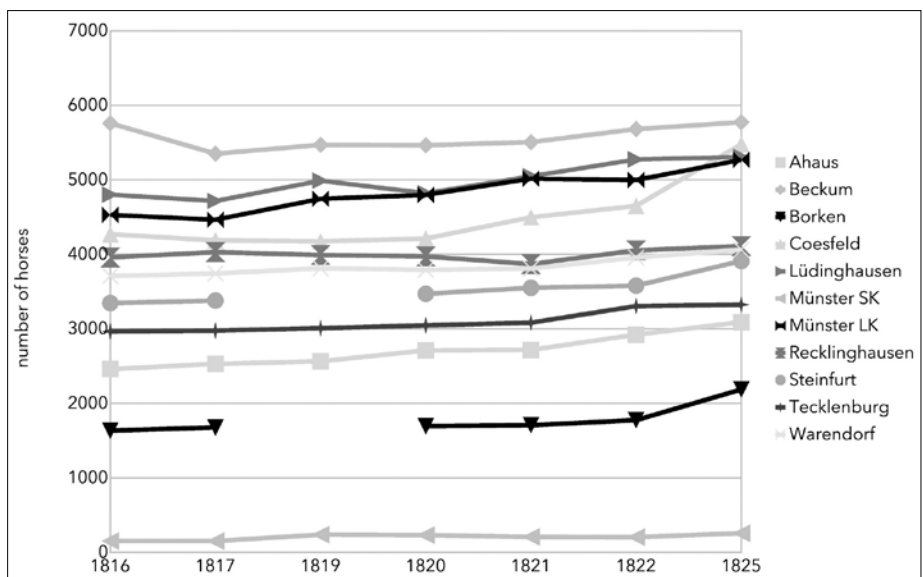


Figure 6. Horse population in the Münster region. Data Source: Nitsch / R. Gudermann: *Agrarstatistik der Provinz Westfalen 1750–1880*, 2009.

18 Badwochenblatt der Stadt Baden-Baden (Weekly newspaper of the city of Baden-Baden) from July 29, 1817, p. 188f.

19 Ibid.

20 Christian Jansen with Henning Borggräfe. *Nation – Nationalität – Nationalismus*, 2007, p. 44; accessed April 3, 2024, <https://www.dhm.de/lemo/jahreschronik/chronik-1820.html>.

21 *Journal für Literatur, Kunst, Luxus und Mode*, June 1820, p. 365–377 and extra illustration.

22 Walter Ulreich. Anton Burg and Son: The Viennese Hobbyhorse Manufacturer, *Cycle History 3*, Proceedings, 3rd International Cycling History Conference, 1992.