



## **„Eine Kempelensche Sprechmaschine“. New insights in speaking machines in the late 18th and early 19th centuries**

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It was in 1791 that Wolfgang von Kempelen published the *Mechanismus der menschlichen Sprache nebst der Beschreibung seiner sprechenden Maschine* in Vienna, the last part of which is dedicated to the description of the speaking machine he had worked on for many years. In some parts of his book Kempelen refers to ideas he hadn't been able to put into practice at that time and asks the readers to further develop the machine.

It was already known that several machines were produced subsequently [2, 3, 6, 7]. For example, Johann Wolfgang von Goethe mentioned in June 1797 in a letter from Jena: “Kempelens Sprechmaschine, welche Hofrat Loder besitzt und die zwar nicht sehr beredt ist, doch aber verschiedne [sic] kindische Worte und Töne ganz artig hervorbringt, ist hier durch einen Tischer [sic] Schreiber, recht gut nachgemacht worden”. In 1806 the well-known medal maker and sculptor Leonhard Posch presented a speaking machine in Berlin. In contemporary sources it is said that it had been built on the basis of Kempelen's machine and was very similar, but improved. Finally, the British physicist Charles Wheatstone optimized Kempelen's machine and built an apparatus which he presented in 1826.

Copying the well-known speaking machine in the Deutsches Museum in Munich, often called “the speaking machine by Wolfgang von Kempelen”, was the reason for research about its history, context and attribution which included speaking machines of the late 18th and early 19th centuries [8]. They brought new insights in the speaking machine of Justus Christian Loder mentioned by Goethe, about which little was known, despite the prominence of both the writer and the owner – Loder being a famous doctor of the late 18th and early 19th centuries –, so that its story can be told now. They also brought insights on other unknown speaking machines built on the basis of the one described by Kempelen.

The recent findings show that the interest in speech synthesis, manifested since the mid-18th century in the ideas and works of Erasmus Darwin, Leonhard Euler, Christian Gottlieb Kratzenstein und Abbé Mical, became more common around 1800. There are several persons dealing with this topic – presumably stimulated by the publication of the *Mechanismus* –, constructing the machine described by Kempelen, improving it and using it for their purposes. Speaking machines can be found in very different contexts showing that the interest in speech synthesis expanded in diverse areas. These include anatomical and physical collections, mechanical experiments becoming part of a *Kunstkammer* and the partly spectacular presentations of public science.

## References

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