

## **Bernd Pompino-Marschall: "Warming up: Von Kempelen et al. - Remarks on the history of articulatory modelling"**

The contribution of von Kempelen's „Mechanism of Speech“ to the ‚phonetic sciences‘ will be analyzed with respect to his theoretical reasoning on speech and speech production on the one hand and on the other in connection with his practical insights during his struggle in constructing a speaking machine.

Whereas in his theoretical considerations von Kempelen's view is focused on the natural functioning of the speech organs – cf. his membranous glottis model – in constructing his speaking machine he clearly orients himself towards the auditory result – cf. the bag pipe model for the sound generator used for the speaking machine instead. Concerning vowel production his theoretical description remains questionable but his practical insight that vowels and speech sounds in general are only perceived correctly in connection with their surrounding sounds – i.e. the discovery of coarticulation – is clearly a milestone in the development of the phonetic sciences: He therefore discards with the Kratzenstein tubes although they might have been based on more thorough acoustic modelling.

Finally, von Kempelen's model of speech production will be discussed in relation to the discussion of the acoustic nature of vowels afterwards [Willis and Wheatstone as well as von Helmholtz and Hermann in the 19th century and Stumpf, Chiba & Kajiyama as well as Fant and Ungeheuer in the 20<sup>th</sup> century].