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Controversies about the distinction between the "natural" and the "artificial" in historic debates in mechanical engineering

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The paper focuses on "boundary work" in engineering, in particular in the course of the professionalization of engineering as an academic discipline in Germany. The continued historical debates about the relationship between technology and science, technology and arts etc. were a constitutive and productive dimension of the modern technological field, i.e. of a field of *knowledge* that counts as genuinely technological.

Today's studies of boundaries in engineering and ICTs address predominantly the dualism between the technical and the social referring to insights in the mutual co-construction of technology and society. The paper follows these perspectives in recent technology studies that allow to challenge the engineer's claim for the neutrality and the objectivity of technology. It suggests to take a closer look at the professional cultures of mechanical engineering on an epistemic level. Where and how are boundaries set in order to produce particular objects of technological knowledge?

On the basis of case studies the paper presents how the boundaries between the natural and the artificial were illuminated and controversially negotiated in late 19th century engineering in Germany. They do not only document the epistemic instability of what is called "technology" and to what extent "technology in the making" can be reconstructed in a very basic field-generating sense with the help of historic material of engineering science. What's more, they show that the engineers' boundary work took place under particular conditions with the help of specific strategies that are linked to their political positioning in the terrain of science of the time.