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The Birth of Geoengineering. Large-Scale Engineering Projects in the Early Stage of the Anthropocene (1850-1950)

The debate about the *Anthropocene* has gone beyond the scope of the geological discourse and became a widely discussed concept in the cultural and social sciences that poses the challenge to rethink the relation of environment and society and the blurring borders between nature and culture. Even though first attempts of the concept's productive implementation in historical scholarship are on hand by now, its heuristic and analytical potential is scarcely sounded out. How does the Anthropocene perspective change the temporal narratives of historical writing and how do the different discussed proposals for a periodization of the Anthropocene retroact to the concepts of environmental history, history of science and technology, and global history?

One of the most recent discourses closely connected with the Anthropocene debates are those about *Geoengineering*. Even though the visions of forming the world are much older, the possibility to shape parts of the earth systems and the climate system started in the early stage of the Anthropocene (1850-1950), when millions of years old natural formations were pierced by large-scale engineering projects; this is where the awareness of the tremendous human agency becomes visible for the first time. These early projects also fueled the reflections and histories of control over nature, the hope of cheap energy for everyone, but also of failed investments, and deadly catastrophes, which today provide an important basis for a critical debate about *Climate Engineering*.

In this project a global selection of large-scale engineering projects will serve as a lens to uncover the "birth" of *geoengineering*, its preconditions, impacts, and perceptions. Geoengineering projects such as: the piercing of large mountain ranges through railway tunnels, the construction of sea canals, and huge dam constructions, were the early flagship ventures of humankind's attempts to change the earth's geomorphological appearance.

Based on the assumption that a history of geoengineering projects not only provide natural-scientific, but also arguments from a history of ideas perspective for a starting point of the Anthropocene that lies in the "Industrial Era," a global selection of these enterprises will be used as case studies to shed light on the historical structures of the Anthropocene's early stage. The project, which oscillates along environmental history, history of science and technology, and global history tries to illuminate the heuristic and analytical potential of the Anthropocene and to align the framework in which the historization and periodization of the concept takes place.