

Science, Techno-Science and Sustainability in Scandinavia

Session proposal

The 7th Norwegian Conference on the History of Science

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Scientists in Scandinavia expressed during the Cold War visionary ideas for environmental management of the world. Natural scientists as well as engineers sought to mobilize socially and politically for an alternative to destructive industrialism. This session seeks to capture the ways in which the academics, scientists, and engineers construed environmental knowledge and governance anchored in technology and Scandinavian political and social culture. The papers spans roughly thirty years of history, beginning in the late 1950s ending with scholars responding to the Brundtland report *Our Common Future* in 1987.

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Equipment Required: A computer enabling Power Point presentations

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Abstract

Ecology, nuclear energy and the boundaries of techno-science

In recent decades, earth system scientists have stated that the earth has entered a new geological era – the Anthropocene – dominated by the profound human influence on the planet's climate, biological diversity and the nitrogen, phosphorus and water cycles. Responding to this warning, scholars have argued that we need a reinvigorated field of environmental humanities in order to make sense of the Anthropocene: It is not only a geological era, but also a deeply political event. These scholars thereby call for a mutual reconciliation of the natural sciences and the human sciences. In this paper, I show how earlier calls for bridging the divide between the sciences have also been closely linked to reflections over how human technology and science shapes the environment and, ultimately, mankind's prospects of survival. More specifically, I explore the ways in which the 'two cultures' idiom and similar concepts were received, construed and circulated in the meetings and journals of Norwegian engineers and industrial managers. The idea of a split between applied science or techno-science and the humanities was invoked in (and shaped) a host of heated controversies, for instance over the destructive vs. the utopian potential of nuclear energy in the 1950s and regarding the reinvigorated environmental movement and futures studies in the 1970s. It was continuously linked to the importance of technical journalism, popular science, and the uneasy relationship between techno-science and the public.

Sabine Höhler

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E-mail: sabine.hohler@abe.kth.se**Abstract****Plant Engineering and Visions of Forest Design in Sweden in the 1960s**

The power of technoscientific intervention into the Earth became especially apparent in the second half of the twentieth century when Earth's environment was turned into an experimental system. This paper explores plant engineering experiments in Sweden's first phytotron facility which began its operations in Stockholm in the 1960s. The phytotron can be seen as a specific form of environmental governance built on techniques of limiting and scaling environmental space for environmental control. A closed greenhouse was equipped with computer and control facilities to enable the study of plant physiology and plant genetics in highly engineered climates that emulated environments elsewhere in time and space. The paper studies the emergent proto-environment of the phytotron as a repository of visions and tools to improve forest and crop growth in Sweden's north. The aim of the paper is to describe the science and technology of the phytotron as essentially transforming the understanding of environment itself as an infrastructure and a manageable entity.

Peder Anker

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E-mail: peder.anker@nyu.edu**Abstract****The Power of the Periphery: A Global History of Ecology in Norway**

The act of doing something good for the world was the cultural Archimedean point from which many Norwegians scientists tried to move the Earth in a new, and to them, more environmentally sound direction. This paper will question the Norwegian scientific culture of environmental well-wishing in a troubled world and will argue that the key to understanding this gaze is in the examination of the ways in which Norwegians upheld their environmental periphery as superior. At the local level that could manifest as a pristine mountain contrasted with an overcrowded city. At the global level it became a beautiful Norway contrasted with a polluted world. This allowed Norwegians to fashion the nation as an ecological microcosm for the creation of a better global macrocosm. Beginning with the translation of Rachel Carson's *Silent Spring* into Norwegian in 1962 and ending with Norwegian scholars responding to the Brundtland report *Our Common Future* (1987), the paper tells the story of the ways in which ecological concerns were imported into Norway via Carson's work and later exported from Norway to the world. During this period Norwegian environmentalists attempted to navigate the tense relations of the Cold War by adopting a middle-ground position that could be embraced by both sides. They provided a vision and dream of harmony and stability in a world filled with tension and instability.