

5. The scientific exploration of Svalbard and the development of modern Arctic research

The concepts “research” and “exploration” are often used indiscriminately about scientific or science related activities in the past. Though we might like to think of research as systematic, scientific studies and exploration rather as the process of discovering new territories, it is important to interpret the two concepts in their contemporary context. What we may regard today as a pure discovery expedition might have been viewed in the past as advanced science.

Polar research as a specific term probably originated in Germany in the 19th century – “Polarforschung” became a scientific discipline. Today, however, we realize that polar research is not defined as a particular discipline but is a geographical definition: research that is dedicated to polar areas of the world. Typically, it is field based, multidisciplinary, international, and very expensive. It is also typical that polar research is motivated by more than scientific curiosity – individual and national prestige, economic and political interests are also important. Nonetheless, international cooperation is prevalent in polar research.

Karl Weyprecht and Georg von Neumayer’s initiative in the 1870s to organize the first International Polar Year (1882–83) was a turning point in making polar research more focussed on science, less on heroic exploration and discovery. On Svalbard the Swedes manned the IPY station at Kapp Thordsen, with great success.

The (scientific) exploration of Svalbard may be divided into different phases, for example:

- 1596–1720: First discovery, geographical exploration, mapping
- 1720–1850: Development of natural science, North Pole expeditions
- 1850–1900: First “golden age” of Svalbard science; Swedish hegemony
- 1900–1945: Geology and land claims; Norwegian hegemony; economic crisis
- 1945–today: International research platform, “big science”, environmental research

For some examples of expeditions and activities during these different phases, see slide copies of lecture.

The scientific profile of Svalbard research has changed over time. Initially, geographical exploration and mapping were top priority – everybody needed a good map. From the mid 19th century geology and geophysics were at the forefront. Resource geology became important around the turn of the century and had political implications in the struggle for sovereignty over Svalbard. Since the 1970s environmental research, not least biology, has expanded. One reason was the introduction of large environment protection areas in 1973. Today, environment and climate related research dominate Svalbard science.

Science has played an important role in Svalbard’s general history. It helped increase the scientific and public knowledge about the area but has also contributed to the basic understanding of global natural phenomena like glaciations, aurora, climate and so on. Scientific expeditions stimulated tourism and *vice versa* and gave a direct impetus to the development of a mining industry. Some scientists played a role themselves in starting mining activities. Science has been a political factor as well, for instance in connection with the sovereignty issue and during the Cold War. Being present and active on Svalbard was a goal by itself. Today, research and education represent one of the main pillars of Svalbard’s economy.

Food for thought

- How can we say that polar research became “more scientific” in the 19th century?
- How has science played a political role on Svalbard?