Does the history of science matter?

The significance of the history of science is not limited to listing past achievements or collecting historical anecdotes. The history of science offers us multidimensional insight into the nature of scientific thinking, the interaction between scientific and other activities in society, and the relationship between local and global scientific communities.

The history of science reminds us, for example, that major changes rarely occur suddenly or are brought about by individual people. Bruno Latour, who studied the relationship between science and society (*Les Microbes: guerre et paix*, 1984), has questioned the myth of Louis Pasteur as a lone hero scientist. Latour argues that the success of Pasteur's microbiological discoveries was not only due to scientific breakthroughs, but also to how Pasteur managed to link his work to broader societal interests and networks. Pasteur's success was based on his ability to shift the interests of different actors so that they began to support his scientific endeavours. Farmers, hygienists, doctors and politicians came to see Pasteur's microbiological work as a solution to their problems. Therefore, scientific innovation did not succeed simply because of its intrinsic scientific value, but because it mobilized a strong support network around itself. In a way, Pasteur expanded his laboratory into society and brought society into his laboratory.

Charles Darwin's theory of evolution can in turn be positioned within the structures of colonial power. Darwin's famous voyage on the HMS Beagle (1831–1836) was a mapping expedition that combined the goals of science and empire. The colonial infrastructure enabled access to global ecosystems and the collection of samples from around the world, even though Darwin himself was critical especially of slavery. In a Latourian sense, the success of the naturalist was based on his ability to create networks that combined the interests of science, natural history collecting, the British Empire and Victorian society.

The History of Finnish Science project makes extensive use of interview and memoir data. Interviews for the project started in autumn 2024, and the first group of interviewees consisted of Academicians of Science. One of the interviewees was Academician Ilkka Niiniluoto.

These examples show how scientific production is intertwined with broader social and international structures. The history of academies of science can also be viewed in this light. Scientific academies and societies founded in the mid-17th century, such as the Royal Society in London and the Académie des Sciences in Paris, created a model for public expert debate based on rational argumentation and empirical evidence. This model of public debate later expanded to include discussion of social issues and had a significant impact on the development of modern democracy and civil society.

When studying the history of science in individual countries, such as Finland, the focus can be on both local characteristics and the interaction between national and international scientific life. From a comparative perspective, women entered the field of science relatively early in Northern Europe. Lydia Sesemann, a chemist from Vyborg, was one of the first women to earn a doctorate in chemistry in Europe (Zurich, 1874), while mathematician Sofya Kovalevskaya became the first female professor of mathematics in Sweden in 1884. Chemist Johan Gadolin and explorer A. E. Nordenskiöld put Finnish and Nordic scientific achievements on the European stage by documenting unique natural and cultural phenomena – scientific practice often served both universal knowledge and the forma-

tion of a regional or national identity. The development of the Nordic welfare state is an example of the interaction between science and the history of society in a later period: after the Second World War, economic and social policy researchers, such as Gunnar Myrdal in Sweden and Pekka Kuusi in Finland, built the theoretical foundation for the Nordic welfare models.

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These are the types of questions and perspectives that guide the project on the history of science in the Republic of Finland, which was launched by the Finnish Academy of Science and Letters and the Finnish Society of Sciences and Letters. The planned publications of the project are a continuation of the Society's multi-volume series on the history of sciences during the period of autonomy and the series edited by Päiviö Tommila and Allan Tiitta at the turn of the millennium on the history of science in Finland from the Middle Ages to the end of the 20th century. Since the publication of these works, research into the history of science has expanded in two directions. Alongside the history of science, we now have the history of knowledge, which studies all forms of knowledge, their production, dissemination and use in society, regardless of whether they have emerged through scientific methods or not. The global history of science, on the other hand, has broadened our understanding of the emergence of scientific knowledge as a complex, interactive process influenced by many cultures and information systems around the world, as exemplified by Darwin and Pasteur.

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The History of Science in Finland

Professor Yrjö Väisälä working with his assistants at the Department of Physics at the University of Turku in the 1940s. On the right, observer Liisi Oterma, in front of the bookshelf Professor Yrjö Väisälä, and in the middle, under the ceiling light, assistant V. Laiho.

Image: Pekka Kyytinen / National Board of Antiquities