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What is required to be able to state something in the name of science? Nowadays, most people would agree that a doctorate would provide that opportunity; being more than ordinarily interested in ornithology or astronomy, for example, is not enough. There has long been a well-established order that differentiates scientific experts – the specialists and researchers – from a wider public, interested amateurs or other parties such as science journalists, politicians and entrepreneurs. Researchers produce scientific knowledge; everyone else consumes it.

This order is not set in stone. It is very much a historical product, with roots in the early 19th century – as we have previously seen, the young Academy of Sciences adhered to another order of knowledge, an order that was also distinctly ideological.

But science also gives rise to other sorts of orders. A scientist tries to bring order to the world through nomenclatures and taxonomies. Defining a protocol for how experiments or observations should be conducted creates data that is comparable and mobile. Classifications and databases order research archives so it is easy to find the right information. This type of activity, this ordering, also entails a type of exercise of power. Once it is established it governs what can be done, sometimes what can be thought, usually without marked effects for others than the experts themselves, sometimes with consequences that reach far outside science. Racial hygiene's sorting of people is an example close at hand; another more harmless one was when schoolchildren were "robbed" of their favourite planet, Pluto, due to the new definition for planets that was adopted by the International Astronomical Union in 2006.

This section contains picture essays that, in one way or another, discuss these orders of knowledge. First are three essays that deal with those who are excluded, people whose voices, for various reasons, do not count. The section starts in the Nobel Archive, with a few samples from its second class post.



Every year, since the Nobel Prize was first awarded, secretaries have sorted and removed hundreds of letters from people who, for various reasons, thought they deserved the prize and who, more or less pleadingly, have stated so. It continues with an amateur geologist who, against better judgement, or more correctly, against accepted scientific theory and without any great success, publicly attempted to dispute the theory of the ice age. The next essay reflects on the gender order that has also ordered the scientific world, using as its starting point a photograph from the Academy of Sciences' Session Hall, in which Maja Arrhenius is visible among the rows of chairs.

But orders of knowledge are not only upheld through practices, but also through various emblems. The observatory at Brunkebergsgården in Stockholm was the most expensive scientific infrastructure of 18th-century Sweden, but was also a symbol of both a political order and faith in scientific rationalism. In the 19th century, another symbolic dimension was expressed in the costume that was introduced in 1828 for members of the Academy of Sciences – a tailcoat and embroidered collar – and which would make its mark on meetings for over a century. We will also see how, in the years leading up to World War Two, politics was greatly involved in the Nobel Prize, and how Hitler simply forbade German researchers from accepting one.

The section ends with three very different examples of how knowledge has been used to concretely order and administrate our world. The first is about a Swedish explorer and an early map of southwest Africa. Cartography was an important activity in colonial practice, where knowledge of the terrain was exchanged for claims on territory. Then there is a rapid jump from African landscapes to the Swedish countryside. Knowledge can be used to exploit nature, but it can also be used to protect it. The red water lily, given protected status in 1905, is the starting point for an essay on the Academy of Sciences' work for Swedish nature conservation. Finally, an essay on an essential, but often neglected aspect of scientific knowledge's effects on society, namely standardisation. To be precise, it is about how time was created and distributed in 19th-century Sweden, with decisive consequences on everyday life.

A PROPOSAL FOR HOW TO CONSTRUCT A FLYING MACHINE,
sent to the Academy of Sciences around 1900.