

ambulatory circumstances for the subsequent 15 years. However, from 1779, the Braheska building on Stora Nygatan was the fixed point for 49 years. After the move to the Westmanska building on Drottninggatan, the Academy remained there for 87 years, until 1915, when it moved to its present premises in Frescati, north of the city. After every move, the Academy seems to have stayed almost twice as long as at its previous home and, if that rule of thumb applies, the next move should take place sometime around 2075. Also, if one is bold enough to put emphasis on how the Academy has moved further and further north, then property in the south of Täby, a suburb to the north of Stockholm, has potential in the future.

On this basis, the cancellation of the possible 2012 move by the Academy of Sciences to the planned Nobel Centre, a controversial newbuild in Blasieholmen in central Stockholm, to which the Nobel Foundation and Nobel Museum are intended to move, should come as no surprise. Discussions were due to the ongoing losses made by the Academy: in 2011 they were twelve million kronor, of which nine million were due to the cost of its premises. Naturally, this was not good for the Academy's balance sheet. A move could have created a positive balance if the premises at Frescati were sold or leased out.⁶⁴ Still, this time there was to be no relocation and the management of the Academy instead had to produce a plan for reducing the cost of its current premises.⁶⁵

Economy

The principle is that an organisation with good management increases the value of its assets. However, the result, in the form of a good economy, has no value in itself; it simply enables the maintenance of investments and support for new initiatives that are deemed important and fit the purpose of the organisation. As regards the Academy of Sciences, its resources have been used in many different ways. This has involved supplementing and expanding collections through purchases and, in equal measure, paying the staff that look after them. Funds have also been used to renovate and rebuild premises when they suffer wear or become unsuitable for activities. Over the years, the Academy of Sciences has been more than happy to invest in exploration and research expeditions, or in establishing research stations or laboratories.

In an assembly of scientists, all of whom are passionate about their own subject, whether it be the entomology of the New World or photographic astronomy, no amount of money will cover everyone's needs and wishes. In other words, the Academy of Sciences has always suffered from a lack of resources, no matter how good its results and how strong its balance sheets. There are also significant uncertainties that make management more difficult: How should the balance of risk and growth be determined when investing

private capital? When can a financial situation be deemed so good that new investments can be made without risking others in the future?

As we have seen, the premises that house an organisation are important, because they determine its circumstances and its opportunities over a relatively long period. The Academy of Sciences' observatory was the start of a comprehensive history in which the Academy successfully retained or bought properties, used them for its own purposes and then sold them at a good profit. For the Academy, therefore, there have been long-term rewards to owning its own buildings, as well as the land they stand on. Since the observatory was inaugurated in 1753, properties owned by the Academy and the collections they housed have comprised a significant part, even the majority, of its assets.

The premises thus came to indirectly influence initiatives and planned investments through the values they represented, just as much as they directly influenced the content of activities through their design and location. In other words, making correct assessments on the issue of premises has also been of great significance for the general financial health of the Academy. When should property be rebuilt or renovated, and when should it be sold? When might it be wise to lease premises for various activities? When should fixed assets, such as various types of collections, be mortgaged or sold to create opportunities for new investments?

The Academy has more than once acquired land or a building by selling an existing property. If the move went to an empty plot, a new building was often constructed using external funding for newbuilds or extensions from private individuals acting as patrons or in their capacity as Academy members, from the state or private foundations, or a combination of these. Every time the Academy disposed of a property and acquired a new one in its stead, it has also resulted in a significant increase in its fixed assets.

IN ITS EARLY YEARS, the Academy of Sciences did not have a great deal of income at all. Its activities were based on voluntary donations and efforts, and were conducted in borrowed rooms. In contemporary terms, the Academy could most be likened to a non-profit organisation. In 1741, it was decided that new members would each contribute a ducat to activities, a regulation that only seems to have been followed for a short period. Another, initially more successful tactic, was to look for donations, not least from among the members. Its economy was thus balanced and even amounted to a small capital of 2,600 daler in copper coin by the mid-1740s, equivalent to an annual wage for a higher ranking official. The money was quickly loaned, with interest, to two members.

Shortly thereafter, in 1746, the Academy's financial assets expanded considerably due to the Thamic donation, created by high-ranking trade official

Sebastian Tham back in 1723, before the Academy of Sciences was founded. Tham's intention was to create a collegium, with lectures at Riddarhuset. In the mid-1740s, the King in Council decided that the donation should be used to pay the Academy's secretary for holding lectures in mathematics and natural science.⁶⁶ The Thamic donation, which had almost doubled over the 23 years to 1746, was thus used to supplement the secretaries' pay.⁶⁷ But after just fourteen lectures the series was terminated, because there were no audiences.⁶⁸ Instead, the secretary published scientific presentations and new physical findings in *Vetenskapsakademiens handlingar* [*Transactions of the Academy of Sciences*].⁶⁹

Otherwise, the first significant income to create some financial leeway was the almanac privilege in 1747, providing the sole right to publish almanacs in Sweden. What was not known then was that this monopoly on printing and distributing almanacs in Sweden would comprise the economic backbone of the Academy for more than 200 years, until 1972, when calendar publishing was opened up to competition. Financing scientific associations through publishing almanacs was an old idea, because those produced by other actors were often full of errors. This was no small problem in a time when the day of rest was legally sanctified and church attendance on Sundays was governed by decree.⁷⁰ A member of the Society of Sciences in Uppsala, university librarian Eric Benzelius, had this idea in 1716 and, in 1725, requested the sole right to publish almanacs. The first time it was to finance an observatory at Uppsala University, and the second time was to create income for the Society of Sciences.⁷¹ The King in Council rejected the applications. But when Benzelius became a member of the Academy of Sciences in 1740, he was quick to present his proposal again. This was taken further in a process that may well have been facilitated by the Academy president, Carl Gustaf Tessin, who was a privy councillor.⁷² However, for various reasons, there was a delay of a few years until a decision was made. A reduction in the number of holiday days in 1741 and the subsequent protests, from which the Dalecarlian rebellion of 1743 could be said to have taken some fuel, may not least be one reason why the almanac monopoly became a controversial political issue in the 1740s.⁷³ However, after the Hat-dominated Riksdag of 1746–1747, the King in Council finally accepted the Academy's proposal.

From 1749, the almanac monopoly provided an annual income of around 8,000 daler in copper coin, paid by publishers in return for the Academy's permission to print approved almanacs. It is no surprise that the income was good, bearing mind the almanac was by far the most significant printed material in Sweden, with an annual circulation of around 130,000 copies, increasing to 190,000 in 1760 and to 294,000 in 1785, thanks to an expanding population that was hungry for knowledge.⁷⁴ From the mid-1780s, matters were simplified for the Academy when the printing, distribution and sale of

almanacs was organised by a single book press, which could purchase the necessary help to satisfy demand in all areas of Sweden.⁷⁵

It should be added that the hunger for knowledge among this growing population could probably also have been satisfied by the individuals who formerly published almanacs for various cities. There is no certainty that the Academy of Sciences was a guarantee of higher quality than previous publishers. Instead, it followed established tradition as regards content. For example, one argument used by the Academy to support the almanac monopoly, alongside the problem of incorrect astronomical measurements, was that almanacs often included chancy information, particularly weather predictions. Yet the Academy continued to predict the weather in their almanacs, day by day, for a long time to come. However, astrological predictions, which were common in older almanacs, vanished in the first decades of the 18th century, before the Academy had the monopoly, mainly due to a law from 1707 that prohibited various kinds of portents, excepting the weather because weather forecasts were important for sales figures.

A lesser income from the *Transactions* can be added to the almanac monopoly. After 1753, income from the almanac monopoly increased thanks to the price of an almanac being raised by 50 per cent.⁷⁶ The Academy had undoubtedly found a green pasture. Profits from the almanacs further increased during the 1760s, which was linked to growing circulation combined with reduced payment to the printers.⁷⁷ Additionally, there was a strategy of encouraging donations from wealthy citizens.⁷⁸ Of course, the booming economy contributed to bold projects – such as building the observatory – from the late 1740s, and funding for expeditions was later provided. From the end of the 1750s, there was no need for the secretary to be paid via the Thamic donation, which could instead be used to pay for a lecturer to hold public lectures.⁷⁹

THE ACADEMY OF SCIENCES THUS HAD A SIGNIFICANT INCOME in the second half of the 18th century. This creates a labour of love, because the banking system was not particularly well-developed and investing money could create purely technical difficulties. One solution was to loan money to trusted members, often against a pledge. However, these investments did not always live up to expectations.⁸⁰ From the end of the 1750s, accumulated income was placed into bank accounts and, more than ten years later, the Academy had bank capital almost equivalent to an annual income from the almanac monopoly, with about the same amount invested in various private businesses.⁸¹ Naturally, the donations for specific purposes that they managed were additional to this.

Despite this large and growing income, the Academy's finances could still be unbalanced. The first economic setback occurred in the early 1780s, as a

result of the acquisition of the Schönfeldt Palace on Stora Nygatan. The Academy first had a significant deficit in 1781, despite income from the almanac monopoly of around 45,000 daler in copper coin annually, which was due to 33 per cent price hike in 1777. This rise was partly counteracted by higher pay to the printer.⁸² Otherwise, expenses were due to the costs of the building, but also to purchases for the expanding natural history collection and rising salary and pension costs, including those to Anders Sparrman. Outgoings had simply become too extravagant. On top of this, the returns on capital left a lot to be desired.⁸³ Order was somewhat restored to the finances from 1783, when Wargentin's death removed him from the post of secretary, which was followed by a strict regime of cutbacks that benefitted the Academy's economy.

Even greater stability was created after 1786, when the almanac monopoly was leased out for a fixed amount each year, while continuing to comprise the primary income for that period. As we have previously seen, it would continue to be the primary source of income until 1972, when the government finally broke up the monopoly and gave everyone the right to publish almanacs.

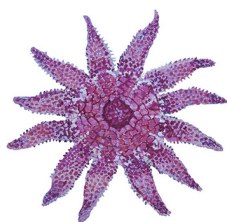
So, at the start of the 19th century, income from the almanac privilege remained the basis for activities. Despite a monopoly on the publishing of printed matter being forbidden in the Swedish Freedom of the Press Acts of 1810 and 1812, the Academy of Sciences was able to continue with a restricted right to publish almanacs because the King in Council renewed existing monopolies for a maximum of twenty years at a time. The Academy's capital had now grown, so that in 1805 its receivables were 41,000 riksdaler which, that year, earned interest exceeding 2,500 riksdaler. In comparison, one day of work was valued at one and a half riksdaler. Other income, such as the Board of Trade's funding for the instrument workshop, was at most a few hundred riksdaler and was thus at a considerably lower level. The same year, properties and possessions were valued at 36,800 riksdaler. The biggest expenses were salary costs and pensions in 1805, followed by operating costs for the building on Stora Nygatan and for the observatory.⁸⁴ Ten years later, receivables had grown by 50 per cent, and considerable amounts were still being loaned out, with interest, to trusted members.⁸⁵

AS WE HAVE SEEN, the foundation of the Academy's assets was the property it owned in the form of land and buildings in Stockholm. From this perspective, moving from Gamla stan to a considerably larger building on Drottninggatan was good business. The purchase price was 47,000 riksdaler banco and, six months later, the Academy had also succeeded in selling the Schönfeldt Palace in Gamla stan for 57,000 riksdaler banco, which meant they had swapped a smaller building with a more central location for a larger

one on the edge of the city, and made a tidy profit of 10,000 riksdaler banco. At the same, there were costs for rebuilding that were only partly covered by the Riksdag, as well as moving costs. Still, when the final bill was settled, it turned out that the whole process had been completed at a very low net cost. In other words, it had been a fantastic deal.⁸⁶

Expansions through the acquisition of land and buildings meant that fixed assets grew throughout the 19th century, as did the value of the almanac monopoly. Income was stable and, in the first decades of the 19th century, capital almost doubled, at the same time as around three per cent was paid out for scientific purposes every year.⁸⁷ Also, in the same period, total assets, which also included buildings and collections, more than tripled. One main reason for this real increase was the sale of the Schönfeldt Palace and remodelling the new property.⁸⁸

Later, in 1863, a new and more beneficial contract for the almanac monopoly, with publishers P. A. Norstedt & Söner, entailed significantly increased resources. The following January, a committee started to produce ideas about how this new funding could best be utilised.⁸⁹ When it submitted its report in February 1865, it included suggestions for more resources for the library, as well as for the purchase of instruments and other items, and for increased wages for the caretaker and other Academy officials. It also suggested that the Academy set aside an annual sum for a basic fund, and the establishment of a reserve fund for scientific purposes that otherwise lacked or had inadequate funding.⁹⁰ When a decision was taken in February 1865, the basic fund had almost 102,000 riksdaler while the reserve fund had barely 11,000 riksdaler.⁹¹ Over the next fifteen years these funds both grew slowly but steadily.⁹² There is no doubt that finances were stable.



ESSAY

*On the field
station's veranda*
p. 576–581

ONE SPECIAL INVESTMENT was the establishment of Kristineberg Zoological Station in 1877, following a donation.⁹³ For its operations, the King in Council granted a sum of 2,000 kronor per year from 1879, funding that was made permanent a few years later. Even here, the Academy's economy was strengthened due to a private donation when operations were paid for by public funding. In general, the Academy of Sciences appears to have had a strong financial situation. There were deficits, as funding did not always arrive at the same rate as operating costs, but there appear to have been resources for dealing with expenses of this kind, such as for running the Museum of Natural History in the mid-1870s.⁹⁴

One deal otherwise notable in this context is the Bergius Botanic Garden's 1885 move from Bergielund on Karlbergsvägen, now in central Stockholm, to Frescati, in the north of the city. Because Bergielund was sold for a million kronor and the area in Frescati cost 230,000 kronor, the Bergius Foundation made a tidy profit, covering the deficit it had borne since the donation had



BYRE, BOATHOUSE AND LABOURERS' CABIN at Kristineberg Zoological Station, painted by zoologist and, subsequently, Academy member Hjalmar Théel in 1874.

been created.⁹⁵ Naturally, the fact that the *Roslagsbanan* railway opened that year, passing the new Bergius Botanic Garden, did not reduce the value of the land – quite the opposite. One fly in the ointment was that an heir to Bergius protested, saying that the will had failed because the Academy contravened it by disposing of the Bergielund property.⁹⁶ But this was no more than a fly.

By the early 20th century, the almanac monopoly had continued to grow. This increased after 1906, when it was leased to Almqvist & Wiksell, which gained an exceptional position as the Academy's publisher.⁹⁷ At this time, both the basic and reserve funds had still been increasing, alongside the even greater values tied up in property.⁹⁸ Naturally, the biggest cost in the 1910s was the move from the premises on Drottninggatan to Frescati. As we have seen, on Drottninggatan both the premises and activities of the Academy and the Museum of Natural History were relatively integrated. However, the two were separated when they moved, in terms of both premises and activities.

The new Museum of Natural History was funded by the King in Council, while the Academy of Sciences had to pay for its own newbuild, not far away. However, as previously noted, the majority of the costs were covered by the

state purchasing the Academy's share of the property on Drottninggatan, but what was lacking for the newbuild, as well as moving and other costs, had to be paid for by the Academy of Sciences. In total, the move meant that the basic fund was halved.⁹⁹ Reckoning the value of the Academy's property testified that this was well-invested money; it more than doubled between 1910 and 1915.¹⁰⁰

IN THE FOLLOWING DECADES, the Academy of Sciences seems to have had excellent finances. Leasing out the almanac monopoly continued to provide income, which increased due to the inflation caused by the economic crisis that followed World War One.¹⁰¹ The Academy's economy expanded dramatically in the 1920s and 1930s, not least due to significant funding from the Knut and Alice Wallenberg Foundation. This paid for more than half of the new observatory in Saltsjöbaden in 1931, with the remainder coming from the sale of the land at Observatorielunden to the City of Stockholm.¹⁰² On top of this, the Knut and Alice Wallenberg Foundation paid for an institution building for the Bergius Botanic Garden in 1936.¹⁰³ Throughout the 1930s, there had also been negotiations about the establishment of a Nobel Institute for Experimental Physics, under the leadership of Manne Siegbahn and, in 1935, the Academy of Sciences came to a decision. The building for the institute was estimated to cost 1.4 million kronor. Of this, the Nobel Committee for Physics used 800,000 kronor from its organisation fund for the purpose of financing the Nobel Institute. The Knut and Alice Wallenberg Foundation also provided significant funding, although it demanded that the Academy of Sciences provided money from the reserve fund. On the whole, the expansion meant that the Academy of Sciences gained a strong balance sheet, even if it had to dig deep into the reserve fund.

The Academy once again significantly increased its income in the years following World War Two, due to increased income from the almanac monopoly and funding for renovating the winter laboratory at Kristineberg, among other things.¹⁰⁴ However, investments made in the 20th century were much more likely to apply to research institutes that were already established within the Academy or which were built upon research preferences, such as the Nobel institutes. The contrast with the latter half of the 19th century was striking, as at that time the Academy had promoted activities of more obvious relevance to general societal interests. These included the Central Meteorological Office, an organisation that administered standard measurements, funding for time signals for Sweden's standard time, an environmental committee for national park administration, and various research stations.

After World War Two, only two new research institutes were developed, the geophysical observatory in Kiruna and the Research Station for Astrophysics on Capri. Instead, existing institutes and stations were expanded and

consolidated, such as the research institute for experimental physics, Kristineberg and the observatory. This was probably linked to a general expansion in public investment in research after World War Two, resulting in other knowledge organisations, such as professional education providers and universities, receiving significantly greater resources.

The decade or so following World War Two shows strong financial growth and expansive research activities. The price for this was that the Academy's resources were exposed to stronger centrifugal forces in the post-war period, in the sense that they were spread out over more, and increasingly costlier, stations around Sweden and, from the 1950s, on Capri too. They all required buildings, equipment and staff which, eventually, entailed quite serious economic strain.

In the first years of the 1960s, there was also a reaction resulting in operating income no longer covering the newbuilds and repairs that were necessary, or upgrades to new equipment, such as a telescope for the observatory. The result was that the reserve fund was under pressure for a few years in the early 1960s, similarly to the late 1930s. After a brief few years back in balance, things went downhill again in the mid-1960s and, in 1967, the reserve fund was practically empty. The final printed yearbook was issued in 1968 – it is possible that publication ceased because of the tough economic situation. And this was when the real setback occurred.

At the end of the 1960s, the Academy of Sciences' almanac monopoly was investigated at the behest of the Riksdag, with the conclusion being that it should be relaxed. Almanacs, which had been the most widely disseminated printed matter in Sweden in the 18th and 19th centuries, were now a relatively minor part, just a few per cent, of the printing industry, which was dominated by daily papers, magazines and advertising. Nor was it any longer of any significance for Almqvist & Wiksell, who controlled Swedish almanac publishing via their agreement with the Academy of Sciences. From being 35 per cent of the publisher's turnover in 1950, in 1964 the almanac's share of this turnover had fallen to a fifth. It was hardly possible to claim that almanacs had such an exceptional status among printed matter that they required special scientific and factual review. Another reason for questioning the Academy of Sciences' almanac privilege was out of consideration for consumers, because there were indications that profit margins for the almanacs were considerably higher than for other printed matter.¹⁰⁵ Increased competition should reduce prices, to the benefit of all calendar lovers.

At the same time, the government stated that the Academy had important duties to fulfil; these were international involvement in various research collaborations and the Academy's permanent research stations and institutes. Still, the government decided that the almanac privilege should come to an end (more on this in chapter 6), especially after several weighty consultation

bodies had taken the same line. The issue was just how the Academy would continue to finance its avowedly important activities without this monopoly.

The government was clear that this issue should primarily be dealt with by the Academy of Sciences.¹⁰⁶ One proposal was to give outreach activities, both nationally and internationally, greater room. This idea can be understood in the light of the declining interest for the Museum of Natural History in the 1960s. Nor were the visitor numbers for the library at the Academy of Sciences much higher in the 1950s than they were at the start of the century.¹⁰⁷ Meanwhile, the government pointed out that only one-fifth of the returns from donation funds were awarded as scholarships and other research funding.¹⁰⁸ There was potential for reviewing the purpose of the funds, so they could be better utilised in the Academy's activities. Additionally, there was the opinion that the relatively large number of research institutes and stations run by the Academy had very diverse characters and must be assessed individually. There were strong indications that the operation of various activities could be solved through a range of means. For example, the library of the Academy of Sciences, with around thirty employees, could be run in partnership with Stockholm University, something that was to happen a few years later.

WHEN THE ACADEMY OF SCIENCES' ALMANAC PRIVILEGE ENDED in 1972, the solution was that the income from its final year would provide a basis for state funding.¹⁰⁹ On top of this, there was earmarked funding from the National Environment Protection Board, the Swedish Board for Technical Development and various research councils. The same year, the Academy paid out considerable sums from its privately managed funds, representing a quarter of its expenses.¹¹⁰ This did not include funds with associated activities such as the Bergius Foundation funds, the Mittag-Leffler Foundation funds and remuneration from the Nobel Foundation for work on selecting Nobel laureates. However, for the Academy, state funding not being equivalent to actual increases in expenses for pay and premises soon proved to be a problem. Funding was adjusted upward, but only retrospectively, and at this period inflation was so high that these amounts were not negligible. To cover increases in pay and rent, the Academy used state funding that was actually intended for purchasing books for the library, among other things, which was possible because no part of the funding was earmarked for library purchases. The library was otherwise the second-biggest item in the accounts in the early 1970s, when it comprised around one-fifth of the Academy's expenses.

The way the Academy observed the government's suggestion of increased outreach activities can be seen in the establishment of an information unit in September 1973. Otherwise, the solution in the 1970s was to hive off and

HEAD LIBRARIAN WILHELM ODELBERG and assistant librarian Erica Ljungdahl photographed in the library of the Academy of Sciences in 1961. The library was an essential part of the Academy's activities, and long had one of Sweden's finest collections of scientific literature. Office staff in the library were captured on film on the same occasion. Behind the counter are Karin Sandin, Margareta Zacke and Elisabet Blohm; Erica Ljungdahl is visible in the background.

to place various activities, such as the library and research stations, in public ownership.¹¹¹ This included the observatories in Saltsjöbaden and Kiruna, both of which were nationalised. The Research Station for Astrophysics on Capri moved its activities to La Palma, where activities were transferred to Stockholm University in 2013.

When, more than fifteen years later, it was time to celebrate the Academy of Sciences' 250th jubilee in 1989, the main financial event was the renovation of the Academy building in Frescati. For this purpose, major donations had been made by the Knut and Alice Wallenberg Foundation, Crafoord Foundation, Kjell and Märta Beijer Foundation, AGA AB and a patron. While the Academy of Sciences was investing in its own property, it was also rebuilt to

house the Center for History of Science in some of the premises previously occupied by the Academy library.¹¹²

At the end of the 1980s, turnover had almost quadrupled in comparison with the early 1970s, when the almanac privilege ended. Despite divestment, the various research institutions were responsible for more than half of turnover. State funding had not kept up, falling to a little more than quarter of the entire turnover.¹¹³ As previously, the remaining costs were covered by the interest income from funds, rent and research grants; the latter item, which at least partly came from state research financiers, had considerably expanded in comparison to the early 1970s and was now almost one-fifth of turnover. The way the Academy's economy grew rapidly during this period is shown in the way its turnover increased by 60 per cent between 1988/1989 and 1990/1991, while direct government funding as a proportion of income continued to fall.¹¹⁴ In 1996, turnover had once again almost doubled, while the proportion of direct government funding continued falling and was now down at 15 per cent.¹¹⁵ Research grants continued growing, approaching a quarter of income.

This trend in the Academy's finances, decades after the end of the almanac monopoly, shows how turnover expanded significantly, so that government funding was a declining part of its economy at the same time as dependence on external research grants grew. The result was short-term positive growth while long-term insecurity increased. Research institutions at the Academy became increasingly dependent on short-term, externally funded research projects, similarly to universities and many other research bodies. The transformation of the way the Academy funds its activities after the loss of the almanac privilege can partially be regarded as the result of an institutional economic uniformity, because it came to more liken research funding for higher education, through government grants and an increasing amount of external funding. It should also be remembered that interest and returns on funds remained a considerable share of financing, despite their slow reduction over time.

Towards the end of the 1990s, the Academy of Sciences' assets had grown to almost 1.5 billion kronor, half of which was invested in shares and half in interest-bearing bonds. Their growth had been good, so good that it was able to be used to lessen the effects of government funding not being increased enough to cover higher expenses. The Academy started to purchase asset management services in 1998, as well as having one employee working part-time doing the same thing.¹¹⁶ A larger budget for asset management usually means greater investment in shares, which held true for the Academy. However, the great stock market crash of the early 2000s was just around the corner. This was to cost the Academy of Sciences dearly and result in extremely strained finances several years into the new century. The situation

was even more serious because the increased value of assets in the 1990s had been used to finance ongoing activities, leading to major cutbacks in the middle of the first decade of the 21st century. The majority of assets owned by the Academy of Sciences are fixed and burdened by pension provisions. However, the results are mostly in balance.

Conclusions

Overall, we can see that the material framework of the Academy, in terms of members, property and finances, displays interesting patterns. Firstly, the composition of its members underwent a significant transformation in the middle decades of the 19th century. This was a period that coincided with the expansion of the natural sciences at universities, in terms of expensive laboratory buildings, increasing status compared to classic university subjects such as theology, law and medicine, as well as increasing public interest in the natural sciences, which was linked to these subjects being regarded as increasingly relevant in a society that was slowly becoming industrialised and secularised. In accounts of the history of the Academy of Sciences, Jöns Jacob Berzelius has often been given the primary responsibility for this transformation in the membership, because it coincided with his time as secretary. Berzelius was indeed active in organisational and regulatory changes during a formative sequence of events in around 1818, which was the basis of the changed membership composition, not least due to inspiration from his visit to the French Academy of Sciences in Paris (see chapter 4).

However, even more important are the strong tendencies to continuity and path dependence displayed by the composition of members. Initially, this continuity was linked to how members were elected, as well as to class divisions that lacked defined limits and categories. When the class divisions were redrawn in 1820, so as to reflect subject divisions at universities, making the Academy of Sciences more institutionally uniform, particularly with their activities in the natural sciences, it also entailed the slow academisation of the members. Eventually, the new, considerably more scientifically focused Academy of Sciences was established, something once again characterised by continuity. As long the class divisions remain as they are and reflect the division of subjects in higher education, we can count on membership continuing to be dominated by university professors.

Secondly, the expanding size of the collections, as well as the number of staff required in their care, led to an almost constant and, in many ways, path dependent need for new and larger premises. Every property transaction meant that a central location was exchanged for new buildings with a somewhat more peripheral location. Because Stockholm has constantly grown since the Academy was founded, this has proven to be a profitable strategy.



Not least because many property purchases were made with the help of donations that financed parts of acquisitions or rebuilds. In this way, the value of the fixed assets of the Academy of Sciences has constantly increased.

Thirdly, the buildings reflect what, at various periods, has been regarded as the main focus of the Academy of Sciences. When the observatory was inaugurated in 1753, astronomy was the pride of the Academy, naturally linked to the almanac privilege. Due to the Bergius donation in the 1790s, and particularly when the Swedish Museum of Natural History opened its doors in the Academy's new premises in 1831, there were increasing indications that botany and zoology, and eventually also mineralogy, had taken over as the Academy's primary sciences. The observatory on Observatoriekullen became increasingly outdated. Meteorology became an important new component later in the 19th century. When, in 1900, the Academy of Sciences was tasked with selecting the Nobel laureates in physics and chemistry and, a few years later, was divorced from the Museum of Natural History through the move to Frescati, physics and chemistry moved into position as the new primary sciences. This was further reinforced by the Nobel institutes having their own buildings for physical chemistry, subsequently theoretical physics, and later a new building for the Nobel Institute for Experimental Physics. As can be seen, buildings are not just locations. They are also clear indications of which disciplines and subjects the Academy of Sciences counts as its primary areas and, in turn, often indicate which members were successful in influencing the contexts in which important decisions were made. Naturally, from this perspective, the idea that the Academy should move to a Nobel Centre, alongside exhibitions and cooperative activities with the Nobel Prize institutions, indicates that activities now cover less research and more outreach for the purpose of informing and interesting the public in the natural sciences and medicine. If the move had happened, it is not impossible that the marketing of the natural sciences would have increasingly taken over as the core activity of the Academy of Sciences.

Fourthly, if donors were the Academy's first source of income, the almanac monopoly was the second. And even after the almanac monopoly created financial stability, donations regularly continued to provide significant additions to various areas of activity, such as when the Schönfeldt Palace in Gamla stan was bought or when a new observatory was built in Saltsjöbaden

INTERIOR OF THE MINERALOGY DEPARTMENT at the Swedish Museum of Natural History. These facilities had previously been used by Nordenskiöld and are sometimes named in sources as Nordenskiöld's laboratory, but when this picture was taken in 1922, he had been dead for many years.

in the early 1930s, with the help of the Knut and Alice Wallenberg Foundation. If the almanac privilege brought security through a guaranteed annual income for ongoing costs, donations brought opportunities for new investments or a shake-up for activities that needed a boost. They have also been the basis for the huge number of prizes, scholarships and research grants awarded by the Academy. The replacement of the almanac monopoly by government funding in the early 1970s led to several decades of decline in the previously secure and stable annual income. Consequently, over the past fifty years, the financial situation of the Academy has weakened. At the same time, unsuccessful investment of its assets have created uncertainty, which is not lessened by the Academy's buildings beginning to age and require renovations.

The solution to the loss of the almanac privilege was to hive off various research stations and other activities, such as the Academy's library, putting them into public ownership. What remains is now almost just the original Academy of Sciences, without its own collections. Activities are limited to responding to public inquiries, outreach activities that are mostly characterised by Nobel Prize decisions and the Nobel banquet, as well as the awarding of many different prizes, awards, scholarships and research grants. This is no mean feat, but is also a long way from the strong and research-focused Academy of Sciences of the 1860s to the 1960s.