A Brief History of the London Mathematical Society

Despite its name, the London Mathematical Society (LMS) has, almost since its foundation, served as the national society for the British mathematical community. Its establishment in 1865 made Britain one of the first countries in the world to have such an organisation, prompting and/or influencing the formation of several other national societies worldwide, such as the Société Mathématique de France (1873), the Circolo Matematico di Palermo (1884), the American Mathematical Society (1888), and the Deutsche Mathematiker-Vereinigung (1890).

Before its creation, other mathematical societies had existed in Britain, such as the Manchester Society, founded in 1718, and the Oldham Society of 1794. But these were very much local bodies, more akin to working men's clubs than learned societies. Moreover, although they flourished for a time, none of them survived; even the famous Spitalfields Mathematical Society of East London [1], which dated from 1717, was forced to dissolve in 1845, due to a rapid decline in membership.

The formation of the LMS was inspired by the increasing need for specialised scientific outlets during the 19th century. In Britain, this resulted in the foundation of national societies specifically devoted to geology in 1807, astronomy in 1820, statistics in 1834, and chemistry in 1841. What was to become the London Mathematical Society arose from a chance remark in a conversation between two former students of University College London in the summer of 1864.

During a discussion of mathematical problems, it occurred to them that "it would be very nice to have a Society to which all discoveries in Mathematics could be brought, and where things could be discussed, like the Astronomical [Society]" [4, 281]. The two young men were Arthur Cowper Ranyard and George Campbell De Morgan, the son of one of the most influential British mathematicians of the day. Augustus De Morgan was the founding professor of mathematics at University College, which he had single-handedly established as the home of advanced mathematical education in London. Conscious of the key role the Professor's reputation could play in attracting members to the Society, it was agreed "that George should ask his father to take the chair at the first meeting" [4, 281].

Agreeing to this, the senior De Morgan apparently insisted that their tentative title of 'The London University Mathematics Society', be changed, first to the 'University College Mathematical Society', and then, in order to widen the scope of the society's membership, to the 'London Mathematical Society'.

The newly-retitled society held its inaugural meeting at University College London on Monday, January 16th 1865, with De Morgan as its first president giving the opening address. The venue was an appropriate one, for the Society's rejected title of 'University College Mathematical Society' was still more accurate at this stage; of the 27 founding members, no fewer than 26 were, or had been, associated in some way with the College. Within months, it had attracted over 60 new members from around the country, including many of the leading British mathematicians of the 19th century, such as Arthur Cayley, James Joseph Sylvester, Henry John Stephen Smith, George Salmon, William Kingdon Clifford and James Clerk Maxwell.

Right from the Society's inception, it had been intended that papers presented at meetings should be printed and circulated among the members. However, the increase in the cost of printing and distribution caused by the sharp increase in membership resulted in the first

volume of the Society's *Proceedings*, covering the period from January 1865 to November 1866, containing just 11 of the 37 papers presented during that time. The need for financial retrenchment was to be a characteristic feature of the Society's formative years.

Even an increase in members' subscription from its initial 10 shillings (50p) to one guinea (£1.05) in November 1867 proved insufficient, and by 1873 the Society found its balance in the red for the first time, due to its ever increasing publication of papers. The Society was thus faced with surviving on an even tighter budget than before. Money-saving ideas such as reducing subscriptions to certain journals, cutting back on printing, and charging members for copies of papers were seriously considered until the applied mathematician Lord Rayleigh (1842-1919) made a generous bequest of £1000 in 1874. The gift was gratefully accepted, the financial pressure was relieved, and the LMS was thus saved from what could have resulted in its early demise.

Before long, distinguished members were presenting papers which would previously have graced the pages of the Royal Society's *Philosophical Transactions* or the *Proceedings of the Cambridge Philosophical Society*. De Morgan's influence may have given the Society much needed initial momentum, but it was papers by later presidents such as Cayley, Sylvester, Rayleigh and Smith which placed it on a level with other scientific societies. What had begun life as a simple club of De Morgan's ex-students at University College had been transformed into the national body for research-level mathematicians [7].

There was now no obstacle to the publication of papers, which increased substantially from this point. By 1900, over 900 papers had been published in the *Proceedings*, with the volume of pages for that year exceeding 700. The next century saw massive expansion in the Society's publication activities. In 1926, under the influence of G.H. Hardy, the driving figure of the Society for the first half of the 20th century, the *Journal* was founded, followed by the *Bulletin* in 1969. More recently, in keeping with the times, 1997 saw the launch of a purely electronic journal, the *LMS Journal of Computation and Mathematics*. Joint publication ventures have included the *Journal of Applied Probability* from 1964, *Nonlinearity* (1988-), and the *History of Mathematics* book series (1989-).

As soon as its finances permitted, the LMS sought to promote and reward mathematical achievement by means of prizes and awards. Its premier award, the De Morgan Medal, was endowed through subscriptions of members in honour of the Society's first president. Initially awarded in 1884 to Arthur Cayley, subsequent medalists have included J.J. Sylvester, Felix Klein, Bertrand Russell and Roger Penrose [6]. Other prizes regularly awarded by the LMS are two Berwick Prizes, two Whitehead Prizes and the Polya Prize, all instituted in commemoration of important figures in the Society's 20th-century history.

The Society has also been instrumental in bringing the work of mathematicians from overseas to the attention of a British audience. Its first initiative was the establishment of the honorary foreign member category in 1867, of which the first recipient was the French geometer Michel Chasles. Later honorary members included Kronecker, Poincaré, Cantor and Hilbert. More recently, to honour the work of G.H. Hardy, not just in mathematics, but in the internationalisation of the subject, a Hardy Lectureship (recently renamed the Hardy Fellowship) was set up to enable distinguished overseas mathematicians to visit the United Kingdom for an extended period to work and exchange ideas. By means of this scheme, such distinguished individuals as Ahlfors, Tits, and Feit have visited the UK as Hardy lecturers in the last 30 years.

Thus, as this brief survey has shown, since its foundation in 1865, the LMS has grown steadily in size and importance. From an initial size of 27, its membership swelled to 250 by 1900, and currently stands at well over 2000. From a college club, it has grown into a learned society, incorporated as a limited company in 1894, and finally granted a Royal Charter in 1965. Although originally intended as a purely research-based organisation, recent years have seen a huge increase in the diversity of activities in which the Society is involved – from education to popularisation to government policy. But perhaps the most significant recent development was its move in 1998 to its first exclusive headquarters. The impressive building, appropriately renamed De Morgan House, is a fitting reflection of its status as Britain's national mathematical society – a far cry from the modest collection of University College alumni who gathered for their first meeting over 140 years ago.

FURTHER READING

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