

Obituary

Walter James Langford

Before reading on, turn to the front cover of this *Gazette* and look at the coat of arms at the top left corner. It was at Walter Langford's suggestion that the Council decided to apply for a grant of arms, and he undertook the subsequent negotiations with the College of Arms. It was one of his many services to the Association over the years.

It was Langford's and the Association's good fortune that, as a student at the University of Reading in the early 1920s, he became a pupil of Professor E. H. Neville, one of the finest mathematicians to have made a long-term commitment to the Association. Neville is usually regarded as the true founder of the Association's library as we know it; he took on the collection in 1923, and Langford assisted him in the production of the first full catalogue. It was, however, through the coincidence of a double bereavement that the relationship between the two men developed into intimacy. Langford has given a moving account of how, as a result of the deaths of Neville's son and Langford's father, each found a substitute role in the life of the other.

On leaving Reading, Langford taught at the Bec School, Tooting and later at Bideford Grammar School. He joined the Association in 1925, and also became an active member of the British Association, through which he maintained his contact with advanced mathematics. But through the 1930s he became increasingly concerned with the problems of mathematical education, and critical of university mathematicians who, through their influence on the examination system, were placing genuine mathematics out of reach of the less academic girl and boy. He became a member of the Teaching Committee, and an advocate of a more unified, problem-centred approach to the teaching of the subject. His efforts were to find fulfilment in the establishment in the 1950s of the O level examination and the alternative (unified) mathematics syllabus.

The end of the 1939-45 war found Langford, in his early forties, in a key position to influence the reconstruction of the Association after years of restricted activity. He became Chairman of the Teaching Committee in 1946, and set in train the completion of the interrupted sequence of reports on the teaching of aspects of school mathematics: trigonometry, higher geometry, sixth-form algebra and analysis. With the last two of these reports he was personally associated, serving as secretary to the analysis committee – a role for which he was well suited in all respects bar one; his florid but almost illegible handwriting.

Another cause which Langford espoused was the post-war renewal of international contacts among mathematics teachers. He represented the Association at a conference in Holland in 1950 on the teaching of mathematics in secondary schools, and was a delegate for the United Kingdom at a similar conference in Geneva in 1956. He chose to make this the theme of his Presidential Address to the Association in 1958, and he

drew attention to some lessons which British education could learn from international comparisons. 'We shrink at the thought of denying our best pupils the instruction of our best teachers but we do this only in the knowledge that we are ensuring beyond all question that the majority of our boys and girls will reach a standard lower than is necessary and desirable.' The problem has not gone away.

Three years later Langford was invited to the United States to tour a number of Summer Institutes for teachers under the auspices of the National Science Foundation's Visiting Foreign Staff Project. Most of the 15 or so participants were European university personnel, but Langford's contribution as a practising schoolmaster was so well received that, on his recommendation, at least three more Association members (myself most fortunate to be included) took part in the programme in subsequent years.

The post-war years saw an important change in Langford's career with his appointment as Headmaster of Battersea Grammar School. This was important too for the Association, for from this position he had a new power base from which to attack one of the major concerns of the 1950s – the acute shortage of adequately qualified mathematics teachers. During his year as President in 1957 he wrote to the head of every public and grammar school in England and Wales, obtaining for public consumption for the first time hard evidence of the proportion of mathematics lessons being taught by insufficiently qualified staff. An eventual outcome of this was the establishment by the Association of the Diploma in Mathematics (Teaching), with Langford as the first Chairman of the Diploma Board. In parallel with this, Langford was also rising to prominence within the Incorporated Association of Head Masters, thereby gaining audience within the Ministry of Education and access to the columns of the national press. He was one of the first leaders of the Association in recent times to recognise the importance of political lobbying and public relations.

Battersea Grammar School thrived under his leadership, and in 1961 (with the cooperation of Alec Penfold, his Senior Mathematics Master and another staunch Association member) it became one of the core of eight schools which pioneered the School Mathematics Project. In this environment he was able to see many of the reforms for which he had been pressing 25 years earlier put into practice.

During these years Langford also played a full part within the community in south London. He served as a J.P. for many years, and his contribution to education was recognised by his appointment as C.B.E. A specially attractive feature of his personality was his interest in, and generosity to, younger colleagues, whether within the Association, school or further afield. If this reflected a consciousness of his own debt as a young man to the support which he had enjoyed from Neville, it is a debt which he amply repaid.

Much of this will seem like ancient history to many present members of the Association. But an appreciation of Langford's life gives the opportunity to remind ourselves how much the present prosperity of the Association

owes to those members – names such as Broadbent, Kellaway, Langford, Snell, Parsons, Maxwell, Combridge come quickly to mind – who got the Association moving again in the years after 1945. Amongst these, none stands taller than Walter Langford.

References

In the preceding tribute I have drawn heavily on the research of Mike Price summarised in his history of the Association, *Mathematics for the Multitude*. Langford's career can also be traced through the following contributions to the *Gazette*:

13, (no. 185, December 1926), pp. 230-231. Report of a British Association meeting.

13, (no. 191, December 1927), pp. 456-457. A note on angle trisection.

21, (no. 246, November 1937), pp. 329-337. Address to the British Association on algebra.

32, (no. 301, October 1948), pp. 240-243. Discussion on mathematics in examinations.

42, (no. 341, October 1958), pp. 177-193. Presidential Address.

48, (no. 364, May 1964), pp. 131-136. Tribute to E. H. Neville.

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DEAR EDITOR,

The list printed on page 125 of the *Mathematical Gazette*, March 1997 is not of values of n such that $10n + 1$, $10n + 3$, $10n + 7$, $10n + 9$ and $10n + 13$ are all prime. It is a list of values of n such that $10n + 1$, $10n + 3$, $10n + 7$ and $10n + 9$ are all prime.

The corresponding list of values of n such that $10n + 1$, $10n + 3$, $10n + 7$, $10n + 9$ and $10n + 13$ are all prime is as follows

1	1606	2227	14416	19573	24760	34798	46516
10	1942	4378	16570	20182	26881	36121	
148	2101	5533	16684	22534	32614	39775	

Yours sincerely,

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Editor's Note: J. R. Gosselin of the Royal Military College of Canada has written to make the same point. He also points out that the value $n = 6949$ should have been included in the previous list (on page 125 of the *Mathematical Gazette*, March 1997) since 69491, 69493, 69497 and 69499 are all primes.