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Report on papers relating to:

The British Association Mathematical Tables Committee

1871 - 1948

received from Professor M.V. Wilkes, FRS

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Deposited in the Bodleian Library, Oxford, 1977

Papers and Correspondence relating to The British Association Mathematical
Tables Committee

The papers were received from Professor M.V. Wilkes, FRS, who served on the
Committee 1939-48, and who had in turn received them from Dr. J.C.P. Miller, the
last Secretary of the Committee 1945-48.

The Committee was set up in 1871, 'for the purpose of reporting on Mathematical
Tables, which it may be desirable to compute or reprint'; the Committee was re-formed
and reorganised at various times but its purpose remained broadly along its original lines.

In 1928 Col. A.J.C. Cunningham (member of the Committee 1895-1901, Secretary
1896-1901) died leaving in his Will 'one-twelfth part (of my residuary estate) for pre-
paring new Mathematical Tables in the Theory of Numbers'. This legacy was used to
produce Vols.III, IV, V, VIII and IX of the B.A. Tables (see Section D).

The B.A. Committee held its final meeting on 23 June 1948, its assets and
liabilities, including the residue of the Cunningham bequest, being transferred to the
Royal Society on 30 June 1948.

A fuller account of the work, members and history of the Committee appears
as a 'Short History' in the Final Report of the Committee (B.20) and also in the Memo-
randum drawn up for submission to the Council of the British Association in March 1946
(A.4).

Contents   Page

A.1-A.4   Minute Books of the Committee 1929-48

A.1   Exercise Book, incribed on front cover 'British Association
               TABLES Committee', and covering meetings
               11 Jan.1929-19 Nov. 1930.   Some reports and
               letters for the consideration of the Committee are
               pasted in. The Minutes are kept in longhand and
               there is a list of officers and members pasted in to
               the last page of the book.

A.2-A.4   Three volumes, bound in blue cloth, 'B.A. Mathematical Tables
               Minutes Vol.1, Vol.2, Vol.3'.   These volumes are
               in typescript with some ms. additions and corrections.
               Vol.1 has a title page 'Minutes & Papers of the British
               Association Mathematical Tables Committee December
               1930-June 1948' with the inscription below: 'These
               papers were in the possession of Dr. J.C.P. Miller,
               the last secretary of the committee, until late 1973.
               He then gave them to M.V. Wilkes who had them
               bound for preservation'.

     A.2   Vol.1 covers meetings 22 Dec. 1930-3 June 1935 with
               signatures of all members attending. It also includes
               annual lists of officers & members 1933-1940, 1943-46.

     A.3   Vol.2. Meetings 27 June 1935-15 Dec. 1945, with
               signatures of all members attending.

     A.4   Vol.3. Meetings 6 Feb. 1946-23 June 1948, with
               signatures of all members attending.   This volume
               includes the final meeting of the committee, with
               arrangements and terms for transfer to the Royal Society
               Mathematical Tables Committee, and future projects to
               be considered.   The last Minute is signed by A.J.
               Thompson 15 July 1948.

Note   No Minute Books appear to survive from the earlier period, but
               references are made to, and extracts quoted from minutes of
               1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880,
               relating to the committee's work on Elliptic Functions in
               Section C.   The Annual Reports (Section B) also provide an
               account of the Committee's work for certain years.

B.   Annual Reports of the Committee

B.1   1896.

No reports were published 1916-1922.

B.2-B.18   1923-1939.

B.19   1948.

B.20   Final report. n.d.

C.1-C.4   Correspondence & papers relating to Elliptic Functions 1925-1943

These papers were contained in an envelope addressed to J.C.P. Miller, with a ms. note 'COMRIE [L.J. Comrie, member of the committee 1928-37 and Secretary 1928-37] Elliptic Function correspondence etc.' and a further 'Note Added by J.C.P. Miller Aug. 1974' as follows: 'The books on Elliptic Functions by J.W.L. Glaisher, referred to in a letter by G.N. Watson [in C.2 below], were collected by me after his death from his home in Leamington Spa (i.e. Watson's home), and later presented by me, together with a large collection of Glaisher papers (offprints) to Trinity College Library' [Cambridge].   There is also a red ink note 'for MVW', which refers to Dr. Miller's handing over of all the B.A. Tables Committee material to Professor M.V. Wilkes.   The envelope is included in C.4.

Among the first projects initiated by the Committee under its first Secretary, James Whitbread Lee Glaisher (Sec. 1871-89), was the preparation of Tables of the Elliptic Theta Functions.   Work on this reached an advanced stage, possibly printers' proof, and monies were granted for the publication, but none appeared. L.J. Comrie, who had had an interest in elliptic functions (C.1) served as Sec. of the Committee 1929-37 and attempted to trace Glaisher's work with a view to publication, but without success (C.2).   He maintained his interest in the calculation and publication of elliptic functions tables and initiated further correspondence and preliminary work on the subject with J.C.P. Miller 1941-43 (C.3).

The disappearance of the work by J.W.L. Glaisher was never solved and a brief account appears in the 'Final Report', B.20.

The papers in C.1 and C.2 were fastened together by Comrie, with an explanatory note, and have been left in his order.

C.1   Correspondence & calculations on Elliptic Functions 1925-28, with a ms. covering note '1943 May 27. This file contains correspondence relating to tables of Elliptic Functions that were contemplated in 1928. L.J.C.'

Corresp. of Comrie with various colleagues about work on Elliptic Integrals, the use of 'calculating machines' and his proposed publication of 4-figure tables. His exchange of letters with Arthur Berry (March 1928) alerted him to Glaisher's work 'said to be partly in type at the C.U. Press', and the work was also quoted as a reference in ms. calculations accompanying a letter from Louis King (Feb. 1928) and marked 'X !!! L.J.C.'

Corresp. with: Louis V. King, Harold Jeffreys, E.L. Ince, Arthur Berry, Walter D. Lambert.

C.2   Correspondence 1929-35, with ms. covering note 'Relating to
       Glaisher's Tables of Elliptic Functions. To be returned
       to L.J.C.'

       Glaisher died in 1928; Comrie became Secretary of the
       B.A. Tables Committee in 1928. The correspondence
       deals with his attempts to locate, or trace the history of
       Glaisher's work on Elliptic Functions, from executors,
       colleagues, C.U.P. etc.

       The folder also includes extracts from the B.A. reports
       relating to the Committee for 1872-80, an extract from
       Glaisher's own account of his work on Elliptic Functions,
       and an extra copy of the 1930 Report of the Committee in
       which the matter is discussed.

       Corresp. with: R. Vere Laurence, W. Lewis, F. Puryer
       White, A.R. Forsyth, G.N. Watson, E.H. Neville,
       J.R. Airey, K. Pearson, W.H. Macaulay.

C.3   'The Tabulations of Elliptic Functions', 1941.

       11 pp. paper prepared by J.C.P. Miller, with revisions
       and further notes after discussions and correspondence
       with colleagues, various dates Aug.-Oct. 1941.

C.4   Correspondence and calculations on Elliptic Functions, 1943.

       Letters from Comrie to Miller on possible publication
       of Tables on Bessel Functions and Elliptic Functions, with
       calculations by Miller, and a letter to Miller from A. Fletcher.

       (The original envelope with the covering notes is included
       here.)

D.1-D.5   Papers and correspondence relating to the legacy of Col. A.J.C.
               Cunningham to the British Association Mathematical Tables
               Committee, 1930-1960

        In his Will Cunningham left 'one-twelfth part (of my residuary estate) for
preparing new Mathematical Tables in the Theory of Numbers'.

        The sum involved was approximately £3,000.

        The correspondence discusses the interpretation of the terms of the Will and
the purposes to which the legacy should most usefully be put.

        The Minutes & Annual Reports from 1930 onwards also refer passim to the
bequest.

        The correspondents (Officers at various periods of the London Mathematical
Society or the British Association Mathematical Tables Committee) are:

Berwick, William Edward Hodgson	(1888-1944)
Comrie, Leslie John	(1893-1950)
Hardy, Godfrey Harold	(1865-1947)
Heilbronn, Hans Arnold	(1908-1975)
Hodge, Sir William	(1903-1975)
Ince, Edward Lindsay	(1891-1941)
Mordell, Louis Joel	(1888-1972)
Watson, George Neville	(1886-1965)
Western, A.E.	

D.1   1931 and 1 letter 1930

               Correspondence and proposals for the Cunningham legacy (some
                    in multiple copies), exchanged between G.H. Hardy,
                    L.J. Comrie, A.E. Western, W.E.H. Berwick. See
                    especially the detailed proposals made by Western (2 May
                    1930) and Berwick (19 February 1931), and the analysis
                    and comments on them by Hardy (n.d.). Agreed
                    recommendations were put to the Committee by Hardy
                    for Berwick, Mordell, Western and himself on 29 November
                    1931; they included a grant to support the work of
                    L.E. Dickson of Chicago on fifth powers, but the Committee
                    postponed a decision, partly because of the high unem-
                    ployment in Britain.

D.2   1932

               Correspondence between G.H. Hardy and L.J. Comrie. See
                    especially Hardy's letter of 4 March 1932, expressing his
                    disappointment at the Committee's reluctance to make a
                    grant from the Cunningham bequest to support L.E. Dickson's
                    work, on technical grounds and also because of the many
                    generous benefactions made by American institutions to

British scholarship.   At its next meeting, on 17 March 1932, the Committee agreed to help Professor Dickson by meeting from the Cunningham bequest the costs of printing his results.   (This appeared as Vol.III of B.A. Tables, 1933.)

D.3   1936-37

Letters from A.E. Western to E.L. Ince on work on 5th and 7th roots of unity to be done by Ince under the Cunningham Trust, and one letter to G.H. Hardy, 1936.

D.4   1937-39 and 2 letters 1945

Correspondence between L.J. Comrie and G.N. Watson re calculation and printing of tables; includes ms. paper by Watson 'The computation of the error function' (9 pp.).

D.5   Misc. shorter correspondence relating to the Cunningham Trust, addressed to A.E. Western:

1948 from L.J. Mordell
1949 (2 letters) from Sir William Hodge
1960 from G.N. Watson
1960 (2 letters) from H.A. Heilbronn

E.   <u>Misc. correspondence & papers relating to the B.A. Tables Committee, 1930-1946</u> (in chronological order)

E.1   Corresp. on work to be undertaken on Emden Functions, 1930 (published as Vol.II of B.A. Tables 1932).

                      3 letters to Comrie from E.A. Milne.

                      Letters exchanged between Comrie and J.R. Airey.

                      Letter from Comrie to L.F. Richardson, with a copy of a letter from A.S. Eddington on Emden Functions.

E.2   Letter from Comrie to E.H. Neville <u>re</u> publications, 1934.

E.3   Misc. correspondence, drafts for committee papers etc. by or with J.C.P. Miller, 1936-1946.

                      Miller's letter to E.H. Neville of 5 Jan. 1942 refers to 'Glaisher's Power Table proof', one of J.W.L. Glaisher's early projects which was eventually recovered and published, unlike his work on Elliptic Functions.

Index of correspondents