

BOLLOBÁS, B. (ed.), *Littlewood's miscellany* (Cambridge University Press, 1986), 200 pp., £17.50 cloth, £5.95 paper.

Methuen published *A mathematician's miscellany* in 1953, it having been, we learn on p. 134 of this 1986 publication, rejected by the Cambridge University Press. Readers of the 1953 text will have their various individual preferences and will eagerly look forward to savouring them anew. My own choices would be three.

- (a) The taking of an upper bound with respect to a variable that is not there (p. 42).
- (b) The review of Ramanujan's collected papers. Here, on p. 98, the editor has inserted a photostat of a postcard from Ramanujan to Hardy at the crucial place.
- (c) Newton and the attraction of a sphere, with (p. 172) Littlewood's comment that Newton's geometrical exposition "must have left its readers in helpless wonder". Those wishing to corroborate that it did should, *before* reading Littlewood's calculus version of what he surmised to lie at the root of Newton's mental process, consult Proposition 71 in the first book of the *Principia*.

As regards (c) I had noted, in my copy of 1953, that a factor 2π was missing from an equation; it has been correctly inserted here on p. 171. On the other hand a word correctly spelt by Littlewood in 1953 (p. 38) is here misspelt on p. 56! There is, in view of J. C. Burkill's eulogium in Volume 38 (p. 47) of the *Mathematical Gazette*, no call to comment further on the 1953 material other than to emphasize that the editor has inserted helpful diagrams on pages 28, 30, 115, 116 and 117.

The fascinating added material consists of a 24-page foreword and a tripartite assemblage from Littlewood's jottings of people, academic life, odds and ends. The foreword is an impressive filial tribute and includes six photographs, that of p. 7 a striking one. Among other matters it describes the Riemann hypothesis and tells of the emergence of Ramanujan.

Under "academic life" we read about the elections, each of them questioned and opposed, of Ramanujan, Besicovitch and Wittgenstein to Trinity Fellowships and two touching letters of gratitude from Ramanujan to Hardy are reproduced. There is also some account of the attempt to deprive J. B. S. Haldane of his readership, and it is a pleasure to read that F. S. Macaulay's candidature for fellowship of the Royal Society was approved by Emmy Noether.

As for "people", the reader's interest will be the greater the more the characters were known to him; and as Harrison, Hollond, Housman and several others, including (p. 154) Metcalfe the manciple, were known to me I have savoured the anecdotes accordingly. The polite Harrisonian rebuke (p. 123) about repeatedly unanswered letters from the Vice-Chancellor calls to mind (and see p. 200) another eminent mathematician's question: "Did you ever hear that it was said of Littlewood that, at a certain stage, smitten by conscience at his unanswered letters, he bought a basket to put them in?" It is more than a little unfortunate that, among the few slight misprints in this book, one disfigures a Latin phrase of Harrison's. Had he, *incuriae et ignaviae omnis impatiens*, seen it he would have had a word to say. Perhaps I may be allowed to subjoin one jotting of my own: I owe it to H. A. Hollond.

During Littlewood's military interlude in the Great War there was an occasion when not enough horses were available, a circumstance Littlewood described as the problem of distributing M horses among $M+N$ men. Whereupon the brigadier "Now then Littlewood: none o' your skylarkin'." Hollond remarked that since he heard of that episode he always thought of skylarking as an admirable term for the Higher Mathematics.

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