already have a sufficiency of the basic ideas like the book; they can see that while any book of this length may appear "formidable" globally, this particular one is not formidable locally. Therefore, this book is a success with them.

To conclude, I think George Whitehead proves at least one thing we already knew: in calibre as a mathematician, and for qualities of taste, style and judgement, he rates a lot higher than many who have written books on algebraic topology. I welcome this book most warmly, and I look forward to the second volume.

J. F. ADAMS

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Percy Alexander MacMahon: *Collected papers*, Volume I, *Combinatorics*, edited by George E. Andrews, Mathematicians of Our Time Series, The MIT Press, Cambridge, Massachusetts, 1978, xxx + 1438 pp., $75.00.

This is possibly a unique presentation of collected papers. First, papers are collected in chapters according to their consonance with the sections of MacMahon's treatise, Combinatory Analysis, whose order they follow. Each chapter begins with an (editorial) Introduction and Commentary, followed by a presentation of related current work, References (sizable bibliographies) and Summaries of the Papers (sometimes including alternative proofs of theorems). The editor's diligence and stamina are most impressive.

The papers, like the treatise, are motivated by MacMahon's ambitious objective (expressed in the preface to the second volume of the treatise) of "presentation of processes of great generality, and of new ideas, which have not up to the present time found a place in any book in any language".

Shorn of its context, this statement may appear more brashly confident than its author intended. It is preceded by a lengthy and glowing appreciation of Eugen Netto's *Kombinatorik*, possibly only to show that he has chosen a different path with due deliberation.

Nevertheless, the pursuit of originality and generality has its perils. For one thing, the current spate of combinatorial mappings has produced the feeling that multiplicity abounds. Perhaps the simplest example is the continuing appearances of the Catalan numbers ($(2n)!/n!(n+1)!$, $n = 0, 1, \ldots$), whose number sequence (No. 577 in Neil Sloane's *Handbook of integer sequences*, Academic Press, 1973) is 1, 1, 2, 5, 14, 42, ... Incidentally, these numbers are named after E. Catalan because of a citation in Netto's *Kombinatorik*, in relation to perhaps the simplest bracketing problem, proposed in 1838. An earlier appearance, which I first learned from Henry Gould, is due to the Euler trio, Euler-Fuss-Segner, dated 1761. There are now at least forty mappings, hence, forty diverse settings for this sequence; worse still, no end seems in sight. In this light, the Catalan (or Euler-Fuss-Segner) originality may be regarded as temporary blindness.

As for generality, MacMahon (paper 52, Chapter 7), gives a general solution of the Latin square problem–requiring the determination of coefficients in the expansion of powers of a multivariable sum. Since current