new to the field will derive full benefit from it after they have had a course that takes them in a leisurely fashion through the more traditional parts of the subject. Alternatively, they may supplement Chapter I by studying the basic material given in Chapter 2 of the author's earlier book with U. Grenander [2].

I cannot conclude this review without referring to a novel and pleasing feature of the book—the fairly detailed and interesting discussion of turbulence, a topic in which the author has been interested for many years. As far as I am aware, this is the first book (in English) on stationary processes to include a treatment of this problem.

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Free rings and their relations, by P. M. Cohn, second edition, Academic Press, London Mathematical Society Monograph No. 19, 1985, xxii + 588 pp., $96.00. ISBN 0-12-179152-1

The fundamental theorem of combinatorial group theory is that a subgroup of a free group is free. In contrast, subalgebras of free (associative) algebras are not well understood, and at the moment defy classification. This is not too surprising: in going from group theory to ring theory the translation of "subgroup" is (one-sided) "ideal." Thus the correct, and fundamental, theorem is that one-sided ideals of free algebras are free submodules. This is a consequence of a "weak algorithm" that holds in the