Foreword

Most textbooks written in our day have a short half-life. Published to meet the demands of a lucrative but volatile market, inspired by the table of contents of some out-of-print classic, garnished with multicolored tables, enhanced by nutshell summaries, enriched by exercises of dubious applicability, they decorate the shelves of college bookstores come September. The leftovers after Registration Day will be shredded by Christmas, unwanted even by remainder bookstores. The pageant is repeated every year, with new textbooks on the same shelves by other authors (or a new edition if the author is the same), as similar to the preceding as one can make them, short of running into copyright problems.

Every once in a long while, a textbook worthy of the name comes along; invariably, it is likely to prove *aere perennius*: Weber, Bertini, van der Waerden, Feller, Dunford and Schwartz, Ahlfors, Stanley.

The mathematical community professes a snobbish distaste for expository writing, but the facts are at variance with the words. In actual reality, the names of authors of the handful of successful textbooks written in this century are included in the list of the most celebrated mathematicians of our time.

Only another textbook writer knows the pains and the endless effort that goes into this kind of writing. The amount of time that goes into drafting a satisfactory exposition is always underestimated by the reader. The time required to complete one single chapter exceeds the time required to publish a research paper. But far from wasting his or her time, the author of a successful textbook will be amply rewarded by a renown that will spill into the distant future. History is more likely to remember the name of the author of a definitive exposition than the names of many a research mathematician.

I find it impossible to predict when Richard Stanley's two-volume exposition of combinatorics may be superseded. No one will dare try, let alone be able, to match the thoroughness of coverage, the care for detail, the definitiveness of proof, the elegance of presentation. Stanley's book possesses that rarest quality among textbooks: you can open it at any page and start reading with interest without having to hark back to page one for previous explanations.

Combinatorics, which only thirty years ago was a fledgling among giants, may well be turning out to be a greater giant, thanks largely to Richard Stanley's work. Every one who deals with discrete mathematics, from category theorists to molecular biologists, owes him a large debt of gratitude.

Gian-Carlo Rota
March 21, 1998