various contributions to the unsolved problem above and a neat characterization of the class of functionals generated by V, F, and M in terms of functional properties alone. In general, of course, the book is expository, developing in particular Blaschke's idea of introducing a metric into $\mathfrak{C}$. However, the thoroughness with which this idea is exploited is due to the author, who throughout has kept a nice balance between his abstract approach and the concrete results achieved.

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Méthodes d'algèbre abstraite en géometrie algébrique. By P. Samuel. Berlin, Springer, 1955. 9+133 pp. 23.60 DM.

The goal of the present work is, according to the author, "to give as complete an exposition of the foundations of abstract algebraic geometry as is possible," and to be useful to the practitioner ("l'usager" as Samuel calls him). Actually the main use of this book will be found as a handbook for one who wishes a less abrupt and difficult introduction to the abstract methods of algebraic geometry than is afforded by Weil's *Foundations* (which, it is too often forgotten, was not meant as an introduction). This latter book begins with three arduous chapters on pure algebra, whose use does not become apparent until much further in the book. Such a barrier does not exist in Samuel's exposition, because he assumes known all the needed basic algebra, or rather refers as he goes along to an appendix containing purely algebraic basic results, or references to those in the literature. (This of course could not have been done by Weil, for the good reason that most of these results were not in the literature at the time.) Samuel proceeds immediately with the geometric language and hence the reader's first contact with abstract methods is reasonably soft.

The book is divided into two parts. The first one gives the general theory of algebraic varieties, defined as either affine or projective varieties. It begins with the notion of algebraic set (set of zeros of polynomial ideals), union and intersection of these, and continues with the notion of dimension, generic points, products, projections, correspondences, rational and birational maps. The deepest theorem in this part asserts that every component in the intersection of two varieties V and W of dimension r and s in projective n space has dimension $\geqq r+s-n$. Elimination Theory is discussed as a special case of the theory of projections (as it should be) and is derived elegantly from the basic and elementary theorem on the extension of specializations. So is the Hilbert Nullstellensatz.

There is a section on properties which hold almost everywhere (i.e. at least on the complement of some proper algebraic subset of a given variety), followed by a section on Chow coordinates. The no-