## BOOK REVIEWS

There is one other consideration to be brought up: cost. My copy of Cassels-Fröhlich cost \$16.00 (before discounts); *Corps Locaux* lists for 36 F (roughly \$6.60, plus shipping costs, etc.). That means that for a dollar more than the cost of Weiss' book you can have all of class field theory thrown in, and that anyone willing to read French can get more mathematics than in Weiss for about half the price. Anyone who buys Weiss will need some justification other than costeffectiveness.

## LAWRENCE CORWIN

Studies in Geometry, by Leonard M. Blumenthal and Karl Menger. W. H. Freeman and Co., San Francisco, 1970. 512 pp.

The trend towards abstraction and generalization in modern mathematics at times seems to be at odds with the need for an intuitive insight into which concepts will prove fruitful and significant to the further development of the body of mathematics. In *Studies in Geometry* we find geometrical intuition at its best treated from an abstract point of view, which allows for significant generalization notably the development of metric and topological properties of Boolean algebras and the development of projective geometry of any finite dimension without the introduction of new definitions for elements of each dimension.

Studies in Geometry is neither a systematic development of one particular geometry nor is it a survey of the main topics of geometry. Rather it presents essentially three theories—the theory of distance geometry, culminating with metric characterizations of Banach and Euclidean spaces, the theory of projective and related geometries, and the theory of curves, considered both from a lattice-theoretical viewpoint and from the traditional three-dimensional Euclidean point of view. These three topics seem quite unrelated and one might expect to find little continuity in the plan of the book. This, however, is not the case. For these theories are all developed from the common concepts of set and lattice, which provide an underlying unifying element to their study.

While both authors use the same algebraic structures in their studies, it is apparent that there is a definite difference between their basic ideas of what geometry is. Blumenthal takes a somewhat Kleinian point of view—a geometry is a system  $\{S, E\}$  where S is a set and E an equivalence relation defined in the set of all subsets, called figures, of S. Fundamental, therefore, to the study of a geometry is a study of the properties shared by all the figures of an equivalence class. To Menger, however, a geometry cannot be divorced

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