preface it considers several topics whose interest seems technical and special; while other topics of modern logic, whose mathematical interest seems far greater, are ignored.

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Theory and applications of distance geometry. By L. M. Blumenthal. Oxford University Press, 1953. 12+348 pp. $10.00.

The first systematic development of geometric aspects of metric spaces is due to Karl Menger, who published a number of results in his *Untersuchungen über allgemeine Metrik* in 1928. Since then several authors have made contributions to this new domain. In 1938 Blumenthal gave a survey of the material available at that time in his book *Distance geometries*, one of the University of Missouri Studies. Considerable progress has been made since 1938 and with this new book the author aims to give a detailed introduction to the subject. About two-thirds of the text is devoted to imbedding and characterization problems. This shows clearly that the writer's own taste has played a large part in selecting the topics.

In the first chapter the author introduces all the principal notions which play a part in the theory of abstract metric spaces. Some have a topological character. It should be remarked that the definition given for compact spaces (p. 29) is different from the usual one, which may lead to some confusion. Chapter II is devoted to the notions of betweenness, convexity and metric segments. It contains Aronszajn's proof of one of Menger's theorems concerning segments: Each two points of a complete and convex space are joined by a metric segment. Chapter III gives in 30 pages a somewhat scanty treatment of metric curve theory. It contains several possible definitions of length and curvature and a survey of the results obtained so far, but for the proofs of many results the reader is referred to the original papers. A fuller treatment is given of the characterization problem. A subclass of metric spaces is characterized metrically whenever necessary and sufficient conditions (in terms of the metric) are obtained which have to be satisfied in order that a metric space be congruent with a member of this subclass. If the subclass consists of the set of subspaces of a metric space the problem is called the imbedding problem. An extensive treatment of this problem for the Euclidean spaces is given in Chapter IV. Most of these results are due to Menger but the author has succeeded in simplifying several of the proofs. If the subclass consists of one space only the problem is to characterize this space metrically among the metric spaces. Several characterizations are given for Euclidean spaces and Hilbert spaces. In a wide class of