pendent on the particular mathematical form used to express them. Indeed, if a 4-dimensional treatment is employed the vorticity is no longer a vector but is described by three of the components of a second-rank antisymmetrical tensor. Evidently Truesdell means that his particular formalism, in terms of 3-vectors, is valid only in three dimensions which is no doubt the case; but over-emphasis on this point of view leads to remarks such as that on p. 77, relative to Lagrange's acceleration formula. Whilst it is true that the particular formula (38.2) holds only in 3 dimensions, it is also true that a corresponding formula, involving the vorticity tensor, holds in 4 dimensions. Thus it does not appear to be correct to state without qualifications that "for the existence of Lagrange's formula it is requisite that the number of dimensions be three."

But when all has been said, one important fact emerges: this book is a valuable compendium of results that every expert in hydrodynamics, gas-dynamics or dynamical meteorology will want to keep by his side and refer to frequently.

G. C. McVittie

Introduction to integral geometry. By L. A. Santaló. Paris, Hermann, 1953. 127 pp. 1500 fr.

Integral geometry is the name given by Blaschke to a branch of geometry which originated with problems on geometrical probabilities and deals with relations between measures of geometrical figures. One should perhaps consider as its father the English geometer W. F. Crofton, while Poincaré left an important mark by introducing the kinematic measure (and by writing a book on geometrical probabilities).[1] In 1934 Blaschke and his coworkers started a series of papers on the subject. The author of this book made some of the most beautiful contributions to it in that period and, in the twenty years which followed, has consistently added new results to it. It is therefore gratifying that a book by the author now exists in the literature. The book is elementary in nature. Its first two parts presuppose only some knowledge of calculus and the last part some projective geometry and a little more maturity.

Part I, on the metric integral geometry of the plane, studies the densities of points, lines, pairs of points, etc. and culminates with Poincaré's kinematic density and Blaschke's kinematic formula. One of the most interesting applications is the author's proof of the

[1] As a matter of historic interest mention should be made of a set of lecture notes by G. Herglotz, which introduced many of the early workers into the subject.