tional problems for multiple integrals of the form $\int F(x, u, u_x)dx$. The authors are able to prove acceptable formulations of the 19th and 20th Hilbert problems.

The general elliptic equation (4) is treated in Chapter 6. Derivative estimates are established under various growth assumptions on the coefficients leading to a discussion of the Dirichlet problem. Strong solutions with bounded first derivatives are shown to be smooth according to the smoothness of the data—a considerably weaker result than may be obtained for the divergence structure case mentioned above.

Many of the results of earlier chapters are extended to systems of equations in Chapters 7 and 8. However, a very specialized form of system is considered which permits an automatic extension of the earlier theory. It is on the theory of general uniformly elliptic systems where much current research interest is focused. In Chapter 9 the authors discuss alternate methods, based on works of Moser, Nirenberg, Morrey and others, for obtaining their estimates of previous chapters. A further approach to the Hölder theory has since been given by the reviewer based on Moser's work on Harnack's inequality. The final chapter treats some other boundary value problems.

The book is in a certain sense complete—the body of theory it presents is close to a final form. It would be of great use for a mathematician already somewhat expert in elliptic partial differential equations. However, for someone seeking an introduction to the theory of quasilinear elliptic equations, the present book would not be the appropriate source. A book of this kind still remains to be written.

N. S. TRUDINGER

Convex sets, by F. A. Valentine. McGraw-Hill Series in Higher Mathematics, McGraw-Hill, New York, 1964. ix+238 pp. $12.00.

In 1934 Bonnesen and Fenchel published a comprehensive survey of the geometry of convex bodies. More than half of it was directed toward quantitative aspects of the theory. By contrast, only a tenth of the present book is devoted to such aspects. This change reflects the developments of the last three decades, which have tended increasingly to emphasize the combinatorial, qualitative, and infinite-dimensional aspects of the theory.

Valentine's book consists of a preface, thirteen chapters (called "parts"), an appendix, a bibliography, and a subject index. Headings of the parts are as follows: I. Basic concepts, II. Hyperplanes and the separation theorem, III. The Minkowski metric, IV. Some char-