sult from the notion of homography. But this notion is of no avail when it is a question of a space possessed only of a metric correspondence by reciprocal polars; this is the case for real space supposed non-euclidean, and it is for this reason, Fontené avers, that the metric properties of a general correlation in real space have not been studied. The author studies them in hyperspace; his theory is readily applicable to real space by introducing the notions parameter of a ray and parameter of an axis. This second interpretation of the theory of the memoir is indicated in the last chapter of the work.

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STAHL'S ABELIAN FUNCTIONS.

Theorie der Abel'schen Functionen. Von DR. HERMANN STAHL, Professor of Mathematics in the University of Tübingen. Leipzig, Teubner, 1896. 8vo, 354 pp.

DURING the last few years the literature on abelian functions has been enriched by three important treatises. The extent and scope is different in each case, so that no one of them will supplant another.

In the work under review, the author presupposes a ready knowledge of elliptic, and some familiarity with hyperelliptic functions; and an extensive knowledge of higher plane curves. His aim is to construct a serviceable bridge from the older to the newer parts of the theory, thus filling up a decided gap between the older books and the later memoirs.

The book is divided into two parts of about equal extent; the first deals with the algebraic function and its integral, while the second is concerned with inversion. Each part is then divided into four chapters. The author introduces his subject by giving a brief summary of the problems in elliptic functions, and shows how each has a natural generalization.

The first chapter is devoted to the treatment of the n branches of the algebraic function $F(x, y) = 0$, and a description of the associated Riemann's surface. The functional element is derived in the vicinity of various kinds of points, under the same restriction as was made by Clebsch and Gordan as to the nature of the branch points. Through-