windschief (p. 26) instead of *gauche?* the two words have practically the same signification. The word *Schein*, so significant in the German, is apparently untranslatable ; Professor Holgate adopts projector as the equivalent ; this answers sufficiently well in Reye, but misses the point in von Staudt's use of the word (Geometrie der Lage, § 3, p. 12), where the reference is explicitly to the *visual* foundation of the geometry. The translator of von Staudt will be hard put to it to render the term adequately.

The book is clearly and accurately printed, but is spoilt for pleasant handling by its most unusual weight.

<div align="right">CHARLOTTE ANGAS SCOTT.</div>

BRYN MAWR,
September, 1898.

BURKHARDT'S THEORY OF FUNCTIONS.

Funktionentheoretische Vorlesungen. Von HEINRICH BURK-
HARDT. Erster Teil : *Einführung in die Theorie der
analytischen Functionen einer complexen Veränderlichen.*
Leipzig, Veit & Co., 1897. 8vo, xii + 213 pp.

THE object of the author in writing the little volume before us has been to furnish an introduction to the theory of functions which is not confined to the presentation of the methods of any one school (Cauchy, Weierstrass, Riemann) but blends these methods as far as possible into an organic whole. The author has been very successful in making his book an introduction not merely to those parts of the theory which have long been classical (algebraic, elliptic, and Abelian functions) but also to the many other important developments of the last thirty years.* The mathematical public may well congratulate itself that a mathematician so thoroughly familiar with all sides of the subject as is Professor Burkhardt has undertaken the task of writing an elementary work along these lines.

We will briefly indicate the subjects treated.

Chapter I is an excellent presentation of the elementary theory of complex numbers and their geometric representation, in which the author has wisely restricted himself to the ordinary complex numbers $a + bi$. It is interesting to

---

* We note, for instance, the introduction of the terms *automorphic func-
tions, fundamental region,* and the proof and applications of the law of sym-
metry.