the general reader. The movement itself, of which all these works are the outgrowths, is undoubtedly of the first importance. In addition to active interest on the part of leading mathematicians and of the strong and influential society appointing and supporting the commission whose report we have considered, other evidences of a widespread and significant participation in the movement are not lacking. Of these only the representation of the Deutsche Mathematiker-Vereinigung on the Commission, and the space devoted to pedagogic matters in its *Jahresbericht*, need be mentioned here. While this movement is directly concerned only with mathematics in Germany, it is nevertheless of international significance, both on account of the fundamental nature of the changes which it proposes and the weight attaching to the names of the societies and men that are engaged in it. In its essentials, it is in close harmony with movements of the day for improvement of the teaching of mathematics in England, in France and in the United States, which agree in demanding:

1. That the presentation take more careful account of the pupils' powers; that it be psychological as well as logical; that consequently the intuitional, the inductive, the concrete, be given prominent place in the teaching of mathematics.

2. That the amount of complex or merely technical work be diminished.

3. That, in addition to its disciplinary value, the importance of mathematics for a clear understanding of nature, and the fundamental character of mathematics in the fabric of modern civilization be brought effectively before the pupils.

J. W. A. YOUNG.

THE UNIVERSITY OF CHICAGO,
January 24, 1906.

VECTOR ANALYSIS.

Vorlesungen über die Vektorenrechnung. Von E. JAHNKE. Leipzig, B. G. Teubner, 1905. xii + 235 pp.

THE entering class at an American college is more or less prepared on elementary geometry and algebra, and perhaps on trigonometry. The problem of collegiate instruction has, therefore, one fairly well-defined premise. All the students who continue their work in mathematics, for no matter what purpose, must study analytic geometry and calculus. From this