

13. In this paper Professor Hedrick describes a method of characterizing functions of a complex variable that are not analytic, but that differ only slightly from analytic functions. For example, the function  $\psi(z) = f(z) + \epsilon\varphi(z)$ , where  $f(z)$  is analytic, and  $\epsilon$  is a real number, will differ but little from  $f(z)$ , if  $\epsilon$  is chosen small, at all points where  $|\varphi(z)|$  is finite. The Riemann surface for such functions may be studied by means of its relation to that for  $f(z)$ . A series of examples of this type and of more general types is given.

O. D. KELLOGG,  
*Secretary of the Section.*

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## THE RELATIONS OF MATHEMATICS TO THE NATURAL SCIENCES.

*PRESIDENTIAL ADDRESS DELIVERED BEFORE THE AMERICAN MATHEMATICAL SOCIETY, DECEMBER 28, 1916.*

BY PRESIDENT E. W. BROWN.

THE duty enjoined on the President of the American Mathematical Society of delivering an address at the close of his term of office is at once an opportunity and a danger. It is one of the rare occasions when he is able to discuss matters which are unsuited for a memoir and when it is proper to try to take a somewhat broader view of his subject than is suggested in investigations designed to elucidate some special part of it. In so doing, he necessarily must look into the future and attempt to foresee it through such indications of the present as may seem significant; and the danger of becoming a false prophet or of raising an unnecessary alarm is unattractive to anyone, least of all to those who have the lifelong habit of feeling their way into the unknown by roads slowly constructed and securely laid. I am willing to run this risk because I believe that there are certain matters connected with the future of mathematical science which need fuller consideration than they have received of late years. In discussing them, one must necessarily tread on debatable ground. It is, however, a happy custom to regard the matter contained in a presidential address not as an official presen-