if the boundary b is displaced by an amount $\delta n = \epsilon\rho(s)$ in the direction of the inner normal. Later the more general variational method of M. Schiffer and the numerous results obtained by means of it are discussed.

While in the preceding chapters the existence of the Green's function, the Neumann function, etc., is assumed (which is permissible since the proofs can be found in many places in the literature), this borrowing is now dispensed with and the slit mapping is carried through without this assumption.

In Chapter 10 it is shown that the methods applied in the preceding chapters can also be applied to the solutions of partial differential equations of elliptic type. Here there are unexpected results from recent investigations of Bergman and of Bergman and Schiffer. The chapter ends with a treatment of the equation of elasticity, $\Delta\Delta\phi = 0$, in order to show how the process must be modified for equations of higher order.

The final chapter is concerned with functions of two complex variables and the analytic (pseudo-conformal) mappings generated by them. It is written for readers who are already familiar with the foundations of the theory of functions of several complex variables. First special regions (bicylinder, hypersphere, etc.) are treated; then the orthogonal functions are introduced for arbitrary schlicht bounded domains, and the mappings on representative regions by means of minimal functions and the invariant metric are set up. Finally the author discusses regions with distinguished boundary surfaces, the corresponding Bergman integral representations, and the "extended classes of functions." The choice of the topics in this chapter is perhaps somewhat too much oriented in the direction of the author's own extensive publications.

However, the book as a whole gives a distinguished introduction to the theory of orthogonal functions with its abundance of new results.

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Théorie des distributions. By Laurent Schwartz. (Publications de l'Institut de Mathématique de l'Université de Strasbourg, nos. 9 and 10; Actualités Scientifiques et Industrielles, nos. 1091 and 1122.) Vol. I, 1950, 148 pp. Vol. II, 1951, 169 pp.

In Euclidean E_k we consider a general function $\varphi(x) = \varphi(x_1, \cdots, x_k)$ which is defined and infinitely differentiable everywhere and is zero outside a bounded domain $D = D_\varphi$, and, as in a previous context, we call such a function a *testing function.* Next, if $F = F(x)$ is a fixed