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Funktionentheorie, by C. Carathéodory, 2 vols., Birkhäuser, Basel, 1950

The appearance of a book by a master of the stature of Carathéodory which is concerned for the most part with the classical aspects of a classical subject is an occasion of great interest. This is particularly so in the present case because it is reported that Carathéodory himself regarded his *Funktionentheorie* as his finest achievement. In appraising this work it is well to recall that on the one hand, Carathéodory was a mathematician of very broad interests and on the other hand the theory of functions of a complex variable was an ever returning theme in his research.

It is therefore natural to anticipate that the present book would be written from a catholic point of view, that the treatment of general questions of convergence, continuity, and so on, would have a strong "real variable" flavor. This is indeed the case. Throughout the book there is constant reference to his *Reelle Funktionen*. One meets everywhere striking formulations of concepts which conventionally are phrased in other ways. For this reason the *Funktionentheorie* will be of considerable interest to the specialist who likes to compare notes.

Carathéodory's contributions to the theory of analytic functions are many and of lasting importance. We need to call to mind only his early work on the Picard theorem which in turn led to the study of the coefficient problem for analytic functions with positive real part, the boundary behavior of conformal maps, the conformal mapping of variable regions, to mention but a few of his contributions. These interests are reflected in the second volume where the theory of bounded analytic functions, conformal mapping, the triangle functions and the Picard theorem are treated.

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Carathéodory did not aim at writing a comprehensive treatise of modern geometric function theory. Many topics such as the general theories of Riemann surfaces and uniformization are frankly omitted.

On the other hand, it would appear that Carathéodory wished to revive classical aspects of the theory of analytic functions which generally do not receive much attention nowadays.

Here is a book which will be of permanent interest not only to the specialist but to all who are inclined to graze in function-theoretic pastures.

Maurice Heins

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