PELSENEER ON MATHEMATICAL THOUGHT

*Esquisse du Progrès de la Pensée Mathématique. Des Primitifs au IXe Congrès
des Mathématiciens.* By J. Pelseneer. Paris, Hermann, 1935. 162 pp.

Anyone seeing this little volume in the window of a bookshop in Paris
would be apt to look upon it as simply another popular survey of the history of
elementary mathematics. Such surveys of various fields are numerous, par-
ticularly in France and Germany, and they serve a good purpose. A second
glance at the title, however, should tempt the inquisitive observer to open the
first few pages. If this be done, he will probably find much that is new to him
and will see the beginning of a treatment of the subject not generally found in
the popular books of the day.

M. Pelseneer begins by calling attention to Boutroux's *L'idéal scientifique
des mathématiciens dans l'antiquité et dans les temps modernes* (Paris, 1920).
This work sought to reveal the hidden spirit which, at different times, inspired
and animated the researches of some of the world's great mathematicians. It
is such a plan of approach to a new type of history, abandoning that of a series
of statements in chronological order, that M. Pelseneer suggests and, to a
limited degree, attempts. He seeks first the spirit of the times—or *"l'air du
temps"*—in which some of the great discoveries were made and by which the
leaders were influenced. Since, however, it is impossible in such a limited
"esquisse" as this to set forth in detail all the influences that make for the dis-
covery of even a single feature in the advance of mathematics, he aids the
reader by references to a few recent publications from which material for fur-
ther study can be drawn. These references are confined almost exclusively to
French, German, and English sources, and all the quotations of modern ma-
terial are in the first of these languages as being the most familiar to the au-
thor's readers. One remark which he makes in this connection is particularly
interesting, namely, that mathematicians are the least tiresome of all conversa-
tionalists since they never talk about their own subjects; they may mention
their achievements, but *"leur oeuvre s'accomplit dans le silence."*

The following list of chapters will serve to show the general scope of the
work: I The primitives, with subtitles (1) Number (the logical aspect), (2)
Number (the mystical aspect), (3) The absence of geometry; II. The pre-Greek
period, including (1) The Egyptians, (2) The Sumerians and Babyloni-
ans; III. The Greeks; IV. The Cartesian period; V. The 19th and 20th centuries.

The closing chapters relate to modern times, and therefore offer relatively
little that is new with respect to material. This allows more space for the dis-
cussion of "la pensée mathématique" in the sense of the term as set forth in
the early part of the book. For the mathematician this is naturally the most
valuable feature of the work. It gives the author an opportunity of sum-
marizing briefly some of the views of such scholars as Boutroux, Couturat,
Darboux, B. Russell, Wavre, Poincaré, and the original works of several modern
mathematicians.

The work lives up to its title so far as being a sketch, and also as relating
largely to the primitives. Only a small part of the world is considered, however,