and linear algebra (2) provide theoretical computer scientists with adequate and powerful tools for future research.

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Panorama des mathématiques pures. Le choix bourbachique, by Jean Dieudonné, Bordas, Dunod, Gauthier-Villars, Paris, France, 1977, xvii + 302 pp., 150 FF.

What is mathematics? According to one often suggested definition, mathematics is what mathematicians do, and the answer, therefore, is a function of time. A more humble question is "what is mathematics *now*?", and even that is partly ambiguous. Mathematics comes in several packages, described by different labels. The subject of the book before us is not the large, family-sized package labelled "the mathematical sciences", which includes, for example, hydrodynamics, statistics, numerical analysis, and computer science. The subject is pure mathematics only; the stated purpose of the book is to give the student at the threshold of research a panoramic view of the pure mathematics that is alive today.

Another way of describing the subject is offered in the subtitle (and explained in more detail in the introduction): the book is about Bourbaki's choice. Bourbaki is a pseudonymous society of French mathematicians who for forty years have been publishing a systematic collection of expository texts, proceedings of seminars, and ex cathedra dicta. How did they decide which parts of mathematics merited attention and which ones did not? What principles have been guiding their choices? They have never answered the question in public, and the author (one of the charter members of the society) says that the only way to find the answer is to examine the results of the choices and to infer from the evidence at hand what must have motivated them. The author was for many years one of the chief Bourbaki scribes, but he insists that his conclusions are personal and do not represent the official Bourbaki point of view.

Be that as it may, what in fact is Bourbaki's choice? To answer the question, consider what every (almost every?) mathematical theory is like. It begins with a very special problem, or so the study of history teaches us, such for instance as the duplication of the cube. What happens next? Answer: there are several possibilities.

I. It could happen that efforts to solve the problem lead nowhere, and the theory is still-born; as examples consider the determination of the Fermat primes and the irrationality of Euler's constant.