

Preface

Let's say it straightaway: Nicolas Bourbaki is not an individual but a group of mathematicians, almost all French. Formed in 1935, this colorful group consists of a dozen members and remains active today. Despite being unknown to most of the general public, these mathematicians changed the face of mathematics during the sixties and seventies.

Bourbaki neither invented revolutionary techniques nor proved grandiose theorems—and neither did it try to do so. What the group did bring, primarily through its imposing treatise *Éléments de mathématique*, was a new vision of mathematics, a profound reorganization and clarification of its components, lucid terminology and notation, and a distinctive style. It seduced many mathematicians, to such an extent that Bourbaki's philosophy has pervaded the international mathematics community. This has increased the influence of French mathematics throughout the world.

It was not only *Éléments de mathématique* that contributed to Bourbaki's fame. The exceptional quality of the group's members also contributed fundamentally to the quality of the group. André Weil, a key figure in Bourbaki since its creation, was one of the greatest mathematicians of the century. The other mathematicians who helped found the group, including Henri Cartan and Claude Chevalley, were also of international stature. More recent members include prestigious figures of mathematics such as Laurent Schwartz, Alexandre Grothendieck, and Jean-Pierre Serre. The members of Bourbaki all carried out individual mathematical work, earning them a range of high international honors. Several of them, notably Claude Chevalley, Laurent Schwartz, Alexandre Grothendieck, and Roger Godement, also committed much of their time to philosophy and politics. The group's philosophy also found its way into the New Math revolution of the seventies. While Bourbaki regretted this extension of their work, like Antigone they watched in fear as their views broke free from the group and started to lead their own existence.

In addition, Bourbaki constructed an extensive folklore around the group, building on the group's secrecy, its name, its humor and school-boy pranks, its structure and method of working. Bourbaki is indebted to this folklore for much of the group's success. Yet the use of the word "success" must be qualified. Bourbaki did not complete its mission, and the evolution of mathematics will surely prevent it from ever being completed. Bourbaki and its philosophy had some unwelcome idiosyncracies that their critics readily denounced. And the future survival of this multi-brained mathematician is questionable.

Bourbaki's story is one of shadows and dazzling light. I hope I have shown both equally in this book.

—*Maurice Mashaal*