Foreword

The present book is an attempt to write a new kind of biography; not only the biography of a mathematician, necessarily including an extensive if non-technical discussion of his mathematical work above and beyond the facts of his personal life, but an attempt to portray the individual *in* the mathematics as well as the individual behind the mathematics, as one and the same individual. Grothendieck is not just one of a select group of the greatest mathematicians of all time; he is perhaps the one amongst all of them in which personality is most strongly revealed in the mathematical work. This observation may be surprising to one acquainted only with the published mathematical writings of Grothendieck, and may be treated with scepticism by those who believe scientific results are pure of all trace of the human input that produced them. A biography alone would be easy enough to write; a mathematical biography more difficult, but the present endeavor may be qualified as positively risky, carrying a real possibility of failure. Yet the material is so rich and so convincing that the project seems to be worth the effort.

It is obviously impossible to write a biographical account of Alexander Grothendieck's life during the crucial "professional" period 1948-1970, without devoting a large part of the text to the mathematical considerations which formed his greatest concern. Since the book is intended to be accessible to any sort of public, this necessity is somewhat of a challenge; one which we have chosen to confront on the one hand by extensive recourse to Grothendieck's own fascinating writings on the subject of mathematical research and creativity, and by keeping the strictly mathematical discussion on a reasonably informal level, communicating only the main thrust of Grothendieck's accomplishments and unique style, and on the other, by the edition and publication of a separate volume, which can be read as an entirely independent work, but which is some sense will also be a companion volume to the biography. This other volume will contain a much deeper exploration of Grothendieck's mathematical work, in the form of contributions written separately by a number of mathematicians who actually witnessed the development of the themes they write about, and for the most part also actively participated in them.

It also seems wise to avoid a strictly chronological progression in recounting Grothendieck's life over the twenty-year period that made him into one of the most extraordinary and influential mathematicians the world has ever known. There are topics which deserve a chapter in themselves, and which have no particular location in time. For all of the chapters, whether devoted to actual events, to mathematical discoveries, to Bourbaki, to Grothendieck's family life, or to his colleagues and students, the major sources are public documents, Grothendieck's own writings, and finally, the indispensable and fascinating words and memories of those who knew him well and who were willing to talk about him in detail and at length: his former students Michel Demazure, Luc Illusie, Jean Malgoire, Michel Raynaud, his colleagues Pierre Cartier, Jacques Dixmier, Roger Godement, Robin Hartshorne, Max Karoubi, Steve Kleiman, Bill Messing, Jaap Murre, Claudine Schwartz, Jean-Pierre Serre, and his friends and children from outside the world of mathematics.

My warmest thanks go to all those who have taken or will take the time to help this project reach fruition.

Proposed Articles for the Independent Volume

Existing texts

Max Karoubi
L'influence d'Alexandre Grothendieck en K-théorie algébrique et en K-théorie topologique

Michel Raynaud
Grothendieck et la théorie des schémas

Luc Illusie
Grothendieck et la cohomologie étale

Pierre Cartier
A country of which only the name is known: Grothendieck and "motives"

David Mumford
Manuscript written but not available yet: next week

William Messing
Manuscript written but not available yet: crystalline cohomology

Proposed texts

Alexander Pelczynski (functional analysis)

Jaap Murre (fundamental groups)

Steve Kleiman (Picard schemes)

Robin Hartshorne (residues and duality)

Jean Bénabou (topos theory)

Yves André (motives)

Carlos Simpson (descent)

Christian Houzel (Cartan seminar?)

Frans Oort (origins of Grothendiecks ideas?)