

The Mechanical Mind in History

edited by Philip Husbands, Owen Holland, and Michael Wheeler

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Preface

Time present and time past
Are both perhaps present in time future
And time future contained in time past
—T. S. Eliot, “Four Quartets”

In the overlit arena of modern science, where progress must be relentless, leading to pressure to dismiss last year’s ideas as flawed, it is all too easy to lose track of the currents of history. Unless we nurture them, the stories and memories underpinning our subjects slip through our fingers and are lost forever. The roots of our theories and methods are buried, resulting in unhelpful distortions, wrong turns, and dead ends.

The mechanization of mind—the quest to formalize and understand mechanisms underlying the generation of intelligent behavior in natural and artificial systems—has a longer and richer history than many assume. This book is intended to bring some of it back to life. Its scope is deliberately broad, ranging from cybernetic art to Descartes’s often underestimated views on the mechanical mind. However, there is some emphasis on what we regard as hitherto underrepresented areas, such as the often overlooked British cybernetic and precybernetic thinkers, and cybernetic influences in politics.

Contributions come from a mix of artists, historians, philosophers, and scientists, all experts in their particular fields. The final section of this book is devoted to interviews with pioneers of machine intelligence, neuroscience, and related disciplines. All those interviewed emerged as major figures during the middle years of the twentieth century, probably the most explosively productive period yet in the search for the key to the mechanical mind. Their memories give fascinating insights into the origins of some of the most important work in the area, as well as adding color to many of the people and places whose names echo through the chapters of this

book. The interviews are not presented as verbatim transcripts of the original conversations—such things rarely make for easy reading; instead, they are edited transcripts that have been produced in collaboration with the interviewees. Facts and figures have been thoroughly checked and endnotes have been added to make the pieces as useful as possible as historical testaments.

A substantial introductory chapter sets out the aims of this collection, putting the individual contributions into the wider context of the history of mind as machine while showing how they relate to each other and to the central themes of the book.

We'd like to acknowledge the help of a number of people who lent a hand at various stages of the production of this book. Thanks to Jordan Pollock, whose advocacy of this project when it was at the proposal stage helped to get it off the ground; to Lewis Husbands, for clerical assistance; and to Bob Prior at the MIT Press for his support and encouragement (not to mention patience) throughout. Of course this volume would be nothing without all the hard work and commitment of our contributors—many thanks to all of them.