## Foreword

## Jerome Bruner

Ceruti and Bocchi have written a challenging, brilliant book. They explore with enormous verve the implications of new developments both in biology and physics for our understanding of the world. Their focus is on the role of contingency, of happenstance in the shaping both of organic evolution and in the emergence of the universe. They argue powerfully against the view that determinacy is the same as predictability. Contingent circumstances occur as a result of unforeseeable events in the physical world, or as a consequence of unpredictable events in the emergence of a species, or as a result of the way we humans think about things. Events produce irreversible changes. But, to quote the authors, "An event cannot by definition be deduced from a deterministic law." History simply overcomes necessity. And every history implies events that might not have occurred. Contingent historical events generate new coherencies in the world, and the notion of highly regularized linearity in explaining things falls to bits. Much of what we know is after the fact, however orderly it may be. The authors provide an extraordinarily rich account of these contingent, unpredictable changes in evolution, in human culture, and in the physical universe, leaning on pioneering contributions of biologists like Stephen Jay Gould and physicists like Prigogine and his many colleagues. And their conclusion is not that either the universe or humanity is at the end of some predetermined road, already known in advance, but, rather, in media res. in the middle of a story—"The Narrative Universe." This book is required reading for anybody who wishes to participate in the intellectual revolution through which we are now living.