We live in an extraordinary age. These are times of stunning changes in social organization, economic wellbeing, moral and ethical precepts, philosophical and religious perspectives, and human self-knowledge, as well as in our understanding of that vast universe in which we are imbedded like a grain of sand in a cosmic ocean. As long as there have been human beings, we have posed the deep and fundamental guestions, which evoke wonder and stir us into at least a tentative and trembling awareness, questions on the origins of consciousness; life on our planet; the beginnings of the Earth; the formation of the Sun; the possibility of intelligent beings somewhere up there in the depths of the sky; as well as, the grandest inquiry of all-on the advent, nature and ultimate destiny of the universe. For all but the last instant of human history these issues have been the exclusive province of philosophers and poets, shamans and theologians. The diverse and mutually contradictory answers offered demonstrate that few of the proposed solutions have been correct. But today, as a result of knowledge painfully extracted from nature, through generations of careful thinking, observing and experimenting, we are on the verge of glimpsing at least preliminary answers to many of these questions...

This book is written just before --- at most, I believe, a few years or a few decades before --- the answers to many of those vexing and awesome questions on origins and fates are pried loose from the cosmos. If we do not destroy ourselves, most of us will be around for the answers. Had we been born fifty years earlier, we could have wondered, pondered, speculated about these issues, but we could have done nothing about them. Had we been born fifty years later, the answers would, I think, already have been in. Our children will have been taught the answers before most of them will have had an opportunity even to formulate the questions. By far the most exciting, satisfying and exhilarating time to be alive is the time in which we pass from ignorance to knowledge on these fundamental issues; the age where we begin in wonder and end in understanding. In all of the four-billion-year history of life on our planet, in all of the four-million-year history of the human family, there is only one generation privileged to live through that unique transitional moment: that generation is ours.

Ithaca, New York October 1978