

©"About Time: Einstein's Unfinished Revolution" by Paul Davies, Viking, (1995), Price not mentioned.©

To the question "What is time?", St. Augustine of Hippo, the influential fourth century thinker is reported to have remarked, "If no one asks me, I know; but if any person should require me to tell him, I cannot." This enigmatic statement is probably what most of us would agree with. All of us have an innate sense of what time is but would be hard pressed to say exactly what it is. Human beings have been fascinated with the riddle of time since time immemorial; every civilization developed a cosmology and with it "theories" about the nature of time; from the cyclical nature of time that one encounters in Hinduism to the linear time which is dominant in the Christian world view.

A scientific study of time was unfortunately neglected because of its association with the mystic and the subjective. This changed with Galileo when time entered the realm of science as a measurable entity. However, time still retained its common-sensical meaning in the Newtonian scheme of things. Einstein changed all that with his theory of relativity, challenging all the accepted "truths" about the nature of time.

Paul Davies' new book is about the progress we have made since Einstein in unravelling the mystery about time. Written for the layperson with little familiarity with science, Davies successfully communicates the excitement in the field. Starting with a wonderful overview about the centrality of time in human thought, titled appropriately "A very brief history of time", he goes on to explain the revolution brought about by Einstein. The notion of relativity of time which Einstein introduced in place of absolute time, its implications, the event horizons in black holes and the twin paradox are some of the topics discussed.

Recent developments in cosmology provide important insights into the conundrum of time. The question, "How old is our universe" has recently been highlighted with reports of new observations which have put a question mark on the hitherto held beliefs about the age of the universe. Writing lucidly and without any jargon, Davies manages to convey a lot of excitement about the subject. Several recent and speculative ideas of Hawking, Hartle and Penrose, among others are mentioned here.

Going back and forth in time has always fascinated sci-fi writers. Undoubtedly, the possibilities are limitless; from the macabre ones of going back in time and killing your grandmother to changing the future "before" it happens offer ample scope for the imaginative mind. Lately there has been some work in exploring the physics of time warps and the behavior of time in the context of string theories. Davies discusses some of this fascinating work but one wishes he had given more details. Another lacuna in the book is the absence of any discussion of the role of time in biology and in human consciousness.©

In 1974, Davies wrote an excellent monograph on "The Physics of Time Asymmetry" which still remains one of the definitive works in the field. With this book, he has reached out to

the lay reader. Though idiosyncratic in his choice of topics, he has written an excellent book which in many ways is far better and complete than Hawkings' much applauded book on the subject.