



## A Question of Time: The Ultimate Paradox

*Scientific American*

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## A Question of Time: The Ultimate Paradox Details

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## From Reader Review A Question of Time: The Ultimate Paradox for online ebook

### Nrtashi says

I...couldn't finish it. This is supposed to be popular science, and yet, at some point, I realized that I don't understand a word from it. Too many complicated terms and ideas quickly glossed over made my head spin. It felt like reading a foreign language!

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### BetseaK says

This mixture of articles gives a good overview of scientific ruminations about various aspects of the concept of time. Regrettably and paradoxically, the style of some of the articles related to the objective (physical) time, though intended to make the underlying physics accessible to the layperson, makes the substance more obscure than really necessary. At least, so it seems to this layperson.

Overall, however, I found this eBook/issue of Scientific American fairly informative and for the most part interesting to read.

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### Anna Paula says

A compilation of articles published by Scientific American on the concept of time, from philosophical, physiological, and physical/mechanical/quantum points of view.

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### Sascha Michels says

It was still quite interesting but sometimes it was either too difficult or it supposed some prior knowledge that I didn't have (I never did physics).

Example: "The traveller uses the length-contraction equation of special relativity to measure distance. So the star six light-years away to the homebody appears to be only 4.8 light-years away"(5.1 Time and twin paradox).

I have never heard of this length-contraction equation and there is no explanation whatsoever which means that I just have to believe that this equation explains why 6 light-years appear to be 4.8 light-years...

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### Rod Haper says

### **A good survey review of time.**

A good review survey of time related physics research and thinking targeted for the informed lay audience. I would have preferred a more mathematical based exposition but that have excluded most of the target audience. Some of the material is dated.

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### **Jack Oughton says**

t's an anthology of intellectual curiosities - approaching the subject of time from the perspective of the various sciences. Very enjoyable. A 'scientific pick me up' perhaps.

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### **Remo says**

Compendio de artículos divulgativos sobre el tiempo, el que miden los relojes. Desde la historia de la medición del tiempo mediante clepsidras y relojes atómicos hasta la gravedad cuántica y el concepto que SIEMPRE me ha fascinado: ¿Es el tiempo continuo o discreto? También hablamos de cosmología, el inicio y el final del tiempo (en un Universo sin materia, ¿tiene sentido el concepto de tiempo?), algo de relatividad (el tiempo y la paradoja de los gemelos de Einstein, mil veces explicada, de ellas 999 mal). Un gran libro para los apasionados de la ciencia y más aún para los que tenemos ese interés especial por la física del espaciotiempo.

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### **Craig Werner says**

A major disappointment. I recently finished reading Peter Galison's Einstein's Clocks, Poincaire's Maps, which sparked my interest in broadening my notion of contemporary ideas about time. Unfortunately, this anthology did almost nothing to either broaden or deepen what I'd picked up previously. The problem is two-fold. First, these essays confirm my sense that for some time now Scientific American has been going downhill, trading in in-depth engagement with the state of our knowledge for gee-whiz (and often cutesy) near-fluff. That may simply mean that I should take the time and energy to keep up with Science News (which has been dealing with related problems, no doubt tied to the need to maintain economic viability). But it's also specific to this volume. The editors have chosen to emphasize the philosophical and "speculative physics" aspects of Time at the expense of better grounded approaches. The last half of the book is devoted primarily to "big questions": will time have an end? is time real? Most of the writers view the answers in terms of mathematical models of systems like quantum loop gravity and quantum chromodynamics and one whose precise name I can't remember that actually includes the word "magic." I'm not an advanced mathematician to say the least, but the rhetoric of the essays does nothing to convince me there's a "there there." The writers are building models and speculating on how they might some day be tested, but, at the risk of sounding anti-intellectual, it feels like metaphysics more than physics.

It's particularly frustrating because the space devoted to angels dancing on the head of cosmological pins could have been devoted to more concrete or to my mind interesting pursuits. I would very much have liked to read something about how the precision clocks described in one section play out in engineering applications. (For instance, just how the heck does GPS actually work?) Or perhaps a section on the way different cultures conceive of time? (A. Aveni's book Empires of Time is a nice starting place for that, but

I'm positive anthropologists have much more to say today than they did in the 1980s.)

It's not a total waste of time. The essays by Antonio Damasio on time and the brain is a good introduction to his thought (and his books); the essay on "inconstant constants" took the speculation into the realm of the testable. But I can't recommend this to anyone. The one star is for the realization of the book as a whole; the essays in the first half would get a three-star rating.

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### **Adarsh Hatwar says**

A collection of disparate essays; interesting read but very disconnected.

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