

THE ANTHROPIC COSMOLOGICAL PRINCIPLE

JOHN D. BARROW

Lecturer, Astronomy Centre, University of Sussex

and

FRANK J. TIPLER

Professor of Mathematics and Physics, Tulane University, New Orleans

With a foreword by John A. Wheeler

CLARENDON PRESS · *Oxford*

OXFORD UNIVERSITY PRESS · *New York*

1986

[Try Prime](#)

Your Amazon.com | [Today's Deals](#) | [Gift Cards](#) | [Sell](#) | [Help](#)

Shop by Department

Search Books

Go

Hello, [Sign in](#) Your Account

Try Prime

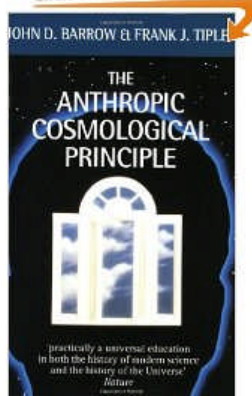
0 Cart

Books [Advanced Search](#) [New Releases](#) [Best Sellers](#) [The New York Times® Best Sellers](#) [Children's Books](#) [Textbooks](#) [Sell Your Books](#) [Best Books of the Month](#)

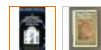


TEXTBOOKS: RENT, BUY, SELL > [Shop now](#)

Click to **LOOK INSIDE!**



Click to open expanded view



[See 1 customer image](#)

[Share your own customer images](#)

[Search inside this book](#)

The Anthropic Cosmological Principle (Oxford Paperbacks) [Paperback]

[John D. Barrow](#) (Author), [Frank J. Tipler](#) (Author), [John A. Wheeler](#) (Foreword)
(28 customer reviews)

List Price: ~~\$35.00~~

Price: **\$21.08** & **FREE Shipping** on orders over \$25. [Details](#)

You Save: **\$13.92 (40%)**

In Stock.

Ships from and sold by **Amazon.com**. Gift-wrap available.

Want it tomorrow, Sept. 26? Order within **7 hrs 51 mins** and choose **One-Day Shipping** at checkout. [Details](#)

23 new from \$15.94 **29 used** from \$9.99
1 collectible from \$16.95

Buy New **\$21.08**

Quantity:

Yes, I want **FREE Two-Day Shipping** with Amazon Prime

[Sign in to turn on 1-Click ordering](#)

More Buying Choices

53 used & new from \$9.99

Have one to sell?

[Share](#)

FREE TWO-DAY SHIPPING FOR COLLEGE STUDENTS
[Learn more](#)

Formats	Amazon Price	New from	Used from
Hardcover	--	\$95.10	\$7.51
Paperback	\$21.08	\$15.94	\$9.99



Best Books of the Month

Looking for something good to read? Browse our editors' picks for the [Best Books of the Month](#) in fiction, nonfiction, mysteries, romance, and much more.

Book Description

Publication Date: **August 25, 1988** | ISBN-10: **0192821474** | ISBN-13: **978-0192821478** | Edition: **1**

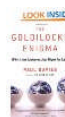
Ever since Copernicus, scientists have continually adjusted their view of human nature, moving it further and further from its ancient position at the center of Creation. But in recent years, a startling new concept has evolved that places it more firmly than ever in a special position. Known as the Anthropic Cosmological Principle, this collection of ideas holds that the existence of intelligent observers determines the fundamental structure of the Universe. In its most radical version, the Anthropic Principle asserts that "intelligent information-processing must come into existence in the Universe, and once it comes into existence, it will never die out."

This wide-ranging and detailed book explores the many ramifications of the Anthropic Cosmological Principle, covering the whole spectrum of human inquiry from Aristotle to Z bosons. Bringing a unique combination of skills and knowledge to the subject, John D. Barrow and Frank J. Tipler--two of the world's leading cosmologists--cover the definition and nature of life, the search for extraterrestrial intelligence, and the interpretation of the quantum theory in relation to the existence of observers. The book will be of vital interest to philosophers, theologians, mathematicians, scientists, and historians, as well as to anyone concerned with the connection between the vastness of the universe of stars and galaxies and the existence of life within it on a small planet out in the suburbs of the Milky Way.

Frequently Bought Together



+



+



Price for all three: \$42.11

[Show availability and shipping details](#)

- This item:** The Anthropic Cosmological Principle (Oxford Paperbacks) by John D. Barrow Paperback **\$21.08**
- The Goldilocks Enigma: Why Is the Universe Just Right for Life?** by Paul Davies Paperback **\$11.56**
- Just Six Numbers: The Deep Forces That Shape The Universe** by Martin Rees Paperback **\$9.47**

Customers Who Bought This Item Also Bought

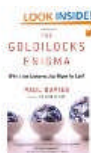
Page 1 of 20



Just Six Numbers: The Deep Forces That ...
Martin Rees

(62)

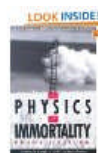
Paperback
\$9.47



The Goldilocks Enigma: Why Is the Universe ...
> Paul Davies

(29)

Paperback
\$11.56



The Physics of Immortality: Modern ...
> Frank J. Tipler

(85)

Paperback
\$15.19



The Physics of Christianity
> Frank J. Tipler

(48)

Hardcover
\$22.52

Editorial Reviews

Review

'an engaging book ... practically a universal education in both the history of modern science and the history of the Universe ... will be much quoted, much debated and much praised' Nature

'a feast: the kind of book which tells you everything you want to know about everything' The Economist

'I was infuriated by it, disagreed with it and loved reading it.' Timothy Ferris, New York Times Book Review

'in the speculative and intellectual richness of its pages, this book is probably unsurpassed' Peter Atkins

'a masterly exposition of what seems bound to become one of the most important developments to have taken place in physical science' TLS

'Intriguing analysis of new scientific thinking.' Sydney Times

'unique and wide-ranging book ... The reader is taken on an eclectic study of many scientific disciplines and is presented with a revealing picture of the structure of the physical world solely in terms of its invariant constants. There are also fascinating chapters on the definition and nature of life, the search for extra-terrestrial intelligence and the interpretation of quantum theory in relation to the existence of observers.' Europe and Astronomy 1992

'If you get a kick out of cosmic coincidences The Anthropic Cosmological Principle ... is definitely for you. The "anthropic" idea, which is that our very existence may explain why the Universe is the way it is, is an extraordinary one. So too is Barrow and Tipler's account.' New Scientist

About the Author

John D. Barrow is University Lecturer in Astronomy at the University of Sussex, England.

Frank J. Tipler is Professor of Mathematical Physics at Tulane University, New Orleans.

Product Details

Series: Oxford Paperbacks

Paperback: 736 pages

Publisher: Oxford University Press, USA; 1 edition (August 25, 1988)

Language: English

ISBN-10: 0192821474

ISBN-13: 978-0192821478

Product Dimensions: 1.6 x 5.1 x 7.8 inches

Shipping Weight: 14.4 ounces ([View shipping rates and policies](#))

Average Customer Review: ([28 customer reviews](#))

Amazon Best Sellers Rank: #110,099 in Books ([See Top 100 in Books](#))

Did we miss any relevant features for this product? [Tell us what we missed.](#)

Would you like to [update product info](#), [give feedback on images](#), or [tell us about a lower price](#)?

More About the Authors

Discover books, learn about writers, read author blogs, and more.



Frank J. ... John D. B...

Customer Reviews

(28)
4.4 out of 5 stars

"Having said that, it was simply the best book I've ever read."

A. Smith | 8 reviewers made a similar statement

5 star 19
4 star 4
3 star 3
2 star 1
1 star 1

"It's one of those books where I have to sit back and think after every half page."

Charles Rogerson | 5 reviewers made a similar statement

"Thus our universe is like a bubble in an infinite number of universes that were formed."

Rama Rao | 2 reviewers made a similar statement

[See all 28 customer reviews](#)

Most Helpful Customer Reviews

73 of 82 people found the following review helpful

Excellent-A profound look past the dogmas of modern physics.

September 30, 1998

By [Thomas A Mulligan](#)

Format: Paperback

Two respected physicists take a chance with their professional reputations by presenting a text that is simultaneously lucid, brilliant, mathematically sound, and honest (gasp!). This is a work in both physics and biology. It centers around the "Anthropic Principle"-roughly, that our existence necessarily puts some constraints on the evolution of the universe. Indeed, as Barrow and Tipler elucidate, these restrictions can be significant. As someone privileged to study under the latter physicist, I can personally attest to the conviction with which Tipler adheres to his beliefs, in the face of contemporary animadversion. Most importantly though, underlying this whole work are some very important concerns about philosophy of science (although maybe the authors might reel back at the notion of any sort of "philosophy" in their work). Perhaps this is for you, the future reader, to determine. My highest recommendation.

1 Comment | Was this review helpful to you?

45 of 49 people found the following review helpful

This Book Should be Famous but Isn't. May 17, 2001

By [galloamericanus](#)

Format: Paperback

This book is a revolutionary treatise on cosmology and the fate of the human species. It is frankly the most breathtaking book I have ever read, more exhilarating than Penrose's "Road to Reality" or than related efforts by Victor Stengers, John Barrow writing alone, Lee Smolin, or Eric Chaisson. I agree with the reviewer who asserts that this book's breadth of erudition is astounding. While quite technical in parts, other parts are definitely within the grasp of anyone who learned high school science well and is comfortable with algebra. There is much here beyond physics: chemistry, earth science, and biology. The book also contains a superb and lengthy discussion of many fascinating topics in the history and philosophy of science. This discussion remains valuable regardless of the future evolution of our understanding of cosmology. This is the book John Wheeler would have liked to have written but did not.

Among the surprising topics included in this book are:

- *A detailed discussion of the large number coincidences of Eddington and Dirac;
- *An extensive discussion of the handful of dimensionless constants that ground modern physics: fine structure (137), ratio of the rest masses of the proton to that of the electron (1836), the coupling constant for gravitation (at most 10^{-39}), etc;
- *An anthropic defense of the Many Worlds interpretation of quantum mechanics against the Copenhagen interpretation;
- *The most extensive discussion I know of why why our universe has 4 dimensions, 3 of space and 1 of time;
- *A chapter on biochemistry and the biosphere. [Read more >](#)

Comment | Was this review helpful to you?

17 of 20 people found the following review helpful

NOT a Layman's guide to the Anthropic Cosmological Principle



Advertisement

Most Recent Customer Reviews

IS OUR UNIVERSE THE PRODUCT OF MANY "MYSTERIOUS COINCIDENCES"?

Frank Jennings Tipler (born 1947) is a mathematical physicist and cosmologist at Tulane University. He has written other books such as The Physics of Christianity, The Physics of... [Read more](#)

Published 4 months ago by Steven H. Propp

Not an Easy Read, but a Great Book

This is a revolutionary book on cosmology; however, I do not think that most people could fully appreciate it unless they had formal education in high level collage physics.

[Read more](#)

Published 10 months ago by John Schmelzle

Amazing Tour de Force

I've had several copies of this book - I loan them to friends interested in the broad sweep of scientific understanding, and never get them back. [Read more](#)

Published 18 months ago by Julius

Getting a bit closer to the truth

This is an amazing book about an amazing concept but it is also amazingly complicated to read. The authors combine a whole universe of thought into a 700 page long argument on why...

[Read more](#)

Published on April 24, 2011 by Arie Pieter Vander Stroom

August 3, 2005

By [Rob](#)

Format: Paperback

Although this is a very extensive book, covering the Anthropic Cosmological Principle (which in short focuses on the fact that so many aspects of the cosmos and nature are finely tuned to make life possible) in a historical perspective, within cosmology, quantum theory, chemistry and biology, it is definitely not a book for the Layman. It includes a lot of mathematics, which I think should have been included in the references at the end of each chapter. However, when you filter those passages out, and focus on the main points, this book is a must-have and a classic for everyone with an open mind and interest in our place in this universe.

Rob (The Netherlands)

Comment | Was this review helpful to you?

9 of 10 people found the following review helpful

The Anthropic Cosmological Principle February 18, 2011

By [Roman Nies](#)

Format: Paperback

This book is a voluminous work on the theory that the universe is made for man. Among cosmologists an interest in a collection of ideas, known as the Anthropic Cosmological Principle has grown over the years. They offer a means of relating human mind and observership directly to the phenomena of a nature with man-fitting constants on a universal scale which is encompassing the world of the atoms and the world of galaxies as well. It reads as if this is what makes the cosmologists mostly occupied.

The expulsion of man from his self-assumed position at the centre of nature owes much to the Copernican principle that we do not occupy a privileged position in the universe. Now this dogma is limited by the Anthropic Cosmological Principle to the effect that our location in the universe is necessarily privileged to the extent of being compatible with our existence as observer. The basic features of the universe including such properties as its shape, size, age and laws of change, must be observed to be of a type that shows the evolution or existence of observers, for if intelligent life did not evolve/exist in an otherwise possible universe it is obvious that no one would be asking the reason for the observed shape, size, age and so forth. The universe, scientist say, must be that large. No astronomer could exist in one that is significantly smaller. The universe needs to be as big as it is in order to give home to just a single carbon-based life form of the kind we are, a highly complex one. One of the most important results of 20th century physics has been the gradual realization of the existence of invariant properties of the natural world and its elementary components which render the gross size and structure of virtually all its constituents quite inevitable. [Read more.](#)

1 Comment | Was this review helpful to you?

> [See all 28 customer reviews \(newest first\)](#)

[Write a customer review](#)

Anthropic principle; is it intelligent design or fine tuning of...

The anthropic coincidences are connections between physical constants that seem to be necessary for the existence of life in the universe and the physical reality we observe. [Read more](#)

Published on May 17, 2010 by Rama Rao

My first amazon purchasing !

Believe me in order to know how it works I purchased "The Anthropic Cosmological Principle" from Amazon. [Read more](#)

Published on November 30, 2009 by J. Prasad

VERY hard going, but perhaps one of the best books Ive ever read.

I studied engineering, so I understand a little logic, maths and physics, but this book was WAY over my head. Having said that, it was simply the best book Ive ever read. [Read more](#)

Published on December 31, 2008 by A. Smith

Astonishing book!

Barrow's book ("The Anthropic Cosmological Principle") is astonishing for the extraordinary wisdom showed in many ways and subjects. [Read more](#)

Published on June 24, 2008 by Poste Italiane S.p. A.

Great...but not science.

My 1986 edition of this book is in poor shape. I have read it cover to cover several times and it shows. [Read more](#)

Published on February 5, 2008 by J. MOLDOVAN

700 Page Pocketbook

Published in late 1980s this book discusses what has come to be known as the 'anthropic principle'- originally coined by Carter in the 1970's. [Read more](#)

Published on August 18, 2006 by Reader From Aurora

Search Customer Reviews

Only search this product's reviews

What Other Items Do Customers Buy After Viewing This Item?



[Just Six Numbers: The Deep Forces That Shape The Universe](#) by Martin Rees Paperback

\$9.47

(62)



[The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead](#) by Frank J. Tipler Paperback

\$15.19

(85)



[The Goldilocks Enigma: Why Is the Universe Just Right for Life?](#) by Paul Davies Paperback

\$13.84

(29)



[New Proofs for the Existence of God: Contributions of Contemporary Physics and Philosophy](#) by Robert J. Spitzer Paperback

\$18.79

(56)

> [Explore similar items](#)

Sell a Digital Version of This Book in the Kindle Store

If you are a publisher or author and hold the digital rights to a book, you can sell a digital version of it in our Kindle Store. [Learn more](#)

Forums

There are no discussions about this product yet.

Be the first to discuss this product with the community.

[Start a Discussion](#)

Look for Similar Items by Category

- [Books](#) > [Literature & Fiction](#) > [History & Criticism](#) > [Criticism & Theory](#)
- [Books](#) > [New, Used & Rental Textbooks](#) > [Humanities](#) > [Literature](#) > [American Literature](#)
- [Books](#) > [New, Used & Rental Textbooks](#) > [Science & Mathematics](#) > [Astronomy & Astrophysics](#)
- [Books](#) > [New, Used & Rental Textbooks](#) > [Science & Mathematics](#) > [Physics](#)
- [Books](#) > [Politics & Social Sciences](#) > [Philosophy](#)
- [Books](#) > [Science & Math](#) > [Astronomy & Space Science](#) > [Astronomy](#)
- [Books](#) > [Science & Math](#) > [Astronomy & Space Science](#) > [Cosmology](#)
- [Books](#) > [Science & Math](#) > [Physics](#)

Feedback

- ▶ If you have a question or problem, visit our [Help pages](#).
- ▶ Would you like to [update product info](#), [give feedback on images](#), or [tell us about a lower price?](#)
- ▶ If you are a seller for this product and want to change product data, click [here](#) (you may have to sign in with your seller id).

Your Recently Viewed Items and Featured Recommendations

You viewed



> [View or edit your browsing history](#)

See personalized recommendations

[Sign in](#)

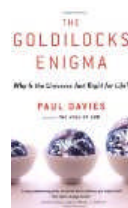
New customer? [Start here.](#)

Continue Shopping: Customers Who Bought Items in Your Recent History Also Bought

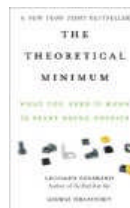
Page 1 of 10



Just Six Numbers: The Deep...
 > Martin J. Rees
 ★★★★★ (62)
 Paperback
 \$9.47 [Prime](#)



The Goldilocks Enigma: Why Is...
 > Paul Davies
 ★★★★★ (29)
 Paperback
 \$11.56 [Prime](#)



The Theoretical Minimum: What...
 > Leonard Susskind
 ★★★★★ (60)
 Hardcover
 \$18.18 [Prime](#)



The Physics of Immortality:...
 > Frank J. Tipler
 ★★★★★ (85)
 Paperback
 \$15.19 [Prime](#)

Get to Know Us

- [Careers](#)
- [Investor Relations](#)
- [Press Releases](#)
- [Amazon and Our Planet](#)
- [Amazon in the Community](#)

Make Money with Us

- [Sell on Amazon](#)
- [Become an Affiliate](#)
- [Advertise Your Products](#)
- [Independently Publish with Us](#)
- > [See all](#)

Amazon Payment Products

- [Amazon.com Rewards Visa Card](#)
- [Amazon.com Store Card](#)
- [Shop with Points](#)
- [Credit Card Marketplace](#)
- [Amazon Currency Converter](#)

Let Us Help You

- [Your Account](#)
- [Shipping Rates & Policies](#)
- [Amazon Prime](#)
- [Returns Are Easy](#)
- [Manage Your Kindle](#)
- [Help](#)

Frank J. Tipler

From Wikipedia, the free encyclopedia

Frank Jennings Tipler (born February 1, 1947) is a mathematical physicist and cosmologist, holding a joint appointment in the Departments of Mathematics and Physics at Tulane University.^[2] Tipler has authored books and papers on the Omega Point, which he claims is a mechanism for the resurrection of the dead. Some have argued that it is pseudoscience.^[3] Tipler was a fellow of the International Society for Complexity, Information, and Design, a society which advocated intelligent design.^[4]

Contents

- 1 Biography
- 2 The Omega Point cosmology
- 3 Selected writings
 - 3.1 Books
 - 3.2 Articles
- 4 See also
- 5 References
- 6 External links

Frank Jennings Tipler

Born	February 1, 1947 <div>Andalusia, Alabama^[1]</div>
Nationality	American
Education	PhD (Physics)
<i>Alma mater</i>	Massachusetts Institute of Technology; <div>University of Maryland, College Park</div>
Occupation	Mathematical physicist
Employer	Tulane University
Known for	Omega Point Theory
Religion	Christianity

Website

<http://math.tulane.edu/~tipler/>

Biography

Tipler is the son of Frank Jennings Tipler Jr., a lawyer, and Anne Tipler, a homemaker.^[1] From 1965 through 1969, Tipler attended the Massachusetts Institute of Technology, where he completed a bachelor of science degree in physics.^[2] In 1976 he completed his PhD with the University of Maryland.^[5] Tipler was next hired in a series of postdoctoral researcher positions in physics at three universities, with the final one being at the University of Texas, working under John Archibald Wheeler, Abraham Taub, Rainer Sachs, and Dennis Sciama.^[2] Tipler became an Associate Professor in mathematical physics in 1981, and a full Professor in 1987 at Tulane University, where he has been a faculty member ever since.^[2]

The Omega Point cosmology

The *Omega Point* is a term Tipler uses to describe a cosmological state in the distant proper-time future of the universe that he maintains is required by the known physical laws. According to this cosmology, it is required for the known laws of physics to be mutually consistent that intelligent life take over all matter in the universe and eventually force its collapse. During that collapse, the computational capacity of the universe diverges to infinity and environments emulated with that computational capacity last for an infinite duration as the universe attains a solitary-point cosmological singularity. This singularity is Tipler's Omega Point.^[6] With computational resources diverging to infinity, Tipler states that a society far in the future would be able to resurrect the dead by emulating all alternate universes of our universe from its start at the Big Bang.^[7] Tipler identifies the Omega Point with a god, since, in his view, the Omega Point has all the properties claimed for gods by most of the traditional religions.^{[7][8]}

Tipler's argument that the Omega Point cosmology is required by the known physical laws is a more recent development that arose after the publication of his 1994 book *The Physics of Immortality*. In that book (and in papers he had published up to that time), Tipler had offered the Omega Point cosmology as a hypothesis, while still claiming to confine the analysis to the known laws of physics.^[9]

Tipler defined the "final anthropic principle" (FAP) along with co-author physicist John D. Barrow in their 1986 book *The Anthropic Cosmological Principle* as a generalization of the anthropic principle thus:

Intelligent information-processing must come into existence in the Universe, and, once it comes into existence, will never die out.^[10]

Critics of the final anthropic principle say its arguments violate the Copernican principle, that it incorrectly applies the laws of probability, and that it is really a theology or metaphysics principle made to sound plausible to laypeople by using the esoteric language of physics. Martin Gardner dubbed FAP the "completely ridiculous anthropic principle" (CRAP).^[11] Oxford-based philosopher Nick Bostrom writes that the final anthropic principle has no claim on any special methodological status, it is "pure speculation", despite attempts to elevate it by calling it a "principle".^[12] Philosopher Rem B. Edwards called it "futuristic, pseudoscientific eschatology" that is "highly conjectural, unverified, and improbable".^[13]

Physicist David Deutsch incorporates Tipler's Omega Point cosmology as a central feature of the fourth strand of his "four strands" concept of fundamental reality and defends the physics of the Omega Point cosmology,^[14] although he is highly critical of Tipler's theological conclusions^[15] and what Deutsch states are exaggerated claims that have caused other scientists and philosophers to reject his theory out of hand.^[16] Researcher Anders Sandberg pointed out that he believes the Omega Point Theory has many flaws, including missing proofs.^[17]

Tipler's Omega Point theories have received criticism by physicists and skeptics.^{[18][19][20]} George Ellis, writing in the journal *Nature*, described Tipler's book on the Omega Point as "a masterpiece of pseudoscience ... the product of a fertile and creative imagination unhampered by the normal constraints of scientific and philosophical discipline",^[3] and Michael Shermer devoted a chapter of *Why People Believe Weird Things* to enumerating what he thought to be flaws in Tipler's thesis.^[21] Physicist Sean M. Carroll thought Tipler's early work was constructive but that now he has become a "crackpot".^[22]

Selected writings

Books

- Frank J. Tipler; John D. Barrow (1986). *The Anthropic Cosmological Principle*. Oxford University Press. ISBN 0-19-851949-4.
- Frank J. Tipler (1994). *The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead*. New York: Doubleday. ISBN 0-19-851949-4.
- Frank J. Tipler (2007). *The Physics of Christianity*. New York: Doubleday. ISBN 0-385-51424-7.

Articles

- Frank J. Tipler (2003). "Intelligent life in cosmology" (<http://math.tulane.edu/~tipler/intelligentlife.pdf>). *International Journal of Astrobiology* **2** (2): 141–48. arXiv:0704.0058 (<http://arxiv.org/abs/0704.0058>). Bibcode:2003IJAsB...2..141T (<http://adsabs.harvard.edu/abs/2003IJAsB...2..141T>). doi:10.1017/S1473550403001526 (<http://dx.doi.org/10.1017%2FS1473550403001526>).
- Frank J. Tipler (2005). "The Star of Bethlehem: A Type Ia/Ic Supernova in the Andromeda Galaxy?"

(<http://math.tulane.edu/~tipler/starofbethlehem.pdf>). *The Observatory* **125**: 168–74. Bibcode:2005Obs...125..168T (<http://adsabs.harvard.edu/abs/2005Obs...125..168T>).

- Frank J. Tipler (2007). "Feynman-Weinberg Quantum Gravity and the Extended Standard Model as a Theory of Everything". *Reports on Progress in Physics* **68** (4): 897–964. arXiv:0704.3276 (<http://arxiv.org/abs/0704.3276>). Bibcode:2005RPPh...68..897T (<http://adsabs.harvard.edu/abs/2005RPPh...68..897T>). doi:10.1088/0034-4885/68/4/R04 (<http://dx.doi.org/10.1088%2F0034-4885%2F68%2F4%2FR04>).

See also

- Tipler cylinder
- Ultimate fate of the universe

References

1. ^a ^b Terrie M. Rooney (editor) (1997). *Contemporary Authors* **157**. Farmington Hills (MI): Thomson Gale. p. 407. ISBN 0-7876-1183-2.
2. ^a ^b ^c ^d Frank J. Tipler (2007). "Biography" (<http://math.tulane.edu/~tipler/biography.htm>). *Frank J. Tipler's Tulane University website*.
3. ^a ^b George Ellis (1994). [<http://impleri.net/files/ellis.pdf>] (<http://www.nature.com/nature/journal/v371/n6493/pdf/371115a0.pdf>) "Review of The Physics of Immortality"]. *Nature* **371** (6493): 115. Bibcode:1994Natur.371..115E (<http://adsabs.harvard.edu/abs/1994Natur.371..115E>). doi:10.1038/371115a0 (<http://dx.doi.org/10.1038%2F371115a0>).
4. ^a "ISCID Fellows" (<http://www.iscid.org/fellows.php>). International Society for Complexity, Information, and Design. Retrieved 2010-03-11.
5. ^a Frank J. Tipler (1976). *Causality Violation in General Relativity (PhD thesis)*. University of Maryland. Bibcode:1976PhDT.....61T (<http://adsabs.harvard.edu/abs/1976PhDT.....61T>).
Source: *Dissertation Abstracts International* **37** (6). p. B2923.
6. ^a Frank J. Tipler, Jessica Graber, Matthew McGinley, Joshua Nichols-Barrer and Christopher Staecker, "Closed Universes With Black Holes But No Event Horizons As a Solution to the Black Hole Information Problem" (<http://arxiv.org/abs/gr-qc/0003082>), March 20, 2000. Published in *Monthly Notices of the Royal Astronomical Society*, Vol. 379, Issue 2 (August 2007), pp. 629-640, doi:10.1111/j.1365-2966.2007.11895.x (<http://dx.doi.org/10.1111%2Fj.1365-2966.2007.11895.x>), Bibcode: 2007MNRAS.379..629T (<http://adsabs.harvard.edu/abs/2007MNRAS.379..629T>).
7. ^a ^b Frank J. Tipler, "pig The Omega Point as *Eschaton*: Answers to Pannenberg's Questions for Scientists", *Zygon: Journal of Religion & Science*, Vol. 24, Issue 2 (June 1989), pp. 217-253, doi:10.1111/j.1467-9744.1989.tb01112.x (<http://dx.doi.org/10.1111%2Fj.1467-9744.1989.tb01112.x>).
8. ^a Frank J. Tipler (1997). *The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead*. New York: Doubleday. p. 560. ISBN 0-385-46798-2.
9. ^a Frank J. Tipler, "Cosmological Limits on Computation" (<http://www.springerlink.com/content/vlj3180664373268/>), *International Journal of Theoretical Physics*, Vol. 25, No. 6 (June 1986), pp. 617-661, doi:10.1007/BF00670475 (<http://dx.doi.org/10.1007%2FBF00670475>), Bibcode: 1986IJTP...25..617T (<http://adsabs.harvard.edu/abs/1986IJTP...25..617T>). (First paper on the Omega Point Theory.)
10. ^a Barrow, John D.; **Tipler, Frank J.** (19 May [Edit this reference (<http://en.wikipedia.org/w/index.php?title=Template:BarrowTipler1986&action=edit>)] 1988). *The Anthropic Cosmological Principle* (<http://books.google.com/books?id=uSykSbXklWEC&printsec=frontcover>). foreword by John A. Wheeler. Oxford: Oxford University Press. ISBN 9780192821478. LC 87-28148 (<http://lcn.loc.gov/87028148>). Retrieved 31 December 2009.
11. ^a Gardner, M., "WAP, SAP, PAP, and FAP," *The New York Review of Books* **23**, No. 8 (May 8, 1986): 22-25.
12. ^a Bostrom, Nick (2002). *Anthropic bias: observation selection effects in science and philosophy* (<http://books.google.com/books?id=TZ5FLwnCTMAC&pg=PA50&dq=Final+anthropic+principle+barrow+tipler#v=onepage&q=Final%20anthropic%20principle%20barrow%20tipler&f=false>). Psychology Press. ISBN 978-0-415-93858-7. Retrieved March 16,

- 2011.
13. ^ Edwards, Rem Blanchard (2001). *What caused the big bang?* (<http://books.google.com/books?id=3y5xm4rUf58C&pg=PA203&dq=Final+anthropic+principle+barrow+tipler#v=onepage&q=Final%20anthropic%20principle%20barrow%20tipler&f=false>). Rodopi. ISBN 978-90-420-1407-7. Retrieved March 17, 2011.
 14. ^ David Deutsch (1997). "The Ends of the Universe". *The Fabric of Reality: The Science of Parallel Universes—and Its Implications*. London: Penguin Press. ISBN 0-7139-9061-9.
 15. ^ Mackey, James Patrick (2000). *The critique of theological reason* (<http://books.google.com/?id=jNZy1docFVvC&pg=PA128&lpg=PA128&dq=david+deutsch+tipler&q=david%20deutsch%20tipler>). Cambridge University Press. ISBN 978-0-521-77293-8.
 16. ^ Shermer, Michael (2003). *How we believe: science, skepticism, and the search for God* (<http://books.google.com/?id=Im4Yl8qVuQEC&pg=PA107&dq=deutsch+tipler&q=according%20deutsch%20tipler>). Macmillan. ISBN 978-0-8050-7479-6.
 17. ^ Anders Sandberg, "My Thoughts and Comments on the Omega Point Theory of Frank J. Tipler" (http://www.aleph.se/Trans/Global/Omega/tipler_page.html)
 18. ^ Gardner, Martin (March / April 2008). "The Strange Case of Frank Jennings Tipler" (http://www.csicop.org/si/show/the_strange_case_of_frank_jennings_tipler). *Book Review, "The Physics of Christianity"*. The Committee for Skeptical Inquiry. Retrieved 29 June 2010.
 19. ^ John Polkinghorne (1995). "I am the Alpha and the Omega Point" (<http://www.newscientist.com/article/mg14519634.400-i-am-the-alpha-and-the-omega-point.html>). *New Scientist* (1963): 41.
 20. ^ Richard G. Baker (1995). "Fossils Worth Studying" (<http://www.sciencemag.org/cgi/reprint/sci;267/5200/1043?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&searchid=1&FIRSTINDEX=0&volume=267&firstpage=1043&resourcetype=HWCIT.pdf>). *Science* **267** (5200): 1043–1044. Bibcode:1995Sci...267.1043E (<http://adsabs.harvard.edu/abs/1995Sci...267.1043E>). doi:10.1126/science.267.5200.1043 (<http://dx.doi.org/10.1126%2Fscience.267.5200.1043>). PMID 17811443 (<http://www.ncbi.nlm.nih.gov/pubmed/17811443>).
 21. ^ Shermer, Michael (1997). *Why People Believe Weird Things*. W.H. Freeman. ISBN 0-7167-3090-1.
 22. ^ The Varieties of Crackpot Experience (<http://blogs.discovermagazine.com/cosmicvariance/2009/01/05/the-varieties-of-crackpot-experience/>). Sean Carroll, Jan 5 2009. Discover Magazine, Cosmic Variance blog.

External links

- International Society for Complexity Information and Design page (<http://www.iscid.org/frank-tipler.php>)
- Faculty page for Frank J. Tipler (<http://www.math.tulane.edu/faculty/tipler.html>)
- Personal website for Frank J. Tipler (<http://129.81.170.14/~tipler/>)

Retrieved from "http://en.wikipedia.org/w/index.php?title=Frank_J._Tipler&oldid=540416759"

Categories: 1947 births | Living people | People from Covington County, Alabama | American physicists | American Christians | Relativists | Cosmologists | Intelligent design advocates | Tulane University faculty | Fellows of the International Society for Complexity, Information, and Design | Massachusetts Institute of Technology alumni | University of Maryland, College Park alumni | Writers from Alabama | Theoretical physicists

- This page was last modified on 26 February 2013 at 00:28.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.