

September Meeting

World Humanism and the IHEU

Babu R.R. Gogineni is the Executive Director of the International Humanist and Ethical Union (IHEU). On Tuesday, September 5, he will speak to FIG about the status of humanism around the world and the role of the IHEU in promoting its growth. The IHEU has member organizations in 37 countries.



Known universally in humanist circles by his first name, Babu is headquartered in London. We are fortunate to have him come to visit FIG in Cincinnati on one of his many trips around the world. He is an engaging speaker who effectively uses anecdotes and humor to bring out his message.

Babu, 32 and recently married, was born in India. Before becoming Executive Director of the IHEU in 1997, he was involved in humanism in India and South Asia for ten years. He has a degree in biology, and worked for many years as a French language teacher.

Babu will discuss his plans to help the IHEU grow as an organization and as an international resource for humanists. He will also tell us about the differences he has observed in humanism and religion in some of the countries he has visited, including of course India and the United States.

Camp Quest

Camp Quest 2000 was the biggest and best yet. The Sugar Woods area of Camp Kerns was filled to capacity with 48 campers and 22 staff members. Most of us stayed in one of the five cabins or the Casper lodge, but a lucky few were rewarded with tent accommodations.

As in previous years, a wide variety of activities were scheduled. We shared Camp Kerns with a large group of YMCA campers, and even participated in their opening campfire festivities. A Camp Quest T-shirt was 'stolen', providing the opportunity to prove that eyewitness testimony is unreliable and subject to manipulation. The videotaped results were both amusing and educational.

Once again Camp Quest took to the skies in Ed Golly's airplane. An early flight spotted a nearby corn maze in the shape of an apple. The

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Events

September 5 Meeting

World Humanism
and the IHEU

Babu R.R. Gogineni
Monday, September 5, 7:00 p.m.
Geier Center, corner of Gilbert
and Elsinore Avenues

August Pool Party

August 27th from 1:00 until 5:00

September Potluck Dinner,

Tuesday, September 12, at 6:30 PM

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seven-acre corn maze provided an enjoyable field trip later in the week. Other notable outdoor events included a canoe trip down the Little Miami river, rock climbing, archery, fossil hunting, astronomy, and campfire meetings with songs provided by

Jerry Reiter. Soccer, water guns, chess on the pavilion, and recorder lessons with Roy Crawford also proved to be popular throughout the week. Horseback riding was once again an elusive goal as thunderstorms intruded.

There were a number of educational activities as well. Fred Edwards and Mynga Futrell enlightened the camp with stories about great freethinkers in history. Bob Riehemann and Bill Monroe provided the good (and not so good) cabin inspection reports. We had special presentations from a magician, creativity instructor Peter Lloyd, Kentucky ACLU director Jeff Vessels, and evolutionary biologist Massimo Pigliucci. Jim Strayer made creepy little spiders a whole lot more interesting (and even sexy). Steve Schafersman explained the basics of critical thinking. Kaye Marshall gave a heartfelt talk about diversity and tolerance. Edwin Kagin, as always, provided his motivational influence as the master of ceremonies.

The camp ended with entertaining presentations from each cabin regarding the humanist view of the world. No one saw the two invisible unicorns, but none of the campers was able to prove (to Edwin's satisfaction) that they do not exist.

The Free Inquiry Group wishes to extend its gratitude to camp director Edwin Kagin and all of the staff members who gave their time to make the camp a success. A special thanks goes out to Helen Kagin for pulling it all together, even when the schedule disagreed with reality.

Philip Ferguson

Last Call for Seats to ***Inherit the Wind*** at Cincinnati Playhouse in the Park on Friday 8 September 2000.

Payment is due by Monday 21 August. Make checks payable to Playhouse in the Park. Send them to:

Bob Riehemann, 229 Foote Avenue, Bellevue, KY 41073
859.491.7219
briehema@cinternet.net

Prices:

\$29.60/seat adult

\$15.00/seat for student and senior(62+)

Garage Parking: \$4.00

An Uppity Old Atheist Woman's Dictionary
by Carol C. Faulkenberry
The Atlanta Freethought Society, Inc 1998
147 pages

Aphorism: A tersely phrased statement of truth or opinion.

This collection of aphorisms contains its share of truth, opinion, and humor. Ms. Faulkenberry, a liberal atheist and supporter of women's rights, uses the form of the dictionary to discuss social, political, and philosophical issues. Most entries are humorous and are easy to read. The intention is clearly to generate a single observation on the topic at hand. To the true skeptic, such an anecdote may lead to questions and possibly moral responsibilities to search for answers---Is this idea true or false? Should I do anything about this? Why is this funny?

Examples:

Feast: Any meal shared in love.

Planned parenthood: A rarity.

Incest: A Biblical family value, illustrated by Abraham, who married his half-sister, and impregnated his two daughters.

Thermometer: Something a husband must consult before he can decide whether to put on a sweater or turn on the air conditioner.

Place one in the bathroom of every fundamentalist you know.

WANTED!

Your Favorite Superstitions!!!!

Collecting Superstitions for a
Superstition Bash Party

Friday, October 13, 2000 at 7:30 p.m.

Send your favorites to: ART-Superstitions, P.O. Box
12896, Cincinnati, OH 45212 or e-mail me at
dloughry@fuse.net (Donna Loughry).

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August 2000



Rationally Speaking

A monthly e-column by Massimo Pigliucci, Department of Botany, University of Tennessee

N. 1, August 2000 - "The Rationalistic Fallacy"

This column can be posted for free on any appropriate web site. If you are interested in receiving the html code, please send an e-mail: pigliucci@utk.edu

Further reading:

How the Mind Works by Steven Pinker

Why People Believe Weird Things by Michael Shermer

If you are of the lot who is stubbornly trying to improve critical thinking skills around the world and feels a bit frustrated by the wave of nonsense that regularly hits the airwaves, you are not alone. If you insist in thinking that all you need to do is to explain things just a little bit better and people will see the light, you are committing what is known as the "rationalistic fallacy."

It is probably true that better knowledge and understanding of science improves one's ability to grasp the real world; if that were not the case the entire education system should be thrown out, a step that only a minority of right wingers is prepared to take in the US at this moment. But it is also undeniably true that explaining science to many people does not make them any less true believers in pseudoscience.

For example, John Moore reports in an article in *The Science Teacher* (May 2000) that subjects were surveyed for their beliefs in the paranormal, UFOs and astrology before taking a course which dissected the evidential bases for all these pseudosciences. While skepticism had marginally increased toward the end of the course, credulity had returned with a vengeance only a year after the test!

It seems to me that we should try to understand what causes the rationalistic fallacy if we hope to make any progress in fighting the rampant irrationalism that manifests itself in countless forms. It might save us a lot of misdirected efforts and a trip or two to the psychotherapist when the depression hits.

The first thing to realize is that many people who believe in all sorts of weird things are *not* stupid; at least, not in the generally accepted sense of the term. Sure, if we define intelligence as the ability to grasp the real world, then anybody who does not understand quantum mechanics is an idiot. But remember the immortal words of physicist Richard Feynman: "If you think you understand quantum mechanics, you don't understand quantum mechanics."

No, the fact is that many people who believe in pseudoscience live successful lives. Some are college graduates. They can understand very well the reality of everyday life;

sometimes they even successfully make complex decisions such as investing their money or planning a career. The answer must therefore lie elsewhere.

I think the problem is in what we mean by "understanding reality." Thomas Henry Huxley, the 19th century scientist known as "Darwin's bulldog," was very successful in lecturing to the general public, to an extent that neither Richard Dawkins nor Stephen Gould can dream of today. Huxley's fundamental philosophy was that science is common sense writ large. Since most people are equipped with both an innate curiosity and a moderate dose of common sense, if we explain things appealing to their already existing mental tools they will understand. Indeed, this is the philosophy behind most science documentaries.

The problem is that most modern science is *not* a matter of common sense at all! On the contrary, from physics to cosmology, from evolutionary to molecular biology, our current scientific understanding of the world is extremely counter-intuitive. The reason for this is that science's realm of investigation now literally spans the whole of creation, from the beginning of time until now (roughly 20 billion years) and from the subatomic level to the largest aggregates of galaxies. Let us remember that in Huxley's time most scientists thought the earth was a few million years old, the existence of galaxies was yet to be discovered, and nobody had the foggiest idea of what an atom or a gene was.

Evolutionary psychologists such as Steven Pinker suggest an explanation for this state of affairs. According to the standard Darwinian theory, our brains are at least in part the result of natural selection to improve our fitness; but the question is: to what *kind* of environment? Obviously, the one that we have inhabited for most of our evolutionary existence: forests and savannahs, where "reality" meant being able to procure food and mates while carefully avoiding predators. Is it any wonder, then, that we simply can't understand quantum mechanics?

If we add to this mix the fact that people still want answers to the fundamental questions of life (probably an annoying byproduct of being self-aware), it doesn't take much to understand why evolution and the Big Bang are discarded in favor of all-powerful and all-good imaginary friends who watch over every detail of our lives (especially the sexual scenes). Even the much-touted fact that Europeans accept evolution and are less religiously fundamentalist than Americans has, I would argue, a far less flattering explanation than it is usually assumed. It is not that Europeans are smarter or know more science (this is demonstrably not so); rather, it is probably that through history they have had their fill of religious wars and witch hunts and they are putting their current trust in another category of priests, the scientists (at least until these, too, screw things up in some major way).

So, what do we do about it? Unfortunately, identifying the causes doesn't necessarily cure the disease. We are in no position to reshape the human brain to bring it up to speed with the current human environment. We can, however, get more familiar with the large literature on human cognitive neuro-

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Humanist Millennium Walk

The International Humanist and Ethical Union (IHEU) is pleased to announce that Belfast Humanist and IHEU supporter Phil Ward has completed PHASE ONE (500 miles) of his epic HUMANIST MILLENNIUM WALK (2500 miles), sponsored by the IHEU!

37 year old Phil Ward started his march on 3 June 2000 in Belfast, just before the contentious sectarian marching season begins. Starting from one epicentre of religious intolerance, Phil Ward aims to reach on 1 January 2001, the other epicentre of religious strife - Jerusalem!

At Belfast, Phil Ward was cheered on by 50 Humanists, among whom Levi Fragell, President of the IHEU, Prof. D.D. Bandiste, Vice-President of the Rationalist Association of India, and various leaders of the Ulster Humanist Association. 26 walkers walked with Phil the first 9 miles, as a show of solidarity with his cause.

On his way to Jerusalem, Phil Ward aims to spread the message that Humanism alone is the solvent of our contemporary divisions, and that our problems can be solved only through rational approaches. Rather than recognize our common humanity, religions promote divisive identities based on ancient superstition and primitive theology. The need of the hour is not religious backwardness, but tolerance and respect for human values. Phil Ward will speak to the media, stop at schools on the way, and distribute Humanist literature.

Phil Ward's selfless and valiant efforts have been warmly welcomed by Humanists en route who have been offering generous hospitality and arranging local meetings and raising money to support him. A total of 1500 Pounds have been donated so far by individuals and organizations in the UK. The media has also shown interest in his efforts: Phil has had 13 media appearances in 7 weeks (BBC Radio Shows; Thought for the Day; Religious Affairs

programs, as well as in newspapers), and he is helping raise the profile of Humanism.

Now walking alone, Phil Ward has arrived in London, and a special focus rally is to be held at the Humanist Centre in London. Those who can come are invited to the 3.00 pm, Saturday 29 July rally at the Conway Hall Library, London. IHEU President Levi Fragell, First Vice President Robbi Robson, Director of Rationalist Press Association Jim Herrick and several other prominent Humanists will also be present!

If you are coming to the London meeting (or are meeting him on his way to Jerusalem via the Netherlands, Belgium, Germany, the Czech Republic, Slovakia, Romania, Bulgaria, Turkey etc.) to honor and support Phil Ward's

extraordinary effort to spread the Humanist message (he is on a no-pay leave from work for 6 months!, and has obtained a bank loan to finance his walk!), do come prepared to appear in his proposed documentary: at least two companies have expressed an interest in preparing a documentary film for television broadcast!

1). To find out more about Phil Ward, and his walk itinerary, please visit the Humanist Millennium Walk website at www.geocities.com/Humanist_millennium_walk

2). You may communicate with Phil Ward on his E mail Philward77@hotmail.com with a copy to the IHEU at humanism@iheu.org

3). You may call Phil Ward on his Mobile Phone at + 44 788 1945 123 (If dialing from the UK, just dial 0788 1945 123)

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sciences; getting to know how the brain works has to be the first step toward designing better tools and arguments to educate people.

We can also be more understanding when we do confront an irrational position, and not dismiss our interlocutor as a simpleton (at least, not too quickly). Demonstrating sympathy and reaching out to the "right brain" may be a better way to get to the left one. But that is subject matter for another column.

**Next Month: "The Place of Science,"
a critique of religionist Houston Smith**

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Brain.com (<http://www.brain.com/home.htm>), up-to-date short articles on brain physiology and how it explains human behavior

Laboratory of Zetetics (<http://www.unice.fr/zetetique/index.html>), at the University of Nice (France) where skeptical research on the paranormal is being carried out

Rationalism (<http://www.utm.edu/research/iep/r/rat-cont.htm>), as defined by the Internet Encyclopedia of Philosophy

Visit Massimo's Skeptic & Humanist Web <http://fp.bio.utk.edu/skeptic/>

Massimo's latest book is *Tales of the Rational: Essays About Nature and Science*

Web links:

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August 2000

FIG Leaflets

"God ain't nowhere near here, child," Socrates' aunt, Bellandra Beaufort, used to say. "He's a million miles away; out in the middle'a the ocean somewhere. An' he ain't white like they say he is neither."

"God's black?" little Socrates asked the tall, skinny woman. He was sitting in her lap, leaning against her bony breast.

"Naw, baby," she said sadly. "He ain't black. If he was there wouldn't be all this mess down here wit'us. Naw. God's blue."

"Blue?"

"Uh-huh. Blue like the ocean. Blue. Sad and cold and far away like the sky is far and blue. You got to go a long long way to get to God. And even if you get there he might not say a thing. Not a damn thing."

-- Walter Mosley, *Always Outnumbered, Always Outgunned* (1998) p. 114

Considering Secular Humanism a Religion.

After all, Protestants believe many different things and disagree passionately with each other. So do Catholics, Jews, Muslims, Hindus, and atheists. A person so inclined could argue that part of the evidence for considering secular humanism a religion is that its adherents do not agree with each other on many things either.

James W. Fraser, *Between Church and State* (1999) p. 232

... the wide spread of religion in agricultural civilizations proves that its productivity-boosting and division of labor-enhancing effects outweigh its exploitative side: those societies that did not have temples and priests did not flourish.

-- Robert Wright. *Nonzero: The Logic of Human Destiny*. (2000) p.86

A crib was just a small mean shack, the display room in front and in the back the work room. In front there'd be a chair, and if it was a Mexican whore or a mick, an altar with a glass of burning olive oil and the Holy Virgin, head turned away from the work room by the whore. Whores deep down are drawn to religion with a naked man as a god on a cross.

Nell Kimball (1854-1934)
Her Life as an American Madam
(NY: Macmillan Co. 1970) p. 210

Thanks to Wolf Roder for the interesting quotes.

The Secular Family

Like most parents, we are walking through a mine field trying to make the best decisions we can, well aware of the fact that any one of them could explode in our faces either now or at some unforeseen point in the future. Religion seems to be a particularly sticky issue. Our ideal is to teach the boys about the wide range of belief and non-belief found all over the world and let them draw their own conclusions. I've experienced first-hand the mistaken attempts of a parent to control their child's beliefs.

Our boys' views about god have certainly evolved over the years. Since almost all of their playmates attend church every Sunday, they have absorbed some of the standard Christian ideas. God and the devil emerged as super heroes in their pretend play. I was amused that God was on the losing side about 50 percent of the time. They did not accept his infallibility.

We have read many stories from a Children's Bible that emphasizes the historical perspective. We discuss the stories and try to decide if they are fact or fiction. This ties in well with the 8 year old's discussions of books at school, although *they* have never mentioned the Bible in those discussions. We have a book about Greek myths to compare to some of the Biblical stories. We have a book about world religions that discusses Islam, Buddhism, and other major religions. And we have also discussed the fact that millions of people do not believe in God at all.

We try to relate to them within the belief system that they currently hold. The six year old came home from Kindergarten in tears one day. He told me that several of his friends at school had told him that he would go to hell if he didn't go to church. I asked him if he was a good person and he said, "Yes." I asked him if he thought God loved him and he said, "Yes." I asked him why God would send him to hell if he was such a good person and was so loved. He dried his tears and seemed very comforted.

They have a standing offer to attend church if they so desire. Fortunately, they have never taken us up on this offer. No matter how uncomfortable they have occasionally felt to be among the few who do not attend church, they see the inherent advantages. I suspect that they have learned over time that being less vocal about their situation causes fewer problems.

Our 4 year old has the distinction of being the only one who has ever attended Sunday school. He went with a friend when he was only 3. He discussed his school experience enthusiastically and often. We were a little concerned, unnecessarily as it turns out. He and I were watching a television show and a teenager said, "God is the most important thing in my life." He turned to me and asked if that girl really meant that, that she really thought God was real and not pretend. He was thoroughly amazed. His views will surely change when he goes to preschool and school. There is no telling



QUOTES FROM VOLTAIRE

"Christianity is the most ridiculous, the most absurd and bloody religion that has ever infected the world."
—letter to Frederick the Great

"Doubt is not a pleasant condition, but certainty is a ridiculous one."
—letter to Frederick, April 6, 1767

"You seem solicitous about that pretty thing called soul. I do not protest I know nothing of it, nor whether it is, nor what it is, nor what it shall be. Young scholars and priests know all of that perfectly. For my part, I am but a very ignorant fellow."
—letter to James Boswell, February 11, 1765

"The truths of religion are never so well understood as by those who have lost the power of reasoning."
—*Philosophical Dictionary*, 1764

"Atheism is the vice of a few intelligent people." —ibid.

"Which is more dangerous, fanaticism or atheism? Fanaticism is certainly a thousand time more deadly; for atheism inspires no bloody passion, whereas fanaticism does.... Fanaticism causes crimes to be committed."
—ibid.

"Nothing can be more contrary to religion and the clergy than reason and common sense." —ibid.
"With regard to the Christians, assuredly their greatest and most venerable saints were those whose brains had sustained the severest shock." —ibid.

"Superstition, born of paganism, and adopted by Judaism, invested the Christian Church from earliest times. All the fathers of the Church, without exception, believed in the power of magic."
—ibid., under "Superstition"

"Every sensible man, every honest man, must hold the Christian sect in horror. But what shall we substitute in its place? you say. What? A ferocious animal has sucked the blood of my relatives. I tell you to rid yourselves of this beast, and you ask me what you shall put in its place?"
—*What Great Men Think of Religion*, Ira D. Cardiff

"I have never made but one prayer to God, a very short one: 'Oh Lord, make my enemies ridiculous.' And God granted it."
—letter to M. Damilville, May 16, 1767

I know a man who is firmly persuaded that, at the death of a bee, its buzzing ceases."
—*Views of Religion*, Rufus K. Noyes

In case you were having a bad day ...

1. The average cost of rehabilitating a seal after the Exxon Valdez oil spill in Alaska was \$80,000. At a special ceremony, two of the most expensively saved animals were released back into the wild amid cheers and applause from onlookers. Exactly one minute later, in full view, they were both eaten by a killer whale.

2. A psychology student in New York rented out her spare room to a carpenter in order to nag him constantly and study his reactions. After weeks of needling, he snapped and beat her with an axe leaving her mentally retarded.

3. A woman came home to find her husband in the kitchen, shaking frantically with what looked like a wire running from his waist towards the electric kettle. Intending to jolt him away from the deadly current she whacked him with a handy plank of wood by the back door, breaking his arm in two places. Until that moment he had been happily listening to his Walkman.

4. Two animal rights protesters were protesting at the cruelty of sending pigs to a slaughterhouse in Bonn. Suddenly, the pigs, all two thousand of them, escaped through a broken fence and stampeded, trampling the two hapless protesters to death.

And finally.....

5. Iraqi terrorist, Khay Rahnajet, didn't pay enough postage on a letter bomb. It came back with "return to sender" stamped on it. Forgetting it was the bomb, he opened it and was blown to bits.

So Tell me....Your day's not so bad, is it?



Letters to the Editor

We welcome comments.
Our e-mail address is:
FIGEditors@aol.com
The mail address is:
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Cincinnati, OH 45208

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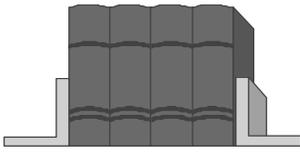
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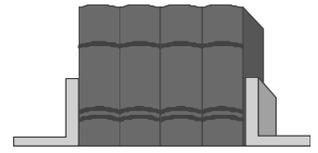
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Book Reviews



***Deconstructing Jesus*
by Robert M. Price
(Amherst, NY: Prometheus Books, 2000)**

The concept and reality of a first century person Jesus Christ is taken apart by a very careful and detailed examination of all the extant writings about his life. The present book covers the same ground as *Who Wrote the New Testament?* by Burton Mack reviewed in these pages recently, (Sept. '99). In fact, Price refers to earlier author's writings throughout to distinguish his insights from Mack's findings. On the whole I prefer the present book. Price's thoughts are more clearly stated than Mack's. Price uses many metaphors and examples from later Christianity and from other religions to illustrate brilliantly what he thinks may have happened.

At first there was a collection of sayings of a sage. Later came the revelations of Wisdom, both can be recognized only by inference, or seen in the Gnostic writings found at Nag Hammadi in 1945. Later came a third type of pre-gospel, a wonder-laden hero biography of great deeds. None of these writings were without precedent among writings of the period. Indeed, Price comments:

The ancient Mediterranean world was hip-deep in religions centering on the death and resurrection of a savior god. Usually these religions and their rites measured the yearly renewal of nature. ... But the myths of each such god supplied the motivation for the fare and triumph of the savior, one that made sense in the native context. (p. 86)

Thus, it is quite credible that writings which referred to a variety of different persons, sages, or prophets became a melange which found its final form in the New Testament only in the fourth century. Price describes the gospels as a mix and match project (p. 42 ff.) in which Christians combined what they liked from the various genre pieces to fashion the gospels we have.

The earliest recorded sayings are ascribed to a wandering sage, a type of Socratic figure, an itinerant cynic. This man may have been not unlike many other Pharisee Rabbis of the last century BCE, and many of his teachings may have entered into rabbinic Judaism after the Jewish War. His followers, the Jewish Jesus people may have fled to Galilee after the destruction of the Temple.

The Christ myth, according to Price, was a development of the diaspora. At issue was the condition under which righteous gentiles could join the synagogue. While many admired the community of Judaism, they felt god's requirement of circumcision and the dietary laws was an excessive burden. As Price interprets it, Christ sacrificed himself so that these requirements could be

lifted. Jesus was crucified in order that Paul and the gentiles could share bread and table.

This "watered-down, more marketable version that made conversion too cheap and only a halfway measure" (p. 77) was unacceptable to the Jews of Palestine. In this way the new cult gradually drifted to a parting of the ways from Judaism into a new religion. Christians then found a need to explain, why the original followers of this god had lost his favor, and why the Hebrew Scriptures should apply to them rather than the Jews.

At the end we are left with a mish-mash of stories, a combination of tales, which the author compares to the stories told of other ancient heroes, of a Heracles or a Dionysus. Let me quote the final paragraph of the conclusion: (p. 266)

The gospels' Jesuses are each complex syntheses of various other, earlier, Jesus characters. Some of these may have been reflections of various messianic prophets and revolutionaries, others the fictive counterparts of itinerant charismatics, and still others historicizations of mythical Corn Kings and Gnostic Aions. I think it is an open question whether a historical Jesus had anything to do with these Jesuses, much less the Jesuses of the gospels. Each is the figurehead, the totem, of a particular kind of Jesus community or Christ cult, and we will never know whether and to what extent each community reflects a remembered Jesus opposed to a Jesus or Christ who is a concretization of its own beliefs and values.

Christians insist the gospels tell a historical reality. Price and his fellow historians peel apart the classical literature to examine the various stories. There is no way a historical Jesus can be found behind the legends or even whether one ever existed.

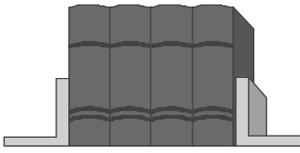
Wolf Roder

***The Inquisition*
by Michael Baigent and Richard Leigh
(London: Viking-Penguin, 1999)**

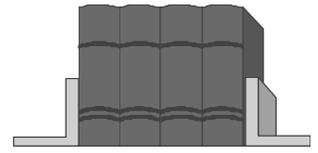
This is both more and less than a history of an institution concerned with investigation and inquiry. In many ways it is a history of the Papacy and the Catholic church, and increasingly becomes a broader narrative as the independence and scope of the Inquisition became narrower. It is less in that this history is written entirely from secondary sources, and follows many of these for pages at a time. It is also a history hostile to the church and especially to the institution and rule of the Pope. And it

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Book Reviews



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is a history which carries on into the present for the Inquisition is neither dead nor dying, although since 1965 it has gone by the name of *Congregation for the Doctrine of the Faith*.

I learned a number of things from this book. For one, the Inquisition does not date to the Dark Ages, but was founded in the later Middle Ages, AD 1206, and reached its peak in the Renaissance. The Dominican Order of priests was founded as the Inquisition, and Dominicans remain the inquisitors to this day. The institution was not founded in Spain or Rome, but in France to fight the heresy of the Christians known as Albigensians, and to stamp out the survival of pagan religion. The Inquisition appeared in Castile only in 1376, and achieved full power under Ferdinand and Isabella in 1479. "Yet popular images are not altogether wrong. It was certainly in Spain that the Inquisition attained new dimensions of bigotry, nastiness and terror."(p. 62) In Spain also the Inquisition operated under the direction of the King as an instrument of royal policy to evict or convert Jews, Muslim, and other unbelievers. To this end the royals "embarked on a ruthless agenda of 'purification' that anticipated Nazi policies of the twentieth century and the practice of 'ethnic cleansing' implemented in the Balkans during the 1990s."(p.63)

The Inquisition was used to oppose witches. After 1484 it became a sin and a heresy to disbelieve in the existence of witchcraft, and Dominican preachers were appointed to obliterate the evil. There is a deep, even psychopathic hatred of women involved in this priestly activity. Women were described

as inherently weak and, almost by definition, 'fallen'. A woman 'is an imperfect animal, she always deceives'. She is 'quicker to waver' in religious faith. She is 'a liar by nature'. She is beautiful to look upon, contaminating to the touch and deadly to keep.' She is to blame, in effect, for virtually everything: 'All witchcraft comes from carnal lust, which is in women insatiable.'(p.111)

Terror, torture, and theocracy continued as long as the Papacy commanded secular powers. This did not end until 1859 when the new Kingdom of Italy annexed the last of the Pope's dominions.

As industry and science progressed in the last century, the Papacy became increasingly anti-modern. The Pope proclaimed the Immaculate Conception of the Virgin Mary in 1854, railroaded his own Infallibility through the First Vatican Council in 1870, and declared the biblical stories as absolutely and literally true history in 1905. In all of this the Inquisition acted as his spies and enforcers on priests who got out of line and laymen who objected. From 1559

until 1966 it kept an Index of forbidden books until it became ridiculous as university students had to obtain special permission to read the books which appeared on every professor's syllabus in philosophy, history and literature.

The authors conclude that "the Church seems not merely out of touch with the exigencies of the modern world, but in some bizarre state of psychological denial as if it were pursuing its own agenda with the single-mindedness of a robot,"(p. 286) Only thus can it be explained that the present Pope can continue an intellectual tyranny over a congregation and a priesthood which increasingly pursues its own agenda. Only thus can the Pope deny the needs of the modern world, with his refusal to see the problems of overpopulation, the needs of women, the deterioration of a celibate priesthood, the technological changes affecting human biology and reproduction, and on and on.

Wolf Roder

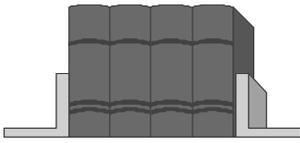
*Tales of the Rational
Skeptical Essays About Nature and Science*
by Massimo Pigliucci
Freethought Press, 2000

The prize winning evolutionary biologist and freethinker, Massimo Pigliucci, has written an excellent collection of essays dealing with science and religion. Massimo was a recent FIG speaker and a participant in Camp Quest; he was well received by both groups.

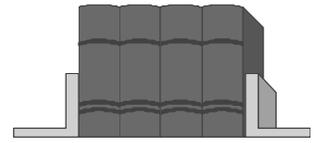
In these pieces, Massimo is concerned to clearly present his ideas, alternately instructing and trying to persuade. As a respected scientist, his strength is biological description and commentary on the creationism debates.

He is candid about his feelings when debating William Craig, a respected Christian apologist, on the existence of God. What Massimo adds to the standard issues of the problem of evil, the existence of morality, and the design argument, is an analysis of the strategy used by Craig to weave these elements together. This includes important information about details conveniently removed and glossed over so that Craig can present a superficially coherent argument. A similar analysis is given for a debate with the creationist archetype: Duane Gish. In both cases there is an interesting comment that Massimo's opponents vary only slightly from a standard form of their presentation. The biological commentary on creationism is clear and intelligible. For those with an interest in debating these issues or learning more about the nature of such debates, these essays should be valuable.





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Reading this book, it becomes clear that Massimo is concerned to present a view of the universe which is consistent with science. He believes that atheism provides the most plausible religious stance and several of the pieces present arguments to this end. He is a strong skeptic and opens and closes the book with essays concerned to define skepticism, among other things. For Massimo a skeptic is an active doubter and a true skeptic has a responsibility to search for evidence to resolve doubts. He follows Goethe in this regard and it is in precisely this sense that skepticism is included in science.

Science is fully naturalistic both methodologically and philosophically in Massimo's view. While it is common to believe that science proceeds to increase its domain of explanation by assuming that natural law will be found to describe the phenomena of nature---methodological naturalism---many people do not subscribe to this as a philosophical view. For example, many practicing scientists believe that a god could create the world and exist outside it or otherwise be unobservable. Deists like Thomas Jefferson believed that God started the universe and then permitted it to develop according to fixed laws. For Massimo those things which are unobservable in principle and are not logical necessities should be dropped from the world view. In his estimation all gods fall into this category.

When discussing world views and the ways to argue for them, Massimo often makes psychological observations. In his essay on the importance of straw men this is particularly clear. As I understand the discussion, it is important to have a simple characterization for any position or idea, no matter how complex, in order to effectively discuss and understand it. This may be true as a quirk of human psychology and it certainly sounds plausible. However, I have serious doubts about it's truth generally.

There may be some ideas which are so complex that simplification to the level of straw men may be impossible. But if so, I will never be able to provide a succinct example in these pages to prove this point---by definition! There are also interesting comments to this end in the refutation of Pascal's wager, where people are classified (straw man fashion!) as either gullible or skeptical. There is a beautiful discussion of type I and type II errors at this point which I found extremely interesting. Gullible persons try to minimize type I errors---rejecting a truth, and skeptics try to minimize type II errors---accepting a falsehood. Massimo points out that each person must decide how to balance these conflicting goals; reducing one increases the other and vice versa. Because he believes that there are more falsehoods, in some sense, than truths, Massimo is on the side of the skeptic. I remain a bit

suspicious about posing the acceptance of philosophical skepticism in this way, but for cases where the analogy is accurate, the result is clear.

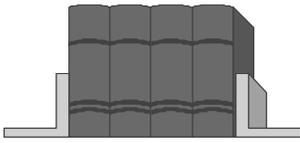
Also included in this collection are three essays on current scientific issues: the origin of life, extraterrestrial life, and chaos. It is here that Massimo takes an anti-reductionist position characteristic of many biologists: Ernst Mayr, for example. And it is here that I begin to question the consistency of Massimo's arguments. For example, he quotes with approval the views of physics found in Brian Greene's *The Elegant Universe*, in several essays. But he rejects Greene's reductionism. Hence there is a need for Massimo to explain his philosophy of physics in order to assess his acceptance of the laws of physics. Problems viewed as computational difficulties for Greene seem to be indicators of emergent properties for Massimo. This said, it is still true that Massimo makes many interesting comments about chemical cycles, DNA, and the origin of life. He rejects the ideas of A.G. Cairns-Smith about clay crystals as important to the beginning of life.

As for the Search for ExtraTerrestrial Intelligence (SETI), Massimo takes the gullible position as defined in his earlier essay. He says that the payoff is so great---philosophical importance in particular---that the gamble is worthwhile. In fact, what we see here is a shift in his scheme for evaluating the gullible and skeptical positions. In the essay on Pascal's wager, Massimo counts truths against falsehoods while in the SETI essay he maximizes, not the number but a measure of importance of truths and falsehoods (SETI is very important and so counts more than other truths). This different procedure leads to a different balance between gullibility and skepticism. In particular, it results in his participation in the SETI home computer program which uses home computers around the world to analyze extraterrestrial radio signals for signs of intelligence. This is one truth that Massimo does not want to reject!

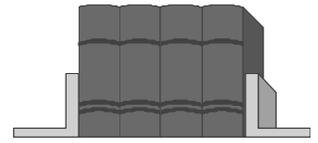
Finally we get to the cautionary tale about Chaos, with a capital C. There are many good points about the misuse of this concept in the essay: many people only use it as a metaphor but imply that the authority of science backs it, and many applications of the theory lack sufficient data to support use of the concept. There are a couple of troubling points. Massimo uses this essay to make his argument that emergent properties, those properties of systems which are not present in any of its parts, cannot be explained by using the properties of the subsystems and the interactions between the subsystems. As an example he says that "...knowing all we know about the structure and behavior of the atoms composing water, we can predict the structure but not the behavior of water."

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This is total crap. For example, the tendency for water to shrink when warmed from 0 degrees Celsius to 4 degrees Celsius was explained in C.H. Cho et al., Physical Review Letters, 5 March 1996. It happens to be difficult to compute properties of many body systems in quantum mechanics. But this is only one more proof that any gods responsible for creation did not consider the happiness of physicists at the big event.

Another problem with the article is his definition of fractal, a set of points to which a fractional (really non-integral) dimension can be assigned. Massimo states that these are "...intricate geometric forms which arise by iteration of some mathematical function." This is much too simplistic. The notion of dimension most often used is Hausdorff dimension, named after a mathematician named Hausdorff. It dates at least from 1937 and does not require the iteration of any kind of function for its application. There are, moreover, several different notions of dimension of a set of points used in chaos theory and there are important unsolved problems in understanding the relationships between these different definitions. This essay suggests that they all lead to the same number. This is not presently known.

So my problem with this essay is that it complains about simplistic applications of science and simultaneously is simplistic. This would not be so bad, and I would refrain from complaining, except that his simplistic idea about emergent properties, which is false if his example is to be believed, is a recurring theme in the text and will lead people astray. Frankly, I do not see why anyone who accepts such ideas has any qualms with Michael Behe's irreducible complexity thesis and the implication of a divine creator. The only difference seems to be that Massimo believes that each successive level will be explained by science and Behe believes that a god will be required eventually. If Massimo is counting successes for each level explained by science, then Behe can use Massimo's tale of the turkey, who counted the number of days he was successively fed, as an analogy. The turkey predicted the next meal on the day before Thanksgiving and Behe might claim that Massimo is predicting the success of science on the level before life. However, Massimo produces useful criticism and his innate common sense outruns his philosophical sense.

All in all, I must recommend these essays very highly. Massimo strives to be as clear as Bertrand Russell, a named hero in the book, and he attains a high standard. These essays are worthwhile reading for anyone.

Bob Riehemann

***The Elegant Universe: Superstrings, hidden dimensions, and the quest for the ultimate theory*
by Brian Greene
WW Norton, 1999**

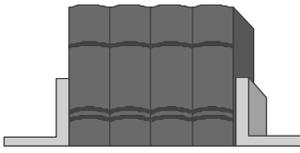
The ideas in this book are interestingly connected to Cincinnati. The most important figure in string theory, Edward Witten, is from Cincinnati and the son of an emeritus professor of physics at UC. He is widely reputed to be the smartest man on the planet. Witten is a professor at the Institute for Advanced Study in Princeton, New Jersey. On page 274 of *The Elegant Universe*, Greene states: "He (Witten) is widely regarded as Einstein's successor in the role of world's greatest living physicist. Some would go even further and describe him as the greatest physicist of all time." This luster has also carried over to the mathematical community, traditionally rather critical of physicists. In the June/July 2000 issue of the Bulletin of the American Mathematical Society, Witten's award citation for the Nemmer Prize reads: "Witten is regarded as the world's premier theoretical physicist. ...he has almost single-handedly constructed a new branch of mathematical physics." Witten figures largely in Greene's book as one would imagine. I was amused so see that the dust jacket contains high praise from...Ed Witten!

Greene is also a well known theorist of string theory and he has produced results which even Witten admires. He is a clear writer and I imagine that much of the book's content derives from the qualitative discussions he has had with Witten and other big names in the field. Fortunately he has a very good knack for illustrating concepts with examples which anyone can understand. The applications might be incredibly difficult, but the basic ideas seem to be presented honestly. If you enjoy reading about things which are really abstruse, this may be the book for you. Some among us might prefer it to theology. He presents this from a completely reductionist point of view and says so on page 17.

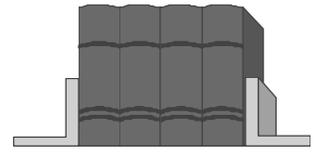
String theory is an effort to understand the physical universe. Instead of imagining that the world is made up of a bunch of point-like particles, string theory postulates that the world is made of higher dimensional objects, 1 dimensional objects called strings (either open or closed), and higher dimensional objects called branes (after membranes). The idea of 1 dimensional strings is now believed to be a kind of approximation since the (second) string theory revolution initiated by Witten in 1995. The theory of higher dimensional branes is called M-theory. The strings and branes are used to compute the quantum probability amplitude, a complex number which, when

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squared, yields a quantum probability. So string theory is an elaboration of quantum field theory and retains all of the confusing issues of quantum mechanics. (For those FIG members who attended the Science Book Club meeting for Feynman's QED: the idea is still to add up the "arrows" over all possible paths.)

Because the multi-dimensional nature of the fundamental building blocks (strings and branes) has not been observed experimentally, they are believed to be small. Small objects require small wavelengths for their observation which means high energy. The current thought is that these energies are so large that they will never be attained by any conceivable accelerator. Evidence for the theory must therefore be indirect, but this is no hindrance. Evidence for atoms was indirect at first. In fact, Einstein showed that the jiggy motion of small particles in suspension, Brownian motion, was explained very well by the postulation of atoms. Einstein's work on this issue was considered the proof of the existence of atoms, which had not been observed at the time (1905).

String theory's problem lies with computing the consequences of the theory. Some big overarching ideas have been achieved but the calculation of details has eluded all of the theorists. Normally in a quantum field theory one determines, from a basic expression called the action, the basic constituents of the theory and how they interact at the simplest level. These basic interactions are then used to estimate better approximations to physical interactions. No one can do this yet in string theory. Also in any valid physical theory, it should be possible to derive the preceding theory as an approximation. Thus from Einstein's general relativity it is possible to derive Newton's theory of gravity and this is often an exercise problem for graduate students. From quantum mechanics it is possible to derive Newton's $F=ma$. From M-theory (String theory) it should be possible to derive both Einstein's general relativity and quantum field theory, but this has not been done yet. One important aspect of a quantum version of general relativity has been verified, but not a derivation of Einsteinian gravity. In any case, obtaining these approximations would not guarantee that M-theory is correct but only that it includes these other theories as approximations, a necessary but not a sufficient condition for a correct physics. For example, there were competing theories to Einstein's gravitation theory from which Newton's theory could be derived as an approximation. One was produced by Dicke and another by AN Whitehead. These theories were disproved in the late 60s and early 70s by Clifford Will, among others.

There are many exciting things about M-theory, two of which touch on major outstanding problems in physics. One is the union of quantum mechanics and general relativity.

This has been a long sought after goal and M-theory is the first viable candidate. The other is the resolution of calculational problems, described generally as renormalization. This is a way to avoid getting infinite answers as the numbers are computed which describe physical processes. Feynman, Schwinger, and Tomonaga received Nobel prizes for creating these renormalization techniques in the 60s. There is no known similar technique which permits a quantum theory of gravity. M-theory has a miraculous cancellation of the infinities problem and the theory contains things which are considered necessary for a quantum theory of gravity. All of these things are very nice but the glowing terms may be a bit too bright. In Michael Kaku's text on M-Theory, Introduction to Superstrings and M-Theory (1999), he states: "...the theory itself often seems like a confused jumble of folklore, random rules of thumb, and intuitions." This is a text used to train professional physicists in research methods of M-theory.

What Greene offers is an overview of the problem of combining quantum theory and gravity. He then gives very nice qualitative explanations of special and general relativity, quantum mechanics, and quantum field theory. After this he describes string theory and its historical development over the past 35 years. There are many fantastic things associated with this theory such as claims that we live in an 11 dimensional world where the 7 dimensions which we do not experience directly are connected to make something called a Calabi-Yau manifold. Everyone should look at the picture of this manifold (or rather, a misleading interpretation of it as an object in 3 dimensions) and try to imagine what this means. Greene discusses experiments, some of which are being performed. An experiment related to string theory was reported the week of 7/17/2000 in the American Physical Society news. At small distances, there should be deviations from the Newtonian law of gravity if there are several extra dimensions. The experiment was only accurate to distances of about 1 millimeter and did not indicate new dimensions. However, refinements are planned for the future. There has been a successful explanation of the entropy of a black hole using string theory and Greene also discusses this, including intelligible descriptions of both entropy and black holes.

The oddness of M-Theory/String Theory reminds me of my favorite cartoon about Einstein. In 1929 Rea Irvin drew a cartoon for the New Yorker magazine which showed a number of people walking along the street, holding their heads and looking bewildered. The caption below is a quote from Einstein: "People slowly accustomed themselves to the idea that the physical states of space itself were the final physical reality." Einstein's theory is mild compared to the strange things which string theory has to say about the universe. Greene's book is an excellent place to learn about this interesting and unverified theory.

Bob Riehemann

