Douglas Gilliland

Table of Contents

Statement of Purpose	1
The Big Questions	3
A Brief History of Stephen W. Hawking	4
Starting at the Beginning	6
Philosophical Commitments of Naturalists	7
Differing Modern Scientific Views	7
Dismantling of the Steady State Model a Boon for Christian Theism	8
Christianity and Creation – The Ex Nihilo Model	9
Hawking and the Relativity of Time	10
Tautological Explanations of Origins	10
Ending It All	11
Infinite Series of Universes Philosophically Impossible	12
Where's the Beef (the Missing Matter)?	13
Heat Death Spells End for Universe	13
The Christian Hope – Escape Heat Death and Live Again	14
How Does Hawking Know What He Knows?	
The Scriptural View of Man	
Faith in Science	16
Regularity of Science – Another Circular Argument From Inside Science	16
Hawking's Positivism	17
Moral Character and Cause in Hawking	18
Hawking and Free Choice	18
The Ought Can't Be Escaped	18
Conclusions	19
Anything But a Creator, Please	19
Works Cited	21

Statement of Purpose

Stephen W. Hawking is a committed naturalist who is considered by many to be the top scientist in his field¹. His bestseller, *A Brief History of Time*, is the most popular book about cosmology ever written². This paper will illustrate the main differences between Stephen Hawking's naturalism and Christian theism. Hawking's theology, cosmology and anthropology are contrasted to that of Christian theism. Christian theism will be illustrated from a number of representative sources.

The Big Questions

Hawking's main interest is in the big questions; "Where did everything come from?", and "Where is everything going?³" By "everything", Hawking means all matter and energy in the physical universe. Hawking is to be given credit for attempting to answer the hard issues, but the question is whether Hawking gives an answer that is adequate to these questions, or is Hawking's answer reduces ultimately to the old dodge, "Whatever is, is".

¹ A rough measure of Hawking's popularity is that a search of "Stephen Hawking" using the Internet search engine google.com turns up over 20,000 pages that mention his name. A search for "Jesus Christ" using the same search engine turns up over 100,000 pages.

² Per http://www.leaderu.com/real/ri9404/bigbang.html.

³ Hawking, *A Brief History of the Universe*, p. vi. In the "Acknowledgments" section to the book, Hawking relates that he felt that none of the books on the subject from the scientific perspective contained the sort of answers to these basic questions that were needed.

A Brief History of Stephen W. Hawking

Perhaps more than most other people, Stephen Hawking's worldview is colored by his personal situation. Hawking, born in 1942, is a victim of ALS, a neuro-muscular disease, which has resulted in an inability to walk and or speak⁴. Hawking first was affected with the disease at the age of 21 at a time where in his life he was already feeling that life had no meaning. Hawking's search for meaning is psychologically driven by the nihilism that is the inevitable result of the naturalist's worldview applied in a consistent manner. Hawking describes a mental trick that he plays on himself to motivate himself to overcome this meaninglessness:

Before my condition had been diagnosed, I had been very bored with life. There had not seemed to be anything worth doing. But shortly after I came out of hospital, I dreamt that I was going to be executed. I suddenly realized that there were a lot of worthwhile things I could do if I were reprieved. Another dream, that I had several times, was that I would sacrifice my life to save others. After all, if I were going to die anyway, it might as well do some $good^5$.

Hawking further worked to overcome his despair over his condition by adopting an "it

_

⁴ Hawking uses a voice synthesizer connected to a computer to communicate.

⁵ On the Worldwide web at: http://www.hawking.org.uk/disable/dindex.html. Hawking's conclusions run counter to his naturalistic philosophy. Self sacrifice for the good of others does not lead to survival of the fittest unless the one doing the sacrifice was always the least fit, but such a characteristic would never be transmitted. Hocking's worldview provides no explanations of what "doing good" ought to be.

could be worse" philosophy of life:

However, while I had been in hospital, I had seen a boy I vaguely knew die of leukemia, in the bed opposite me. It had not been a pretty sight. Clearly there were people who were worse off than me. At least my condition didn't make me feel sick. Whenever I feel inclined to be sorry for myself I remember that boy⁶.

Hawking got married not long after his diagnosis and that also changed his reason to live:

I got engaged to a girl called Jane Wilde, whom I had met just about the time my condition was diagnosed. That engagement changed my life. It gave me something to live for⁷.

Finding His Meaning in Intellectual Pursuits

Due to his illness, Hawking has spent the past forty years of his adult life contemplating his own mortality and searching for answers to the "big questions". Hawking has rejected the answers to the meaning of life offered by Christian theism, and has adopted the worldview of a committed naturalist. Hawking frequently refers to traditional Christian concepts, as this paper shows, and makes an attempt to refute their traditional meanings⁸.

⁶ On the World Wide Web at: http://www.hawking.org.uk/disable/dindex.html

⁷ On the World Wide Web at: http://www.hawking.org.uk/disable/dindex.html. This may be a more consistent reason for Hawking to live (passing on his genes, etc.), but if the truth were told it's more the quest for knowledge that drives Hawking than anything else.

⁸ Hawking attributes such beliefs to ignorance which science alone can dispel.

Starting at the Beginning

Hawking believes that the universe had a beginning⁹ although he currently rejects the notion of a "singularity"¹⁰. The belief in a beginning contrasts Hawking to more traditional naturalists who believed that the universe is eternal¹¹. Hawking bases this belief on the results of his scientific inquiry, which is now widely accepted in the scientific community¹². However, Hawking's notion of beginning is not that of the theistic Christian since Hawking believes that he has removed the need for a Creator by the use of quantum mechanics¹³.

⁹ On the Worldwide web at: http://www.hawking.org.uk/lectures/lindex.html, "All the evidence seems to indicate, that the universe has not existed forever, but that it had a beginning, about 15 billion years ago. This is probably the most remarkable discovery of modern cosmology."

¹⁰ Hawking, *A Brief History of Time*, p. 50, "The final result was a joint paper by Penrose and myself [Hawking] in 1970, which at last proved that there must have been a big bang singularity provided only that general relativity is correct and the universe contains as much matter as we observe." However, Hawking notes that he has since changed his view on the need for a singularlity based on quantum mechanics.

Instead the size of the universe was "so small" that quantum effects were relevant.

¹¹ On the Worldwide web at: http://www.hawking.org.uk/lectures/lindex.html, Hocking lectured, "The time scale of the universe is very long compared to that for human life. It was therefore not surprising that until recently, the universe was thought to be essentially static, and unchanging in time."

¹² The scientific community is by and large naturalistic in philosophy. In fact, Hawking is now complaining that his arguments for a singularity were so compelling that most scientists don't accept that a singularity is not needed due to quantum effects.

¹³ The notion is that there is an equal amount of matter and antimatter in the universe so that the net is zero. Hence, there's really nothing for a Creator to create. Of course both matter and antimatter are things so Hawking has not escaped the issue at all.

Philosophical Commitments of Naturalists

Interestingly, Hawking admits that the reasons other scientists have seen it differently is their philosophical commitment¹⁴ to the steady state model although he blames it on theology as well¹⁵. However, it should be noted that many theologians opposed the steady state model based on the Creation account of Genesis¹⁶. They did so in the face of scientists who supported the steady-state model. Hawking fails to make this distinction clear in his writings. In science, a theory which best comports with the facts should be dominant, but when the facts contain the philosophical presupposition that miracles don't occur, then a Creator is ruled out philosophically from the outset¹⁷.

Differing Modern Scientific Views

The dismantling of the steady state model has led some scientists to re-examine the Biblical account of creation. One of these is Robert Jastrow, a self described religious

_

¹⁴ Hawking, *A Brief History of Time*, p. 50. Philosophies do affect views of reality. Hawking notes that the Russians (during communism) opposed his work on philosophical grounds of their prior commitment to the Marxist belief in scientific determinism.

¹⁵ On the Worldwide web at: http://www.hawking.org.uk/lectures/lindex.html, "This argument about whether or not the universe had a beginning, persisted into the 19th and 20th centuries. It was conducted mainly on the basis of theology and philosophy, with little consideration of observational evidence."

¹⁶ Theologians have opposed the state state model on the basis of the fact that the universe is not eternal.

Only God is eternal.

¹⁷ This point is perhaps best made by Phillip Johnson, in *Darwin on Trial*, or his other books where Johnson links the theory of evolution with naturalistic philosophy showing how the science is driven by the philosophy rather than the philosophy by the science.

agnostic¹⁸, who writes that "the Universe had, in some sense, a beginning — that it began at a certain moment of time, and under circumstances that seem to make it impossible — not just now, but ever — to find out what force or forces brought the world into existence at that moment.¹⁹" Jastrow goes onto make the incredible statement, "Now we see that the astronomical evidence leads to a biblical view of the origin of the world.²⁰" These sorts of statements from modern naturalists stand in start contrast to their historical antagonism to supernatural explanations of origins²¹.

Dismantling of the Steady State Model a Boon for Christian Theism

From a Christian theistic perspective, perhaps the greatest contribution of Hawking has been that his theories have forced naturalists to examine their own answer to the question of origins of the universe²². With the steady state theory dismantled, the idea of an eternal universe is no longer scientifically in fashion. This forced a revolution in naturalism.

However, the answer to the question "Where did the universe come from?" is ultimately left unanswered by Hawking and other physicists. Their answer really reduces down to "whatever is, is". The inability to answer the question of what happened in the time prior

¹⁹ Jastrow, pp. 11-12.

¹⁸ Jastrow, p. 11.

²⁰ Jastrow, p. 14.

²¹ Jastrow, p. 16, Jastrow notes that scientists were upset by the results because it showed them that their beliefs were contradicted by the evidence.

²² Jastrow, p. 14 notes that "Some scientists are unhappy with the idea that the world began this way... But the latest evidence makes it almost certain that the Big Band did occur many millions of years ago."

to 10⁻⁴³ seconds opens a door for Christian theism²³. However, the naturalist's objection is Christians have a "God of the gaps²⁴" and that these gaps are constantly receding²⁵. This objection rings hollow though, because of the inability of science to answer the basic question of what caused all of the matter to come into existence in the first place. That is the big question that still remains at the end of the day.

Christianity and Creation - The Ex Nihilo Model

In contrast, the God of the Bible created the heavens and the earth²⁶. This creation was ex nihilo²⁷. The universe itself is not eternal²⁸, but was created by a free act of an eternal God²⁹. Christians have varied over the centuries about whether the Creation was instantaneous, over a literal 6 days, or over a long time period³⁰. Philosophically, the

²³ Hugh Ross and others have written books from a Christian perspective which exploit this gap in science.

²⁴ Reynolds, John Mark, God of the Gaps: Intelligent Design and Bad Apologetic Advice. Chapter 13 in Mere Creation: Science, Faith & Intelligent Design, edited by William A. Dembski.

²⁵ Hawking puts together a compelling narrative from Aristotle (340 BCE), through Ptolemy (2nd century ACE), Copernicus (1514 ACE), Kepler/Galileo (1609 ACE), Newton (1687 ACE), Einstein (1915), and finally Hubble (1929). The narrative shows that each step has some truth to it, but is not a complete answer in itself. Each step takes into accounts that the previous step could not completely take into account.

²⁶ Gen 1:1 In the beginning God created the heaven and the earth.

²⁷ Creation out of nothing. Berkhof, p. 125, notes that "... the Christian church from the very beginning taught the doctrine of creation ex nihilo and as a free act of God."

²⁸ Hodge, p. 553, "The Scriptural doctrine therefore is, (1) That the universe is not eternal. It began to be."

²⁹ 1 Tim 1: 17 Now unto the King eternal, immortal, invisible, the only wise God, be honour and glory for ever and ever. Amen.

³⁰ Hodge, pp. 557-558 notes the various positions. The key issue is that God is the Creator, not the time

effect of the universe's existence must have had a cause³¹.

Hawking and the Relativity of Time

Hawking's main difficulty comes with the relativity of time³². The linkage between time and space is clearly shown in the experimental data. Matter warps space-time and space-time warps the mass of matter. In a universe that obeys the principles set out by general relativity, instead of mass being constant, mass increases as it approaches the speed of light. This leads Hawking to conclude that **before there was matter**, **there was no before** either³³. Space, time and matter all came into existence at the beginning. Thus, by definition there was nothing prior.

Tautological Explanations of Origins

Again, this is simply restating that the universe is all that there is. Since this is ultimately unscientific, or rather non-scientific, Hawking admits that the Laws of Science break

period of the Creation.

³¹ This is the cosmological argument for the existence of God.

³² Hawking, *A Brief History of Time*, p. 8. Interestingly, at this stage of his argument, Hawking calls St. Augustine to his defense when he writes, "[Augustine] said that time was a property of the universe that God created, and that time did not exist before the beginning of the universe."

Hawking, *A Brief History of Time*, p. 23, "The theory of relativity does, however, force us to change fundamentally our ideas of space and time. We must accept that time is not completely separate from and independent of space, but is combined with it to form an object called space-time." It should be noted that just because two things are linked doesn't mean that they can't exist independently of each other. Time could still exist for a non-material being as a linear progression of events.

down at that point³⁴. However, Hawking is unable to postulate what the Laws might have been that could have brought about all matter. The question is left hanging awkwardly and is not resolved in his writings.

A second problem is that while relativity has proved time to be relative, it hasn't eliminated it entirely. The notion that if there was no matter, there would be no time is a bit ephemeral, but it's a live issue for theology. Whether God stands outside of time or not, it's clear that He acts in time. The act of Creation has relevance as it put into motion our timeframe itself. However, to presume that a prior act could not have put this timeframe into motion is a sort of victory by definition. The fact that when pressed further, there's no adequate answer demonstrates this clearly.

Ending It All

The question of what will be the end of all is particularly relevant to the naturalist. If matter is all that there is, then it's crucial to know what the ultimate destiny of matter might be³⁵. Hawking also dodges the eschatological question³⁶. Although he admits that the best evidence shows that the universe will keep on expanding indefinitely³⁷ and

³⁴

³⁵ Tipler, p. xii, notes that "almost all physicists have ignored the future of the physical universe."

³⁶ http://www.hawking.org.uk/lectures/lindex.html "We are not yet certain whether the universe will have an end."

³⁷ Hawking, *A Brief History of Time*, p. 46, "The present evidence therefore suggests that the universe will probably expand forever, but all we can really be sure of is that even if the universe is going to recollapse, it won't do so for at least another ten million years, since it has already been expanding for that long."

eventually die a heat death, Hawking still holds out hope that science will come up with evidence that the universe will re-collapse and devotes a large portion of his book to that possibility³⁸. But, why is this important to modern physicists? After all, Hawking has the vision to see that traditional naturalists were wrong on the steady state model and that the universe did have a beginning. Why not an end as well? Perhaps the reason is in a desire for at least some form of corporate immortality³⁹.

Infinite Series of Universes Philosophically Impossible

The expansion/collapse concept provides the matter and energy for future re-expansions as well as a possible explanation for an infinite past series. After all if we know that the universe was once a singularity and has as its destiny to be that singularity once again, we may only one in an infinite series of expressions of that process. As merely an element in an infinite series, even the most improbable events can eventually happen. However, if the universe will keep expanding forever, our uniqueness is greatly reduced and improbable events become even more improbable due to the reduced number of tries⁴⁰.

³⁸ This door has been decisively closed in recent days with the discovery of the cosmological constants. The conclusion is that the universe will keep expanding indefinitely with insufficient mass (regular matter, dark matter or other more exotic theoretical types of matter) to cause the universe to collapse. This eschatological hope of naturalism is not indicated by the best of their own evidence. Eventually, the universe will be a very cold and lonely place.

³⁹ Tipler, Frank, recently tackled this issue from a scientific (non-Christian) perspective in his book, "The Physics of Immortality." Tipler proposes a future where mankind uses the chaos inherent in the future to mold the physical universe into a form in which man can survive in spite of the eventual heat death of the universe.

⁴⁰ Reducing the number of tries from infinite to one is pretty a big step.

Where's the Beef (the Missing Matter)?

The search of science today is to find the missing matter that will cause the universe to have enough gravitational attraction to collapse back on itself⁴¹. Observational science has produced the result that there is not enough matter, so scientists have tried to come up with possible solutions to this problem. One proposed solution is that unknown forces will start to apply to re-attract the matter in the universe⁴².

Heat Death Spells End for Universe

The naturalist's eschatological hope is bound up with the fate of the earth and ultimately with the universe. Frank Tipler put it well when we wrote, "If the human species, or indeed any part of the biosphere, is to continue to survive, it must eventually leave the earth and colonize space. For the simple fact of the matter is, the planet Earth is doomed.⁴³" Tipler's dream is to create a machine, with an intelligence beyond that of humans, as our surrogates in space travel⁴⁴. These intelligent robots can take DNA sequences for man and other creatures to the furthest parts of the universe increasing our chances of survival through redundancy⁴⁵. Upon arrival, the robot probes would proceed

⁴¹ Recent evidence demonstrates that the universe will keep expanding faster and faster forever.

⁴² This claim is nothing more than a tautology.

⁴³ Tipler, p. 18. Tipler places the end of a habitable Earth at around a billion years from the present.

⁴⁴ Tipler, p. 44. "But the fundamental reason for allowing the creation of intelligent machines is that, without their help, the human race is doomed. With their help we can and will survive forever." Tipler sees them as helping us colonize space.

⁴⁵ Tipler, p. 19, "an intelligent robot probe would be sufficient to seed other star systems with life, because the machine could code DNA sequences for humans and other terrestrial life into its memory, and then use

to construct plants and animals out of existing materials and produce man when the conditions were ready⁴⁶.

The Christian Hope - Escape Heat Death and Live Again

The Christian eschatological hope is in the return of Jesus Christ⁴⁷ and the New Heavens and New Earth⁴⁸. The earth will not die a heat death, but will be rejuvenated by God after passing away with a loud noise⁴⁹.

How Does Hawking Know What He Knows?

Like many naturalists, Hawking's own epistemology is surprisingly naïve. What is most interesting is how Hawking believes he came to know what he knows. Hawking

this information to create living cells of these life forms in the star systems." What Tipler envisions is a sort of futuristic tower of Bable – a notion as old as the book of Genesis.

⁴⁶ The reverse notion is that human life came to earth from the stars (panspermia) is a popular one in science fiction. It formed the basis for the 1999 season finale of the TV show, "The X-Files." See the Internet site http://www.panspermia.org for more details. The trouble with these notions is that they simply push the origins problem off to somewhere else. They also don't adequately deal with the ultimate heat death of the universe.

⁴⁷ Titus 2:13 Looking for that blessed hope, and the glorious appearing of the great God and our Saviour Jesus Christ;

⁴⁸ Rev 21:1 And I saw a new heaven and a new earth: for the first heaven and the first earth were passed away; and there was no more sea.

⁴⁹ 2 Pet 3:10 But the day of the Lord will come as a thief in the night; in the which the heavens shall pass away with a great noise, and the elements shall melt with fervent heat, the earth also and the works that are therein shall be burned up. This is the opposite conclusion to history that science envisions.

presupposes that Darwinian evolution would have produced some creatures with the ability to draw more correct conclusions than other creatures. The creatures that draw the best conclusions are the ones that survive the best⁵⁰. The creature that is better able to come to terms with the facts of science and use them has a better survival than one that doesn't. Man, for Hawking, is the product of a mindless process and mind is nothing more than an electrochemical phenomenon.

The Scriptural View of Man

This notion is out of phase with the claims of Christian theism. Humans were created in the image and likeness of God⁵¹, which, among other things, is taken by most Christian theists to mean that humans have the ability to reason⁵². We can discover the facts of our universe not because we have been wired by evolution to do so, but because the Creator wired us to do so by creating us in His image. Although man is fallen and that image is marred, it is not eradicated⁵³. Even a theistic evolutionist would argue that this rational capacity comes to man specifically as a gift from God and not from "nature".

-

⁵⁰ Hawking, *A Brief History of Time*, p. 12, "However, provided the universe has evolved in a regular way, we might expect that the reasoning abilities that natural selection has given us would be valid also in our search for a complete unified theory, and so would not lead us to the wrong conclusions."

⁵¹ Gen 1:27 So God created man in his own image, in the image of God created he him; male and female created he them.

⁵² Berkhof, p. 204, "As created in the image of God man has a rational and moral nature."

⁵³ Berkhof, p. 204, "man, even after the fall, irrespective of his spiritual condition, is still represented as the image of God."

Faith in Science

Hawking's answer to the question of how science and know what it knows also begs the question it proposes to answer. What is true is reduced to what has apparently worked best⁵⁴. Hawking falls short on providing examples of why this should be the case⁵⁵ and presents sort of an intuitive case for his position. Hawking bases the hope for success in the future on the triumphs of the past without providing any reason why that should be the case. This is akin to the Stock Market investor who buys a stock that has shown great growth in the past based merely on the past. Science should be trusted to provide ultimate answers in the future, Hawking assures us, because science has provided answers that have worked in the past⁵⁶. Yet, science itself is merely a discovery and codification of the principles already inherent in nature. "That which works best, works best" is merely a tautology. This faith in science of the naturalist is evident to the theistic Christian but not clear to the naturalist who is unable to question the philosophical foundation of his own worldview.

Regularity of Science – Another Circular Argument From Inside Science

The presumption of regularity is another bit of borrowed capital from the Christian theist's worldview. The whole notion of the inductive method and arguing from the

⁵⁴ Phillip Johnson deals with this subject in his book "Darwin on Trial", where he notes (pp 155-156) that Darwinists fail to provide falsification tests for their own theories.

⁵⁵ Hawking is aware of the need for falsification of a scientific theory, but the falsification test appears to be missing from his own thesis at this point.

⁵⁶ Hawking, *A Brief History of Time*, p. 13, Hawking points to the microelectronics revolution and nuclear energy as two examples of practical applications of science.

particular to the universal can't be justified without resorting to the tautological argument⁵⁷ "whatever is, is", as well⁵⁸.

Hawking's Positivism

Hawking describes himself as a positivist viewing the correspondence between theory and reality as irrelevant⁵⁹. Yet when it comes to testing string theory, for instance, Hawking rejects current trends on the objection that they lack observationally tested predictions⁶⁰. When it comes to imaginary time, a necessary construct for Hawking's no boundary cosmology, there are no falsification tests offered.

⁵⁷ The tautology is that the scientific method will produce the best results because it has produced the best results in the past. Thus the best method to test is the scientific method. There's no external justification for why it is best.

⁵⁸ Bahnsen, Greg. *Transcendental Argument for the Existence of God*. After Bahnsen's death, noted atheist Michael Martin wrote an article, "Does Induction Presume the Existence Of The Christian God? (1997)", Found on the Internet at: http://www.infidels.org/library/modern/michael_martin/induction.html. Martin has been answered by Bahnsen follower Mike Butler as found on the Internet at: http://www.ozemail.com.au/~seccomn/phil/martinrefute2.htm

On the Worldwide web at: http://www.hawking.org.uk/pdf/time.pdf, Hawking wrote, "I take the positivist viewpoint that a physical theory is just as mathematical model and that it is meaningless to ask whether it corresponds to reality. All that one can ask is that its predictions should be in agreement with observation."

⁶⁰ On the Worldwide web at: http://www.hawking.org.uk/pdf/time.pdf, Hawking poses the rhetorical question, "If this is true it raises the question of whether string theory is a genuine scientific theory. Is mathematical beauty and completeness enough in the absence of distinctive observationally tested predictions."

Moral Character and Cause in Hawking

By all accounts, Hawking is a person of high moral character. Certainly some might attribute this to his physical limitations but one only needs to consider the moral life of Larry Flynt to realize that physical impairment does not equal inability to sin⁶¹.

Hawking and Free Choice

Hawking rejects scientific determinism as untenable due to the Heisenberg Uncertainty principle. While this principle speaks directly to the ability to determine both position and velocity of an electron, it is often cited as a principle extending to morals by those who are naturalists⁶². Events in the universe are not strictly determined, because the level of knowledge to do the determining is unknowable⁶³. Thus an individual person is an agent of choice not merely a link in a cause-effect chain.

The Ought Can't Be Escaped

However, this does not answer the question of meaning nor does it deal with why someone should do a good act instead of a bad one. Nor does it help in determining which acts are good and which are bad⁶⁴. Yet, Hawking discerns some acts as good

⁶¹ Flynt is also wheelchair bound, but is a pornography magazine publisher.

⁶² There is no sound reason for extending this scientific theory into the realm of philosophy.

Philosophically, it is most akin to some eastern religions such as Hinduism.

⁶³ The foreknowledge of God is not adequately dealt with by naturalists.

⁶⁴ Only a transcendental standard can adequately deal with the "ought" issue.

ones⁶⁵ and others as not good. This would appear to be borrowed capital from his Anglo-Saxon heritage that he doesn't question⁶⁶. Despair is a part of his life due to his physical condition, but he dismisses it.

Conclusions

The work of Stephen Hawking is important to Christian theists because of his solid refutation of the steady state model. The steady state model served as the naturalist's refuge for well over a century⁶⁷ and was dismantled in the late 20th century by the work of Hawking and other physicists. This has significant implications in Christian apologetics to the scientific community. No longer is the philosophical stumbling block of the steady state model in the path of dialog. Both sides now agree that the universe had a beginning and the universe will have an end although for the naturalist there is no reason for eschatalogical hope⁶⁸. This is a part of the collapse of scientific naturalism.

Anything But a Creator, Please

However, Hawking is working hard to eliminate God from the equation. Hawking's

⁶⁵ Hawkins relates the previously mentioned example about dying for someone else as a good act. Having incorrect knowledge would certainly qualify as something bad for Hawking.

⁶⁶ Hawking is not published on the subject, but there may be a biography that contains this information. This is beyond the scope of this paper.

⁶⁷ In particular the notion that the universe was static was seen by scientists as an indication that it was eternal.

⁶⁸ All people can do is pass along their genes to the next generation as a sort of temporary corporate immortality.

creation of the mathematical construct of imaginary time is claimed by Hawking to have eliminated the need for a creator. For Hawking, the universe is like a bubble in a carbonate beverage where an infinite number of other universes are popping in and out of existence for eternity. This is admittedly unfalsifiable since the boundary can't be crossed, nor can the theory be tested in any other way. This fails the test of a scientific theory and is instead a metaphysical all it's own. It is a prime example of the creativity of the naturalist in attempting to come up with a solution that paints God out of the picture.

Works Cited

Berkhof, L., Systematic Theology. (Grand Rapids: Mich.: Wm. B. Eerdmans, 1959).

Dembski, William A. Mere Creation: Science, Faith & Intelligent Design. (Downers Grove, Il.: IVP, 1998).

Hawking, Stephen W. A Brief History of Time. (New York: Bantam Books, 1988).

Hodge, Charles. *Systematic Theology*. (Grand Rapids: Mich.: Wm. B. Eerdmans, 1993 reprinted).

Jastrow, Robert. *God and the Astronomers*. (New York: W. W. Norton & Company, 1978)

Johnson, Phillip E. Darwin on Trial. (Downers Grove, Ill.: IVP, 1993).

Miller, Jonathan & Van Loon, Borin. *Darwin for Beginners*. (New York: Pantheon Books, 1982).

Tipler, Frank. The Physics of Immortality. (New York: Anchor Books, 1995).

