

Intelligent Design and the Being of God

Larry D. Paarmann
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Abstract

Objections to intelligent design are briefly reviewed: claims that it is not science, that it is concealed biblical creationism, and that it should not be taught in public schools. Included will be a brief history of intelligent design, indicating that the concept is not new, but has been around throughout recorded history. The reason for using “Being of God” in the title is indicated, rather than “Existence of God;” this is not critical to the paper, but is more philosophically correct. Then a long list of distinguished scientists will be presented, including a few Nobel laureates, who have found arguments of intelligent design to be convincing, and are theists, at least in part, because of such arguments.

1. Introduction

Intelligent Design, as used in this paper, refers to the idea that many things in the universe appear to be, in the minds of many, to not only be designed, but designed intelligently. Many others disagree, but even those who disagree often do recognize, or state, that things do appear to be designed while professing that the appearance of design is only an illusion. One of the more well-known that make such a profession is Richard Dawkins, who wrote “Biology is the study of complicated things that give the appearance of having been designed for a purpose.”¹ Some pages on in the same book, Dawkins writes: “Yet the living results of natural selection overwhelmingly impress us with the appearance of design as if by a master watchmaker, impress us with the illusion of design and planning.”² While Dawkins admits that there is appearance of design in the natural world, he professes that it is an illusion, and goes to great pains to present his case that it really has all come about through natural selection. So the question is,

addressed briefly in this paper, “Does the natural world show evidence of intelligent design, or is the apparent design only illusory?”

Seemingly more and more scientists find intelligent design a legitimate area of scientific inquiry, such as Michael Behe³, Michael Denton⁴, Stephen C. Meyer⁵, William Dembski⁶, Stuart Burgess⁷, etc., however they are in the perceived minority, and most scientists do not find intelligent design an acceptable science.

An outspoken critic of intelligent design is Eugenie Scott, and argues strongly against it being taught in public schools. Scott and Nicholas J. Matzke co-published a paper titled “Biological Design in Science Classrooms,” and stated the following in the abstract: “Scientists do not use ID to explain nature, but because it has support from outside the scientific community, ID is nonetheless contributing substantially to a long-standing assault on the integrity of science education,” Near the end of the paper they state: “ID therefore is making a serious challenge not in the world of science, but in the world of public educational policy.”⁸ Clearly, many people such as Dawkins, Scott and Matzke, do not think intelligent design is scientific, and presumably do not think design in the natural world is obvious. Again we ask, “Does the natural world show evidence of intelligent design, or is the apparent design only illusory?”

2. Brief Historical Review

As Dawkins has written: “Almost everybody throughout history, up to the second half of the nineteenth century, has firmly believed in the opposite [the opposite of Darwinian natural selection] – the Conscious Designer theory.”⁹ The reason being that there didn’t seem to be any plausible alternative, but Darwin provided the theory of small, gradual improvements accumulating through natural selection to improve the “design” of biological sys-

tems. While many may embrace Darwinian evolution as an alternative to intelligent design in biology, and space does not permit a detailed study here, it does not address the appearance of design in the natural world outside of biology.

In 1802, William Paley published *Natural Theology or Evidence of the Existence and Attributes of the Deity, collected from the appearances of nature*.¹⁰ Famously, in the first chapter, Paley describes in detail someone discovering a watch along a path and even if he had no knowledge of watches at all, or even if such things exist, ascertains that the watch was designed. Chapter II expands upon the first chapter, considering what would be the case if the watch was capable of reproducing itself. Then, beginning in chapter II, Paley applies his argument to the natural world. Most of his applications are in biology, but he does have one chapter on astronomy. Paley presents evidence that God is the master designer of the universe and all things therein just as much as a watchmaker is the designer of a watch. Dawkins' book, *The Blind Watchmaker*, is, of course, a take-off on Paley's watchmaker. Dawkins argues that the watchmaker is blind, in fact, the watchmaker doesn't exist. The appearance of design is an illusion, rather it all came about through natural selection.

In the New Testament, Paul indicates that all know something of God from the created works of nature: "For the wrath of God is revealed from heaven against all ungodliness and unrighteousness of men, who by their unrighteousness suppress the truth. For what can be known about God is plain to them, because God has shown it to them. For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse. For although they knew God, they did not honor him as God or give thanks to him, but they became futile in their thinking, and their foolish hearts were darkened."¹¹

Marcus Tullius Cicero (d. 45 BC) wrote in his book *On the Nature of the Gods* as follows¹²: "The first point, Lucilius then said, does not seem to even need discussion, for what can be clearer and more obvious, when we have lifted our eyes to the sky, and have gazed upon the heavenly bodies, than that there exists some divine power of exalted intelligence by which these are ruled?" Further on in the same book, Cicero wrote¹³: "there is something in nature which the mind, the reason, the strength, and the power of man would be unable to produce, surely that which does produce it is higher than man; now the heavenly bodies, and all those phenomena which observe an everlasting order, cannot be created by man; consequently that by which they are created is higher than man. And what could you say this was rather than God? For if there are no gods, there can be nothing higher in nature than man, since he alone possesses reason, and nothing can

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surpass reason in excellence. But that there should be a man who thinks that in the whole universe there is nothing higher than himself shows senseless arrogance. There is, then, something higher, and therefore there is assuredly a God."

Plato wrote in *Dialogue Philebus* as follows¹⁴:
"Socrates: Very good; let us begin then, Protarchus, by asking a question.

Protarchus: What question?

Socrates: Whether all this which they call the universe is left to the guidance of unreason and chance medley, or, on the contrary, as our fathers have declared, ordered and governed by a marvelous intelligence and wisdom.

...

Socrates: Do not then suppose that these words are rashly spoken by us, O Protarchus, for they are in harmony with the testimony of those who said of old time that mind rules the universe.

Protarchus: True.

Socrates: And they furnish an answer to my enquiry; for they imply that mind is the parent of that class of the four which we called the cause of all; and I think that you now have my answer."

In the Old Testament, Isaiah records God as saying: "Listen to me, O Jacob, and Israel, whom I called! I am he; I am the first, and I am the last. My hand laid the foundation of the earth, and my right hand spread out the heavens; when I call to them, they stand forth together."¹⁵ David wrote as follows: "When I look at your heavens, the work of your fingers, the moon and the stars, which you have set in place, what is man that you are mindful of him, and the son of man that you care for him?"¹⁶ And also, "The heavens declare the glory of God, and the sky above proclaims his handiwork."¹⁷ And Job has written: "Remember that you have made me like clay; and will you return me to the dust? Did you not pour me out like milk and curdle me like cheese? You clothed me with skin and flesh, and knit me together with bones and sinews. You have granted me life and steadfast love, and your care has preserved my spirit."¹⁸

For hundreds of years BC up until recently, that is throughout recorded history, we have it that many have seen compelling evidence of design in the natural world that implies a creator. Darwinian evolution has led many to deny such implications of nature, but as we will see, many others still find the evidence of design in nature compelling.

3. The Being of God

It is common to speak of evidences for the existence of God, but here we will indicate that the "being" of God is

preferable to the “existence” of God. Being versus existence of God is an aside to the overall argument of this paper, but we will address the issue briefly. Its relevance is that these definitions clarify what is meant by the word “God.” Hints as to the uniqueness of the name and person of God are given in Exodus 3:14 where God is quoted as responding to Moses’ request for His name as follows: “God said to Moses, ‘I AM WHO I AM.’ And he said, ‘Say this to the people of Israel, ‘I AM has sent me to you.’”¹⁹ Albert Barnes (1798-1870) comments on this Scripture passage as follows: “The words express absolute, and therefore unchanging and eternal Being. The name, which Moses was thus commissioned to use, was at once new and old; old in its connection with previous revelations; new in its full interpretation, and in its bearing upon the covenant of which Moses was the destined mediator.”²⁰

The etymology of the word “existence” is as follows: stand forth, come out, emerge; appear, be visible, come to light; arise, be produced; turn into.²¹ Therefore, some have suggested that speaking of the *existence* of God is inappropriate, but rather we should speak of the *being* of God. While it is appropriate to speak of the existence of any created being, for such do indeed emerge, appear, etc., but that God’s being is eternal, and therefore, in a sense, He does not exist, but does have being, the only self-existent being.²²

In essence, what is being stressed here, is that all things that exist in the universe have a derived existence, that is, existence is not inherent within them, but comes from another. And that other is God, who is the only self-existent being, from which all else is obtained. So the God that we are speaking of is the center of all meaning and purpose. This concept of God may be new to you. The question is, is the appearance of design in the universe real, and if so, does it point to God?

4. Some Who See Design

In this section it is documented that some, perhaps many, scientists see design in nature. Most do not claim to be theists, but they do admit to being interested in, fascinated by, or convinced that there is design in nature.

Paul Davies, a professor of theoretical physics (especially applied to quantum physics, astrophysics and cosmology) at Arizona State University, and popular science writer, has written the following: “Scientists are slowly waking up to an inconvenient truth – the universe looks suspiciously like a fix. The issue concerns the very laws of nature themselves. For 40 years, physicists and cosmologists have been quietly collecting examples of all too con-

venient ‘coincidences’ and special features in the underlying laws of the universe that seem to be necessary in order for life, and hence conscious beings, to exist. Change any one of them and the consequences would be lethal.”²³ Davies has also written, “There is for me powerful evidence that there is something going on behind it all . . . It seems as though somebody has fine-tuned nature’s numbers to make the Universe. . . . The impression of design is overwhelming.”²⁴

Fred Hoyle (1915-2001), founder and director of the Institute of Theoretical Astronomy at the University of Cambridge, has stated the following: “A common sense interpretation of the facts suggests that a superintellect has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature.”²⁵

Michael Behe, professor of biochemistry at Lehigh University, mentioned above, has stated that “The conclusion of intelligent design flows naturally from the data itself – not from sacred books or sectarian beliefs. Inferring that biochemical systems were designed by an intelligent agent is a humdrum process that requires no new principles of logic or science. It comes simply from the hard work that biochemistry has done over the past forty years, combined with consideration of the way in which we reach conclusions of design every day.”²⁶

Michael Denton, author and biochemist, mentioned above, has written that “The complexity of the simplest known type of cell is so great that it is impossible to accept that such an object could have been thrown together suddenly by some kind of freakish, vastly improbable, event. Such an occurrence would be indistinguishable from a miracle.”²⁷

Thomas Nagel, well-known philosopher, has written as follows: “In thinking about these questions I have been stimulated by criticisms of the prevailing scientific world picture . . . by the defenders of intelligent design. Even though writers like Michael Behe and Stephen Meyer are motivated at least in part by their religious beliefs, the empirical arguments they offer against the likelihood that the origin of life and its evolutionary history can be fully explained by physics and chemistry are of great interest in themselves. Another skeptic, David Berlinski, has brought out these problems vividly without reference to the design inference. Even if one is not drawn to the alternative of an explanation by the actions of a designer, the problems that these iconoclasts pose for the orthodox scientific consensus should be taken seriously. They do not deserve the scorn with which they are commonly met. It is manifestly unfair.”²⁸

George Ellis, well-known astrophysicist, and winner of the Templeton Prize in 2004, has stated that “Amazing fine tuning occurs in the laws that make this [complexity] possible. Realization of the complexity of what is accom-

plished makes it very difficult not to use the word ‘miraculous’ without taking a stand as to the ontological status of the word.”²⁹

Allan Sandage, astronomer, winner of the Eddington Medal, National Medal of Science, Crafoord Prize, and was elected a Fellow of the Royal Society, has written that “I find it quite improbable that such order came out of chaos. There has to be some organizing principle. God to me is a mystery, but is the explanation for the miracle of existence, why there is something instead of nothing.”³⁰

Arthur Eddington (1882-1944), well-known astrophysicist, winner of the Royal Society Royal Medal, Henry Draper Medal, etc., stated the following: “The idea of a universal mind or Logos would be, I think, a fairly plausible inference from the present state of scientific theory.”³¹

Albert Einstein, winner of the Nobel Prize in Physics, stated the following: “[T]he scientist is possessed by the sense of universal causation. . . . His religious feeling takes the form of a rapturous amazement at the harmony of natural law, which reveals an intelligence of such superiority that, compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection.”³²

Antony Flew, well-known and influential atheist throughout much of the twentieth century, comments as follows: “I think that the most impressive arguments for God’s existence are those that are supported by recent scientific discoveries. . . . I think the argument to Intelligent Design is enormously stronger than it was when I first met it. . . . It now seems to me that the findings of more than fifty years of DNA research have provided materials for a new and enormously powerful argument to Design.”³³

Freeman Dyson, winner of the Templeton Prize in 2000, Fermi Award, Henri Poincaré Prize in 2012, Oersted Medal, etc., professor of physics at the Institute for Advanced Study in Princeton, said the following: “The universe shows evidence of the operations of mind on three levels. The first level is elementary physical processes, as we see them when we study atoms in the laboratory. The second level is our direct human experience of our own consciousness. The third level is the universe as a whole. . . . I am sure of only one thing. When we look at the glory of stars and galaxies in the sky and the glory of forests and flowers in the living world around us, it is evident that God loves diversity.”³⁴

Frank Tipler, physicist, writes as follows: “When I began my career as a cosmologist some twenty years ago, I was a convinced atheist. I never in my wildest dreams imagined that one day I would be writing a book purporting to show that the central claims of Judeo-Christian theology are in fact true, that these claims are straightforward deductions of the laws of physics as we now understand them. I have been forced into these conclusions by the inexorable logic of my own special branch of physics.”³⁵

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Charles Townes won the Nobel Prize in Physics in 1964 for discovering the maser which led to the laser. In the cover article for the July 27, 1998 issue of *Newsweek*, “Science finds God,” Sharon Begley cited Townes: “As a religious person, I strongly sense the presence and actions of a creative Being far beyond myself and yet always personal and close by.” Begley wrote, “Townes believes that recent discoveries in cosmology reveal ‘a universe that fits religious views’ – specifically, that ‘somehow intelligence must have been involved in the laws of the universe’.”³⁶

Henry F. Schaefer, III, is the Graham Perdue Professor of Chemistry and director of the Center for Computational Quantum Chemistry at the University of Georgia. He has been cited as one of the most quoted chemist in the world. Schaefer is quoted as follows: “A Creator must exist. The big bang ripples (April 1992) and subsequent scientific findings are clearly pointing to an ex nihilo creation consistent with the first few verses of the book of Genesis. . . . The Creator must have awesome power and wisdom. The quantity of material and the power resources within our universe are truly immense. The information, or intricacy, manifest in any part of the universe, and (as Allan Sandage has well stated) especially in a living organism, is beyond our ability to comprehend. And what we do see is only what God has shown us within our four dimensions of space and time!”³⁷

Arthur L. Schawlow (1921-1999), Nobel Prize winner (1981), for contributions to the development of laser spectroscopy, professor of physics at Stanford University, writes as follows: “It seems to me that when confronted with the marvels of life and the universe, one must ask why and not just how. . . . But the context of religion is a great background for doing science. In the words of Psalm 19, ‘The heavens declare the glory of God and the firmament showeth his handiwork’. Thus scientific research is a worshipful act, in that it reveals more of the wonders of God’s creation. . . . I find a need for God in the universe and in my own life.”³⁸

Arno Penzias, Nobel Prize winner in physics for 1978, who helped uncover evidence of the Big Bang, has said that “the best data we have (concerning the big bang) are exactly what I would have predicted, had I nothing to go on but the five books of Moses, the Psalms, the Bible as a whole.”³⁹

When asked about Hoyle’s theories of a steady state universe or an oscillating one, Penzias responded: “Well, people are uncomfortable with the purposefully created world. To come up with things that contradict purpose, they tend to speculate about things they haven’t seen yet, like missing mass, which would allow the world to collapse back on itself.”⁴⁰ Penzias explains further: “Astronomy leads us to a unique event, a universe that was created out of nothing and delicately balanced to provide exactly the conditions required to support life. In the absence of

an absurdly-improbable accident, the observations of modern science seem to suggest an underlying, one might say, supernatural plan.”⁴¹

John C. Sanford, plant geneticist at Cornell University, writes as follows: “Such bewildering complexity is exactly why language (including genetic language) can never be the product of chance, but requires intelligent design. The genome is literally a book, written literally in a language, and short sequences are literally sentences. Having random letters fall into place to make a single meaningful sentence, by accident, is numerically not feasible.”⁴²

5. Summary & Conclusion

Intelligent Design as an area of scientific research, while embraced by some, is rejected by others, and perhaps by the majority of scientists. Yet, observing design in nature is something reported throughout the ages. And, as indicated above, many modern very accomplished scientists report observing design in nature as well. Above we briefly indicated some 19 scientists who see design in nature, including 4 who are Nobel Prize winners.

- Proving that something is designed, rather than occurring naturally, is not easy. However, it should be noted that detecting design is routinely done in forensics and archeology, and sophisticated design detection procedures have been developed.⁴³
- Whether Intelligent Design is indeed “science” or not is not really a “scientific” question, but rather one of semantics, or definition. The real question is not so much is Intelligent Design science, but rather is it true.⁴⁴
- Let us end with the question we began with, “Does the natural world show evidence of intelligent design, or is the apparent design only illusory?”

Notes

1 *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design*, Norton, 1996 [1986], p. 1. Richard Dawkins was Professor of the Public Understanding of Science at Oxford University from 1995 until 2008, and is a well-known, and out-spoken, advocate of materialistic evolution. Dawkins won both the Royal Society of Literature Award and the Los Angeles Times Literary Prize in 1987 for *The Blind Watchmaker*.

2 *ibid*, p. 21

3 Michael Behe is professor of biochemistry at Lehigh University. His popular publications include *The Edge of Evolution: the search for the limits of Darwinism*, Free Press, 2007, and *Darwin’s Black Box: the biochemical challenge to evolution*, Free Press, 1996.

4 Michael Denton is a British-Australian author and biochemist, and former senior research fellow in the Biochemistry Department of the University of Otago, Dunedin, New Zealand. His popular publications include *Evolution: still a theory in crisis*, Discovery Institute, 2016, *Nature’s Destiny: how the laws of biology reveal purpose in the universe*, Free Press, 2002, and *Evolution: a theory in crisis*, 3rd ed., Adler & Adler, 1986.

5 Stephen C. Meyer is a geophysicist with a Ph.D. from Cambridge University in the history and philosophy of science and is the director of Discovery Institute’s Center for Science and Culture. His publications include *Darwin’s Doubt: the explosive origin of animal life and the case for intelligent design*, HarperOne, 2013, and *Signature in the Cell: DNA and the evidence for intelligent design*, HarperOne, 2009.

6 William Dembski has a Ph.D. in mathematics from the University of Chicago, a Ph.D. in philosophy from the University of Illinois at Chicago, and a Masters of Divinity from Princeton Theological Seminary. His publications include a scholarly book, *The Design Inference*, Cambridge Studies in Probability, Induction, and Decision Theory, Cambridge University Press, 1998, and books for popular audiences, for example, *Uncommon Dissent: intellectuals who find Darwinism unconvincing*, editor, Intercollegiate Studies Institute, 2004, *Intelligent Design: the bridge between science & theology*, IVP Academic, 2002, and *The Design Revolution: answering the toughest questions about intelligent design*, IVP Books, 2009.

7 Stuart Burgess is Professor of Engineering Design in the Department of Mechanical Engineering, University of Bristol, Bristol, UK. He specializes in bio-inspired design and biomechanics. He has published over 140 papers, and is a former co-editor of the *International Journal of Design & Nature and Ecodynamics*, <http://www.witpress.com/journals/dne> and was Head of the Department of Mechanical Engineering at the University of Bristol from 2004 – 2011.

8 Eugenie C. Scott and Nicholas J. Matzke, “Biological Design in Science Classrooms,” *Proceedings of the National Academy of Sciences*, vol. 104, suppl. 1, May, 2007, pp. 8669-8676. Scott has a Ph.D. from the University of Missouri in anthropology, and was the executive director of the National Center for Science Education from 1987 until 2014. Matzke has a Ph.D. in computational and genomic biology from the University of California at Berkeley, is currently with the Research School of Biology at the Australian National University in Canberra, Australia and is a former Public Information Project Director at the National Center for Science Education.

9 *The Blind Watchmaker*, p. 3-4

10 William Paley, *Natural Theology or Evidence of the Existence and Attributes of the Deity, collected from the appearances*

of nature, Edited with an Introduction and Notes by Matthew D. Eddy and David Knight, Oxford World's Classics, Oxford University Press, 2008. The text is available from other publishers as well. The book went through some four editions in its first year of publication, and by 1822 it had gone through more than twenty editions.

11 Romans 1:18-21, English Stand Version (ESV)

12 *On the Nature of the Gods*, translated by Francis Brooks, Methuen, London, 1896, Book II, Chap. II (p. 41 in the OLL pdf book). The E-book (pdf format) was obtained from the Online Library of Liberty: <http://oll.libertyfund.org/titles/cicero-on-the-nature-of-the-gods>

13 *On the Nature of the Gods*, Book II, Chap. VI (p. 45 in the OLL pdf book).

14 *The Dialogues of Plato*, vol. 4, *Parmenides, Theaetetus, Sophist, Statesman, Philebus*, translated by Benjamin Jowett, with analyses and introductions, 3rd edition revised, Oxford University Press, 1892 (pp. 640-644 in the OLL pdf book). The E-book (pdf format) was obtained from the Online Library of Liberty: <http://oll.libertyfund.org/titles/plato-dialogues-vol-4-parmenides-theaetetus-sophist-statesman-philebus>

15 Isaiah 48:12-13, ESV

16 Psalm 8:3-4, ESV

17 Psalm 19:1, ESV

18 Job 10:9-12, ESV

19 Exodus 3:14, ESV

20 Albert Barnes, *Barnes Notes on the Old and New Testaments* (fourteen volumes), 19th edition, Baker Books, 1983. This quotation was obtained from *Notes on the Bible*, by Albert Barnes, 1834, online at <http://sacred-texts.com/bib/cmt/barnes/index.htm> It is also available as part of the e-Sword package: <http://www.e-sword.net>

21 From the *Online Etymology Dictionary* at http://www.etymonline.com/index.php?allowed_in_frame=0&search=existence

22 See, for example, R. C. Sproul, *God's Being and Apologetics* (video), at <http://www.ligonier.org/blog/rc-sproul-gods-being-and-apologetics-video> See also R. C. Sproul *Proves that God Does Not Exist* (video), at <http://www.ligonier.org/blog/rc-sproul-proves-god-does-not-exist>

23 *The Guardian*, June 25, 2007. <http://www.theguardian.com/commentisfree/2007/jun/26/spaceexploration.comment>. Paul Davies is a professor of physics at Arizona State University, and author of popular science books such as *The Erie Silence: renewing our search for alien intelligence*, *The Goldilocks Enigma: why is the universe just right for life?*, *The Fifth Miracle: the search for the origin of life*, etc.

24 Paul Davies, *The Cosmic Blueprint: new discoveries in nature's creative ability to order the universe*, Simon and Schuster, 1988, p. 203.

25 Fred Hoyle, "The Universe: past and present reflections," *Annual Review of Astronomy and Astrophysics*, vol. 20, 1982, p. 16. Hoyle wrote popular science books and science fiction, such as *The Martian Chronicles*, *The Black Cloud*, *A for Andromeda*, *The Intelligent Universe*, etc.

26 Michael J. Behe, *Darwin's Black Box: the biochemical challenge to evolution*, Free Press, 1996, p. 193. Behe is also the author of *The Edge of Evolution: the search for the limits of Darwinism*, Free Press, 2007.

27 Michael Denton, *Evolution: a theory in crisis*, 3rd ed., Adler & Adler, 1986, p. 264.

28 Thomas Nagel, *Mind & Cosmos: why the materialist neo-Darwinian conception of nature is almost certainly false*, Oxford University Press, 2012, p. 10. Nagel obtained his Ph.D. from Harvard University and taught at the University of California at Berkeley and Princeton University before joining the faculty at New York University.

29 George Ellis, "The Anthropic Principle: laws and environments," in *The Anthropic Principle*, edited by F. Bertola and U. Curi, Cambridge University Press, 1993, p. 30. Ellis is Distinguished Professor Emeritus at the University of Cape Town in South Africa, and is known for his work in cosmology. He coauthored *The Large Scale Structure of Space-Time* with Stephen Hawking in 1973.

30 Allan Sandage, quoted by John Noble Willford, "Sizing up the Cosmos: an astronomer's quest," *New York Times*, March 12, 1991, p. B9. Available online at <http://www.nytimes.com/1991/03/12/science/sizing-up-the-cosmos-an-astronomer-s-quest.html?pagewanted=all> Sandage (1926-2010) was an astronomer with the Carnegie Observatories (Mt. Wilson, Palomar Mt., and Las Campanas in Chile). He is known for determining the first reasonably accurate values for the Hubble constant and the age of the universe. He is also known for discovering the first quasar.

31 Arthur Eddington, as quoted in Fred Heeren, *Show Me God: what the message from space is telling us about God*, revised edition, Day Star Publications, 2000, p. 259.

32 Albert Einstein, *The World As I See It*, Open Road Integrated Media, 2011 [1956], p. 37. Einstein received the Nobel Prize in Physics in 1921.

33 Antony Flew, quoted in Antony Flew and Gary Habermas, "My Pilgrimage from Atheism to Theism: a discussion between Antony Flew and Gary Habermas," *Evangelical Philosophical Society*, 2004. Available online at <http://www.epsociety.org/library/articles.asp?pid=33>

34 Freeman Dyson, "Progress in Religion," Templeton Prize acceptance speech given on May 16, 2000, in the Washington National Cathedral, available online at <https://www.edge.org/documents/archive/edge68.html>

35 Frank J. Tipler, *The Physics of Immortality: modern cosmology, God and the resurrection of the dead*, Anchor Books, 1995, p. ix. Tipler is a mathematical physicist and cosmologist, holding a joint appointment in the Departments of Mathematics and Physics at Tulane University.

36 Charles Townes, quoted in Sharon Begley, "Science finds God," *Newsweek*, July 27, 1998. Cited in *Scientific GOD Journal*, vol. 1, issue 3, March, 2010, p. 155. Available online at [http://scigod.com/file/SGJ_V1\(3\).pdf](http://scigod.com/file/SGJ_V1(3).pdf)

37 Henry F. Schaefer III, "The Big Bang, Stephen Hawking, and God," printed version of an invited lecture delivered on October 13, 2004, New College Lecture Series, Center for Computational Quantum Chemistry, University of Georgia, Athens, GA, p. 22. Available online at <http://www.newcollege.unsw.edu.au/downloads/File/multimedia/pdfs/1c383cd30b7c298ab50293adfecb7b18.pdf>

38 Arthur Schawlow, "One must ask why and not just how," Part 1, chapter 21, in *Cosmos, Bios, Theos: scientists reflect on science, God, and the origins of the universe, life, and homo sapiens*, edited by Henry Margenau and Roy A. Varghese, Open Court, 1992, pp. 105-107.

39 Arno Penzias, quoted by Malcolm W. Browne, "Clues to Universe Origin Expected," *New York Times*, March 12, 1978. Available online at http://www.nytimes.com/1978/03/12/archives/clues-to-universe-origin-expected-the-making-of-the-universe.html?_r=0

40 Arno Penzias, quoted in Denis Brian, *The Voice of Genius: conversations with Nobel scientists and other luminaries*, Perseus Publishing, 1995, p. 164.

41 As quoted in Denyse O'Leary, *By Design or by Chance?*, Castle Quay Books, 2004, p. 23. The original source is Arno Penzias, "Creation is supported by all the data so far," chapter 16 in *Cosmos, Bios, Theos: scientists reflect on science, God, and the origins of the universe, life, and homo sapiens*, edited by Henry Margenau and Roy A. Varghese, Open Court, 1992, p. 78.

42 J. C. Sanford, *Genetic Entropy & the Mystery of the Genome*, 3rd ed., FMS Publications, 2008, p. 124. Sanford has been issued more than 32 patents, is the recipient of the Distinguished Inventor Award by the Central New York Patent Law Association, and is the founder of Sanford Scientific and Biolistics, two biotech companies.

43 See, for example, William Dembski, *The Design Inference*, Cambridge Studies in Probability, Induction, and Decision Theory, Cambridge University Press, 1998, *Intelligent Design: the bridge between science & theology*, IVP Academic, 2002, and *The Design Revolution: answering the toughest questions about intelligent design*, IVP Books, 2009.

44 See, for example, Stephen Meyer, *What is Science?: Is Intelligent Design Science?*, An excerpt from the Center for Intelligent Design Annual Lecture, London, 2012, 5 minutes and 10 seconds in duration, YouTube video: <https://www.youtube.com/watch?v=XHawDCUyFSg> See Note 5 above.