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Catholic Physics - Reflections of a Catholic Scientist - Part 7 Are All Great Scientists Atheists?

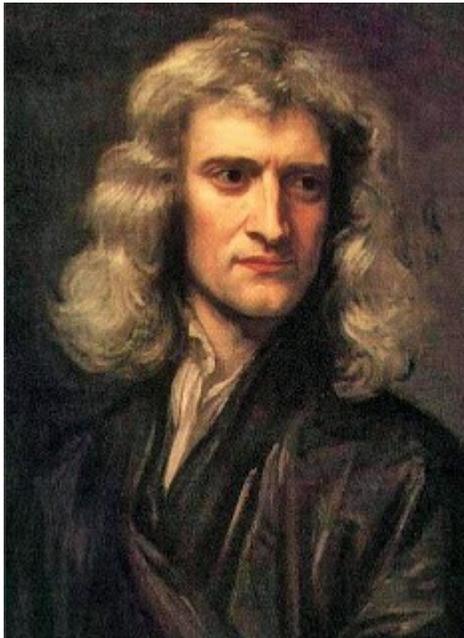


- ♦ 1200's
- ♦ Authority on physics, geography, astronomy, mineralogy, chemistry, zoology, and physiology
- ♦ "The aim of natural science is not simply to accept the statements of others, but to investigate the causes that are at work in nature"
- ♦ He understood that the Church is not opposed to study of nature
- ♦ Patron Saint of Scientists

Catholic Physics - Reflections of a Catholic Scientist - Part 7

Thoughts on belief, knowledge and faith—rational and irrational; my journey to faith, and on the “Limits of a limitless science” (to paraphrase Fr. Stanley Jaki). A discourse on the consonance of what science tells us about the world, and the dogma/teachings of the Catholic Church; you don’t have to apologize for being Catholic if you’re a scientist.

Are All Great Scientists Atheists?



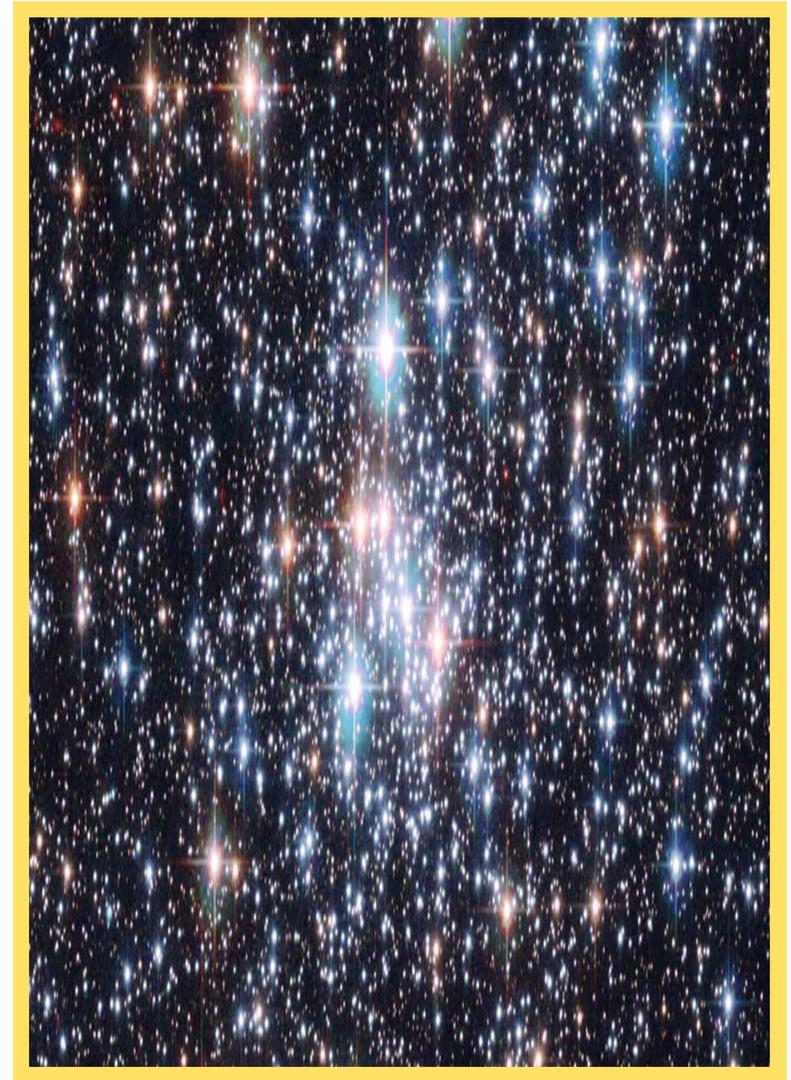
Isaac Newton, Portrait by Godfrey Keller
Courtesy Wikipedia.en.org

“The laws of nature are written by the hand of God in the language of mathematics.”
Galileo Galilei

“Certain it is that a conviction, akin to religious feeling, of the rationality or intelligibility of the world lies behind all scientific work of a higher order... This firm

Finally, I will say that I find most of the remarks inspiring. And it shows me that faith is not ultimately an act of intellectual discernment, but grace given to us by the Holy Spirit. It is a gift, and we should not be scornful of those who have not received the gift.

From a series of articles written by: Bob Kurland - a Catholic Scientist



Professor Abdus Salam (Nobel Prize for physics (elementary particle theory), Director, International Centre for Theoretical Physics, Trieste): “Now this sense of wonder leads most scientists to a Superior Being—der Alte, the Old One, as Einstein affectionately called the Deity—a Superior Intelligence, the Lord of all Creation and Natural Law.”

Professor Arthur Schawlow (Nobel Prize for Physics [laser physics], Stanford University): “It seems to me that when confronted with the marvels of life one must ask why and not just how. The only possible answers are religious... I find a need for God in the universe and in my own life.”

Professor Wolfgang Smith (Philosophy, Mathematics and Physics—theoretical work provided the key for solving the re-entry problem in space flight, Oregon State University): “If the physics of the last century prompted atheism, the physics of today is inciting at least the most thoughtful of its votaries to re-examine ‘the question of God’”

Professor Charles Townes (Nobel Prize for physics, development of the MASER/LASER, University of California, Berkeley): “I believe in the concept of God and in His existence.”

Professor Eugene Wigner (Nobel Prize for physics, applications of symmetry principles—group theory—to quantum mechanics, Princeton University): “The concept of God is a wonderful one—it also helps us makes decisions in the right direction. We would be very different, I fear, if we did not have that concept.”

A few remarks are in order to put this list in an appropriate context. First, only a small fraction of the listed scientists are practicing Christians, and of these, a smaller proportion are Catholic. Most are deists who believe in a Creator God, but not a personal God. Second, it is quite likely that the majority of scientists, including great ones, are atheists or agnostics (Steven Weinberg comes to mind as the most vocal of these). Nevertheless, if only a small proportion of scientists are believers, that shows that faith in atheism is neither a necessary nor a sufficient condition for being a good scientist. Third, if one looks at birth-dates (not included here) the majority are old—and in fact may be dead—Cosmos, Bios and Theos was published in 1993. I can offer two explanations here: these older scientists matured in an age that was not as anti-religious as the present one and/or scientists gain a reputation only after a life-time of work (neglecting boy geniuses, theoretical physicists and mathematicians). Fourth, and this is puzzling, a significant plurality of the listed scientists are from Princeton University. Maybe this represents a selection bias on the part of the authors or is an indicator of more religious freedom at Princeton. Fifth, I’m sure I’ve omitted several eminent believers—two immediately come to mind, John von Neumann and Kurt Goedel, both formerly at the Institute for Advanced Study, Princeton (what is in the air at Princeton?).

belief, a belief bound up with deep feeling, in a superior mind that reveals itself in the world of experience, represents my conception of God.” Albert Einstein, as quoted in Cosmos, Bios and Theos.

“There can never be any real conflict between religion and science for the one is the complement of the other.” Max Planck, *ibid*.

Reflecting on a snarky comment to one of my recent blogs (“the Catholic church seems to know with some certainty that we have souls (a nonsensical concept provided (sic) what we now know about neuroscience”), I can only conclude that evangelical atheists (including Richard Dawkins) learn about science from the popular media rather than from research—their own and that of others. From the comments of these evangelical atheists on Facebook and other blogs, I also conclude that they know little of the history and philosophy of science. The corollary to this ignorance is their opinion that you cannot be a good scientist if you are deluded by religious faith.

Let’s put the kibosh to that opinion by relating the religious beliefs of eminent scientists. In the early history of science, great scientists—Galileo, Newton, Descartes, Pascal—all had a deep religious faith. But suppose the atheist responds, “That was then, this is now; we know more now to justify that believing in God is a delusion.” My response to this canard is to cite the theistic credo of present day eminent scientists, many of them Nobel Prize winners. Most of these seem to be in the “hard” sciences, physics and chemistry, rather than in biology or medical sciences. If any of you readers have ideas about the reason why physicists are more likely to be theists than are biologists, I’d like to hear them.

Most of the information given below is drawn from Cosmos, Bios and Theos, by Henry Margenau, Yale mathematical physicist (the * denotes member, National Academy of Science, Member. Research Council of Europe, , Fellow, Royal Society UK—see below) and Roy Varghese. I’ll give a pertinent quotation and minimum background material for each scientist. Not all of the scientists listed in the book believe in some specific religion, or even a personal God. Many are deistic, believing in a Creator, but not necessarily a God immanent in the universe. Because of space limitations, not all of those interviewed will be listed here.

Professor Christian Anfinsen* (Nobel Prize for Chemistry, biochemistry of RNA, Johns Hopkins University): “I think that only an idiot can be an atheist! We must admit that there exists and incomprehensible power or force with limitless foresight and knowledge that started the whole universe going in the first place.”

Professor Werner Archer (Nobel Prize for Physiology/Medicine, restriction enzymes and molecular genetics, University of Basel): "I do not think our civilization has succeeded in discovering and explaining all the principles acting in the universe. I include the concept of God among these principles. I am happy to accept the concept without trying to define it precisely. I know that the concept of God helped me to master many questions in life; it guides me in critical situations and I see it confirmed in many deep insights into the beauty of the functioning of the living world."

Professor D.H.R. Barton (Nobel Prize for Chemistry, conformational analysis in organic chemistry, Texas A&M University): "God is Truth. There is no incompatibility between science and religion. Both are seeking the same truth"

Professor Ulrich Becker (High energy particle physics, MIT): "How can I exist without a creator? I am not aware of any answer ever given."

Professor Steven Bernasek (Solid state chemistry, Princeton University): "I believe in the existence of God. His existence is apparent to me in everything around me, especially in my work as a scientist. On the other hand I cannot prove the existence of God the way I might prove or disprove a (scientific) hypothesis."

Dr. Francis Collins (Medicine, former Director of the Human Genome Project, Director, National Institutes of Health, author *The Language of God*): "Freeing God from the burden of special acts of creation does not remove Him as the source of the things that make humanity special, and of the universe itself. It merely shows us something of how He operates."

Professor Freeman Dyson (Theoretical physics, Princeton Institute for Advanced Study): "I do not make any clear distinction between mind and God. God is what mind becomes when it has passed beyond the scale of our comprehension. God may be either a world-soul or a collection of world-souls. So I am thinking that atoms and humans and God may have minds that differ in degree but not in kind." Taken from the Templeton Prize Award address, 2000.

Sir John Eccles (Nobel Prize, neurochemistry): "If I consider reality as I experience it, the primary experience I have is of my own existence as a self-conscious being, which I believe is God created."

Professor Manfred Eigen (Nobel Prize for Chemistry, fast reaction kinetics, Director Max Planck Institute for Biophysical Chemistry, Göttingen): "...religion and science neither exclude nor prove one another."

Professor John Fornaess (Mathematics, Princeton Univ.): "I believe that there is a God and that God brings structure to the universe at all levels from elementary particles to human being to superclusters of galaxies."

Professor P.C.C. Garnham (Medical protozoology, University of London): "God originated the universe or universes...At some stage in evolution when proto-humans were sufficiently advanced, God created the human soul...By faith and by appreciation of scientific necessity, God must exist."

Professor Conyers Herring (Solid state physics, Princeton University): "We live in a hard, real universe, to which we have to adapt. God is a characteristic of that universe—indeed a miraculous characteristic—that makes that adaptation possible. Things such as truth, goodness, even happiness, are achievable, by virtue of a force that is always present, in the here and now and available to me personally."

Professor Vera Kistiakowsky* (Experimental Nuclear Physics, MIT and Mount Holyoke College): "I am satisfied with the existence of an unknowable source of divine order and purpose and do not find this in conflict with being a practicing Christian."

Professor Sir Neville Mott (Nobel Prize for physics, solid state physics, Cambridge University): "...we can and must ask God which way we ought to go, what we ought to do, how we ought to behave."

Professor Robert Neumann (nuclear and isotope chemistry and physics, Princeton University): "The existence of the universe requires me to conclude that God exists."

Professor Edward Nelson (Mathematics, Princeton University): "I believe in, pray to, and worship God."

Dr. Arno Penzias (Nobel Prize for physics for first observation of the universal microwave background radiation, Vice-President for Research, AT&T Bell Laboratories): "... by looking at the order in the world, we can infer purpose and from purpose we begin to get some knowledge of the Creator, the Planner of all this. This is, then, how I look at God. I look at God through the works of God's hands and from those works imply intentions. From these intentions, I receive an impression of the Almighty." (as cited in *The God I Believe in*)

Rev. Professor John Polkinghorne (Theoretical elementary particle physics, President, Queens College, Cambridge University): "I take God very seriously indeed. I am a Christian believer (indeed, an ordained Anglican priest), and I believe that God exists and has made Himself known in Jesus Christ."