

A Friendly Conversation

William A. Barrett
Allaedin Ezzedin
March, 2015

This is an email conversation that I (Barrett) carried out with a pair of Muslim students over a period of several months in the fall of 2010. I was a lecturer in computer engineering at San Jose State University at the time. Mr. Ezzedin studied compiler design theory and assembly language. He was later inspired to write a speech about his faith and its relation to his compiler course. It was delivered to a Stanford University group, in March 2010. His speech was The Binary World and the Day of Judgment. It is no longer available on the web.

I suggested that we discuss various religious issues in a philosophical way through email. He is clearly a devout Muslim. I made it clear that I was a secular humanist and an atheist.

Our conversation clearly cuts no new theological or scientific fabric. But you may find it interesting as our attempt to understand each other and to reconcile the modern scientific framework with the Islamic faith. We both felt that a reconciliation is not only possible, but vital for the future of mankind, and the avoidance of further conflicts between the western world and the Islamic world.

These are our shared emails, exactly as they were written, except for a few corrections and deletions of certain personal issues.

I had not considered this worth publishing until now (spring 2015), but recent events in the middle East and the rise of the Islamic State caused me to reconsider publication.

Please read our email conversations, then my reflections on ISIL, Islam and our modern system of technical education at the end of this paper.

From: Allaedin@xxx.com
Sent: Sunday, March 14, 2010 12:28 PM
To: bill.barrett@sjsu.edu
Subject: A technical and spiritual reflection

Dear professor Barrett,

I pray that you receive my letter while you and your family are in the best state of health and spirit.

A few years back I was privileged to be one of your students in Assembly Language Programming and Compiler Design.

I want to share with you [this spiritual reflection](#) [a dead web reference] that I delivered to some Stanford students few years ago. It is about Compiler and I quoted you in it :)

Yours,

Allaedin Ezzedin

From: bill.barrett@sjsu.edu
To: allaedin@xxx.com
Subject: RE: A technical and spiritual reflection
Date: Tue, 23 Mar 2010 22:27:23 -0700

Thank you for the credit. You were in my compiler class Fall 2003, if my records are correct. You have an interesting viewpoint on the subject, and I wish you well in your life's endeavors.

I happen to be an atheist, and am rather well read on issues of religion and science. If you would like to engage in an open dialog on such issues, I'd be happy to correspond with you by email, also suggest alternative readings that might interest you.

From: Allaedin@xxx.com
Sent: Wednesday, March 24, 2010 10:54 PM
To: bill.barrett@sjsu.edu
Subject: RE: A technical and spiritual reflection

I'm happy to hear back from you... yes, I would love to engage in an open dialog in any religion related subject. So please lead the conversation and as I did with the technical subjects, I will open my heart and mind for you.

Thanks, Allaedin

From: bill.barrett@sjsu.edu
To: allaedin@xxx.com
Subject: RE: A technical and spiritual reflection
Date: Thu, 25 Mar 2010 08:21:29 -0700

Well, from my point of view, it's pretty simple – I consider that there is no supernatural god, nor any “afterlife”, no heaven, no hell. When I die, it will be rather like going to sleep with no dreams, forever.

As to my life, I find far more inspiration and joy in contemplating the love of my wife and family, along with the amazing scientific view of the universe, and great works of art. I don't need a minister or priest or imam to fill me with myths from ancient books full of weird stories and supposed miracles.

Great sources of inspiration for me are great novels, operas, plays, musical compositions, musical theatre, etc. I love classical music, generally, though there are a few composers I would just as soon do without. It may seem strange that an atheist would be enraptured by JS Bach's Christmas Oratorio, with its heavy Christian message, but it's true. I can enjoy the music and even the message without having to accept that Jesus was some kind of god, or was even resurrected. Or even that the New Testament has much of anything of value to say to us today. Modern psychology and sociology has far more to say about human behavior than anything I could find in either Testament. I could go on about that, but won't, to keep this short.

I should point out that my mother was a rather devout German Lutheran. She pushed me through endless church services, Sunday school and what the Lutherans call “confirmation”, all of which I rather hated. I saw no point in it. By the time I was 15, I had read extensively about the universe through astronomy books, plus some evolution, and was studying analytic geometry, trigonometry and calculus with a very bright friend of mine in my home town in Nebraska. I since earned a PhD in physics and math, and feel I have a good understanding of the nature of things. I've studied quantum mechanics, special and general relativity. I did my thesis on a special decay process of the mu meson. This was at the University of Utah, where I made a number of Mormon friends, and had the pleasure of studying that curious religion first hand.

I didn't know much about evolution at the time, but since then, Richard Dawkins has written a series of books that explain in great detail just how it works. There really is no need to assume that a supernatural god generated all the marvelous life forms that we see around us.

There are many directions to go with this, but if we dig much deeper, I shall have to ask you to read one or two books for the details. You clearly have some physics and science training – I suggest *God, the Failed Hypothesis* by Victor Stenger [1]. Stenger is an emeritus professor of physics and astronomy, University of Hawaii, and has written extensively on the issue of science vs. religion. You should be able to follow most of his arguments, though a few are difficult.

Regarding evolution, you no doubt have heard of Charles Darwin, who first enunciated the principle of natural selection in the late 19th century. Since then, the discovery of DNA has opened this up to an astonishing degree. We can no longer accept that man is some special “creation” of a supernatural god, instead has evolved through millions of years as part of an immense tree of life, going back to the first replicators. Richard Dawkins has several books on the subject that are quite readable. One that might interest you as a computer hacker is *The Blind Watchmaker* [2]. There's a companion CD that allows you to carry out your own evolution experiments, with a simple model of a DNA-like specification, with a way of selecting modifications to obtain new “life” forms. The program is all simulated, of course, and greatly simplified, but it makes his point.

Regarding Islam, I know something of it as well, though I've never been in a mosque. A former student kindly gave me a book about the Prophet's life [3] – we could discuss some aspects of that if you like. I've also followed a Great Courses course on Islam [4]. Although I cannot accept a supernatural Allah who rules our lives (certainly not mine), I can respect Islam and those who follow its precepts. That is, to the extent that its adherents remain peaceful and respectful of the laws and traditions of the nation in which they reside.

In our case, that's America and its secular constitution. You are no doubt aware that the USA is a non-sectarian nation. Despite the clamor of some conservatives, we are not a nation founded in Christianity or the Ten Commandments. I would strenuously resist any attempt to somehow “convert” our nation into an Islamic republic. As I would those who are trying to shape it into some kind of “Christian”, “Mormon” or “Jewish” nation.

From: Allaedin@xxx.com
Sent: Monday, March 29, 2010 12:51 AM
To: bill.barrett@sjsu.edu
Subject: RE: A technical and spiritual reflection

Your mother's push for you to attend the church services reminded me with my father's push to learn math, physics and programming! He has a PhD in nuclear science and he wanted me to be like him in the 9th grade :) He taught me FORTRAN [5] way before I entered college and he was very strict with me in education all the way until I finished high school. After high school he left me alone and wanted me to decide for myself which field I would like to continue my education in. The exercise of choosing my major helped me later when I tried to answer tough questions about my existence in this world and the role that I would like to play in shaping it.

Yes, I was born in a very active Muslim family that values religion and science, but at one point I had to make my personal choice whether to go with their route or to choose my own. And even if I choose theirs I have to be convinced 100% that this is what I would like to do and have interest and passion for it.

Dear Mr. Barrett, you raised many interesting points and I really appreciate the fact that you shared them with me.

I did not get the chance yet to read “God, the Failed Hypothesis” but I read some book reviews and I came across an interesting [interview](http://www.positiveatheism.org/crt/stenger1.htm) [http://www.positiveatheism.org/crt/stenger1.htm] with the author, Victor J. Stenger, who explained his scientific views about different issues including the Big Bang, which is an interesting phenomenon that was summarized in one verse in the Quran 1400 years ago: ["Haven't the unbelievers seen that the heavens and the earth were joined together \(in one singularity\), then we clove both of them asunder."](#) (21:30)

So it happened and it happened with the command of the almighty. Now whether to believe of the existing of God or not, I really think no one can answer this question for us. Everything around us can be the answer, even C++ :)

When I was in school, if I had a question about my C++ project, whom shall I ask? Well, you! You are my professor and you know the assignment inside out. Now, if I have a question about the language itself? Who can answer every single question about the C++ language; structure, classes, functions, bugs, etc. I might go and ask Bjarne Stroustrup [6], since he developed the language and know all its features and limitations. So C++ is a creation and Stroustrup is the creator and as powerful the creator is, as powerful the product will be.

This simple understanding is what makes me believe on the exiting of God. Whenever I go hiking in the beautiful mountains of Yosemite or go swimming in the astonishing beach of Santa Cruz, or visit the monetary aquarium, I cannot think of anything but the amazing hand that beatified all these creations.

To be continued,
Allaedin Ezzedin

From: bill.barrett@sjsu.edu
To: allaedin@xxx.com
Subject: RE: A technical and spiritual reflection
Date: Wed, 31 Mar 2010 13:52:52 -0700

You appear to have a very happy and satisfying life. I can find no argument with that.

Those of us with no faith in god feel that we are correct in a scientific, rational and philosophical way. That doesn't mean that we lack feelings about the majesty of the universe and life on earth. However, this also effectively makes it difficult for us to consider joining some church even though there may be good community reasons for wanting to. Sort of hard to explain, but there it is. We atheists have not been around long often to develop our own community reasons to feel part of a larger

movement, with hymns, discussions, etc. Well, of course there's the Unitary Universalist church, which sort of tries to fill that need.

From: Allaedin@xxx.com
Sent: Thursday, April 01, 2010 12:07 AM
To: bill.barrett@sjsu.edu
Subject: RE: A technical and spiritual reflection

There is a sign off highway 87 in the South San Jose area that reads "Happiness is Submission to God Alone". I am indeed very happy and pleased with my life, but I have to admit that I am very sad about the state of the world. The humanity today lives in chaos; wars, suicides, oppression, child abuse, women abuse, HIV, abortion, drugs, alcohol, etc and this really concern me.

We reached the moon and every day we advance in technology and knowledge, yet we fail to answer the basic needs of the human being.

This universe is created by a powerful hand based on a system; a divine system that has all elements of success for peace and justice. Out of His wisdom, He didn't force us to follow it but rather gave us the will and the intellect to follow it or not. Unfortunately we decided to go against the system and create a system for ourselves. A system that based on injustice, where the innocent are slaughtered by the wicked and where we became enslaved our own desires.

I personally don't see this darkness to be overcome except by following the guidance and the commands of the creator of the heavens and the earth. Humanity needs first to search for its creator, understand His system, and then adhere and submit to Him.

From: bill.barrett@sjsu.edu
To: allaedin@xxx.com
Subject: RE: A technical and spiritual reflection
Date: Thu, 1 Apr 2010 13:22:15 -0700

I heartily agree that the world is full of problems that we humans need to face up to and find solutions for.

I often despair that we are not up to the task and may well end all life on earth through atomic warfare. For example, over-population is at the core of many of our troubles, and this should be obvious to everyone on earth. Yet very little is being done to get our population in line with what earth can support. The Roman Catholic Church in particular continues to fight contraception measures and abortion, which are reasonable ways to reduce family sizes. I don't know what the Islamic world's response to this is, but my newspapers and other readings suggest that Islam in general is indifferent to the problem.

My despair stems largely from the huge number of religious faithful on earth and their influence. Since every religion teaches that there's a paradise awaiting us after death, there isn't any point in caring for the earth, or controlling our population. You also have passages in the OT that urge man to subdue nature and rule over all the creatures, which we seem to be doing in spades. Where are the passages that explain that the amount of arable land for food production is finite, and that mass starvation, riots, and

more await those nations and groups whose population exceeds the food supply? And how many religious groups are seriously working to control our population? Answer: none.

I'm not sure just where you find your god's intentions, but our Old Testament doesn't look so good to me.

If you step back from it and remove your rose-colored glasses for a moment, ask yourself what sort of god is described in it? What I see is a vain, cruel, vicious god who cares little for his people. I also see a god that supposedly made great promises to "his people", the Jews, and urged them to commit genocide against various neighbors, yet over history has let others screw them, starting with the Romans, then later virtually every other nation on earth. That has culminated in the massacre of several million Jews by the Nazis in the 1940s.

By the way, Hitler was raised as a good Catholic, and considered himself so most of his life, but also adopted a weird sort of Teutonic myth, borrowing from anti-Semitic writings of Martin Luther, the Protocols of Zion and Henry Ford. The German people went along with his persecution of the Jews, largely through the propaganda of Joseph Goebbels, but he also borrowed heavily from Martin Luther, the founder of the German Lutheran church. So the Germans got much of their hatred of the Jews from the pulpits of their churches. The German Catholics were also told to go along with Hitler's plans, or at least, not resist him. Even Pope Pius XII is now known to have failed to take a stand against Jewish persecution [7]

Did God really ask Abraham to sacrifice his only son on an altar [8]? What a cruel prank to play on someone! My reading of this is that this story was kept in the OT in order to coax people into obeying this particular god instead of what should have been a more normal love for one's children. Religions evolve along with living creatures, and one of the ways a particular religion may survive among its competitors (and there are now and have been many competitors) is to frighten the pants off of people by threatening them with hellfire if they don't "believe" and also offer eternal bliss in some future paradise if they do "believe" and obey god. Islam and Judaism were among the success stories of evolving religions for much that reason. Christianity survived for various reasons, the biggest probably being its acceptance by Constantine in the 4th century, causing the whole Roman Empire to pay attention to this new religion [9].

A few more points:

■ A "round" table is described in the OT as 10 cubits in diameter and 30 cubits around (circumference) [10]. What circle is there such that its perimeter is 3 times the diameter? In other words, God or whoever wrote this thought that PI was 3. Can't God do arithmetic better than that?

■ Was it Jericho who was ordered by god to utterly destroy the Hittites, down to the last woman and child, after he decided on some mercy for the vanquished tribe? [11] Why was that necessary? And, if the Hebrew god was so great and powerful, why did he even tolerate the gods of other peoples?

■ Why does god demand so much "worship" of him and what is the point of it? If this is the same god that created and ruled the universe, what need does he have of people bowing down to him with various prayers over and over? This can be explained in a natural way by religious evolution – the successful religions demand the most of its adherents. Thus Islam demands endless little ceremonies, including five bowing prayers per day from each Muslim. Why? To keep its adherents in line and returning to the Mosque, also to keep the money flowing in to the priests, imams, ministers or whatever they are called. Religions that don't ask for much of anything don't get much of anything, and their

priests eventually give up and do something honest instead. Such weak-kneed religions eventually disappear from lack of adherents. But the really vicious and all-demanding ones thrive. Ponder that for a moment.

■ Why should god demand “obedience” from his people? Is this the same god that is omnipotent? Why doesn’t he just use his omnipotence to work things out instead of this clumsy and inefficient means of using people for his purposes? For example, if there really were a caring god, why couldn’t he have arranged for Adolf Hitler to have a little blood clot or a sudden heart attack earlier in his career, thereby saving several million Jews from extinction? Who would have noticed this little miracle? But it didn’t happen. Why not? ...and don’t tell me about the “inscrutable ways of the all-mighty god” – that’s just a cop out.

■ I would like you to point out in the OT or the Quran ONE passage that explains clearly just how to anesthetize someone in preparation for surgery or to deal with intense pain from battle or disease. That single description in an ancient document like the OT or the Quran would be more than enough to convince me that there really is a supreme being. But the holy books – all of them – are silent about this. Apparently god doesn’t care if we suffer and die from various diseases that are now preventable.

■ I would also like to find anything in the OT or Quran that spells out Newton’s laws, relativity (special and general), Maxwell’s laws, semiconductor physics, anything related to controlling and treating disease, or anything about how to organize a constitutional democracy. Your passage about the heavens and earth being joined together is lovely poetry, but it doesn’t hold a candle to the detailed mathematics, astronomy and physics involved in a modern explanation of the cosmos. If your creator god actually put together all this mechanism, why don’t some of the mathematics and physics of it appear in his holy written works?

■ What is the use of *pain* from a religious point of view? Every religion has a terrible time trying to explain why innocent children must suffer in great pain of such diseases as the black plague, tuberculosis, rickets, polio and many more. Many of these are now preventable or treatable, but many remain. Check out this web site for a list of some pretty disgusting fatal diseases in children that are still not curable: http://www.ehow.com/about_5414851_fatal-diseases-children.html. This is the so-called “problem of pain” which no religious doctrine has been able to explain in a reasonable way. For those of us who contend there is no god, and who understand evolution, there’s no problem. There’s plenty of pain in nature, as Darwin observed, but it’s a natural consequence of the way life has evolved. Control of pain required our evolution as thinking, reasoning descendants of apes, plus plenty of (human) genius to work out methods of controlling pain and disease. The Bible and Quran provided exactly zero help along those lines.

■ Ask yourself why the Catholic church fought the Copernican view of the solar system for so many years. Galileo was nearly burned at the stake for holding to that view, and weaseled out of it during his inquisition. Fortunately he wasn’t tortured, just threatened with torture, and kept under house arrest for the rest of his life. The church finally admitted it was mistaken a few decades ago, some 300 years after Galileo.

■ I admit that Islam did not go down the path of suppressing scientific information, and that there was a great flowering of science during the Alhambra period in Spain. But modern Islam doesn’t seem to have produced much in the way of scientific achievement compared with the secular western world. Why is that?

Well, this has gotten pretty long-winded. I hope you aren’t offended by the above. You can find greatly expanded versions of all this in any of several books.

One, from the 18th century, is by Thomas Paine: *The Age of Reason* [16]. Yes, the same Tom Paine who wrote several other books describing his vision of a new republic of America. This book deals with

his analysis of the old and new testaments, and the problems they pose to any reasoning person.
Another is by Christopher Hitchens, *God is not Great* [17]

From: Allaedin@xxx.com
Sent: Wednesday, April 28, 2010 10:58 PM
To: bill.barrett@sjsu.edu
Subject: RE: A technical and spiritual reflection
[I added my comments to this email]

Dear professor Barrett,

Due to some work and family commitment I had to disappear for some time, but God knows that I was thinking of you all this time. I shared your thoughts with a dear friend of mine who showed interest to be engaged in the conversation. Her name is Anna and I hope you are OK with her to be CCed in our future emails

Here is her email to you:

[wab] Thanks for your email. I enjoy engaging in a discussion of this sort.

Anna -- I'd like to refer to a short book by Victor Stenger, *God, the Failed Hypothesis*[1] in what follows. He reviews nearly all the cogent arguments in support of atheism, and also shows how a satisfying and happy life is possible without the encumbrance of a strong belief in some God or an afterlife. He is a published scientist, a professor of physics at the U of Hawaii, and has written longer books detailing his findings.

It happens I have a close friend, and niece, who is a trained opera soprano and pianist. We haven't exchanged a discussion of this sort, since I sensed that she wasn't that interested. From your opening paragraphs, you've obviously given a great deal of thought to religious matters beyond the superficial. As have I.

[Anna] Dear Dr. Barrett,

Your former student Allaedin Ezzedin has shared with me some ongoing conversation between you two, and I connected so much with some of your writings that I wish to respond. Much like you, I depend largely on mathematical and scientific understanding to accept any explanation of why things are the way they are in the universe. We even share something in common in that I too finished geometry, trigonometry and calculus by the time I was 15, although I did not pursue mathematics beyond a bachelor's degree; instead I went on to enjoy a fulfilling career in music. Similarly to you, I have always resented any type of preaching or proselytizing by any religious organization, and always regarded religion as mere mythology, to the point of labeling myself anti-religious. It was simply too ridiculous to believe people that claim that there is one being out there, more powerful than any creature, human or otherwise, not to mention knowing everything, and most certainly, I never bow down in submission to any being, even if such a being did exist. And again, I too, even from my childhood, find much awe and inspiration from music, arts, books, and the majesty of nature, regardless of any religious perspective. All of the above mentioned made me independent in that I had no need of enlightenment, nor a leader to follow, nor a set of rules to obey, so I never felt any need to go religion-shopping. In short, I was perfectly happy the way I was, and it is important to mention that I also have always lived in such a way

as to not harm anyone else, so from an ethical standpoint, religion played no role in my treatment of others, be it people, animals, the earth.

[wab]. Good. I like your attitude.

[Anna] Much like you, I readily accepted nature as a perfectly reasonable explanation for why trees are not only beautiful, but provide carbon dioxide so we can breathe, and why rain falls from the sky to nurture living creatures, and why the sun rises every morning to provide light and warmth, and all questions about how grandiose the universe is. Then I came to the understanding that if a single mountain were in a different spot on earth, it would affect the entire balance of land and water on earth, and life as we know it would be somewhat different. Likewise, if the oceans were not exactly the size they are, or the trees are not exactly the height they are, again, they would affect the balance of the earth and change the way things are in this world. Not only that, I came to learn that the amount of water on earth is the same at all times (moisture from the Red Sea evaporates from the heat of the sun, winds blow it thousands of miles away, or perhaps very near, and it returns to earth as rainfall for instance). Coincidence is just too far out of an answer for me to accept at this point. Nature alone is no longer enough explanation why this particular reality exists, among millions of other possible realities. As I have a fondness for Voltaire's Candide, I briefly restate that we live in the "best of all possible worlds." Can it be coincidence to have this state of the universe, merely a random chance of nature?

[wab] Surely you misread Voltaire. *Candide* was written as a satire on the overly-optimistic philosophies of his day, and also the "problem of evil" that thoughtful religious people need to confront. Dr. Pangloss is generally considered to be an exaggeration of Gottfried von Leibniz [19], who was a great mathematician. Leibniz apparently enjoyed a very comfortable life and naturally assumed that everything in the world was well. You don't have to watch the news much or read much history to discover that there's much about "nature" and our place in it that is horrible.

I respectfully disagree that we live in the "best of all possible worlds". As I recall the story, the heroine Cunigonde fell for Pangloss's story, but ended up being cheated, raped, sold into slavery, beaten, etc., but nevertheless continued to insist on the truth of Pangloss's philosophy to the end. That's satire, and Voltaire was a master of pricking the fanciful balloons of pretentious philosophers and poets. See <http://en.wikipedia.org/wiki/Candide> for an analysis.

Also see Stenger, chapter 5 for a discussion of whether the universe is congenial or not. Also whether designed by a congenial God or not.

On the other hand, we are products of evolution and have been evolved to be as fit as reasonably possible through natural selection within our environment.

That occurred through thousands of painful centuries of conflict with nature and its many predators. It appears that we and other living things are designed to fit our environment, but that is a kind of illusion – natural selection has weeded out the unfit over thousands of generations, leaving those that are best fit.

Our life today in most industrial societies can be very comfortable indeed, compared to our caveman ancestors. But that's thanks to scientific achievements in mechanics, electricity, chemistry, medical science and more, not thanks to any ancient religious writings. See Stenger chapter 2 on the illusion of design.

By the way, from a musical point of view, I'm still waiting for the opera or cantata that celebrates what we now know about the cosmos. We need the equivalent of Handel's Messiah that displays the

scientific wonders of the known universe and our place in it. Perhaps you could find a poet friend and compose something?

[Anna] There is one passage in the Quran that basically states that there are two bodies of flowing water (meaning one body of salt water, the other a body of fresh water), meeting together (meaning they are adjacent to each other), between them is a barrier which they do not transgress (meaning they do not mix). Naturally, at the time that this was written, there were no microscopes, no modern science, no advanced technology to test the salinity of water. Now logic dictates that when you have two bodies of water adjacent to each other, they will mix. And yet, science has recently shown that indeed, there is an area somewhere around Bahrain, where in the ocean lie two separate and distinct bodies of water next to each other, one salt water and the other fresh, as if there is an invisible wall in between the two, such that the waters stay separate from each other and do not mix.

[wab] Actually not very new – Archimedes (287 BCE-212 BCE) was aware of this and defined the basic principles of hydraulics. Salt water has a slightly higher density than fresh water, and that permits a pool of fresh water to remain atop a body of salt water. If the two are permitted to mix through some kind of turbulent action, then both become somewhat salty. They will also not later separate, due to the second law of thermodynamics. Coral islands, such as Cozumel (Mexico), among others, enjoy this principle – in the absence of rain, the coral in time becomes filled with salt water, making the island uninhabitable and bereft of vegetation. But with fresh rain water pouring down regularly, over time a large pool of fresh water forms on top that can be tapped for fresh water.

There is no invisible wall, just a thin region in which the two have not yet mixed. You need a very quiescent situation to maintain a reasonable separation.

It's quite possible that the writers of the Quran knew something of Greek science. It's also an easy experiment or observation, which a desert nomadic people would surely want to know about.

By the way, Archimedes computed a very precise value of PI [12], a problem that totally eluded the Old Testament writers. See 1 Kings 7:23 for a description of a kind of large water bowl 30 cubits round and 10 cubits across – in other words, PI was 3.0 to whoever wrote this [10].

[Anna] This is new information to mankind, and we can rely on modern science and technology to confirm this, which was written hundreds of years ago. Another example is that the Quran contains a passage that says that mountains have pegs. And indeed, modern science has recently shown that underneath the surface of the earth, under each mountain is a type of root for that particular mountain, a peg so to speak. Again, this new information to mankind was written years before even a simple microscope was invented, not to mention the advent of advanced science and technology. I could go on, but basically, there are several examples of scientific facts (embryology, the sociology of bees, etc.) found in the Quran. If you would like more specific passages, let me know and I will find them and quote translations for you.

[wab] Mountains have pegs under them? Well, in a sense, there must be some solid mass beneath a mountain range to support it against the fluid lava mass upon which it floats – Archimedes again. We are all riding on large platelets floating on a viscous layer of hot lava. The slow movement and collisions of these platelets is causing the earthquakes. Volcanoes also erupt as the movement exposes passages for water to percolate down to the hot layers, which then boils up like a steam boiler exploding.

I would be much more impressed if the Quran or other holy writing predicted the existence of the deep sea rifts which is where the platelets are separating. These were only discovered through the

development of deep sea diving equipment. If the Quran claims to know something about mountains, show me more about plate tectonics, how the earth is heated (natural radiation from long-lived radioactivity), and exactly how earthquakes are formed. The assumption of the faithful is that it was inspired by that loving God. Show me something that explains how to relieve suffering through anesthetics, or how to cure polio or the black death. To quote Stenger [1], page 188:

The Bible reads as an assembly of myths fashioned by ancient authors who had no concept of historical accuracy. Its description of the world reflects the scientific and historical knowledge of the age in which the manuscripts were composed.

With all due respect, the same could be said of the Quran.

By the way, Darwin was greatly troubled by a calculation made by Lord Kelvin on the age of the earth [13]. Kelvin's estimate assumed the earth was very hot at one time, and was slowly cooling off through radiation to outer space. His earth age was much too small to explain evolution, and appeared to falsify Darwin's theory. However, he didn't know about nuclear energy and natural radioactivity. When radioactivity was taken into account, which happened later in Kelvin's lifetime, he agreed that the earth's age was much larger, sufficient to account for evolution.

[Anna] Let me address the problem of overpopulation in the world today. There are some geographical locations on earth where the human population is too high, as well as perfectly livable places on earth where the population is reasonable or even low. The Earth we have really is enough space for all of us. Related to overpopulation is the problem of poverty. In Islam, muslim adults of sound mind are required to pay zakat, which is money to help the poor and needy. The amount of zakat is a mere 2.5% of what is left of one's annual income after expenses (generally speaking). If this were applied to the entire population of able adults in the world - keep in mind one would pay only 2.5% of income, once a year, after regular living expenses were paid - and the money was distributed fairly among the needy, and Islamically we are obliged to give this money to the poor who need it most, the problem of poverty would essentially disappear.

[wab] I still contend that the earth's population is about 2 to 5 times too large to be supported in the long run. Local areas that could be better cultivated certainly exist, but there are also many that have been exhausted. There are also economic causes of farm failure, in particular, the massive federal corn subsidies awarded in the US, which has the effect of making our corn too cheap on the world market for farmers in other nations to compete [14].

The idea of zakat (or tithing in the Christian faith) is very well and good, and certainly should be encouraged. Most main-line Christian churches nowadays press their congregations into donating food, clothing, money and services to the needy. It wasn't always that way - in the 19th and early 20th centuries, church members were urged to support a foreign mission, not the local poor.

In most Western societies, there's a tax that goes to social causes, so that's a kind of zakat imposed by majority vote of the citizens. The French (also mostly non-religious, by the way) probably pay the most to support their needy, also to totally cover all medical conditions of their people. The US is probably the most niggardly in that regard, although charitable organizations help cover the need. I could show you survey results that prove that, on the whole, religious people in the US are less likely to support the needy through taxes or charity, than non-religious humanists. [15]

As to "space", yes, there's plenty of *space* for people. What's limited is *arable land* (land that can be

cultivated, with ample fresh water and favorable climate), and that is in fact decreasing due to salinity and other factors. Global warming will almost surely cut down on the existing arable land, though there may be new areas opened up in the north now too cold for agriculture. Increasing farm productivity and dealing with farm subsidies can help reduce the food deficit, but population growth can always defeat these best efforts.

Please notice the assault on the ocean's fisheries, and the salmon runs in our great western rivers. This is partly due to a growing population of people dependent on the fixed resources of the ocean, as well as dams put up to provide fresh water for farming in arid regions. Population is the driver behind all this, plus the false assumption that earth's resources are unlimited.

[Anna] You speak of the cruelty in that innocent children suffer and die of numerous diseases. Without pain and discomfort, how would we appreciate health and comfort? I would find the world rather suspicious if only the adults got sick or in accidents, and all children lived healthy safe lives up until adulthood – think of the overpopulation problem we would have then!

[wab] How would we appreciate health and comfort? Are you telling me that innocent children must continue to suffer and die in order to *instruct* us all? As a teacher, I find that quite repugnant, excuse me. I have never seen a child die in a horrible way, (at least not personally, only through TV and newspaper articles), but I've never considered that just part of my education. My point was that a loving, omniscient God should be preventing this. He (or she) could also figure out a way to control our population short of warfare, epidemics or starvation. But the holy books contain no useful tools to help us overcome our natural desire to increase our kind. On the contrary, the OT writings seem to urge people to be fruitful (Gen 8:17). There are passages warning that if a man spills his seed on the ground, that's an offense toward God (Gen 38:9-10). And, somehow, the Roman Catholic Church has decided that contraception is against God's will. [20]

[Anna] Believing in the existence of a creator includes a premise that this creator is above human beings in every way. It would be rather silly to choose to bow down and admit one's inferiority to a creature that is either on the same level as humans, animals, trees, the sun, stones, anything that is not more powerful than you or I. Granted, it seems grandiose, that there would exist a god who knows everything and is all powerful. So to accept to believe in the first place that there is a God is to accept that He is beyond what is imaginable to us, omnipotent, and to compare Him with human characteristics does not do justice to Him in the least. Basically we would find a conflict to believe in a god that is not omnipotent. At this point, I will stop trying to define God, as to define Him would also be to limit Him.

[wab]. Well, I don't have a God to "bow down to". I see no reason to do that. Your statements seem inconsistent to me. Why not try to define God? He supposedly has produced large books that attempt to define his attributes in human and physical terms, and they leave much to be desired – see my previous emails. Also read Stenger [1], chapters 6 through 9. Incidentally, I quote Stenger in all this, but he is just a kind of messenger for a vast collection of scientific fact and theory that support his contentions.

[Anna] You pose the question why God demands so much worship of him. To the contrary, accepting God as omnipotent is accepting that He does not need anything from anybody. He is independent in every way, free of all needs and wants, not dependent on our service for anything. Rather, it is mankind that will benefit from doing good deeds in the name of God, in other words, worship. Would God gain anything from people praying to Him? No. Do we have anything to offer God that He does not already have? No. To think otherwise is to negate the belief in God to begin with. Rather, who is it that gains

from worship: people. Summed up, people worship their Creator for their own sake, so they can benefit, not for God to gain nor benefit.

[wab]. I agree that taking time from our busy lives to ponder the imponderables of life is valuable. Some find that in meditation. I find it in contemplating what I've been reading, or in a great work of art, or just thinking about matters in the middle of the night. Or in discussing issues like this with you or with my wife or a friend. If that's some kind of worship, so be it.

My problem is with the formal worship in a church, mosque or synagogue. I must there sit and listen to some message delivered from a pulpit, with no opportunity to respond or rebut, or ask for amplification. Often the guy or gal in the pulpit provides me with nothing that I didn't already know, and sometimes something that I just don't agree with. As to being inspiring, it's hard to claim that of a typical church service, though I like fine sacred organ or choir music. A really well-delivered sermon is also worth hearing. And singing some familiar hymn in the company of friends can be wonderful.

But all that is through the genius of dedicated artists, writers and composers. Were they really inspired by some invisible God? They may have believed so, and that's sufficient.

[Anna] Here you may say that if God is omnipotent, why did He not give Hitler that little blood clot earlier in his career, thereby saving millions of lives? It is not as if God is a marionette, pulling strings on people like puppets. Rather, God gave Hitler many chances to change his ways. It was Hitler who always chose the evil path, of his own free will. I have never seen anybody praying, fasting, donating money, following the dress code, or refraining from ingesting pork and alcohol because he is forced to, not by God nor another person. Besides that, if these actions do not come from the heart, they are pointless and benefit nobody. Again, believing in God in the first place includes the premise that God knows what is in our hearts, so mindless actions that mean nothing to the doer are exactly that: mindless actions with no benefit. As you know, we all have free will, as certainly you don't see or feel anyone or anything controlling you, your actions, your decisions, or your life. Free will would be completely pointless and contradictory if all your life decisions were already made for you without any thinking on your part, and you just followed along, cruising down the path of life, without need to make any effort.

[wab]. You seem to be assuming there actually is a loving, omniscient God. My point about Hitler was that there is not such a god. He could have easily arranged to take Hitler out of existence to save the earth from a horrible, destructive war, and 6 million Jews from the gas chamber. That could have been done in such a way as to not reveal his power in the slightest.

But that didn't happen. The cost of six million Jews plus some 30 million more casualties in the second world war seems to me to be a very high price to pay for a kind of total free will on our part as a supposed gift from God.

Also, if in fact our free will is so important, completely separated from any action on His part, then there's no point in caring about Him one way or the other. He is like a parent that has totally abandoned his/her children on the grounds that they have free will and should manage their own affairs. May Johnny play in the street at age 3? That's his choice – he has free will!

[Anna] Now typically, loving and doting parents make sacrifices, large and small, every day for the sake of their children out of love for them. True, you can classify these sacrifices as parental obligation, but the deeply caring parents who perform the daily routines (packing lunches, making sure kids brush, changing diapers,...) - without resentment nor direct benefit to them – are happy to do so because of the deep and natural love from parent to child. Truly caring parents are happy to make endless such sacrifices without gain to themselves, purely for the sake of the children. Such actions do not directly

benefit the parents, yet they do them without resentment, out of love for their offspring, so the offspring can benefit. Similar to such love for kids, only on a much grander scale, those who believe in God as the one who takes care of them, also perform duties (prayer, fasting, almsgiving, pilgrimage,...) because they are happy to do so out of profound love for Him, rather than out of fear of punishment, or forced obligation. Much like the love we have for children, we do things for God out of an immeasurable love for Him, and are happy to do so, from our own free will. Think about it: in this busy day and age, does one want to interrupt what he is doing and take the time to pray, or does one want to forego food and drink in order to fast for empty reasons? Not likely. But, to do these things out of love that reaches beyond love for your children, your spouse, even your own self, the answer would be sure, to elevate your status in the eyes of your creator. Similarly, wouldn't a just and kind CEO reward the employees that are loyal to and appreciative of him over those that ignored his position as their CEO? This is a miniature example, but it seemed to me a practical analogy.

[wab]. I accept much of what you say. I had wonderful parents who looked after my best welfare as that was needed, and also left me alone to my own devices when they felt I was ready for it. They expressed great love toward me, and I responded to the extent that I could.

I just don't see what role a God plays in all this. There isn't any God in the first place – you seem to realize that in your opening paragraphs.

[Anna] When I was young, I used to marvel every year at my birthday, and how it was that given the statistics of people dying every year, every month, every day, every minute, that I was one of those who continued to live as opposed to one of those who did not. Chance? Luck? Arbitrary matter of numbers? Seem like easy answers, but unacceptable to me. More than that, all my life I have been given what people call blessings, though at the time I just thought of myself as being extremely fortunate – excellent health, immense talent in the field of music, a decent brain, very little hardships, good family, income, etc. Religious or not, we are all well aware that at any given moment, any one of us could be in an accident that renders us quadriplegic, or go blind or deaf. For those who believe in health and good fortune we have as gifts rather than luck, we try to be ever-mindful and ever-aware of these blessings and never even for a moment be unthankful. In my youth, I was always grateful for these things, but I never expressed this appreciation to anyone, let alone a higher power. Prayer and worship in light of this can be considered thanks to the higher power that can take it all away from us in an instant. In a nutshell, worship is beyond rituals and “endless little ceremonies,” which would seem a worthless waste of time to those who do not understand how much we appreciate our universe. More than simply a set of rules of what to do and how to live, worship is a way by which we express our thanks. Besides, can billions of Muslims around the world, including tens of thousands of American converts, be that dumb to perform “endless little ceremonies” for no reason... blind faith is not enough to compel the intelligent ones to behave appropriately - the ones who truly understand that worship is for them, and not to benefit God, know they do not “need” myths from a leader,” and that each one is responsible for his individual actions. Why not just say that isn't believing enough? Isn't faith in the heart? While this may be true, I take that as somewhat of a cop out, as you may well do too, so I take that one step further and say that if faith is in the heart, actions are proof of that faith.

Given that one accepts God in the first place, one would accept that God can either punish or reward people. We never know when death comes, so we take responsibility for our own actions, and do good in the world now, before it is too late. I mentioned earlier that from an ethical standpoint, religion played no part in my behavior in my youth, and I was still a decent and moral person. The only difference now

is that I have reasons for morality and decency that go beyond simply wanting be nice because it makes me happy, or that being unselfish gives me satisfaction. The difference here is that good behavior without awareness is its own reward. Why not take that one step further and make your intentions to do good with awareness that the Creator is watching, and can take account of all our deeds and treat us justly for them? Equally, the deterrent against lying, cheating and stealing is that again, the Creator is watching, and will treat us justly for the bad; fundamentally, we can use basic morality that is common in decent humans as a stepping stone to a better path.

[wab] What you seem to be leading up to is a behavioral theory that essentially comes down to placing a large collection of imponderables, such as love, our place in the universe, etc. into a basket called God. I have no problem with that as a way of getting on with life, and finding our place in it. My problem is that once you start talking about a God, you will have to decide “which God”? And that leads you down the path toward one of the many world religions, each of which suffers from serious internal contradictions, demands on our life, and more. And who is supposed to interpret what that God wants? – lots of interpretation is needed, given the shortcomings of the holy books. Lots of people have tried to create a fresh religion that would appeal to large numbers of people, and fix some or all the problems. Some were successful in the popularity sense. But not by my standards.

[Anna] Going back to the question of why there is so much evil and suffering in the world, if all was good and well on earth, basically making earth itself a near paradise, there would be no purpose in striving for something better. Again, believing in God as all-powerful is believing that He will take into account all your deeds, and reward justly or punish appropriately. I see not much point in the trials and tribulations we experience on Earth if we don’t learn from them and improve ourselves. I am the first to admit no perfect Islamic society exists, and our community is full of misguided followers who do evil and portray an incorrect vision of Islam as a way of life. Many would agree with you in that in our modern times, Muslims are in a rather pathetic state, and not keeping up with the rapid speed of advancement of some parts of the world. Even the issue of taking care of the Earth, which Islam encourages, is greatly ignored in Muslim societies. I repeat, the individual is responsible for his own deeds. Please be sure to judge a person’s actions as opposed to blaming his bad actions on his imam, or mosque, or religion.

[wab] I don’t wish to blame anyone. The fact remains that the great world religions have been an impediment to humanity. Here, I refer you to Christopher Hitchen’s work *God is not Great* [16], with his extensive bibliography. I prefer the informality of “secular humanism” to tying myself to one of these God-loving religious enterprises. We know much more in a scientific sense about people and their problems than did the ancient holy book writers. I prefer to listen to them in my strivings to understand how people behave, and also to understand my own shortcomings and uncertainties.

[Anna] Regarding Abraham sacrificing his own son, yes, it seems like a cruel prank to order someone to do that; however, ultimately Abraham did not go through with the sacrifice, and it was rather a test of sorts. Would we cheat on an important exam if we knew the instructor was closely monitoring, even if we did not prepare for it and we were certain we would fail? The honest person would not. Again, life is full of tests of all sorts. You claim that God does not love His people, letting them suffer so; to that I respond that is not a good life in a place better than Earth better than a miserable life here on Earth? Those innocent children who are in pain from disease will eventually have their bliss and comfort, as God does love innocent children.

[wab] How is a child afflicted with polio to find a “place better than Earth”, except through an afterlife? I claim there is no afterlife – how can there be an afterlife without some sort of real God to provide it? There is simply no evidence for an afterlife, other than unsupported – or poorly supported – claims in the Quran or Bible.

[Anna] I believe what Allaedin is saying when he says: *This universe is created by a powerful hand based on a system; a divine system that has all elements of success for peace and justice. Out of His wisdom, He didn't force us to follow it but rather gave us the will and the intellect to follow it or not. Unfortunately we decided to go against the system and create a system for ourselves. A system that is based on injustice, where the innocent are slaughtered by the wicked and where we became enslaved our own desires.*

I personally don't see this darkness to be overcome except by following the guidance and the commands of the creator of the heavens and the earth. Humanity needs first to search for its creator, understand His system, and then adhere and submit to Him.

Thus we human beings have the potential to maintain a good and fair world to all, and this is actually the nature and pure state of mankind; however, over the course of time, man – some out of evil, some inadvertently – has corrupted the earth so much so that we are now in a state of despair. Fortunately, it is not too late to correct our mistakes and turn the world around for the better.

[wab] I just don't accept that the universe was created by a “powerful hand based on a system”, unless you mean that the “system” is the collection of laws that we call physics, starting with the big bang. But that system had no “hand” involved in it, no almighty God that launched it, and no God that keeps it all going. That isn't necessary at all. And all the evidence is against the idea of some sort of superhuman “hand” either creating the universe or interacting with it, or with us.

Again, you need to read Stenger and follow his arguments. That's exactly what his book is about, as an introduction to this different way of thinking about the universe and our place in it.

Unfortunately, he requires a basic training in physics. You mention studies in mathematics, which is great, but not whether you've studied college-level physics. That's usually three semesters of hard work, requiring calculus. And there's much more that can't adequately be covered in a three-semester course.

As to “all elements of success for peace and justice”, we certainly know enough about sociology and politics to achieve this. It just requires a more universal education in what science has to offer in these areas, and the will to support it politically. Both are lacking now. And, as I've pointed out, the holy books provide no useful framework for a political solution of the problems of peace and justice – that came through the enlightenment, the work of many philosophers, and the founders of our American constitution.

[Anna] The last thing I want to be is one of those dreaded preacher-types, set out to convert others. I simply related well to some of the things you wrote to Allaedin, and wanted to express them to you.

Best wishes for peace and happiness,

A.L.

[wab] Again, thanks for your interest. I have no desire to “convert” you, either, and I hope I haven't been “preachy”. Instead, I trust that you can appreciate my point of view, though you may not agree with it. It took many years of reflection on my part to reach where I am at. My training in physics and

math was a vital part of that, opening my eyes to the underlying order and ultimate simplicity of the universe, void of any need for a supernatural god.

My best wishes for a satisfying career in music and in your faith.

From: bill.barrett@sjsu.edu
Sent: Tuesday, August 24, 2010 10:24 AM
To: Allaedin@xxx.com
Cc: Bill Barrett
Subject: RE: A technical and spiritual reflection

A few more issues have occurred to me since we last chatted, and I'd like your views on them –

What about Shariah law? Several Muslim nations use this ancient law system rather than develop a democratic, legislative and non-sectarian approach to law – through a court system, counsel for the defense, trial by jury, judge presiding but not making the verdict.

How important is Shariah to Islam? And is it possible that we will see a demand for Shariah law in the U.S. as the Muslim community here develops sufficient voting strength to influence local laws? So how important is Shariah law to the Islamic faith? And who decides on whether it should be imposed or requested in some foreign community? I've read about some demands among Muslim communities in the Netherlands, France and England to use Shariah law in various communities, and that horrifies me. Women's rights would go straight out the door, along with any sensible use of evidence and legal constraints that have been painfully developed in western nations over centuries.

Given that there are already some 1900 mosques and 2.5 million Muslims in the U.S. [18], the political influence of Muslims in local and state politics will grow in time. What aspects of our Constitution and civil laws are repugnant to the Islamic faith (if any?). Would we see a demand for a theocratic government (run by some non-elected imam)?

Also, given that one of the pillars of Islam is “submission”, I have to ask, “submission to whom?” To the devout Muslim, it strikes me that the voice of God is delivered not just through the Koran (which delivers many varied and conflicting messages), but also through its imams. When your faith demands “submission”, doesn't this mean that some other voice (certain passages of the Koran or preachments from the imam) now take precedence over one's own good sense and reason? Or take precedence over the local laws and customs of the country in which you reside? How can “submission” be reconciled with respect for individual conscience and liberty of thought and expression?

I think these questions lie at the heart of much of the concern Americans have regarding Islam. Certain of the Islamic nations have not demonstrated a very good record of tolerance, women's rights, modern legal practice, etc. Just read any newspaper about the latest atrocities of the Taliban, or stonings in Pakistan or Saudi Arabia. Or what led up to 9/11, the senseless suicide bombings in Iraq, Afghanistan and Pakistan, and more. It's no wonder that Americans (and many Europeans) are nervous about the prospect of large numbers of Muslims with their mosques, minarets and imams in their midst, also voting and – for some – seeking political office.

The proposed “mosque” north of the 9/11 site in New York City has stirred up a great deal of controversy. I've read several articles in the San Jose Mercury News and the San Francisco Chronicle,

also a Time magazine story [18]. I generally agree that (1) it isn't really a mosque, rather a reconciliation center, not that that matters, and (2) this is an artificial controversy stirred up by several influential right-wing political figures, including Sarah Palin and Newt Gingrich, among others, plus Fox News and Rush Limbaugh. Imam Rauf (of the proposed New York reconciliation center) appears to be a moderate Muslim who has worked most of his life toward peaceful solutions through reconciliation. I do hope that he represents the future face of Islam, and that his influence will in time be felt in the Middle East. Our Department of State apparently agrees with me, and I heartily support such efforts.

p.s. regarding any article, I haven't started assembling one, but I will of course let you review it before submitting to any journal, and your name and Anna's will appear alongside mine. I really have enjoyed this, and hope that we may continue, given what time you can spare on it.

This is where our correspondence ended.

Recent Events

Since this conversation, the Islamic State (ISIL) has arisen and has taken much territory from Iraq and Syria by force of arms. Its leaders have left an abysmal trail of beheadings, mass murder, and destruction of ancient texts and artifacts.

ISIL now claims to have established a caliphate. The purpose of the ISIL caliphate appears to be cleansing Islam by ridding itself of unfaithful or compromising members of the faith, as well as other groups of undesirables [21], [22]

ISIL's self-proclaimed caliph, Abu Bakr al-Baghdadi, earned a BS, MS and PhD in Islamic studies.

Some of the ISIL leadership appears to have earned technical degrees, as evidenced by their skill in developing websites and material spread through modern social media. Engineering skills are evidently not in short supply in ISIL.

As a former instructor in computer engineering, that struck home to me. How is it possible that any person could be intelligent enough to master a modern engineering discipline, and yet serve a backward, tyrannical religious movement, not seen in history since the middle ages?

Then it occurred to me - the computer is a demanding task master - one tiny detail in a software program can easily cause a system to fail. The computer is a tyrannical taskmaster, inhumanly fast, inhumanly accurate in detail, with an immense memory, and yet with no conscience or sense of purpose other than one expressed in its arcane programmatic instructions. Satisfying its demands requires mystical incantations by a skilled computer engineer.

In short, the computer is much like the god of the Old Testament or the Quran - perfect in many ways, indifferent to the plight of we ordinary mortals, often tyrannical and unpredictable, and yet vital to many of our needs. It offers rich rewards, but only if its high priests - like our engineers - can utter the correct incantations.

Add to that, the relatively lightweight study of history, politics, philosophy required of engineering students. Add their generally low appreciation of such "soft" studies relative to the "hard" discipline of the physical sciences and computer disciplines.

So, what struck me is that the training and experience of a computer programmer is not that different from the demands made on a devout Muslim by his religion. Just substitute "computer" for "God", either way, and the two psychological experiences are the same. The computer is just as demanding - and often capricious - as the Biblical or Quranic God. Both have their high priests, uttering obscure

incantations to their god, hoping to achieve some form of earthly satisfaction.

One must also consider that those with the most technical skills also tend to have the least developed social skills. In short, technical people tend to have been "nerds" as students, bright, but lacking many close friends, generally withdrawn.

Consider Alan Turing, totally focused on abstract mathematical issues, but with almost no appreciation of human feelings and relationships. To him, people were just there to be used for some higher purpose. While at Bletchley Park during the second world war, that higher purpose was cracking the Nazi Enigma code machine. People or customs standing in the way of that goal simply had to be pushed aside. Winning the war was a paramount goal, but to Turing, it appears that his obsessive advancement of computer technology and machine intelligence justified brushing aside human feelings.

This has helped me understand the nature of ISIL and its technical leadership, though of course, it has by no means justified ISIL's actions.

When one is totally focused on the demands of the Islamic god, as expressed in the pages of the Quran, then a Caliph must be established, all idols must be smashed, and every person must be judged by their relation to this particular standard of Islam. Those considered to be a threat to one's narrow conception of Islam must simply be eliminated - and this is considered to be God's judgment, expressly stated in His word.

For the fanatic, the beheading of some individual is little different than the swatting out of some computer bug, either for the sake of a caliphate or a computer system.

References

- [1] Victor Stenger and Christopher Hitchens, *God, the Failed Hypothesis*, Prometheus Books, 2008
- [2] Richard Dawkins, *The Blind Watchmaker*, W. W. Norton and Company, 1996
- [3] Tariq Ramadan, *In the Footsteps of the Prophet*, Oxford University Press, 2007
- [4] prof. John Swanson, *Great World Religions: Beliefs, Practices and Histories*, part II, *The Great Courses*, www.teach12.com
- [5] FORTRAN, a programming language developed for an early IBM mainframe computer by IBM in San Jose, California, in the 1950s. Though now considered obsolete, many large programming tools originally written in FORTRAN remain in use in the scientific and technical community.
- [6] Bjarne Stroustrup, currently a professor of computer science at Texas A&M university, developed the C++ language, a successor to the popular C language, starting his work in 1979. C++ provides an object-oriented capability to the C language.
- [7] See <http://www.religion-online.org/showarticle.asp?title=2017> for a review by John T. Pawlikowski of two books on the relationship of Pius XII to Hitler's Nazi regime. The Pope essentially cut a deal with Hitler that permitted the Roman Catholic church to continue its religious services in the Nazi occupied territories with no interference, at the expense of the church's agreement not to aid the Jews in any rescue attempts. The two books are:

Hitler's Pope: The Secret history of Pius XII by John Cornwall, Viking Penguin, 430 pp.

Pius XII and the Second World War: According to the Archives of the Vatican by Pierre Blet, S.J. Paulist, 304 pp.

- [8] Genesis 22:2-14.

[9] See Wikipedia or other sources, *Constantine and the Early Church*. Roman Emperor Constantine's conversion to Christianity occurred in 312 AD, following his victory at the Battle of Milvian Bridge.

[10] 1 Kings 7:23. I also mention this issue later in our correspondence. As a mathematician, I marvel that these people were able to fabricate this bowl or "molten sea", probably of bronze, yet didn't notice that if its diameter were 10 cubits, the circumference should have measured about 31.4 cubits, not 30 cubits. Also see [12] below.

[11] Joshua 6:21: "And they utterly destroyed all that was in the city, both man and woman, young and old, and ox, and sheep, and ass, with the edge of the sword." Other sources claim that the Israelites and the Hittites continued to battle for centuries. Many more atrocities in the Old Testament are listed in this web site: <http://www.nobeliefs.com/DarkBible/darkbible3.htm>.

[12] see Petr Beckmann, *A History of Pi*, St. Martin's Press, 1971, chapter 6. Archimedes of Syracuse was born 287 BC. His estimate of pi, using polygons of 96 sides as an approximation, was bounded below by 3.14084 and above by 3.142858. The average of these two is 3.141849, good to four decimal places. He worked this out without the benefit of trigonometry, and without a decimal notation for numbers.

[13] See http://orgs.usd.edu/esci/age/content/failed_scientific_clocks/kelvin_cooling.html for details.

[14] See http://en.wikipedia.org/wiki/Agricultural_subsidy for details on US corn subsidies and their impact on world corn production and foreign farmers.

[15] See http://www.godandscience.org/apologetics/atheists_theists_morality.html for a review of the "moral equivalence" of Christians and atheists through relevant statistical studies. Also see Christopher Hitchens, *Who Says the Nonreligious Don't Give*, Free Inquiry, April/May 2010, p 13. Also see Tom Flynn, *Are Secularists Less Generous?*, ibid, August/September 2010, p 9. One reasonable measure of the "generosity" or "altruism" of atheists vs. religionists is in what these groups contribute per person to various charitable causes. Most surveys show very little difference between these groups. Other studies of divorce, incest, family violence, child abuse, etc. tend to show these rates are higher among more highly religious groups than others. There is also a strong correlation to family income, so one is left with the question of whether it is the low income or the religiosity that contributes to family problems.

[16] Thomas Paine, *The Age of Reason*, first published in 1794 in England. Available from Dover Press, New York.

[17] Christopher Hitchens, *God is not Great: How Religion Poisons Everything*, Hachette Book Group, 2009

[18] Bobby Ghosh, *Islamophobia: Does America Have a Muslim Problem?* Time Magazine, August 19, 2010. This issue also contains statistics about the American Muslim population.

[19] Gottfried von Leibniz, 1646-1716: a German mathematician, philosopher, theologian and poet. Voltaire's satire on Leibniz is of course "tongue in cheek", attacking Leibniz's general optimism about the state of humanity, and his anti-materialistic views. For a learned summary of Leibniz's philosophy, see <http://plato.stanford.edu/entries/leibniz-mind/>

[20] Pope Benedict XVI appears to have recently (November 2010) softened the church's stance on the use of condoms. See <http://www.deathandtaxesmag.com/38245/pope-benedict-the-trojan-horse/> for a review.

[21] Graeme Wood, *What ISIS Really Wants and How to Stop It*, the Atlantic magazine, March 2015, pp 78-94.

[22] Wikipedia article on ISIL: http://en.wikipedia.org/wiki/Islamic_State_of_Iraq_and_the_Levant

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