**Science and ReligionEssay 2 (Due May 6th)  
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The world was always a very intolerant place. And now it has a justified factual basis for intolerance. Science is intolerant of baseless beliefs. Beddington, Chief Scientific Adviser to the UK government, says that we must be intolerant of misguided beliefs up to going into conflict with the transgressors. He says “[Some believe] direct conflict is bad and won’t persuade anyone, but I have to disagree”. And so even asking the wrong question comes into question with this attitude. We shall analyze the dangers of the said question in a holistic sense to realize what is happening in this neighborhood.

Pseudo science is creating problems for the world. National policy and personal decisions should logically be based in science. Yet on issues such as Global warming or the hazards of smoking, if one scientist or institute of repute even remarks that “There is no statistically significant association between secondhand smoke and lung cancer1” or that “atmospheric CO2-derived blessing is as sure as death2” then policy makers can reject the unanimous pleas of hundreds of scientists who are sure that both smoking is hazardous to health and that global warming is so deadly that by refusing to correct it, ‘Mankind is Sleepwalking to the End of the Earth3’. In the light of such abuse of science and the eminent death and doom mankind faces because of it, it perhaps stands to reason the extent to which scientists will go to silence those they think that are not practicing “correct” science.

The attitude of science has remained the same over the years; the waters today are murkier. Georg Cantor, Ludwig Boltzmann, Kurt Gödel and many other ingenious scientists were discriminated against4, so much that it lead them to suicide, because their ideas were in such conflict with the conventions of their time, but form the basis of ours. Science has never taken well to thinkers that upset its foundations. Even though in retrospect it might have benefitted scientific progress if their ideas were considered before they were driven to insanity, it really does not make sense for science to be more accepting in today’s world full of groups and corporations that want to ride the wave of the scientific method for their own benefit.

Now that we have established that the promotion of faulty theories is dangerous, let us look at this exam question in greater detail. The question has some factual problems which is perhaps the most troublesome. It says that “the observation” (which implies the following is observed and accepted), “that fossils of ***all*** the different kind of animals appear suddenly ... with no evidence of ancestors”. This is clearly a wrong observation statement. It is true that many animals do not have a well documented fossil record, but some animals have a very clear lineage of ancestors preserved in fossils. There have been instances where a huge number of

fossils appeared apparently without any ancestors, such as in the Cambrian explosion, but we do find fossils from before this time. Moreover, intelligent design does not use the complexity of cells to explain its idea, but rather the notion of irreducible complexity. The sentence for Lamarckian theory begins with ‘The idea’, and so seems acceptable even though Lamarckian theory has been conclusively shown to be incorrect. Perhaps then problem lies with the English. One could try to see this as a question which aims to teach students to use evidence to corroborate theory. Creationism is not taught in the science classes where this examination was conducted and so students were not being tested on it rather being taught to match theory with fact. Inspection of the rest of the exam shows that it in fact expects the student to believe evolution to be true. Question three states: “Over a long period of time, new species of snails develop. This is an example of X”, the choice of answers being evolution,mutation,selection andvariation, with the correct answer clearly being evolution. I feel this considerably takes away the bite from the danger to humanity that the question under consideration posed.

Nevertheless, the anger by the scientific community was unprecedented. Intellects around the world were angered and message boards filled up with countless people, especially disappointed British from where this question originates, who wanted to see this corrected and those responsible to face criminal offenses. The examination authority issued an apology and guaranteed no further mention would be made of such baseless theories. But the story does not end here. It is but the tip of the iceberg.

Scientists have grown increasing intolerant of religious beliefs and also of those who hold them. Scores of academically sound scientists have to face hostile work environments, suspensions and termination from work and other harsh measures due to their personal beliefs. Such is considered the danger of believing in religion. NASA scientist David Coppedge was “humiliated and demoted” for talking to colleagues about intelligent design even though his job was to investigate the origins of life. Astrophysicist Guillermo Gonzalez was not given tenure because he co-authored a book about the impossibility of life by accident. And then there is the famous Martin Gaskell Case, where Martin was denied an academic job due to his religious leanings despite being far more qualified than the other candidates6.After which Dawkins said that it was okay to discriminate against those that hold religious beliefs but choose to keep them inside, as when the religious scientist does biology, astronomy or any other science he must use facts that he does not believe in which makes him a fraud or more spectacularly in his words:

“He is a fake, a fraud, a charlatan, drawing a salary for a job that could have gone to an honest astronomer.” –Dawkins7

And though now religious scientists are in a minority these are not a few isolated cases but the field is pockmarked with them.

Science will protect its owna and it must in order to survive intact. As must Christianity, Islam and other religions. Science has the redeeming fact that it had a self correcting mechanism

unlike the written in stone ways of most religions. Science can easily give up theories it finds to be at fault, but will still defend with vengeance those it believes are correct. Religions evolved to protect interests of communities and to create a social understanding. Science, despite its foundation in fact and experiment has made its own rites of passage. [Brian P. Frank](http://www.nature.com/nature/journal/v472/n7343/full/472384a.html#auth-1) glimpses into a possible future world where to obtain a PhD one must demonstrate a firm belief in the facts of science by walking across coals.

*“We have known that it is not enough for scientists and engineers to choose cold detachment. Those were dark days of research suppressed, of scientists persecuted for speaking truths that could have saved us all. And what is the result? Global disaster so vast that we still live with the consequences. It must not happen again.”  
  
“Never again,” the crowd murmured.  
  
“We must stand against those who would promote ignorance for selfish ends. We must have true faith! Vikram Singh!” Li barked, “Where do you place your faith?”  
  
Vikram licked dry lips and gave the response. “I place my faith in the facts as revealed by science.”*

*This was their department's most sacred tradition, and everyone knew it. Other disciplines had their own rituals, but this was the Chemical Engineering way.5*

I am sadly reminded of the South Park episode, ‘Go God Go’. Placed far into the future, mankind has left religion as it believes it was the cause of great trouble. Instead there are three warring groups of atheists who believe that their answer to the great question is the correct one and that the other answers are so wrong and dangerous that war must be fought to eliminate misunderstanding. As someone who plans to take up serious science as a career and as someone who thought that science would one day save us all, it is with great distress that I conclude this essay like this.

*All beliefs are equal, but some beliefs are more equal than others*

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a the scientific method and widely accepted theories nowadays the conservation of energy, quantum mechanics etc, previously determinism etc)

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