



IS THE UNIVERSE FINE-TUNED FOR US?

Perhaps the oldest “proof” of the existence of God is the “Argument From Design.” It is a kind of “Argument From Ignorance” because, instead of evidence, it insists that the only answer to a difficult (and seemingly unanswerable) question is “God.” Of course, this answer is more than a little vague and ambiguous, if not to say, a bigger and more insoluble mystery that it purportedly solves.

By the turn of the 18th Century, the findings of Isaac Newton had led to the nebular theory of the formation of the solar system. Pierre-Simon Laplace’s version of it caused him to respond to Napoleon that “I had no need of that [God’s intervention] hypothesis!” The argument subsequently focused more on biology until Darwin’s work showed that no deity was necessary there either. Modern cosmology and physics have since provided mysteries that, it is claimed, are “explained” by a deity, the most interesting of which is the problem of “fine tuning.”

“Fine tuning” is the idea that the fundamental constants of physics, expressed as dimensionless numbers, are precisely such as to allow the formation of atoms, and stars, and, especially, life as we know it. Even the tiniest variation in these constants, it is said, would make these things impossible. No one knows why these constants are what they are or how they arose. They come out of equations that describe physical phenomena having to do with the strength of the fundamental forces of nature, the ratios of the masses of subatomic particles, and so on. One that is frequently mentioned is the fine-structure constant, α , so called because it comes out of an analysis of the fine structure of the spectral lines of hydrogen.

If, as some say, these fundamental constants were related to matter and energy at the beginning of space of time, it is natural to ask how it is that they all came out as they did. The famous British astronomer and physicist Fred Hoyle (1915-2001) – who came up with the term “Big Bang” even though he denigrated (and perhaps as a way of denigrating) the idea! – said that the apparent “fine tuning” of the fundamental constants “suggests that a super-intellect has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature.” The fine tuning problem, it is said, caused the famous atheist philosopher Antony Flew (1923-2010) to turn to De-

ism and other scientists to theism and Christianity.

But embracing ignorance as if it were knowledge is not understanding. And mysteries should not be cause for despair or justification for a capitulation to mindless faith in otherwise groundless and incoherent claims. We do not know why the fundamental constants of physics and the regularities of the universe are what they are. We don’t even really know how the universe would be different if such constants were a bit different. Claims to the contrary are sheer speculation that cannot be tested. There are many possibilities to be sorted through, considered in detail, critiqued and tested, and very likely many possibilities yet to be thought of. The problems concerned go to deep, even philosophical questions about reality. For example: why must $F=ma$ or $E=mc^2$? As Hoyle’s countryman and contemporary JBS Haldane (1892-1964) put it: “The universe is not only queerer than we suppose, but queerer than we can suppose!” And when it comes to other possible universes then even this may be an embarrassing understatement.

The most obvious explanation for the “fine tuning” problem – if it is even formulated properly – is simply that we would not exist to wonder about it in a universe with different fundamental constants. As it is, most of the universe is quite inhospitable to life, most of the earth is quite inhospitable to human life, and during most of the existence of our planet there were, in fact, no humans around. The next time a large asteroids smacks into the earth there may again be no humans around. The “fine tuning” problem also becomes one of perspective if it happens to be the case that what we can see of reality is only a small part of it all. There is already good reason to suppose that most of the universe is physically and observationally inaccessible to us. There may be vast parts of the universe, or other universes – which we are not quite sure what that may even mean – that dwarf what we can observe. And if all of these other places or universes are lifeless – as most of what we can see is – then it would make sense that our existence may be highly improbable. It is also an open question as to what would really happen if the fundamental constants were different. For all we know, life could develop based on totally different principles than those we know. It would take many people many years to even begin to consider

(continued from page 1)

the possibilities and even those would probably be untestable.

Importantly, the motivations of theists should not deter a consideration of whether “a superintellect has monkeyed with physics, as well as with chemistry and biology.” For our universe could be the result of a “superintellect” – or a number of them – who figured out how to do such things. Was ours their crowning achievement? Or one of many early disappointments? Was it even a serious effort? Or a third-rate sloppy experiment? Or a blue book final exam response to a problem such as: “Define the universe and give three examples?” What might have become of such “a superintellect?” Did they stick around to watch what happened? Or did they lose interest and move on to other things? There have even been speculations that the observable universe may be a simulation run by a super-advanced intellect or intellects. Sadly, none of these possibilities seem testable. And, at least presently, they seem more metaphysical than scientific.

There are more pedestrian possibilities. It may be, for example, that the fundamental constants of physics – there are about 26 currently – are, in fact, not really so fundamental. They may be related to or derivable from each other such that there may as few as only one really fundamental constant. Scientists seeking a “grand unified theory” hope for such a simple outcome of their work. It could also be that they arise naturally or inevitably from physical processes. Even solving the “fine tuning” problem would not eliminate difficult questions. Indeed, the most surprising thing would be if we ever ran out of questions to ask and things to be puzzled about.

Finally, contrary to the claims of apologists for theism or some brand of theism, if a “superintellect has monkeyed” with the fundamental constants of the universe, such a being could not be omnipotent. It could not be “God” as believers understand the idea. For if a “superintellect” had to choose specific and precise values for things to turn out properly, then it would mean that creating a universe or a space-time reality is subject to rules of some kind. It would mean that just as one must use certain ingredients and processes to, say, bake a cake, “God” is similarly constrained. It would be a cosmic or super-cosmic instance of the observation of Francis Bacon (1561-1626) that “Nature, to be commanded, must be obeyed.”

The obvious next question is: where did the rules for making a universe or a space-time reality come from? Who made those rules and could they have been made differently? If they could have been made differently, then the whole idea that the “fine tuning” problem proves the existence of “God” falls apart.

All NTCOF events can be found through our website calendar , or our meetup page, from which you can RSVP, at:

- www.meetup.com/church-of-freethought - JOIN THE NTCOF MEETUP GROUP !!!

Social Luncheon: Today, immediately after our Service, join us for lunch and discussion. Today we meet at the Jason’s Deli on MacArthur Blvd just south of 635, at 7707 N MacArthur Blvd, phone (972) 432-0555.

Freethought Salon: Get together to discuss today’s service topic or other conundrums of interest for Freethinkers. Most Sundays, over breakfast, at the Hilton DFW Lakes Hotel restaurant in Grapevine beginning 10:30 AM; see the meetup site!

Game Night: The regular game night crew meets nearly every Friday night at the IHOP on 2310 Stemmons Trail (I-35), near Northwest Highway (Loop 12). Plan to arrive at about 7:30 PM, and stay late playing Risk, Rummikub, and other fun games!

Have Another Idea? Email or call us about it!

**PLANNED FOR NEXT MONTH:
“RELIGIOUS FREEDOM:
USE IT OR LOSE IT!”**
 >>> Sunday, July 6th, 2014 <<<
**SHERATON GRAND DFW AIRPORT
SE CORNER OF 114 AND ESTERS**

**YOUR GENEROUS DONATIONS
TO THE NTCOF ARE NEEDED,
APPRECIATED,
AND TAX-DEDUCTIBLE!!**



The North Texas Church of Freethought
The Fellowship of Unbelievers

Presenters:	David Burgess Tim Gorski
Welcome Coordinator	Mark Barnick
Videographer:	John Gauthier
WebMasters	Rusty and Sarah Nejdil

**P.O.Box 202447, Arlington, TX 76006
(214) 702-2050**
Website: www.churchoffreethought.org
Email: info@churchoffreethought.org