

From: Ivan Antic <iantic@***>
To: khrapko_ri@***
Subject: Anthropics, God, and other unnecessary ideas
Date sent: Mon, 2 Sep 2002 22:36:05 +0200

Respected Professor Khrapko,
I had the pleasure of attending your lecture at Gamow's Odessa Summer School. Even though I am a big anthropics-opponent (I believe my friend Zoran already announced me as such) I liked the lecture very much and consider it one of the best lectures at the conference.

Zoran and I have a long history of discussions on similar subjects, but he has so far failed to convince me that anthropic principle(s) have any value. I have tried to collect all my impressions and questions together with some comments on Your lecture. I wrote them down in a Word file which I have attached to this message. Please be so kind as to read it and help me understand the matters mentioned inside.

with respect,
Ivan M. Antic

[The attachment is available seperately at: www.ivantic.int.eu.org/fizika/radovi/fb00]

From: "Radi Khrapko" <khrapko_ri@***>
To: "Ivan Antic" <iantic@***>
Subject: Re: Anthropics, God, and other unnecessary ideas
Date: Tue, 03 Sep 2002 15:43:33 +0000

Thank you, I can read your paper

From: "Radi Khrapko" <khrapko_ri@***>
To: "Ivan Antic" <iantic@***>
Subject: God
Date: Wed, 04 Sep 2002 09:23:12 +0000

Dear Ivan! Your criticism of my report is excellent. You are right. Thank you. I shall try to answer you later. But your God is awful. Please, see a fragment.

The ideal proposed by the very essence of scientific methodology can only be satisfied by a divine creature.

It is not clear for me. An ideal of scientific methodology is reductionism, i.e. a reduction of complex to simple, but not an inventing of super complex and essentially incognizable designs such as God.

If we agree that science and religion are two opposite approaches,

Science and religion are not opposite approaches. The science and religion supplement each other in the sense that the more one, the less another. An uncertainty relation relates them: the science is more certain, the religion is less certain. The religion blossoms only in the territory, which have been not seized by a science. And this territory is steadily reduced. But the truth, it is peculiar to a science, having answered any question, at once to set several new.

and if we agree that logic is the very core of all science,

It's true. And it implies an incompatibility of all science with idea of God since a base of religion is alogizm. "Credo quia absurdum."

we cannot help wondering how the ultimate goal of essential natural sciences such as physics and cosmology is – God!

The ultimate goal of natural sciences is to understand everything and to exclude God. Laplace showed this purpose. "My Emperor, I do not need the hypothesis", Laplace said to Napoleon about God.

One of the basic rules of logic states that the best system is the one with least postulates.

This rule of logic does not exist. The logic does not estimate what is better, and what is worse.

Therefore, if we want to make cosmology and physics best systems we must find that one postulate. But however we may call that one postulate it will undoubtedly (especially in cosmology) be either some form of God

A postulate is something very simple, self-obvious, axiomatic. For example, the second Euclidean axiom is, if A equals B, and C equals B, then A equals C. God is not an axiom by no means. The statement that God is an axiom is monstrous.

Your Radi Khrapko

From: Ivan Antic <iantic@***>
To: Radi Khrapko <khrapko_ri@***>
Subject: Re: God
Date: Wed, 4 Sep 2002 22:37:19 +0200

Dear Professor Khrapko,
thank you very much for the nice words. I am looking forward to reading your reply.

I am also grateful for your comments on my understanding of Zoran's paper. I am glad I was wrong because my being right would cause a huge mess in views on science and religion. However, I think you misunderstood me on several points, and I shall try to clarify them.

> The ideal proposed by the very essence of scientific methodology can only
> be
> satisfied by a divine creature.
>
> It is not clear for me. An ideal of scientific methodology
> is
> reductionism, i.e. a reduction of complex to simple, but not an inventing
> of
> super complex and essentially incognizable designs such as God.

Even though reductionism is only one view on scientific goals, I agree with you. Reductionism is exactly what I tried to say by sloppily calling upon non-existing Logical rules. Anyway - the absolute reductionism would be a single statement that explains everything. It seems that God is the only thing that satisfies this conclusion. God is not a complex idea, quite the contrary: we can simply define him by saying "God can do everything" or "God does everything" or "God knows everything (but humans cannot understand it)". God is simply an absolute universal quantificator and qualificator.

"Why is the Sun yellow?" - "Because God made it so"

"How did the Universe begin" - "God caused the Big (Original) Bang"

"Why are we alone?" - "Because God wishes so. We cannot understand His reasons"

My point is: whatever science spawns as the "final equasion" - the final reduction - it will be undistinguishable from the idea of God.

> Science and religion are not opposite approaches. The
> science

I still think they are. They are both directed towards learning the truth(s) but have very different (if not opposite) approaches: science is extremely critical, objective and has strict rules; religion is based only on faith, however irrational it may turn.

-Religion finds a book that says some people 3000 years ago had the lifetime of 900 years. Science activates the ratio and shows that people had the average lifetime of 30 years back in those days

-Religion takes the same book and believes that the human kind is the

result of two series of incests (Adam and Eve, Noah and his Wife). Science says that absence of incests is one of the biggest reasons why we have evolved to this point

Science gives proofs, religion insists on belief. Since there is no way to visit the past (yet) both science and religion could be right. But the difference in approach is obvious.

- > It's true. And it implies an incompatibility of all science
- > with idea of God since a base of religion is alogizm. "Credo quia
- > absurdum."
- > The ultimate goal of natural sciences is to understand
- > everything and to exclude God. Laplace showed this purpose. "My Emperor,

Exactly! That is so true!

this is what makes my (Zoran's) 'conclusion' look morbid. If we look from this side science strives to exlude god (ergo, it is opposing religion); but if we look from another side - science strives to reduce everything to one - and that one will (by its logical characteristics) be: God. The paradox is frightening. However, I believe I made some serious mistake in developing the idea and reaching this conclusion.

- > One of the basic rules of logic states that the best system is the one
- > with
- > least postulates.
- >
- > This rule of logic does not exist. The logic does not
- > estimate
- > what is better, and what is worse.

You are right. I have heard that 'rule' many times but it definitely doesn't belong to Logic. Nevertheless, reductionism is the main direction of mathematics and physics, as well as many other sciences.

- > A postulate is something very simple, self-obvious,
- > axiomatic.
- > For example, the second Euclidean axiom is, if A equals B, and C equals

not necessarily! In the days of Euklid & Co postulates were obvious. Today, anything can be a postulate as long as it doesn't make any contradictions in the system it creates. I remember reading about some mathematician who re-wrote the Euclidian geometry using only a circle and a line (or something like that). Simple postulates are just more convinient to the human mind.

nevertheless, earlier above I tried to explain that God IS simple (but not obvious to a non-believing mind)

I'm sorry for the long reply,

yours,
Ivan Antic

From: "Radi Khrapko" <khrapko_ri@***>
To: "Ivan Antic" <iantic@***>
Subject: Re: God
Date: Fri, 06 Sep 2002 19:08:07 +0000

Dear Ivan, I am sorry but
God, who can do everything, contains everything. Your God contains the
Universe, its past and future. Your God duplicates the Universe. So, God is
more complex than the Universe.
As a matter of fact, to say, God made it, is the same as to say, I do not
know how it was made, or it is even worse because saying, God made it, you
balk at scientific research. All Biblical stories are foolish fibs, which
resist scientific progress
Excuse me,
Your Radi Khrapko

From: Ivan Antic <iantic@***>
To: Radi Khrapko <khrapko_ri@***>
Subject: Re: God
Date: Sat, 7 Sep 2002 21:30:26 -0100

Dear Mr. Khrapko,
allow me to try, once more, to make myself even more clear:

> Dear Ivan, I am sorry but
> God, who can do everything, contains everything. Your God contains the
> Universe, its past and future. Your God duplicates the Universe. So, God
> is more complex than the Universe.

OK. Let us first take a look at the alternative: the science. Science takes this universe, its past and future, complicated as they are, and tries to reduce the description and ontology to a few equations. To some extent - it succeeds. According to physics, all existence and everything that is going on in this universe can be described by the 4 forces. Even though these 4 forces "contain" the entire universe (and infinitely many others, if given different initial values!) the system IS simple. BUT, as we all know, the system is not perfect. We can always ask another "why" (or even "how") and remain without an answer. Whatever we proclaim as elementary particles one could always wonder if they could be complex after all. Whatever we put at the beginning of time and space, one can always ask "How and why did that happen". The very bases of scientific methodology seems to prevent us from ever closing the system.

However, if we let God take over from that point, the system could be closed.

What you refer to as my god is not any more complex than the ultimate scientific reduction. If we REDEFINE the universe from the god-aware point it is the simplest possible system: god is everything. When you say "everything" you don't have to say anything more to complete the definition. You don't have to list the past, future, stars, planets, people.. all of that goes under "everything". Can it be any more simple than that?

> As a matter of fact, to say, God made it, is the same as to say, I do
> not know how it was made,

That IS the psychological origin of the idea of God, but it is still a VALID EXPLANATION. Logic (or anything similar) doesn't say an explanation has to be understandable by humans to be valid. Maybe we don't understand God, maybe noone ever will, but that doesn't mean he could not be the reason and explanation for all existence.

> or it is even worse because saying, God made it, you balk at scientific
> research. All Biblical stories are foolish fibs, which resist scientific
> progress

The validity of the divine explanation against scientific criteria is exactly the point of Zoran's paper and my elaboration. It does make us wonder if science will ever satisfy human curiosity, but we must not hide from self-examination even if it does concern the scientific concept itself.

My examples of biblical idiotisms had the purpose to show what religion is all about. At the beginning of renaissance, when science and religion were equal, people actually believed in those stories. Whole christianity has only one source of knowledge: The Bible. The religious don't use hypotheses, experiments etc. - they only use faith. I am writing all this only to prove one thing: science and religion are using opposite methods (you denied this in your second letter to me).

NOTE: I am not a religious person. I do not believe in any form of divine creature but I am intrigued by the strange convenience of such a hypothetical figure.

I did my best trying to explain the points of Zoran's paper. However, I believe it would be best if he could continue defending it from now on. I am more interested in the points I presented in my first letter to you (the Word file). I hope you will find the time to consider them and provide me with some answers.

with respect,
Ivan Antic

From: "Radi Khrapko" <khrapko_ri@***>
To: "Ivan Antic" <iantic@***>
Subject: Re: God
Date: Mon, 09 Sep 2002 14:32:14 +0000

Dear Ivan Antic

Indeterminism means that we do not know what will be, but indeterminism does not hamper us to know what will not be.

What is pleonasm? Please, be simpler. Full determinism is myth independently of QM.

The convenience of God is less than convenience of sand where an ostrich hides its head.

A divine explanation is nonsense. There is a divine nonexplanation. Idea of God never satisfies curiosity of a normal human being.

The statement "We can use God for explanation, but we shall never understand God" is pathology.

Logical explanation is always understandable by humans. A logical is understandable by definition. I cannot discuss with a man who does not use logic. It is another civilization.

Thank you

Radi Khrapko

From: Ivan Antic <iantic@***>
To: Radi Khrapko <khrapko_ri@***>
Subject: Re: God
Date: Mon, 9 Sep 2002 19:32:57 -0100

Respected Mr. Khrapko,
in your last letter you expressed a certain amount of irritation. I
apologize if my persistency is the cause of that.
You also wrote some rather suspicious conclusions; I feel awkward
correcting an university professor, but you leave me no choice:

> Indeterminism means that we do not know what will be, but indeterminism
> does not hamper us to know what will not be.

I have not studied QM yet, but I believe that it just gives the
probabilities of things appearing or happening somewhere. But, just as it
cannot give 100% (1) probability of something happening, it cannot give 0%
(0) probability either. All results are given within the interval (0,1).
Therefore, QM (=indeterminism with Copenhagen interp.) cannot say if
something is impossible => anything is possible.

> What is pleonasm? Please, be simpler.

Webster's Dictionary says: "pleonasm n. 1. the use of more words than are
necessary to express an idea (...)"
e.g. "a round circle" , "wet water" , "hot fire"

> Full determinism is myth independently of QM.

I cannot see what implies this conclusion. Even within QM, it is the
interpretations that imply indeterminism as an inherent feature of nature.
Bohm, for example, claimed that the universe IS deterministic and that QM
is just another kind of thermodynamics (roughly said).

> A divine explanation is nonsense. There is a divine nonexplanation. Idea
> of God never satisfies curiosity of a normal human being.

1) it does satisfy the curiosity of millions of people. are they normal or
not - who is to say?
2) we seem to be taking two different roads here. Your goal seems to be to
satisfy your curiosity, and mine is to learn the truth. One doesn't
necessarily imply the other.
> The statement "We can use God for explanation, but we shall never
> understand God" is pathology.

once again: human understanding is NOT the criterion for truth!

> Logical explanation is always understandable by humans. A logical is
> understandable by definition.

there is no such definition.
Even if all this you say is valid, you are still evading the fact that god
IS simple and thus satisfies the reductionistic requirements whether we
like it or not.
I don't like this fact any more than you do. I am confused and almost
frightened by it, and that is what makes it so interesting.

thank you for reading,
Ivan Antic

From: "Radi Khrapko" <khrapko_ri@***>
To: "Ivan Antic" <iantic@***>
Subject: Thank you
Date: Wed, 11 Sep 2002 16:35:37 +0000

Dear Ivan Antic:

You are right, I am rather irritating. But you are not better. You worry yourself and make many grammatical mistakes.

And you are not right. We do not know what point a particle will get, but we know that it will not get the points where $\psi = 0$. We do not know what point a particle will get, but we know that it will not get two various points at once. Laws of physics imply many interdictions. The God may do everything. The nature submits to laws. The perpetuum mobile is impossible. An idea of the divine arbitrariness arouses my loathing.

Anthropic principle is not a tautology, conditions-for-life = life. The anthropic principle is: conditions-for-life is improbable. The probability of an anthropic universes is very small against the background of all universes. A little change of physical constants may make the universe is unsuitable for life. In other words, the area of values of the constants permitting life is extremely small. The area of the values admitting a civilization is even less. We shall name this area the anthropic area. Why constants have got in the anthropic area?

It is impossible to predict a behavior of a chaotic system in the classical mechanics. Such a system is unsteady with respect to fluctuations. See, for example, I. Prigigine's works.

Dementia of millions of people are immensurable. Life-time of the industrial civilization will be very short because of these dementia.

It was you who wanted to satisfy human curiosity by the divine explanation.

I, not you, want to know truth. But God is not the truth. God is a lie.

Human understanding is not a criterion for truth, but a lack of the understanding is not a criterion for truth so much the more.

God is incognizable, omnipotent, allseeing, omniscient, etc. And you claim that God is simple! It's pathology. "Simple" means "easy, not difficult or complicated (He couldn't even answer very simple questions), not complex, plain, stupid (Billy was a very simple boy)" (See Longman Dictionary)

Dear Ivan Antic. Thank you. I do not have all the time in the world.

R. Khrapko

From: Ivan Antic <iantic@***>
To: Radi Khrapko <khrapko_ri@***>
Subject: Many thanks
Date: Wed, 11 Sep 2002 20:32:48 -0100

Respected Prof. Khrapko,
dispite the fact that we did not agree on most points and that we failed to draw any mutual conclusions, I believe I have learned a lot from this discussion. I am truly grateful You found the time and patience to read and comment on my writings.

I am planning to compile our small correspondance and put it on my homepage.
Do I have your permission to do this?

(it will be available at: www.ivantic.int.eu.org/fizika/radovi/fb00)

thank you for your time,
Ivan M. Antic

From: "Radi Khrapko" <khrapko_ri@***>
To: "Ivan Antic" <iantic@***>
Subject: Re: Many thanks
Date: Fri, 13 Sep 2002 17:31:03 +0000

Yes, of course