

# Playing God: A Scientific Fable

by David R. Topper

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Topper is a retired professor of History at the University of Winnipeg in Canada, where his teaching fields were the History of Science and the History of Art. In addition to writing scholarly articles over his career, he published six books, three of which are on Einstein. The last one is an historical novel on Einstein called *A Solitary Smile* (Beeline press, 2019), the writing of which prompted him to go on to write a series of fictional stories and even poems. Topper notes:

The *Playing God* story arose out of my attempt to bring the story of creation – which in most Jewish liturgy is still grounded in the literal seven-day story in Genesis – into present-day cosmology. I want to show that the Jewish idea of God (at least as I see it) is adaptable to this worldview, since a key Jewish conception is that God’s initial creation was incomplete (there are different versions of this). As such, all Jews are commanded to repair the world. Both God and humans are together in this, and hence the chummy dialogue with God in my story.



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## THE JEWISH POST & NEWS

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Candle lighting time Friday is 8:46 p.m.  
Shabbat ends at 9:47 p.m.

**A life snuffed short: 49 years ago a brilliant young med student by the name of Aron Katz drowned in the**

**The enthralling account of the attempt to revive a drowning victim - as written at the time by Dr. John Eadie**

By BERNIE BELLAN  
Fascinated as I was by the story I had

**W**e know now that the universe began with a Big Bang about 13.8 billion years ago.

But what about before that? How do we find out what happened then? There are no data to start with. No experimental information from which to begin. Nothing. Well, not ‘nothing’ nothing, for if that were so, there wouldn’t be a Big Bang. What do we do when we have no data?

Well, Einstein had a way of getting at such knowledge without real experiments: he called it (or maybe we later made up this term) a “thought experiment.” You see, it’s an experiment that you do in your mind. Of course, it helps if you have a mind like Einstein’s. But since he’s dead, you’ll have to rely on me – like it or not.

A good example is the first such experiment, which Einstein performed at age sixteen, and he speculated this way. He asked: “What would the world look like if I rode on a beam of light?” See what I mean by a thought experiment? Clearly this is impossible to do in reality. For one thing, nothing moves at the speed of light, neither when Einstein was a teenager nor now. But in the end, his theory of relativity came out of this idea, and he deduced that nothing can ever travel at light speed – except for light itself.

Now to my thought experiment about what happened before the Big Bang. First, don’t get me wrong, I’m not comparing myself to Einstein. No way. It’s just that I’m using his method to try to penetrate what it was like before the Big Bang. What existed? Well, that’s easy to see – in your mind, that is. Obviously, that was when God alone existed. Only God, all alone. Just God. Nothing else.

Hold it a sec: At this point I need to set up some parameters. Thought experiments work under idealized conditions, such as assuming no friction. For my experiment, the analogous assumption would be assuming no angels – or devils, which were just bad angels – only God alone. Frankly I don’t believe in either of those beings, unlike many people on this planet (come to think of it, probably most people), and contrary to much of John Milton’s Paradise Lost, an otherwise marvelous work of 17<sup>th</sup> century literature, but groundless in heavenly

reality, I'm sorry to say. Which brings me back to long before the Big Bang – and God alone.

Really, think about it. God alone means that not only were there no angels and devils, but also that there was no universe – yes, no universe – indeed, no other existing entity or entities. This also means that there was no space or time. Only God was everywhere, and God was everything.

What would that be like? How to know? Well, let's be God – you know, we'll *play* at being God. Okay? Now isn't that the ultimate thought experiment? I'm game to play being God. Do you want to come along? If you're afraid that maybe you'll be struck by lightning, or something bad will happen to you – well, then, leave now. Right now. Here! Stop! No one's making you read what I'm saying. Goodbye.

Otherwise, here goes ....

*Being God is not all it's cracked up to be. Everything is the same all the – ... time? No. What word do I use here, since there's no time? Just an eternal present, like me, eternal, and being all of existence. That's me. I am everything. And everything is me. But why do I even exist? Come to think of it, I don't know. But I should; after all I'm God, and I should know everything. But I don't know why I exist.*

*The worst part is that being God, believe it or not, is being bored. Because there is nothing else except me, there is nothing to break the routine. Me alone doing, ... well, what actually do I do? I exist, I tell myself. I know that! The problem is that I need something else to break the tedium and give me something else to do, besides just exist. So, I should create something. But hold on, if I do that, I will no longer be everything. I would be creating another existence, a world, and this has never been done before (whatever "before" means). A world that will exist independently of my control – unless I wish to interfere now and then with a miracle or two or three. Ah, what to do?*

*Why hesitate, if I know the future? Well, here's the rub. For this case I am having my future-sense turned off. I don't want to know the future. Not knowing the consequences of my actions gives at least some levity and surprise to my*

*otherwise torpid existence. So, to create, or not to create a universe, that is the question.*

So, God itself contemplated this God-changing act of God.

Well, we know what happened. God created the universe with a Big Bang. And, as such, God was not alone anymore. Now there was a universe to watch over. Of course, you are now probably thinking of God looking at us, with all our joys and sorrows. But, remember: we, as human beings on this little blue planet Earth, came much later than the Big Bang. So, the next question is: right after the Big Bang, what was this newly-created universe like? What was there for God to see?

First, a caveat. Before your mind rushes in the wrong direction: we are not going to bring up the story about the six days God made various earthly things, let alone Adam & Eve. That's the mythology of Genesis. No, here we talk about what (within the speculative framework of present-day astronomy and cosmology) really happened.

The Big Bang universe began as a point of extremely hot, extremely dense matter that immediately doubled in size, again and again, expanding as it evolved, doubling again and again, cooling as it expanded, again and again, creating space and time as it expanded, again and again, cooling but still a dense mass, next consisting of protons and neutrons (and later other sub-atomic particles), colliding and forming the first elements – hydrogen, then helium, and so forth, again and again, expanding and cooling as it evolved. This kept up for about 400,000 years before stars and then galaxies began forming out of this chaos. And this means that for all this time that the universe was evolving, it was – and get this! – totally dark. Yes, completely dark. Pure black. Not much to see. Plus remember: now there was time (that is, the passage of time), so this 400,000-year period was a real thing for God to experience.

But there's more! This relative darkness across the entire universe was still true for – and here's another shocker! – the first billion (yes, I said billion) years. Even though the first stars and galaxies were now forming and evolving, they were still sparsely scattered throughout the universe, so that seeing it from

the outside (if that makes any sense; I guess, a God's sense) the entire universe was still fundamentally dark. Indeed, cosmologists call the first billion years of the universe the Dark Age. Of course, this is all a far cry from what we find in Genesis, but that's beside the point.

Who knew about this Dark Age? Besides God that is? Actually, no one else, until very recently. We've only realized this in my lifetime, as contemporary astronomy has discovered so much of this mind-blowing information. After the Dark Age, as the expansion continued, the universe finally lit up ("let there be light") and it started overall to look much the way it does today. Incidentally, the new James Webb telescope, placed about a million miles from our Earth around the start of 2022, has [as I write this] just generated the first images. Eventually it will be able to penetrate back to the early universe around when those first stars and galaxies were forming – if all goes as planned.

Although this mental journey of mine began with the question of what it was like before the Big Bang, and we played at being God to find out, I feel I cannot stop here, until it gets to us – that is, we human beings on this little blue planet. So here goes.

About 4.5 billion years ago, a dense cloud of interstellar gas and dust started collapsing and was set spinning, due to a shock wave from a nearby supernova, and by the law of angular momentum, the more it collapsed, the faster it spun – and, as such, pieces of it were sent by centrifugal force into orbits around a central star. The pieces coalesced and cooled, forming planets and moons, as the star shrunk into the Sun that we have now. Incidentally, the size of our Sun/star tells us that it has a 'lifespan' of about 10 billion years. So, this means that our Solar System's 'life' is about half over. Also, when it's about 7.5 billion years old, the Sun will grow into a red giant and encompass the entire orbit of our earth, destroying everything. In the end, it will just shrink into a dead white dwarf, having used up all its hydrogen. But that's in the far, far future (for us). So, back to the past.

Because of the special conditions on this third planet from the Sun, around 3.8 billion years ago life began, single-cell organisms, various viruses; and by 1.5

billion years ago early forms of plants and fungi and animals. And hence it went, or really it evolved. We know that around 65 million years ago the dinosaurs and other categories of plants and animals were wiped out in a mass extinction. This event was crucial for my story, for with those giant creatures gone, physical space opened up making room for the small mammals to emerge, evolve, and ultimately dominate the planet. And thus 6 million years ago humans diverged from chimpanzees and bonobos – eventually becoming homo sapiens as we know ourselves today.

Hence, we humans finally appear in our story, having avoided the Adam and Eve myth. But we still have a residual issue to deal with. Let me explain, for here things get tricky. We are talking about life being formed in the universe. But we only know of this one case of the evolution of life: namely, here on earth, a planet in our solar system, near the edge of what we call the Milky Way galaxy, which is part of a cluster of galaxies that ... well, you get the picture.

Of course, there may have been an evolution of life elsewhere in the universe, and there is much speculation today of this probably being true, due to the recent discovery of many planets out there that are circling around stars with conditions likely conducive to living things. But, despite the fact that lots of people believe that alien beings exist and that they have been and still are visiting us in their UFOs, the scientific reality is that we on Earth are the only known case of life in the universe. And hence the only example where we can again continue playing God.

We have the story of God's creation as told in Genesis. But what would a God who created the Big Bang say?

*Well, you see: I did create a universe! I guess it was kind of on a lark, but here it is anyway. And time, as noted, began. The passage of time. And space too. Of course, your smart guy Einstein spoke of space-time, but that's a story for another time. Although, by the way: he was right!*

*It started with the Big Bang. And you know what happened then, as this universe evolved from that point of almost infinite density to the universe as it is now, 13.8 billion years later. Quite an achievement, wasn't it? Worthy of all the*

*praise that humans like to shower upon me with their prayers, starting with the Psalms.*

*So, my universe was quite an accomplishment. And I was not bored during that early Dark Age, because I could see into that dark space and watch as stars were forming, and as they clustered together into galaxies of various sizes and shapes. With my future-sense turned off, it was a marvelous show for me to watch. It kept me constantly occupied, and never bored.*

*Nevertheless, it was difficult realizing that this universe had taken something from me, out of me, away from me – for I no longer was, as before time began, all that was. Now there was this other entity – and growing, constantly taking up more space – well really creating space as it went.*

*Now that the universe is here, in existence, what will happen to it? Your cosmologists today have three scenarios as to what will happen as the evolution of the universe continues. One: it expands faster and faster forever, with everything dying in the process. Two: the expansion eventually slows down, but that takes forever, and again everything dies in the meantime. Three: the expansion finally stops and the process reverses, such that it returns to the Big Bang, and then (probably) it starts all over again. This is a cyclic universe. To be honest (can God be anything but honest?), I peeked into the future to see which one of the three is going to happen, but I'm not telling you now. Let your future scientists find this out as they probe deeper into my creation.*

*As you see, death, of various kinds, was built into the system. If I didn't like what I saw, I could do away with it as quickly as I made it. Strange perhaps, but I was exceedingly upset at the extinction of the dinosaurs about 65 million years ago. They were interesting to watch and seemed to be having a good time on your planet. Of course, there was lots of violence and fighting – after all, they were dinosaurs.*

*Frankly, the violence and death prepared me for you humans later on. The extensive warfare between human groups, on and on. No one ever seemingly living in peace. Of course, I should have been prepared for this with the heavenly battles between the good angels and the bad angels. But it still bothered me*

*deeply. On Earth, the animals mainly kill for food. Actually, some don't, and I see that your scientists are now discovering some of these sadistic animals. But you humans kill for the most trivial reasons. So, yes, many times I thought of ... well just taking the lot of you out of your misery. Wiping out all that I made. Incidentally, that Sodom and Gomorrah story in Genesis is nothing compared with what I saw, and still see. But I'm leaving you alone, along with the rest of the universe.*

Wait a minute. What are you doing, talking about angels? I thought we both knew that there were no angels. A fantasy of humans. Have you been reading Milton or something?

*I read everything. And I like Milton, and how he portrays Satan and others.*

Yes, of course you read everything. What am I thinking? But angels are a myth, so why perpetuate a falsehood?

*You are saying this, not me.*

I can't believe what I'm hearing. You must be teasing me? I know that God cannot tell a lie. But it looks like God can tease.

*Why is this angel/devil thing so important to you?*

Oh, so you're going to turn this around against me. I'm not going there. You and I both know there are no angels, of any types. That's why you created the universe. And I'll just leave it there. I'm done. You may have the final words – as long as you don't mention angels.

*You must remember this: the universe is just an experiment; an experiment is just a query – all done to alleviate my ennui, purging my melancholy and gloom. However, in time, it was replaced by rage and pain, shock and despair at how you humans behave. What did I make, I ask myself? The few righteous on your planet feel the same way. The Rabbis (who incidentally believe in dybbuks) say my job was incomplete and you humans have to complete it – to perfect it. They are right.*

*So, I tell you: do as the Rabbis say. Get off your buns and change the world.*



*The experiment continues.*

*Praise the Lord!*

You broke the deal. I'm not going to bite at that dybbuk thing. Who knew that God would pull my leg? Pushing boundaries, coming close to, but not quite, telling a lie. What a jokester. Who knew?

*Praise the Lord!*

Yeah, that too!

## Science

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By

DAVID R. TOPPER

We know now that the universe began with a Big Bang about 13.8 billion years ago. But what about before that? How do we find out what happened then? There are no data to start with. No experimental information from which to begin. Nothing. Well, not 'nothing' nothing, for if that were so, there wouldn't be a Big Bang. What do we do when we have no data? Well, Einstein had a way of getting at such

pen to you – well, then, leave now. Ring you read what I'm saying. Good! Otherwise, here goes ....  
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