

Re: "The Arrow of Time"

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- *From:* "AllYou!" <Idaman@xxxxxxxxxxxxxxxx>
 - *Date:* Mon, 6 Feb 2006 15:08:50 -0500
-

"tomgee" <tyropress@xxxxxxxx> wrote in message
<news:1139247573.423469.145750@xx>

>

AllYou! wrote:

> "tomgee" <tyropress@xxxxxxxx> wrote in message

> <news:1139052881.782294.5810@xx>

>>

>> AllYou! wrote:

>>> "tomgee" <tyropress@xxxxxxxx> wrote in message

>>> <news:1138900128.685489.207630@xx>

>>>>

Re: "The Arrow of Time"

>>> AllYou! wrote:

>>>

>>>> Time is simply a mathematical

>>>> concept used to compare the aggregate change in the state of >>>> the

>>>> universe between two events.

>>>>

>>>> Between events, yes, but it is more than that. Entropy exists >>>> only

>>>> where time exists, and time exists only where time passes. The

>>>> fact of the passage of time refutes the metaphysical claim that >>>> time does

>>>> not exist.

>>>>

>>>> Entropy exists as it exists.

>

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That's gibberish, I'm afraid. I expect better from you.

>

>>> You're trying to prove the existence of

>>> time by simply asserting it.

>

No, not true. You are the one trying to prove the non-existence of

time by simply asserting that. To prove that, you must explain the

phenomena of entropy and motion without the use of time. You cannot do

that, so you simply ignore my call of your bluff.

I think that you're the one who now posts gibberish. The non-existence of something can only be demonstrated by the absence of any evidence that it exists, and there's no evidence that time exists. As to entropy

en-tro-py (P) Pronunciation Key (ntr-p)
n. pl. en-tro-pies

1) Symbol S For a closed thermodynamic system, a quantitative measure of the amount of thermal energy not available to do work.

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- 2) A measure of the disorder or randomness in a closed system.
- 3) A measure of the loss of information in a transmitted message.
- 4) The tendency for all matter and energy in the universe to evolve toward a state of inert uniformity.
- 5) Inevitable and steady deterioration of a system or society.

I'll assume that you're interested in #4. All matter and energy in the universe tends to evolve toward a state of inert uniformity. Why must that include any component of time any more than mere motion?

Let's take the case of releasing a gas into a closed container at vacuum. Entropy says that the gas will tend to fill the room to the same density. Well, this didn't happen by magic. The molecules of gas bounce off each other, and a certain number of them will bounce in a direction where there are no other molecules, and so they'll exist in another part of the container. And now that there are less molecules in the corner of the container where they were first released, and some in the other corners, the concept of entropy has begun, and this bouncing and spreading of the molecules will continue until the gas exists throughout the container at the same density.

Except for remembering where the gas was, and predicting where it will go, what has this got to do with time?

>>> For instance, you say that time exists

>>> only where time passes. But how can it pass where it doesn't >>> first

>>> exist? That's a circular argument.

>>>

No, that is not a circular argument. That is one definition of time,

and it is correct. There are many other definitions just as valid as

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that one.

But that one is circular. Time passes where it exists? Splat rays from Mars only move where they exist, but do they exist? And if they do, what are they?

You cannot have time without it passing.

Well, if you take the existence of time on faith, I suppose that's true, but this isn't alt.religion. Where's the evidence that it exists?

Aging is proof

that time exists and that it passes.

Aging is proof on the physical phenomena at play in biology. It has nothing to do with time.

Explain how time could exist

without it passing. Not possible. Thus, since aging is evident, time

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must be passing during the aging process.

I'm not making the case that it exists without passing. I'm making the case that it doesn't exist.

>>> Time is simply exists as a mental construct.

>>>

>> Not so. Time passes, as can be evidenced by noting flora and >> fauna

>> growth and death, and in the requirement that time must pass in >> order

>> to measure motion.

>

> LOL! You're still stuck on the merry-go-round. You invent time for > use

> in your constructs, and then point to it's existance in those > constructs

> as evidence of its physicallity.

>

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But you have no ticket for the merry-go-round, where everyone lives

except you! I did not invent the concept of time, but I agree time

exists because I have aged as it passed for me and I can remember what

I did yesterday or ten minutes ago. The past does not exist now but it

did exist once.

That's what I said. Time only exists because you need a way to track your memories, and build your predictions. It's a construct of the mind, and nothing more. The past no longer exists, and the future has yet to exist. So as I said, all there is in the universe, except for memories and predictions, is now.

The math constructs used to measure time are not evidence of time's

"physicallity" and I do not use them as such. My evidence that time

exists is the fact that things age.

What do you mean that they age? You mean that they change, right?

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I do not claim that time is a

physical process as you claim that I do, but I claim that time is a

property of matter. The process of aging is physical evidence that

time exists, but aging is not time itself – it is just the passing of

it.

If time were physical, wouldn't it be capable of affecting something?

> You use math to measure speed, but

> does that mean that math is anything more than a mental construct?

>

No, it does not mean it is anything more than that.

Then pointing to the fact that you need time to measure speed proves nothing either.

> The point is that we don't need time to measure speed. Just like

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- > distance, and mass and so many other naturally occurring physical

- > properties of matter and energy, we could just as easily measure > speed

- > by arbitrariness picking a naturally occurring speed, and use that as a

- > standard by which we measure all other speeds.

- >

You're not thinking well.

Whereas it remains to be seen as to which of us is not thinking well, such assertions demonstrate your proclivity to make useless pronouncements..

Speed is the rate of movement irrespective
of direction. It is equal either to distance traveled divided by
travel time, or to rate of change of distance with respect to time.

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Well, I've given you my counter-argument to this already, so I'll simply note my rejection of this assertion here.

You cannot have any speed as a standard to measure all other speeds

unless you have the time factor involved in the measurement.

That's only true if we continue to repeat the mistakes we've already made. However, if we start with a clean slate, as we must if we're to have an intellectually honest debate, then it's perfectly reasonable to take a speed and use it as a standard by which we can compare (i.e., measure) other speeds. For instance, what's your measure of time? Portions of the total motion of the rotation of the Earth on it's axis? Or orbits around the Sun? You cannot express time except as a function of motion in the first place. So why the extra step?

> But instead, we chose to

> use distance (as measured by using other standards of distance), and

> time (which we originally invented as the standard for all motions), > and

> use a function of those to calculate speed.

>

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Time is not a standard. It is a property of matter. In determining motions, time is a factor in the equation but it is by no means a standard like e.g. the kilogram or the second. A second of time is a standard, but because it varies depending on an object's state of motion within the universe and wrt other objects, it is a standard only within the ref. frames of specific objects. That is what SR shows us – that our stds of time measurement are valid only wrt particular states of motion.

So tell me, going back to the beginning of when we used a second to measure the passage of time, what was a second? A length was measured by using a standard of length, and weight was measured by using a standard of weight....etc, so what was a second?

- > What we should've done is taken distance (as measured by using other
- > standards of distance), and motion (as measured by using other > standards

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> of motion), and derived time as a function of the two of those.

>

>

>>>> Actually, it's a useless layer of

>>>> complexity whereas units of motion, which is an actual >>>> physical

>>>> property

>>>> of matter, could suffice quite nicely in it's place.

>>>>

>>>> "Units of motion"? Ya mean like seconds, hours, days, etc.?

>>>

>>> Well, we could certainly use the same labels.

>>>

>>>> Without

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>>> those time measurements, explaining the passage of it would be >>> far

>>> more

>>> complex than any babelfish could ever explain.

>>>

>>> But you're still confused. There is no passage of time if time

>>> doesn't

>>> exist.

>>>

>> If time did not exist, that would be true; but since time exists, >> that

>> is false. Thus it is you who is confused.

>

> You're argument amounts to time exists because time exists. first > of

> all, define *exists* in this context, and then secondly, prove it.

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>

I have defined it above, now you define your meaning of "time does not exist" in view of the factual evidence that it is a factor in aging and motion.

You never defined the term *exists* Secondly, in the context of this debate, the existence of factual evidence is that which is under debate, and therefore, has not been established except that you've asserted it. You have no idea how to avoid circular arguments, do you.

>>> The only *explanation* we need has to do with the fact that we

>>> have memories of *past* events, and predictions about *future* >>> ones.

>>> If not for that, the universe would simply exist *in the moment*.

>>>

>> That may be the only explanation needed in metaphysics, but that

>> explains nothing in physics. Memories and predictions have >> nothing to

>> do with the existence of time; rather, they support the physical

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> > passage of time.

>

> So all you have for the existence of time is memories and > predictions.

> Hmmmmmm. So if there were no intelligence capable of having > memories or

> of making predictions, there'd be no support of the passage of time,

> right?

>

No. The fact that the past once existed and the concept of the future

support the concept of time, but they are not all there is to prove

that time exists. Aging and motion are proofs to me that time exists,

so what are your arguments against that?

Well, I've given them above, but I'll summarize again. motion and aging are change, and any attempt to evaluate change requires memory. Without memory, change occurs, but it does so much as the existence of matter doesn't mean anything more than it exists, and that energy exists because it exists, or that any properties of matter and energy exist because they exist. Time is a mental construct we use to measure these

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things, but it's not a property of anything. Saying that time exists because change exists is like saying that splat rays from Mars exists because matter is massive. Matter is massive because it is, and anything more is a leap of faith.

> > The Parthenon is real, built long ago where much time

> > has passed since.

>

> All of the physical processes of the universe have progressed since > the

> Parthenon was built, and so we're able to peg its construction > relative

> to the state of the progression of all of those processes, and > that's

> all there is to it.

>

So you're arguing against yourself now. "Progress", both as a verb and

as a noun, means moving forward or onward. Thus you cannot have

progress without motion and you cannot have motion without the passage

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of time.

The problem here is that the concept of time is so hard wired to your psyche that you're simply incapable of even seeing the arguments presented to you. It's all well and good to reject those arguments, but not being able to see them in the first place is a little sad.

IOW, what you continue to do is use the definitions that have evolved using the concept of time as proof that it exists. But it's improper science to use a mere definition as evidence of anything. It's the validity of the definitions that we're debating, and so to use those definitions as the very proof of their validity is, well, invalid.

Progress, forward, onward, and all other such concepts mean change. That's all.

>> Predictions based on empirical research await the

>> passage of time to come true. You're confusing memory and >> prediction

>> with time like or as if growing potatoes involves time but is not

>> time

>> itself.

>

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> Actually, that's what you're doing. If time were physical, you'd be

> able to show how time affects something.

>

No, it's not. I do not claim that time is physical. I claim it is a

property of matter.

A property is a quality or a characteristic of

something. Things age during the passage of time and that shows how

time affects things.

Wait, you just said that time affects nothing, but now you say it affects everything. If we're to have this debate, I need to know which you'll argue.

> But as you so clearly pointed

> out, you must wait for physical processes to evolve, but there's > nothing

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> about time which affects them.

>

I do not claim that either. Time is a property of matter and as such

it cannot affect that of which it is a property. It is the passage of

time that makes us think time affects things, but actually it is our

own states of motion that affects us by setting the time rates of our

existence. All visible matter is involved in entropy because it exists

in the time dimension, but it is the time rates that determine an

object's age, and the time rates are set proportionally inverse to that

object's states of motion. Thus, time rates are a personal thing

specific to all discrete objects.

The thing that determines an object's age is the at what point during the evolution of the universe it came into existence. IOW, we have the whole of the universe, and it evolves, and we pick a reference process which evolves along with the rest of the universe, and we use some event generated by this process as a marker for when the object came into existence. We call that age, but it's all a memory. the object wither exists, or it doesn't, and that's that.

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When you and I are sitting on the surface of the planet, we are at constant velocity wrt to the Earth and thus we have the same time rate that the Earth has. When we move about the surface, we move faster than the planet and our time rates slow accordingly.

Everything about the biological processes which affect our appearance slow, I agree. All processes slow. But what has that got to do with time? Time is just the way we relate these differences. We use time, and math to do so. Does that mean math exists beyond an intellectual concept too?

> Time is just a dimension on a chart.

> That's it. No intelligence, no charts, no time.

>

>

> >> >> IOW, we use units of length to compare lengths, and units of > >> >> mass

> >> >> to

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>>>> compare mass. We really should use units of motion to compare

>>>> motions.

>>>>

>>> > No. I disagree.

>>>

>>> As is your right, no matter how wrong.

>>>

>> As is your opinion, no matter how wrong.

>

> Opinions can't be wrong.

>

Of course they can. At least, here on this planet they can be.

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Opinions, by definition, cannot be wrong. Matters of opinion are debatable, matter of fact are either right, or wrong. Notions as to what is fact, and what is not, are not opinions, they are conclusions or predictions or even speculations, but they are not opinions.

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