
Subject: Movies, Real Life, and Time Travel (Why not?)

Posted by [abakshi](#) on Sun, 11 Apr 2004 01:14:39 GMT

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JavaxcxThe theory of time and light is a bit confusing:

If at the speed of light, time stops, then shouldn't there theoretically be light at every point of the universe all at once? I'm aware of the deceleration of light, but that still doesn't account for a lot of empty space.

Time does not stop at the speed of light.

The way "time travel" is viewed by Einstein's relativity is that if you - being an object with mass (not a photon of light) - will experience time (the space-time continuum, if you will) slower than on earth. It is relative, so for example while a period of time may seem to you like an hour, years may have passed on Earth, depending on how fast you are travelling. So then if you go back, it may have been an hour for you and a hundred years on Earth, so you have "travelled to the future." And since it has only been an hour for you, your body is only an hour older.

However, you do not need to go at the speed of light to experience the effects of time dilation. It even occurs at slower speeds - the effects are so small that we humans do not notice it.

However, there was an experiment done a while ago with two jet planes travelling toward each other, both with atomic clocks onboard. The clocks' time readings were confirmed to be exactly the same before takeoff. When the planes landed, there was a time difference of about 0.0002 seconds IIRC. That means nothing to a person, but it is very noticeable to an atomic clock.

So this explains how you can go to the future.

Now there is a way you can theoretically go to the past as well - my AP Physics teacher spent a few hours explaining the details of how, but I don't recall, and I don't think an incorrect explanation would help this thread too much, so I'll leave that up to you to find online.

The reason why we don't seem to have people from the future, from a theoretical standpoint, is that if you go back in time, you create your own timeline - your own universe - that is different from our "normal" one. So then because we live in the normal one, we don't see people from alternate ones.

But then this brings up the point of predestination...think about this - having a "normal" and an alternate timeline implies that you were not "supposed" to leave the normal timeline but you have. But then if everything you have done normally is part of the "normal" timeline, why is travelling to the past anything different. Let's say you just travelled back in time - if you were "supposed" to have taken the train this morning, for example, because you did so, weren't you "supposed" to have travelled back in time as you just did?...so then it does really come down to the idea of predestination - were you "supposed" to have done what you are doing. If not then how did something get screwed up? After this, the argument becomes quite strange and most people would zone out (if you're still reading my post....).

Anyway, the idea of time travel intrigues most people, and though a theoretical physicist would probably explain it all much better than I can, I think it's an interesting idea. If you read up on it, it

becomes really scary - for example, if you go back in time to a time when you were alive, "you" from that time are still there, but now "you" from "now" are there. So there are two of "you." Let's say you do something and accidentally kill an ancestor of yours - if you go back to the future, you are not going to your future - you are creating a new future (a new branch of the space-time continuum), and you would not exist in this future...

That reminded me - the movie Back to the Future (I, II, and III) from the 80's was quite interesting as brings a lot of these things into perspective (although the flux capacitor and the 83 mph speed may be just a tad off).

Anyway, if you're still reading that's cool I doubt very many people did so though - as the average attention span is like .02 seconds

Maybe this clarified some things or confused you more than you wanted to be....
