

LEWIS ON TIME TRAVEL

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Intro Metaphysics

1. The question of whether time travel is possible

The question: is time travel in-principle possible? (Not whether time travel really occurs, or will ever be technologically or physically possible.)

The challenge: time travel appears to give rise to paradoxes.

2. First paradox: arrival after or before departure?

“In 1985, Marty McFly enters a time machine, sets the controls for 1955, pushes the button, waits, and then arrives in 1955...”

McFly’s arrival seems both before and after his departure.

One solution: time has two dimensions. The arrival is 30 years before the departure in time₁, but a few seconds after in time₂.

On closer inspection, however, this account seems not to give us time travel as we know it from the stories. When the traveler revisits the days of his childhood, will his playmates be there to meet him? No; he has not reached the part of the plane of time where they are. He is no longer separated from them along one of the two dimensions of time, but he is still separated from them along the other. (p. 225)

Lewis’s solution: the arrival is before in “external time”, i.e., plain old time, but before in “personal” or experienced time.

...there is one way to assign coordinates to the time traveler’s stages, and one way only (apart from the arbitrary choice of a zero point), so that the regularities that hold with respect to this assignment match those that commonly hold with respect to external time. With respect to the correct assignment properties change continuously as you go along, for the most part, and in familiar ways. First come infantile stages. Last come senile ones. Memories accumulate. Food digests. Hair grows. Wristwatch hands move. The assignment of coordinates that yields this match is the time traveler’s personal time. (pp. 226–7)

Likewise a bystander might truly say, three years after the last departure of another famous time traveler, that “he may even now—if I may use the phrase—be wandering on some plesiosaurus-haunted oolitic coral reef, or beside the lonely saline seas of the Triassic Age”. (p. 227); the quotation is from H.G. Wells)

3. Second paradox: personal identity

Suppose you go back in time and meet yourself. It appears that we have two people in the room, and yet there is only one, since each is you.

Solution: there are two temporal parts of a single person.

But what makes them temporal parts of the same person? Answer: psychological continuity and causation.

4. Third paradox: changing the past

“...Back in 1955, the dashing McFly inadvertently attracts his mother, overshadowing his nerdy father. As the union of his parents becomes less and less likely, McFly begins to fade away into nothingness.”

Suppose McFly actually prevents his parents from meeting. Then where did he come from?

But just because *some* time travel stories are inconsistent doesn't mean that *every* time travel story is inconsistent!

5. Fourth puzzle: paradox of ability

Tim *can* kill grandfather (because he's got what it takes)

Tim can kill Grandfather. He has what it takes. Conditions are perfect in every way: the best rifle money could buy, Grandfather an easy target only twenty yards away, not a breeze, door securely locked against intruders. Tim a good shot to begin with and now at the peak of training, and so on. What's to stop him? The forces of logic will not stay his hand! No powerful chaperone stands by to defend the past from interference. (pp. 230–1)

Tim *can't* kill grandfather (because you can't change the past) Tim is a time traveler, descended from Grandfather. If Tim kills grandfather, then where would he have come from?

Note: the contradiction doesn't concern what Tim *does*; it concerns his abilities, what he can/could do.

Main response: suppose Tim doesn't kill Grandfather. The fact that he doesn't kill him doesn't mean he can't, any more than the fact (if it's a fact) that I'm not going to go out on New Year's Eve doesn't mean that I can't.

So why did we think otherwise?

To say that something can happen means that its happening is compossible with certain facts. *Which* facts? That is determined, but sometimes not determined well enough, by context. An ape can't speak a human language—say, Finnish—but I can. Facts about the anatomy and operation of the ape's larynx and nervous system are not compossible with his speaking Finnish. The corresponding facts about my larynx and nervous system are compossible with my speaking Finnish. But don't take me along to Helsinki as your interpreter: I can't speak Finnish. My speaking Finnish is compossible with the facts considered so far, but not with further facts about my lack of training. What I can do, relative to one set of facts, I cannot do, relative to another, more inclusive, set. (p. 232)

“Tim can kill grandfather” is true relative to one set of relevant facts:

Set 1 of relevant facts: Tim is a good shot, has the desire to kill Grandfather, has a loaded gun, etc.

“Tim cannot kill grandfather” is true relative to another set:

Set 2 of relevant facts: Tim is descended from Grandfather, who was never shot

Since ‘can’ shifts meaning between the statements, the statements aren't incompatible.