

THE TWO-WAY DOOMSDAY MACHINE

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A thought experiment invites us to examine our intuitive beliefs about the reality of the past, the reality of the future, and our capacity to affect either, and provides a test of our attitudes towards life. Given an inescapable choice and extraordinary power, would it be our duty to destroy the whole of reality, both past and future?

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You find yourself in a small, windowless room. You are not quite sure how you got there. In front of you is what appears to be machine of some kind, about the size of a chest of drawers. It is almost as featureless as the room, except that it has two buttons. The blue one, on the left, is labelled 'The Past'. The red one, on the right, is labelled 'The Future'. There appears to be no other way of activating the machine (if, indeed, that is what it is, and not some rather minimal art installation). After studying it for a while, and failing to uncover whatever secret it holds, you prepare to leave.

At once, a powerful voice fills the room. 'The machine in front of you', says the Voice, 'is a Two-Way Doomsday Machine. It can destroy the whole of reality, or only part of it. How much it will destroy depends on what you do.' It pauses, as the chilling significance of its words sink in. The Voice continues: 'If you press the blue button on the left, the machine will destroy the past. If you press the red button on the right, it will destroy the future. If you press both, it will destroy both past and future immediately. If you press neither, the machine will destroy both past and future precisely one hour after I finish speaking.' Again, the Voice falls silent, briefly. You are baffled and appalled, but before

you can ask any questions, the Voice speaks for the third and final time: 'The hour to Doomsday begins now. You will not hear me speak again.'

Your first thought is that this is all a hoax (why can't you remember how you got here? were you anaesthetised? hypnotised?). Perhaps the machine is nothing but an inert metallic box, with two buttons, connected to nothing. If so, then it doesn't matter what you do. But if it is not a hoax – and something somewhere in your mind tells you that it is not – then a crushing responsibility has been placed on your shoulders. You cannot, surely, afford to do nothing. Perhaps the Voice lied to you about the effects of pressing, or not pressing, the buttons, but in the absence of any reason to think so, what the Voice has told you is your only guide.

So, what do you do? For all you can tell to the contrary, you now have one hour – no, 57 minutes – to decide. But perhaps there are reasons to think that at least part of what the Voice said was nonsense. How can pressing the blue button destroy the past? After all, you know that there has been a past – your own past for example. It is true now to say that such-and-such (your 16th birthday; being caught in a thunderstorm last Wednesday; getting up this morning) really happened. How can you now make it true that these things did *not* happen? For that is, surely, what is implied by 'destroying the past', that is, really destroying the past, not merely destroying present traces of the past. The whole idea of 'destroying' or even just 'changing' the past involves a logical contradiction.

Think of the time-traveller going back in time, with the intention of preventing the First World War. How can she possibly succeed? For what prompted her to go back in time was her knowledge that the First World War really happened. If she now prevents it happening, then what was it that made her go back to prevent it? It never happened! Of course, she might be mistaken in thinking there had been a First World War (although that would take quite a bit of explaining), so what of a more radical case?

Sickened with life, a time traveller goes back to the past in order to prevent his own conception, and so bring it about that he was never born. But if he succeeds, then he fails, for he then removes the very person who prevented his own conception, which can now go ahead, as indeed it did. So you cannot really change the past. So you cannot destroy it. The blue button does nothing, surely.

What about the red button? No similar paradox seems to haunt the idea of destroying the future. Or does it? For isn't there a fact of the matter as to what *will* happen, even if we don't now know what those future facts are? To put it another way: if the future is real, then you can't make it unreal. You cannot *change* the future any more than you can change the past. But now, the future is *not* like the past, is it? The past is real, in that there is now a fact of the matter as to what actually happened. But, now one thinks about it, there isn't similarly *right now* a fact of the matter as to what actually will happen. The future is just a series of possibilities. You may go into town this Saturday, or you may choose not to. Both of these are open to you. So it can't already be the case (you reason) that only one of these possibilities is actually real, and the other unreal, for then they wouldn't both be open to you. So, you conclude, the future is not real. And if it is not real, how can be it be destroyed? You cannot destroy what never existed. So the red button does nothing, either.

No, that can't be right. You can't destroy the non-existent, but you can close off possibilities, make them no longer possible. Imagine choosing between taking the 9.15 flight to Paris and taking the 8.55 train. Choosing the 8.55 rules out the possibility of taking that particular flight, given that one needs to be at the airport at a particular time to do so, and being at the train station in time to catch the 8.55 isn't compatible with that. Similarly, but far more devastatingly, pressing the red button rules out possibilities for the future, indeed every possibility except total nothingness. So pressing the red button definitely could do something, something not inappropriately describable as 'destroying the future',

even though one cannot literally destroy what *will be* real, nor what is unreal.

It seems then that the rational thing is to press the blue button, for didn't you just decide that that could do nothing?

But now you recall reading a book by... Bertrand Russell, was it?, in which he argued that everything that you can now observe, or could observe, is entirely consistent with the world's having come into existence five minutes ago. Certainly, you appear to have memories of yesterday, last week, five years ago, and of reading history books or encountering other traces of a past that stretches back before your birth. But who is to say that such memories are accurate? Could they be an illusion, perhaps put there by the unknown being who told you the machine's terrible secret? Is there any decisive, unanswerable reason to suppose that there was in fact any time before you found yourself in this room? Perhaps even the memory of the Voice is another illusion (a thought that seems quite comforting right now). So it may already be the case that there is no past. In which case, pressing the blue button cannot destroy it. Indeed, unlike the red button, the blue button doesn't even close off possibilities.

You're going to press that blue button. . . .

No, wait! Given that you are going to press one or other button (but not both), perhaps there are exactly two possibilities:

- (1) There is no past, your memories apparently of the past are entirely illusory – and you press the blue button.
- (2) There is a past, corresponding more or less to what you remember – and you don't press the blue button, but press the red instead.

Perhaps that's what the Voice meant when it said that pressing the blue would destroy the past. Pressing the button is consistent only with there being no past.

Suddenly, pressing that blue button no longer seems the obvious thing to do.

If you pressed it, would you be responsible for the fact that there was no past, that all the things you thought had taken place *never happened*? You surely have a choice whether to press that button or not. And you are – aren't you? – responsible for any foreseen consequences of pressing or not pressing the button. If you press the button, there will have been no past. Can you live with that? Think of all the wonders of nature, the most glorious works of mankind, the acts of kindness, love and selflessness. All these will be nothing, just fragments of a half-remembered dream. And you will have made it so. On the other hand, think also of the horrors of the past, the natural disasters causing such loss and suffering to living things of all kinds, of the acts of torture, oppression, massacre and deliberate cruelty. All these too will be nothing at the touch of that button. Is it perhaps your duty to make it the case that they never happened? You have to weigh up the goods and the evils and balance them against each other. On which side does the balance come down?

A thought occurs to you that might let you off the hook. Surely, if you press the blue button you don't *cause* the past to be nothing. For causation runs from earlier to later, not the other way around. In letting a fragile vase fall from your hand, you cause its later smashing on the floor. But nothing you do now can *cause* something to *have happened*. This spark of hope, however, is soon extinguished. What difference does it make that you don't *cause* the past never to have happened? Your pressing the button is still only compatible with that great absence. Some consequences, it seems, are not causal.

So far, you have tried to be objective, weighing up consequences as if from a God's-eye view. Perhaps it is time for a little self-interested thought. Suppose you press the blue button, thus, you think, ensuring that everyone has a future. But if the past is mere illusion, as it would be, just how many people are there that would have a future, and

what would it look like? If the past is an illusion, and you can't trust a single memory, then what is there, outside this room? You have no idea. Leaving, you might stumble upon scenes of unimaginable suffering which *you could have prevented*. And if you never leave the room, what life is that? Or what if, on leaving, you find that you are the only living creature in existence? Your finger hovers over the red button. . . .

Wait. Perhaps you don't have the right to choose. What are you? A limited, ignorant creature, with imperfect moral understanding. How can you take it upon yourself to make such a momentous decision? The destruction of the past (if we may put it that way), or the destruction of the future? So perhaps the right thing to do is to do nothing, and hope that it's all a hoax. But if it isn't, then there will be neither past nor future, and you have foreseen that. Didn't you earlier reflect that you are responsible for the foreseen consequences of your free actions? 'Doing nothing' is, in fact, nothing of the sort. It is making a choice, taking a decision that will lead to the destruction of the whole of reality.

The hour is nearly over. What will you do?

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