

“[A]wful things have happened when wizards have meddled with time....” Hermione warns Harry¹ – only after they have travelled back in time on a seemingly impossible mission to rescue both Buckbeak and Sirius Black. Yet this seems to be a common occurrence in sci-fi and fantasy – characters warn of the dangers of time travel, only to then travel in time, sometimes with disastrous consequences, sometimes not. So is time travel a good idea? It’s certainly intriguing. Perhaps because the impossibility of time travel is one of the few certainties in life, it has become a favorite topic for sci-fi and fantasy writers. Yet time travel presents its own new set of uncertainties – far from how it is accomplished, it demands the creation of a theory of the laws that would govern time travel, which it seems each author imagines differently.

The “butterfly effect” is perhaps the most well-known potential pitfall of time travel. The short story “A Sound of Thunder” is often credited as the originator of this hypothesis, which suggests that any change of the past, even as small as the killing of a butterfly, would affect the future. But how could killing an insect possibly affect the flow of time? Wouldn’t that insect die rather soon anyway (most of them have short lives, especially in the grand scheme of time)? The creators of the TV show *Castle*, when they indulge in time travel for a single episode, suggest that the butterfly effect is silly because time’s fluidity would naturally correct any small actions, like the killing of an insect.² On the other hand, time travel as depicted in DC’s *The Flash* TV show stays true to the butterfly effect, even taking it one step further: as Jay Garrick explains to Barry, the very act of time travel creates changes in the future. Even if Barry time travels again and undoes what he changed, the future will never return to exactly the way it was, because a broken mug will always have a crack, no matter how well-glued it is.³ In this case, Barry is

¹ J.K. Rowling, *Harry Potter and the Prisoner of Azkaban* (New York: Scholastic, Inc., 1999), 399.

² *Castle*, season 6, episode 5, “Time will Tell” (2013).

³ *The Flash* season 3, episode 2, “Paradox” (2016); this specific scene can be found at <https://www.youtube.com/watch?v=eAdqqkyp0YE>.

forced to live with the changes he has caused, yet because he was the instigator of the “new timeline,” he remembers what it was before – and thus suffers the guilt of knowing what he changed.

Something similar happens in 2009’s *Star Trek*, when Spock and some Romulans inadvertently travel more than a century back in time. This creates an alternate reality in which events, though similar to those that Spock remembers, have changed, and “cannot be predicted by either party.”⁴ It also creates a situation in which there are two Spocks: one that has come back from the future, and is now quite old, and another whose career has just begun, who is still figuring out who he is. Though the older Spock lets his younger self live his own life, he is still available for valuable advice and guidance. This too raises questions: one would think that interacting with one’s past self would create a paradox. Indeed, that is what Kirk believes when the elder Spock forbids him from telling the younger Spock of his existence: “he inferred that universe-ending paradoxes would ensue should he break his promise.”⁵ But apparently this is not the case, for Spock speaks to his younger self on several occasions. Indeed, this has been the general consensus within the *Star Trek* universe, where time travel is a fairly frequent occurrence (despite as-frequent warnings against it). For example, there is an episode of *Star Trek: The Next Generation* when Worf’s son Alexander, now a grown Klingon, comes back in time to try to change his own childhood decisions.⁶ This time travelling creates no paradoxes (that we are aware of), and indeed seems rather mundane. We are not informed of any changes made to the future due to this, as the time traveler comes from the future into our present, rather than from the present into the past. Returning to the question of interacting with oneself, Hermione warns Harry not to let anyone else, especially himself, see the him that has time travelled: ““what do

⁴ *Star Trek* (2009, Paramount), DVD.

⁵ Ibid.

⁶ *Star Trek: The Next Generation*, season 7, episode 21, “Firstborn” (1994).

you think you'd do if you saw yourself bursting into Hagrid's house?'... 'I'd – I'd think I'd gone mad...'”⁷ But oddly, the whole point of Hermione getting the Time Turner in the first place was to *attend classes* – meaning that many people saw her every time she time travelled. And it's not too far-fetched to imagine that she may have seen herself. Perhaps this is permissible because both her “past” and “future” selves would have known about the time travel? But it doesn't explain why it was all right for others to see her, when “[y]ou – must – not – be – seen”⁸ was the cardinal rule of the rescue mission. And speaking of seeing – would the Harry and Hermione who travelled back in time appear on the Marauder's Map? Would there be two Harry Potters and two Hermione Grangers on the map at the same time? And if so, why didn't Professor Lupin see them when he consulted the map and saw Sirius drag Ron and Scabbers into the tunnel?

In travelling to the past, there is the potential to change something that will affect one's own life. But what if that something caused the time traveler not to be born at all? Would they simply cease to exist? *Back to the Future* suggests otherwise. Marty's actions initially cause his parents not to get married, and thus not to have children. However, this is depicted as a gradual process – in Marty's photo of himself and his siblings, his older siblings slowly disappear the longer he remains in the past, suggesting that if he remains, there is a chance that he can “fix” what he has changed. Indeed, when he begins disappearing, it is also a gradual process much like an illness – he begins to feel weak and insubstantial, but when his parents kiss, sealing their fates, he is immediately restored. But what would have happened had he returned to the present without reuniting them? Would he have simply ceased to exist? And why did he not disappear immediately after sabotaging his parents' first meeting? Clearly there is an element of Hollywood behind this question – there has to be a main character for there to be a story. Yet it

⁷ Rowling, *Harry Potter and the Prisoner of Azkaban*, 399.

⁸ *Ibid*, 393.

presents an interesting issue – did the possibility of his parents’ romance sustain him until he had restored it?

Back to the Future also introduces the issue of causation in time travel. By travelling back in time and enlisting the help of Doc Brown, in the past, to return to his own time, how much did Marty affect his future? Before the time travel, Doc Brown created the time machine; but when Marty travelled back in time, he told Doc Brown that he would succeed, and even warned him of the dangerous outcome this success would have (namely, being targeted by terrorists for stealing their nuclear weapon material). So when Marty returned, the Doc Brown he met would have been a different Doc Brown than he left, for this Doc Brown knew of his success beforehand and also heeded Marty’s warning and wore a bullet-proof vest. So what effect did the knowledge of his success have on Doc Brown? Was he motivated to create the time machine *because he knew it would succeed*, or even to prevent a paradox? Let’s look at another example: in *Star Trek: The Next Generation*, Captain Picard and some of his crew travel back in time to save Data. While in the past, they meet Guinan, who works on the *Enterprise* in their present but is also on Earth in the time they travelled back to, thanks to her incredibly long life. When they meet her in the past, it is Guinan’s first time meeting them, but they have known her for years. Before the mission, Picard is unsure of whether he should go, as it is unusual for him to participate in an away mission. Guinan calls him into the bar and asks him if he remembers the first time they met. When Picard answers affirmatively, Guinan warns him not to be so sure, stating that if he doesn’t go on this particular mission, they might never meet.⁹ Thus, it is because of Guinan that Picard goes on the mission and time travels...to meet Guinan. This seems to suggest some sort of paradox. Perhaps another example can better explain this paradox. In *The*

⁹ *Star Trek: The Next Generation*, season 5, episode 26 and season 6, episode 1, “Time’s Arrow: Parts 1 and 2” (1992).

Librarians, Flynn discovers a note written by himself, in the past, that helps him solve a puzzle. Later, once he has travelled back in time, he writes the note, so that he can find it in the future.¹⁰ So the question is: *where did the text of the note come from?* By the time Flynn wrote it, in the past, he had already read it, in the future, and *thus knew what it would say* – he did not have to compose it, merely remember it. Yet clearly it had to have been composed by someone...

One final issue with time travel: when it occurs and one returns to the present, has time passed? It would seem logical that you could simply return to the moment you left, which is what happens in many stories of time travel, including *About Time* and those *Star Trek* episodes where we see both ends of the time travel trip. Yet in the show *Timeless*, the time travel takes up time in the present; the travelers are gone for however long they're in the past. But why would this be so? What could prevent them from returning the moment they left, and thus not "losing" any time? However, if they returned to the moment they left, without a loss of time, would this imply a type of immortality? *About Time* clearly rejects this notion; though the time travelers have more time (for example, to read every book twice), they are not immortal. This is never clearly explained. However, the implication is that the time traveler will always have to return at some point; he cannot live in his past forever. But does he continue aging, even in the past? Which would mean that he would return older than he left?

It is clear that time travel is a thorny (fantastical) issue, one which various writers have attempted to address. Each seems to create their own laws of time travel, yet each is attempting to address the same questions and potential paradoxes. This uncertainty, paradoxically, is caused by the certainty of time travel's impossibility in our world. Interestingly, the one thing that most agree on is the inadvisability of time travel, yet it continues to be practiced, even by characters who have been warned against it. Perhaps this is a commentary on humanity and its seeming

¹⁰ *The Librarians*, season 2, episode 10, "And the Final Curtain" (2015).

need to use any technology available to it, even if it has disastrous consequences. In today's world, such warnings should be well-heeded. Perhaps, on the other hand, it is an attempt, paradoxically, to encourage viewers and readers to look towards the future, not dwell on the past, by suggesting that even if they could, they would be ill-advised to change their pasts. And perhaps, in the end, it is a commentary on the fleeting nature of life, an admonition to recognize the uncertainty of the next moment and appreciate each one, "to live every day as if I've deliberately come back to this one day, to enjoy it, as if it was the full, final day of my extraordinary, ordinary life."¹¹

¹¹ *About Time* (2013, Universal Pictures, 2014), DVD.