Vanishing Points: The Temporal Mechanics of the SuperLegendaryFlarrowVerse

by LJC

Summary

Welcome to a totally SERIOUS exploration of the VERY STRICT rules of time travel in the Berlantiverse FULL OF ACTUAL SCIENCE.

'The timeline is malleable... in flux until it is set. Well, this future is not set. The future is always in flux. This world isn't real.'

—Rip Hunter tells Sara Lance that her Ollie totally won't have a robot arm in 'Star City 2046' because someday in the future Sara and Ray will go back to 2016 and this Causal Loop will cease to exist. He hopes.

Before we start, two things:

If your answer to the question 'What are the rules of Time Travel in this particular fictional universe?' is 'Time Travel doesn't actually exist, so there are no rules', then this essay is not for you. Close the browser tab, and forget you ever clicked on the link, and we'll both just pretend nothing happened. I'll ignore you, you'll ignore me, and we'll just go on living our lives peacefully, without name-calling or bloodshed.

Secondly, the only way to figure out 'What are the rules of Time Travel?' in a fictional universe where time travel exists is to actually review every instance of time travel as well as every instance where a character discusses time travel, and then through observation of cause and effect, discern what the rules actually are.

Once the rules have been established, it's time to use what we've learnt to categorise whether or not those rules are *internally consistent*. And then decide if those inconsistencies are due to the
established rules being broken, or the discovery of a new rule we should then apply to all future instances.

Spoiler: when rules directly contradict one another and are not internally consistent, then what you have is what we technically call 'a hot mess'.

Is the SuperLegendaryFlarrowVerse a hot mess, you ask?

Yes, says I. Yes, it is. It's still entertaining, it's still a joy to watch, and it's still pretty much my favourite. But that doesn't mean it's not, in terms of temporal mechanics, a hot mess.

**Rules Were Made to Be… Followed, Actually**

'Do I need to remind any of you that I'm a Time Master? Making discrete alterations to the timeline is what I do, so we're not just gonna charge into the past like a bull into a china shop…'

—Rip Hunter, 'Pilot, pt. 2' trying to convince the people he lied to that despite the part where he told them lies, he's actually in charge and knows what he's doing. No, really.

The Rules of Time Travel in the SuperLegendaryFlarrowVerse (so Far As We Know) Are:

1. You can travel from the future to the past!
2. You can travel from the past to the future!
3. You can change the past! (Take that, Stephen Hawking!)
4. OK, but FYI, changing the past changes the future (which may not actually be your plan).
5. And if you change the past in a way that creates a paradox, Bad Things Happen.
6. The only 'bad things' we know about are vague threats of 'time folding in on itself and creating a temporal vortex', 'irreparable damage to the timeline' and 'black holes'.
7. People go to Sooper-Seekrit Time Master Grad School for this shit; it is straight-up not for amateurs.
8. Spoiler: Barry, the entire Legends team minus Rip (and later, Mick), and Vandal Savage are amateurs.

There are actually a lot more rules, but these are the basics. Thus far. As far as we know.

**Gideon, What's Our Status?**

The entire premise of *Legends of Tomorrow* is that there's a bunch of Time Captains out there whose job it is to make minor alterations to the timeline, to keep time running smoothly. And they've been doing this for a really long time. As a result, time has been written and rewritten constantly!
And not just by Time Masters. Speedsters are out there, operating without a Time Travel Licence, also screwing things up for the rest of us, creating new Alternate Timelines willy-nilly! You have no idea how much work it is, making sure the universe doesn’t implode on a daily basis.

OK, so how many Alternate Timelines are we really talking, here? One? Three?

Oh, honey. Try a baker's dozen that we know about, and probably another half-dozen at least that are mentioned in passing but never explored. Aside from a scattered handful of self-annulling tangent timelines (i.e. 'Potential Futures') created by Ray being sloppy with his tech, Savage seriously fixating on Firestorm, the younger versions of the Legends being spirited away to the Refuge, the 2046 where Ollie has a robot arm, this is pretty much a complete map (thus far) of all the extant ( kinda) Timelines in the SuperLegendaryFlarrowVerse.

**Timeline A** – Nora Allen is alive and well, and Barry becomes the Flash in 2020 when E-1 Wells and Tess Morgan's particle accelerator explodes. In this timeline (where FYI apparently humanity was never wiped out by the Thanagarians in 2175), Eobard Thawne travels from his present circa 2190 to Barry’s past and changes the past by killing Nora Allen which creates…

**Timeline B** – Where Nora Allen dies March 18, 2000, and Eobard Thawne kills Wells and Morgan, impersonates Wells, builds the particle accelerator, which explodes in December 2013 and Barry becomes the Flash, which creates a future where Eobard Thawne travels back to 2016 and discovers 'OMG the Flash is from 2016!', and Mark Mardon creates a tidal wave that destroys Central City AND Cisco is killed by Eobard Thawne, but Barry runs back in time 24 hours and creates…

**Timeline C** – Where Nora Allen dies March 18, 2000, and Eobard Thawne kills Wells and Morgan, impersonates Wells, builds the particle accelerator, which explodes in December 2013 and Barry becomes the Flash, and Mark Mardon is captured before he can create a tidal wave that destroys Central City and Cisco is alive and well but completely unaware that Eobard Thawne is Harrison Wells, until he starts having vibes of his death in Timeline B. So Team Flash find the real Harrison Wells' body, confront Thawne, and Eddie kills himself to erase Thawne from the timeline which creates…

**Timeline D** – Which is identical to Timeline A, except Eobard Thawne is never born. Also, we never actually see this timeline, because the Camera Crew that follows Barry around so we can watch his adventures doesn't go to Timeline D, where Barry will have no adventures until 2020. Poor Timeline D. No-one loves Timeline D.

Meanwhile, back in **Timeline C** – Vandal Savage arrives in Central City in December 2015, tracking down Kendra Saunders because like the Hammer Mummy films, she is the reincarnation of his beloved! Only, unlike the Hammer Mummy films, Vandal Savage kills her, and Prince Khufu, and Team Arrow and Team Flash, except for Barry who runs backward 24 hours to create:

**Timeline E** – Where Barry is all 'Holy crap you guys, the Staff of Horus is totally a thing' and so instead of everyone dying, Kendra and Carter kill Savage (they think) and Kendra and Cisco break up because she's going off with Carter to prep for her spin-off. And then Barry runs back to the January 2015 to get tech so he can fight Zoom from Evil Wells, which creates:

**Timeline F** – Where Hartley Rathaway, instead of being a total dick, teamed up with Team Flash in January 2015 and by 2016 is actually Cisco's BFF, and everything is
(seemingly) completely identical to Timeline E (including Ronnie and Stein’s entire history) until Barry runs back to March 18, 2000 and prevents Eobard Thawne from killing Nora Allen, which creates:

**Timeline G (aka Flashpoint)** – Other than Cisco having a total 90s ponytail, we actually have no idea what Timeline G looks like, though according to *Earth Logic*, it should actually look just like Timeline A and Timeline D. However, I would not actually place any money on that bet. Because as you’re about to learn over the course of the next fifteen pages, *Earth Logic* does not always apply. Especially not when someone seems really, really, really personally invested in Nora Allen being Edith Keeler and never getting out of that damned refrigerator ever.

So, where does *Legends of Tomorrow* fit in?

*Legends of Tomorrow* starts in:

**Timeline E** – Vandal Savage has been killed in December 2015 (but not really) cos in 2166 he kills Rip Hunter’s family, so Rip steals the Waverider and goes back to 2016 to recruit a team of people whose temporal footprint is so slight that it won’t create any actual paradoxes (supposedly) if they all disappear in 2016 and are never heard from again. They travel back to 1975, where Snart steals the Maximillian Emerald and gives it to his dad, which creates:

**Timeline EE** – Which is identical to Timeline E, except for the Snart family history, and nothing actually changes the timeline until 2147, when Vandal Savage releases the Armageddon Virus 5 years early which creates:

**Timeline FF** – Which is identical to Timeline E, except the Armageddon Virus was released in 2147 instead of 2152, which seemingly creates no actual paradoxes that significantly alter the timeline until 2166, when the Oculus is destroyed and instead of sticking around to defend the Earth from the Thanagarian Invasion in 2175, Vandal Savage instead travels back to March 1958 to use the Hawks’ blood to activate a meteorite which creates:

**Timeline GG** – Which is identical to Timeline FF, right up until March 1958 when Vandal Savage dies, which results in a paradox which creates a Timequake which erases Vandal Savage from the timeline after 1958 (including the events of December 2015) which should result in:

**Timeline HH** – Which is identical to Timeline E from 1700 BCE to March 1958, and diverges from there so that the events of December 2015 do not take place, Kendra Saunders is still dating Cisco Ramon, Snart and Rory are still robbing ATMs in Central City, Sara Lance is now Schrödinger’s Canary (i.e. she either wasn’t rescued by Nyssa off the coast of Lian Yu in the North China sea in 2008 or she is still hanging out in dive bars in Tibet doing her very best Marion Ravenwood impression), Carter Hall is alive and well and never came to Central City in 2015, and Martin Stein and Jax are still zooming around Philly unaware that they can transmute matter. However, much like Timeline A and Timeline D, we will never actually see this timeline, because the camera crew follows Rip and the Legends to what we can only presume is now:

**Timeline II** – Where paradoxically Rip’s family are still dead, Snart is still dead, the Time Bastards are still dead, and the Oculus is still destroyed despite the fact that the Snart who destroyed it never left Central City in January 2016, and there are not two
incarnations of Prince Khufu flying around St Roch, one of whom was born in the 22nd century, and yet Vandal Savage still died in 1958. Kinda. Oh, and while the Snart Family timeline has changed, apparently the Lance Family timeline hasn't, because Laurel is still dead, Sara is still alive, and Quentin Lance at no point seems surprised by Sara from Timeline E reappearing in Timeline EE.

BUT WAIT, THERE'S MORE! Because Time Master Druce clued us into:

Timeline X – Where Vandal Savage is imprisoned in 1975, the Soviets win the Cold War in 1986, the Armaggedon Virus is released in 2152, Savage never takes over the world in 2166, and the Earth is destroyed in 2175 when the Thanagarians invade both Earth AND The Vanishing Point and all human life in the universe is extinguished. But— you guessed it—like Timeline A, we will never actually see this timeline onscreen, due to it being over-written by the Time Masters manipulating the timestream to create:

Timeline E. Right back where we started, at the beginning of the Causal Loop.

Choose Your Own Adventure!

There are two types of 'time travel' that appear most frequently in science fiction that most of you are probably familiar with. The first is 'Linear Time', i.e. a single timeline that is constantly over-written by changes. 'Wave Function Collapse' means that there is only ever one single timeline in existence. So, a traveller from the future makes a change in the past, it creates a new timeline that re-writes the old one. The old timeline no longer exists, and when the time traveller travels back to his or her own time, it is the future of the new timeline.

The second is 'Many-Worlds Interpretation' i.e. that every change to the timeline creates a new timeline that branches off and exists in parallel to the original. So, a time traveller from the future travels to the past, and makes a change. This creates a new timeline, but the original timeline still exists, it just is not accessible from the new timeline. Not without a stable Einstein-Rosen bridge i.e. wormhole, anyway.

For the purposes of completely avoiding having to get an advanced degree in theoretical physics, or a Thermodynamics lecture, I'm gonna do this the easy way, by providing a common frame of reference from pop culture.

Linear Time = The Terminator (1984)

Many-Worlds Interpretation = Star Trek (2009)

Now, the difference between these two models is in the word 'change'. In one, when you change the past, a new future is created which overwrites the original timeline. In the other, a new parallel universe is created and both timelines still exist, but you can't get from Timeline B back to Timeline A.

Now, from the POV of the Time Traveller, both of these look the same. So how do you know which type of universe you're in?

That's where paradoxes come in.
What is a Temporal Paradox, and Why Should We Care?

'Well, to avoid the risk of a paradox, it's probably best to refrain from killing anyone.'

—Rip Hunter, completely ignoring the fact that the entire premise of *Legends of Tomorrow* is about killing Vandal Savage in the past in order to create a future where his family is alive, which would create a paradox due to Rip Hunter never travelling into the past to kill Vandal Savage.

A paradox is a statement that contradicts itself. In time travel, a paradox is when something exists when it shouldn't/can't due to cause and effect (i.e. causality). How a paradox resolves itself is how we differentiate between the two types of time travel—the *Terminator* type (linear time), or the *Star Trek (2009)* type (parallel worlds).

Paradoxes happen in time travel fiction! But they do not always destroy the universe/create breaches in the multiverse/make dementors fly out of the speed force to eat your face. Time Wraiths and/or Reapers that eat your face only happen on *The Flash* and *Doctor Who*, and I'm pretty sure they only happen because the VFX are cooler that way.

Oh, and you know what paradoxes really, really, really don't do? That would be reset the universe to 1700 BCE. But we'll get to that later.

Here's how causality works:

Rip Hunter's family is killed by Vandal Savage in 2166. This causes Rip Hunter to travel from the future into the past, to prevent his family from being killed. The moment at which he changes the timeline is called the 'Point of Divergence' i.e. where the Original Timeline diverges from the New Timeline.

Now, *Terminator* says that when Rip Hunter travels into the past to prevent his family from being killed, he creates a new timeline where his family is alive. Since the new timeline over-writes the original timeline, Original Rip Hunter will wink out of existence along with his original timeline, and New Rip Hunter will replace him and happily live out his life, never knowing there ever existed a version of reality where his family were killed.

Meanwhile, *Star Trek (2009)* says that when Rip Hunter travels into the past to prevent his family from being killed, he creates a new timeline where his family is alive. Since the new timeline exists in parallel to the original, Original Rip Hunter retains all his memories of the Original Timeline, but can never return to it. And if he does (via a stable wormhole) he will do so as a Timeline Remnant, and there will now in that timeline be TWO Rip Hunters.

But wait, you say, that's not what happens on *Legends of Tomorrow*. In *Legends of Tomorrow*, Our Heroes remain in a timeline where they changed the past all the damned time, and yet were able to return to the future, and no-one winked out of existence! And the same thing happens on *The Flash*, too! Barry travels backwards in time a bunch of times, and there aren't two of him (except for those times where there are two of him). Each time he takes the place of his former self and then returns to the revised future, where Central City was never destroyed by a tsunami created by Mark Mardon, and where Hartley is now a good guy and Cisco's best bud! Not to mention the really important bit: where Barry travelled back after Vandal Savage killed Carter, Kendra, Team Arrow, and all of Central City.

So is it *Terminator*, or is it *Star Trek (2009)*? Because it has to be one or the other: it cannot be both.
You're right. It can't be both.

Welcome to why this essay exists. Does your head hurt yet? If not, trust me, it will.

**Pull Yourself Up By Your Bootstrap Paradox**

'The events that you dread could very well come to be due to your actions to prevent them.'

—Rip Hunter, being hilariously unintentionally prescient in 'Star City 2046'

OK, first off, let's talk about *Legends of Tomorrow'*s timeline alterations. As on *The Flash*, Our Heroes make changes to the timeline which appear to over-write the original timeline, without anyone either winking out of existence or having their memories of the original timeline replaced, or having their faces eaten by a Time Wraith. So, by all accounts, we're straight up living in a *Terminator* universe, right? Linear time, one single timeline that is continually over-written, and the time travellers themselves are immune to the changes.

First off, when we actually examine the timeline at the end of 'Destiny', it turns out that there are only two instances of the Legends actually making alterations to their original timeline:

1. Leonard Snart stealing the Maximillian Emerald, and giving it to Lewis Snart in 1975.

2. Per Degaton killing his father and Vandal Savage releasing the Armageddon virus in 2147 instead of 2152.

Everything else that the Legends did was, thanks to the Time Masters using the Oculus to manipulate events to ensure Vandal Savage rose to power in 2166—in fact a Predestination Paradox, which is more commonly referred to as a Bootstrap Paradox.

The Novikov self-consistency principle i.e. The Bootstrap Paradox, is when a future event is the cause of a past event, which in turn is the cause of the future event. In layman's terms, it means that any change you make to the past does not actually alter the future because that thing you travelled into the past to do? You'd always done it. You just hadn't done it yet.

So, in the timeline Our Heroes come from, Rip Hunter always went back in time to try and kill Vandal Savage in 1700 BCE. Sara Lance always spent 2 years in Nanda Parbat with Ra’s al Ghul from 1958 to 1960. Martin Stein always gave antibiotics to HG Wells in Salvation. Mick Rory was always marooned, picked up by the Time Bastards, brainwashed, and turned into the temporal bounty hunter Chronos.

If Rip Hunter had not tried to change the past—if he had simply stayed in 2166—then his wife and son would never have died, because the Time Masters would never have ordered Savage to murder Miranda and Jonas.

So, remember when we found out that there was an Original Timeline in *The Flash*, where Barry's mother Nora Allen lived, and Barry became the Flash when Harrison Wells' particle accelerator exploded in 2020? And that timeline was changed by Eobard Thawne travelling to the past and killing Nora Allen? And we were all 'GASP! We've been living in an Alternate Timeline The Entire Time!'
Same deal. We never realised there ever was an original timeline where Vandal Savage was arrested in Norway in 1975, or the Soviets won the Cold War in 1986, or the Thanagarian Invasion of 2175 destroys the planet.

That we were, GASP, in an Alternate Timeline all along!

OK, so far so good, right? So what's the problem?

The problem, my darlings, is that each of those Alternate Timelines where Barry Allen and Rip Hunter's televised adventures took place that we enjoyed watching every week on the CW should now have ceased to exist because of Consistency Paradoxes, i.e. The Grandfather Paradox.

You know that timeline the Barry Allen we know and love came from, the one with the point of divergence is March 18, 2000? The one where Nora Allen is murdered by Eobard Thawne when Barry was 11 years old? According to causality, that timeline should have ceased to exist when Eobard Thawne was erased from the timeline by Eddie Thawne's death. Because if Eobard Thawne is never born, then Eobard Thawne never travels into the past to kill Nora Allen.

Likewise, the timeline where Rip Hunter went back to 2016 to recruit eight individuals to form a team to prevent Vandal Savage’s rise to power in 2166 should also have ceased to exist when Vandal Savage was exposed to Thanagarian radiation and then set on fire in March, 1958. Because if his family are never killed, then Rip Hunter never travels into the past to prevent his family from being killed.

There are now two possible ways of resolving a Grandfather Paradox:

**Terminator version:** A new timeline is created that is identical to the original up to the Point of Divergence (in this case, March 1958), but the future of the new timeline is now different from the original. Judgement Day moves around, for example. The Legends version of 'Judgement Day' FYI would be 'the day in 2166 when Vandal Savage kills Miranda and Jonas'. And Our Heroes from the Original Timeline never actually team up in 2016 to change the future by changing the past. All of their adventures are over-written and erased from the timeline by the new timeline.

**Star Trek (2009) version:** A new timeline is created that is identical to the original up to the Point of Divergence (in this case, March 1958). Our Heroes from the Original Timeline never actually travel to that new timeline, or if they do via a stable wormhole, they discover they are now Timeline Remnants—doppelgängers of the new timeline's versions of themselves.

That's it. Binary choice. Either one, or the other.

Yeah, so, um… clearly there has to be a third option. One where, when presented with a Consistency Paradox, everything stays the same, except for the things that don’t, right?

Yes. That third option is called 'breaking our own rules' and it's not internally consistent, it's actually a continuity error on the part of the executive producers.

So our shows decide to ignore both of these possibilities, and present us with a heretofore unknown third option! Where a Grandfather Paradox is resolved by… ignoring it and hoping it will go away!

No, seriously, so far, near as I can tell, that's it. That's the party line. When a Consistency Paradox should destroy the timeline we've been televising, we're going to pretend that nope, no big deal. Nothing has actually changed. La la la, we can't hear you. Joe is always Barry's dad because we
can't bring ourselves to do that to Jesse Martin. And you wouldn't want us to, right? MY GOD, HOW COULD YOU BE SO CRUEL?

Since everybody on The Flash and Legends of Tomorrow appear to in fact STILL EXIST, this would point to the SuperLegendaryFlarrowVerse existing in a Star Trek (2009) universe, right?

Um… no. Because if that were true, then travel between Parallel Timelines wouldn't be possible without stable wormholes.

OK, so since time travel between parallel timelines clearly is possible, then that's what Barry creates when he runs, then, right? And that's how the Waverider gets around? Stable wormholes?

Let's say 'sure'! Every revision to the timeline actually results in Our Heroes moving laterally across space-time and sliding from parallel timeline to parallel timeline, rather than living in a single timeline that is continually revised. Oh, and those lateral moves are always only ever in one direction. You still can't go back to a previous timeline. All you can do is keep on creating new timelines by changing the past, and hoping each time the new timeline you create is the one you want.

Wait, so…. what's the problem, again?

The problem is that based on the aired episodes themselves, every single Time Traveller on The Flash and Legends of Tomorrow believes that they are living in a Terminator universe where a single timeline is being continually over-written—not parallel universes created every time you change the past. Over and over again, Rip, Wells, Thawne, all refer to 'the timeline' as if it's not one of many. Over and over again, it's stated unequivocally that it's dangerous to change the timeline—which isn't so much the case if you're not actually changing the timeline, but creating new ones that run parallel to the original.

All of the rules of time travel that we've seen thus far reinforce the idea that we're living in a Terminator universe.

Right up until we slam headfirst into a Grandfather Paradox, which should result in a new timeline where none of the events of either series took place.

And then, AS IF BY MAGIC, the narrative tells us 'No, really, we were in a Star Trek (2009) universe all along!' Even though that's actually, um… not what we've been shown thus far. How do we know?

Because if we were in a Star Trek (2009) universe, then the Omega Protocol wouldn't be a thing.

And the Omega Protocol is totally a thing.

The Alpha and Omega of Omega Protocols

'The Omega Protocol calls for precision. Multiple attempts from the Pilgrim could do irreparable temporal damage. Which means she's only got one shot at killing each and every one of us.'

—Rip Hunter, three episodes before the team make multiple attempts to erase Vandal Savage from the timeline, with no precision whatsoever.
OK, so the first time we see someone erased from the timeline by their ancestor or younger self being killed is Eobard Thawne in the season one finale of *The Flash*, 'Fast Enough'. When Eddie dies, he creates a Consistency Paradox that almost immediately catches up with the Reverse Flash, and he disappears in a flash of blue light.

We see the same exact VFX used again in the tease of 'The Refuge', when the Council of Time Masters sentences Time Pirate Kaylex Druzan to death via the Omega Protocol. The Time Masters assassin the Pilgrim locates Druzan's younger self and kills him, resulting in Druzan vanishing in the 'present' (if the Vanishing Point can indeed be called 'the present') in the exact same manner as the Reverse Flash.

However, the episode makes it quite clear that the Omega Protocol erases you from the timeline, completely removing you from history. His specifically says that if the Pilgrim kills his 10-year-old self, 'this team will never have been born'. Which means when someone is killed in the past, the timeline is rewritten and their future actions (and all the consequences of those actions) cease to exist. Time Pirate Druzan was erased. Eobard Thawne was erased.

OK, so death by Omega Protocol is totally a thing! A scary, scary thing that can totally happen!

So, if the Omega Protocol erases someone from the timeline, and is a genuine threat, then why would Druce have ordered the Legends wiped out, if he needs them in order to ensure the future where Vandal Savage is alive and well and ruler of the world in 2175?

The only answer that makes sense is if the Legends have already done what they were supposed to do, and erasing them will no longer affect the timeline where the Thanagarians are defeated by a world united under Savage in 2175.

The only way that works is if the paradox created by an Omega Protocol doesn't actually create a timequake that extends from the Point of Divergence in all directions and create a new timeline where they were never born. It just means if you kill someone in the past, they die in the present (whenever that present may be) but everything they did still happened.

Well, OK then. So then that solves the whole Grandfather Paradox thing with Thawne, right?

Yep! Sure does!

OK, then why does Rip Hunter seem to think that killing Savage in the past would save his family? For that matter, how do the Legends drop the Hawks off in a timeline with no Vandal Savage if, in fact, the Omega Protocol doesn't actually remove Vandal Savage from the timeline? Also, why would removing the team's younger selves (except for Ray) from the timestream and stashing them at the Refuge actually work? Why would Rip offer his younger self to the Pilgrim, and why would she accept, if it would not actually have any effect on the timeline?

So... new rule? Or continuity error?

Welllllllll..... that's the funny thing, isn't it? Because the Omega Protocol works one way for poor erased Time Pirate Druzan, but as we will see from both the events of *The Flash* and the finale of *Legends of Tomorrow*, it apparently works differently for Vandal Savage and Eobard Thawne. Because not only was Thawne not erased from 'history' (i.e. the timeline where the TV crews follow Barry around) at the end of season one of *The Flash*, Vandal Savage was also not erased from history what with the team still together, and Miranda and Jonas and by extension Snart and the Time Masters still being dead, when the Omega Protocol should have restored the original pre-series timeline.
However, when the Hawks leave the team to return to St Roch, they say 'With Savage gone, we want to start fresh, see what happens.' And I'm pretty sure that Rip would not have stopped them, if Vandal Savage were in fact still prowling around the 21st century.

So... was the Vandal Savage who killed Miranda and Jonas and was in turn killed in 2020 a Timeline Remnant? Or was he erased from the timeline after he was killed in 1958?

Yeah. I know. I feel you, I really do. We were so close to this whole thing making sense! So close. I'm pretty much at the point where I really just want to start drinking.

My Brother From Another Timeline's Mother

'Eddie Thawne died, so Eobard Thawne should have been erased out of existence, right?'

'Not necessarily. It's possible Eobard was in the Speed Force, protecting him like a bomb shelter, keeping him alive and his time line intact. It's what's known as a 'time line remnant'. '

—Earth-2's Harrison Wells explains to Team Flash how Eobard Thawne was protected from actually being erased from the timeline where Barry's mum is still dead despite that being a massive consistency paradox that will be have-waved away by calling it 'a fixed point' which actually is a misnomer when what he means is her death is the Point of Divergence that created this timeline, but it's how the series will explain why Barry is still the Barry we all know and love instead of a different Barry who doesn't get his own TV series until 2020.

According to Earth 2's Dr Harrison Wells—aka Harry—the timeline the Thawne we met in season one of The Flash came from Timeline A (where Nora Allen woke up the morning of March 19, 2000, and got Barry off to school just fine, and then Barry Allen grew up and became the Flash in 2020) ceased to exist when he killed Nora Allen, and the Eobard Thawne who shows up in 'The Return of the Reverse Flash' is a Timeline Remnant.

A Timeline Remnant? Like, left over from a bolt of time and sold at a discount on an end-cap?

The short answer: Yes. Kinda.

Before you laugh, this is an actual thing! Except it's called 'Polchinski's Paradox' and it's about billiard balls. According to theoretical physicist Joseph Polchinski, this sort of Grandfather Paradox would occur if you fired a billiard ball into a wormhole at an angle which, if the ball continues to travel on that path, would emerge in the past and knock itself off-course so that it never entered the wormhole to begin with.

A timeline remnant is that second billiard ball. Someone who exists despite the paradox of the timeline they came from ceasing to exist. They are, quite literally, left over from a previous timeline.

Now, here's where things get... OK, 'wiggly' isn't a scientific term, but we're gonna go with 'wiggly' because 'timey-wimey' gets very over-used in this fandom and it belongs to That Other Time Traveller In A Long Brown Coat, anyway. So, yeah.... WIGGLY.

If Eobard Thawne from Timeline A went back to 2016 of Timeline A, he wouldn't learn jack about the Flash because in Timeline A, Barry isn't the Flash yet, because the particle accelerator hasn't exploded yet. The only way Eobard Thawne could travel back to 2016 and see the Flash in action is
if the Eobard Thawne from 'The Return of the Reverse Flash' came from the future of Timeline B, where Nora Allen died in 2000, and the Particle Accelerator exploded in December 2013.

You can't jump from Timeline A to Timeline B that way. It's about which direction you're coming from. You can start in the future of Timeline A, travel back to the past of Timeline A, change the past which creates Timeline B, and then if you go back to the future, it's Timeline B's future.

But you can't start in the Future of Timeline A, and travel back to the past of Timeline B. Just like you can't start in the past of Timeline B, and travel to the future of Timeline A. You can go forward and back, you can create a new future by changing the past, but you can't travel between timelines.

Yet when the Eobard Thawne of season two went to his past, he showed up in the past of a timeline he had yet to alter, but was in fact already altered by his own actions (Bootstrap Paradox).

So... New Rule of Time Travel? Or Continuity Error?

Sadly, in this case, it's a continuity error. But it aired, so it's canon. So how do we make it work?

We have two options! Option One:

Thawne A travels back from the 2190s of Timeline A, but because 2016 is was chronologically after The Point of Divergence (March 18, 2000), the Speed Force protected him from being Omega Protocol'd and spat him out in the only extant timeline in 2016—Timeline E—despite the fact that he has yet to create Timeline B by killing Nora Allen in March 2000. But he will kill Nora Allen, because he did kill Nora Allen. So the only anomalous part of this is how he retains his memory of the original, unaltered timeline (Timeline A).

So that's one way Thawne from Timeline A could have ended up in Timeline E without Time Wraiths popping out of the Speed Force to eat his face—because Timeline A no longer existed, he got ejected into the only existing timeline: the one where in 2016, Barry is the Flash.

But the question remains: is the Thawne in season two the same Eobard Thawne who will become the Eobard Thawne of season one of *The Flash*? Harry seemed to think so. Then again, Harry also considers Big Belly Burgers a totally reasonable dietary staple. And so I'm doubting him on this one, because according to every example of time travel in *The Flash* and *Legends* up to that point, the Eobard Thawne from Timeline A could not have travelled back to the past of Timeline E. Hence Option Two:

The Eobard Thawne in 'Return of the Reverse Flash' is Timeline C's Thawne, who made the same exact choices Timeline A's Thawne does, and has yet to kill Nora Allen but will kill Nora Allen, and is trapped in the closed Causal Loop of a predestination paradox.

Any way you look at it, the Thawne in 'The Return of the Reverse-Flash' is not, nor can he ever be, the same Thawne who died in 'Fast Enough' when Eddie killed himself to save the world. Because he travelled back to 2016 from a timeline where Barry Allen became the Flash in 2013, and not 2020. That's just cold hard facts, folks. I didn't make them up, I swear.

OK, so, bomb shelters. We can work with that. Let's presume that, the Speed Force, like the Temporal Zone and the Vanishing Point, are in fact dimensions that exist outside of the space-time continuum. And so any changes to the timeline that occur while you are outside of time don't affect you.
Which would explain why, at no point during 'Destiny', did Martin Stein turn to Rip Hunter and say 'Don't worry—I just remembered how, after you proposed this little adventure on a rooftop in Star City in January 2016, Jax met me in the parking garage as I was leaving and we popped over to the curiously empty S.T.A.R. Labs and fixed the time drive on the jumpship so he's on his way here.'

Oh, wait. *Time Pirate Kaylex Druzan begs to differ.* Damn. So let's go with 'the changes Jax made to the timeline hadn't caught up with Martin yet'. After all, Mick does say that the length of (relative) time before time 'hardens and sets' is unknown. Which is a lovely, and very smart, loophole the writers gave themselves. Well done, writers' room!

(Coincidentally, the Vanishing Point being 'outside time' is also a very handy explanation for how Jax is able to return to the Waverider with no issues despite Baby Jefferson being removed from the timeline.)

I guess your personal timeline being protected and immutable by a 'bomb shelter' such as the Speed Force in this case really does have more to do with where your name lies on the call sheet.

However, Timeline Remnants mean two important things right now:

1) Timeline B’s Eobard Thawne still exists (despite being Omega Protocol'd) and has a shiny new Series Lead contract that spans all four series that make up the SuperLegendaryFlarrowVerse and Timeline B's Thawne is the one we met in 'Return of the reverse-Flash' and again in 'The Race of His Life'.

2) Theoretically Timeline HH’s Leonard Snart still exists in the SuperLegendaryFlarrowVerse despite dying in 'Destiny', and possibly also despite of (or due to) the changes to the timeline which resulted in Timeline G aka Flashpoint.

Which begs the question: if there is a version of Leonard Snart who was never recruited by Rip Hunter to become a legend, does that mean there are also versions of Mick Rory, Sara Lance, Jefferson Jackson, Martin Stein, Kendra Saunders, and Carter Hall running around the current timeline? Moreover, which of the two Snarts is the Timeline Remnant? And if the Snart we all know and love is now a Timeline Remnant, then are the other Legends we know and love now also Timeline Remnants? Or are their doppelgängers like Star City 2046 Ollie with the robot arm, not 'real' because that future is still in flux and hasn't 'set'?

OK, so a lot of these questions will most likely be answered in October. But those answers also depends on the definition of Timeline Remnants.

As previously mentioned, based on Well's theory, and canonical evidence presented in the season two of *The Flash*, Timeline Remnants exist unmoored to a past or future that they can ever actually get back to. Whatever future they go to is not the same one they left, and whatever past they came from is different because of whatever they changed.

So what about the *original* timeline? You know, the one where Nora Allen was alive and well and Barry still became the Flash? Or the one where Vandal Savage never killed Miranda and Jonas?

It’s like the Bottle City of Kandor, bro.

You lived there, it was real for everybody right up until the moment you left it, and only you remember it because it got over-written by the new timeline. And being sealed in a giant glass bottle, it’s totally off limits, now. There’s no way back. Not for Barry Allen, not for Rip Hunter, and definitely not for Eobard Thawne. The best they can hope for is a timeline that is the least changed by time travellers, time pirates, and millennial speedsters to come home to at night.
The good news is that if you come from a past that no longer exists, but you're still walking around and breathing and doing stuff? Then instead of winking out of existence all together OR getting a shiny new set of memories, you're a Timeline Remnant. And you now have whatever damned future you want—that is until:

1. Time 'sets', and the ripples from that pebble you tossed into the pond finally catch up with you, and you still wink out of existence like Eobard Thawne OR

2. Since it's a new timeline, you're now The Spare, as the new timeline has effing 2 of you now ha ha isn't that hilarious. And as far as your friends over in the original timeline are concerned, you disappeared and never came back, and now we’re in Star City 2046 and Ollie’s got a robot arm.


And we all just accepted 'OK, so Timeline Remnants are now totally a thing.' But then how the hell do they work?

They work however the writers want them to, apparently. But in terms of how they're presented in the SuperLegendaryFlarrowVerse, here's a crash course in how timeline remnants work:

Let's say that on January 1, 2016, you travel back to January 1, 2015. In 2015, there are now TWO OF YOU. Physically. In the same place. Like when Barry spotted himself running alongside himself in 'Out of Time'.

2016!You has already travelled back to 2015. Any changes you make to the timeline will over-write the 2016 you came from. Could be a big thing (Tidal wave! Oh crap Cisco's dead! Oh crap Kendra, Carter, Ollie, and everybody ever are dead!) could be a tiny thing (you write a note and sticks it in Sgt Rock’s helmet in 1944).

But when you go back to 2016 (either the old fashioned way, 1 second per second forwards i.e. 'the slow path' or the Barry Allen way of just running real fast) the 2016 you'll go back to is one where the changes you made will be permanent. In that new timeline, there will always have been a note in Sgt Rock’s helmet.

2015!You has not yet travelled back in time. Which means according to Rip Hunter NOTHING CAN HAPPEN TO YOU, or else it will create a Grandfather Paradox. 2016!You won’t exist if 2015!You dies. So, roofie-ing yourself and leaving yourself in a hotel room for the duration is totally a workable plan. Better yet, DO NOT INTERACT WITH YOURSELF. AT ALL. LET HER DO HER THING, WHILE YOU DO YOUR OWN TIME-TRAVEL-Y THING. Because unless 2016!You actually remembers 'oh yeah, I spent Jan 1, 2015 passed out and woke up in a really swank hotel room' (thus proving a) time is linear and b) 2016!You is living in a Bootstrap Paradox), avoidance is TOTALLY THE KEY to not screwing up your own timeline.

That's what Barry does, in 'Flashback'. He spots his unconscious self, and is all 'PERFECT! I'm gonna let past-me sleep this off, while future-me gets what I need, and I'll head back to 2016 with NO-ONE THE WISER!'

Thawne's so better at this than you, Allen. Seriously.

(Ok, to be fair, Barry almost pulls this off—except for the part where he actually does end up changing the past just that wee tiny bit, so that when he comes back to 2016, it's not the same 2016 he left, to the tune of Pied Piper and Cisco totally being bros. And that timeline where Hartley stayed a bad guy? BOTTLED CITY OF KANDOR, FOLKS.)
BUT… what if 2015!You totally did REALLY IMPORTANT STUFF on Jan 1, 2015? Stuff that has to get done, in order for 2016!You to exist? Then sedating yourself and stashing her is OFF THE TABLE. Unless 2016!You has an eidetic memory and TOTALLY remembers EXACTLY what you did that day (spoiler: oh hells no), and steps in and does all of it letter-perfect. Or at the very least, close enough as to not screw up the timeline so much that the future you came from no longer exists.

(Which is what Eobard-as-Wells tells Barry to do, after the whole tidal wave thing. And as a time traveller himself, he is CRAZY SERIOUS about it, cos remember, if Barry screws up the timeline, the future Eobard wants to get back to won't exist. That's called 'preserving the timeline' and it ONLY WORKS because of the whole 'time wants to happen' thing. Which in the real world is called Close Time Curves, but in the SuperLegendaryFlarrowVerse universe, is actually more likely called 'The Time Bastards using the Oculus to make Goddam Sure Time Happens exactly the same way we want it to'.)

See, that's the thing about Eobard Thawne, isn't it? He keeps checking with Gideon in the Time Vault that none of his actions one hundred and sixty years in the past have actually erased the future he left, which would supposedly cause Time Wraiths to come out of the Speed Force and eat his face. Or, more importantly, strand him in an alternate timeline, unable to return to the future he left, forever because stable wormhole or not, that future is now, you guessed it, THE BOTTLE CITY OF KANDOR.

But Zoom killed his Timeline Remnant! Like, actually a whole bunch of them. He is a serial murderer of himself. It's his thing. So why didn't a black hole open up or dementors come out of the Speed Force to eat his face until, you know, that one time dementors came out of the Speed Force and ate his face?

It would appear that much like Eobard Thawne, Earth-2's Hunter Zolomon is also better at this than Barry Allen. Oh let's face it—as much as we love him, everyone is better at this than Barry Allen.

But I digress.

At some point prior to the events of 'Welcome to Earth-1', Zoom realises 'oh hey, what's really going to make this entire I'm-a-good-guy-AND-a-bad-guy plot work is if I am in two places at once and both of me are interacting with Team Flash. And since Martian Manhunter only exists on a parallel world thus far only shown on CBS, I'll just have to do this the old fashioned way—by an insanely labyrinthine plot device wherein I run back in time, change the past in order to create a Timeline Remnant so both of us can be in the same place at the same time, and then split up so I can be on Earth-1, macking on Caitlin, while Other Me is laughing maniacally at Barry and Harry and Cisco!

But, you ask, how does that really work? Because it's Jay who was macking on Caitlin, and then Zoom killed that Jay, so how can that Zoom remember macking on Caitlin?

The only way the Zoom on Earth-2 who killed 'Jay' would 'remember' the events of 'Welcome to Earth-2/Escape from Earth-2' that happened on Earth-1 would be if he lived through them, and then ran back in time to meet his younger self and convince him that he needs to sacrifice himself. Then the Zoom who had kissed Cait kidnaps Wally and take him to Earth-2, and then stays on Earth-2, and reaches through the breach to kill the Zoom on Earth-1, before that Zoom can run back into the past to kidnap Wally.

Which means that the 'Jay' that Zoom killed wasn't actually the Timeline Remnant. The remnant is actually the Zoom that went to Earth-2 with Wally, because the future he came from no longer exists, and he changed the past by killing his younger self.
Crazy, right? I KNOW. BELIEVE ME. But it's the only way *both* Zooms can have experienced the events on Earth-1 during the two-parter.

OK, what about Barry's Timeline remnant in 'The Race of His Life'?

Barry Allen has to defeat Zoom. So he runs back into the past by 1 hour, and meets up with himself and tells is One-Hour-Younger Self that since he has now changed the past by running back in time an hour, he is now a Timeline Remnant because the past he came from no longer exists because he just changed it and created a new timeline. One-Hour-Older Self's job is to sacrifice himself by running so fast that he disappears into the Speed Force, while One-Hour-Younger's Self takes his place in the new timeline.

Why you and not me, One-Hour-Younger Barry asks?

One-Hour-Older Barry explains that in order for both of them to be in the same place at the same time, One Hour Younger needs to exist and NOT run back into the past by 1 hour. Because that way, not only does One-Hour-Older Barry no longer have a past, but the future he came from also ceases to exist. He is a remnant of a timeline that no longer exists at all, in either direction. And that's the only way for both of them to be in the same place at the same time.

Both Barrys agree that even if they are billiard balls that this makes straight up zero sense, because in a SANE time travel narrative, they just created a Grandfather Paradox and the One-Hour-Older Barry should disappear when One-Hour-Younger Barry doesn't go back in time. But they go with it. And the Barry who survives is in fact the one who was an hour younger than the one who died.

So, how are Zoom and Barry able to create Timeline Remnants by travelling backwards, when the other instances of Speedsters time travelling (Barry in 'Rogue Time' and subsequent instances) the speedster from the future replaces the speedster from the past?

The answer is.... continuity error. Sorry, that's all I've got.

**Horrible Things, Indeed**

'We do construct a rule on our show that if you kill me right now with a hatchet, the rest of the team can’t just… go back in time and stop you from hitting me with the hatchet. Our rule is that when you try to interfere with events that you participated in, that creates a time paradox, and black holes, and horrible things happen.'

—— *Legends of Tomorrow* showrunner Phil Klemmer trying to say that they're really serious about this whole Paradox thing, 5 months before the season finale has Vandal Savage interfering with events he participated in without black holes and horrible things happening.

'We can't go back and change events in which we participated. Time would fold in on itself, creating a temporal vortex.'

—— Rip Hunter, in 'Pilot, pt. 2' trying to say pretty much the same thing Phil said, only with more technobabble and no references at all to the classic 1993 Bill Murray comedy *Groundhog Day*.

So, we've already established that the way this universe likes to resolve Grandfather Paradoxes is
either with sleight-of-hand via flashy VFX to distract audiences from the lack of actual logic, or Timeline Remnants.

So, why is it that sometimes when you change the past—big or small—you can still go back to the future, and other times The Pilgrim (or your ancestor Eddie) can Omega Protocol you and you wink out of existence, and yet the timeline doesn't change at all despite the fact that you were just erased from the goddam timeline and according to that logic, every single thing you did now longer happened, or happened differently?

**Answer:** because the rules of time travel thus far presented to us in *The Flash* and *Legends of Tomorrow* are broken any time they stand in the way of the story the producers want to tell.

Now, before you go 'BUT THAT MAKES NO SENSE' remember that the writers' rooms of the SuperLegendaryFlarrowVerse are made up of women and men who have been hired to tell a good story, not necessarily deliver a physics lecture about the laws of thermodynamics. So in this case, as in many others, it's just 'it happened the way it happened because it's a better story if it happened that way'.

That is why instead of *The Flash* season 1 ending with everybody waking up to a brand new timeline where Nora Allen is alive, Barry was never raised by Joe, Henry Allen never went to jail, Harrison Wells and Tess Morgan were never killed in a car crash, the STAR Labs particle accelerator didn't come on-line until 2020, and Eobard Thawne was never born, instead there was no change to the timeline despite the fact that Eddie killing himself made Eobard Thawne wink out of existence.

Take a deep breath. Ok, you good? Still with me? OK.

So, according to the Rules set forth by Phil Klemmer, the black hole above Central City wasn't created by Barry colliding with a single hydrogen particle at a specific speed, but in fact opened up because of the Grandfather Paradox. Cause and effect, 'this is officially what happens when you create a Consistency Paradox in this universe'. What Rip would call 'irreparable damage to the timeline', no doubt.

OK, since that's how *The Flash* writer's room seems to remember the season one finale, let's go with that. Grandfather Paradox results in a Black Hole. Got it.

So, if the Black Hole appeared in the exact location in space-time where Eddie Thawne's death Omega Protocol'd Eobard Thawne, because that's where the camera crew is, then where is the black hole above Harmony Falls, Oregon, in March 1958? Isn't that where Vandal Savage's death in 1958 Omega Protocol'd the Vandal Savages in 1975, and 2021?

Yeah. Welcome to my world, folks.

Survey says [ding!]: continuity error.

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**Timequakes, and Why Savage's Crazy Bad Guy Plan Makes No Sense**

'Okay, it's official. This is the craziest bad guy plan in the history of bad guy plans.'

—Jax speaks for ALL OF US, in 'Legendary'
With the Oculus destroyed, Vandal Savage is now no longer being controlled by the Time Bastards, who arranged the entire universe specifically so that Savage will be King of the World in 2175 when the Thanagarians Invade, right?

So of course, the second everyone outside of the Vanishing Point has free will and the future is actually in flux for really real for the first time since the series began (and coincidentally since time began), Savage goes completely off script and decides to follow his own agenda, which is to recover three Thanagarian meteorites and detonate them, using Khufu and Chay-Ara’s blood.

Now, why it has to be their blood and not his own, we will actually never know. Suffice it to say, the temporal mechanics behind it are dodgy as hell. But then again, as I’ve explained for the past twenty pages or so, the temporal mechanics of this entire universe are dodgy as hell.

But let's take a look at this particular nugget of crazy in detail, shall we?

According to Dr Martin Stein, Savage’s plan to ‘erase time’ and reset the timeline to 1700 BCE is to create a temporal paradox that would result in a timequake that would return the Earth to Ancient Egypt.

Actually, let's be clear: according to Stein, the way the universe would resolve the paradox would be to ‘the point of the first chronothermic reaction’.

First off, according to Google, what ‘chronothermic’ actually means is ‘a long duration heat treatment at lower temperature is equivalent to a short duration heat treatment at higher temperature’, which means you can either cook something for one hour at 200 degrees F, or 30 minutes at 400 degrees F, and theoretically get the same thing. What does this have to do with time travel? Your guess is as good as mine, folks.

Okay, so ignoring the real world definition of ‘chronothermic’, from a time travel point of view, if an ‘endothermic reaction’ in terms of thermodynamics results in the absorption of energy as heat, and ‘exothermic reaction’ results in the release of energy as heat, then ‘chronothermic’ clearly means the… time of energy as heat?

Yeah. That makes no sense, either. Whatever, Professor. We're going to assume from context that by ‘chronothermic’ what Stein means is the ‘explosion that destroys the world’.

Only problem with both Savage's plan and the actual entire plot of the episode is that in this case, the first chronothermic reaction is March, 1958. Not 1700 BCE. The only way the timeline would collapse and start again in 1700 BCE would be if Savage took the Hawks blood back to 1700 BCE, and performed the ritual there, rather than in 1958. So why didn't he? Because also according to Stein, whose Physics Degree has never before been as much of a Deus Ex Machina Generator as it is in this episode, the three time periods Stein reasons that Savage chooses are based solely on the Earth's alignment with Thanagar. So there is no actual logical reason why the timeline wouldn't just reset to March 1958 (the actual time of the first actual chronothermic reaction).

However, what this episode does tell us is that Temporal Paradoxes are apparently resolved by a 'timequake' which creates shock waves from the Point of Divergence out in all directions (past, present, and future) to reset the timeline.

Which, FYI, hasn't actually happened (so far as we know) any of the multiple instances in the last 2 years when Time Travel has in fact created a Consistency Paradox.
In Conclusion

As of this moment in time, we're now on our thirteenth canonical timeline.

Despite all evidence to the contrary, for the sake of the narrative, we're currently declaring the SuperLegendaryFlarrowVerse officially a Terminator flavour universe, with 'wiggle room'. I.e. for all the pieces of the puzzle that simply do not fit, they still aired. They're still canon. They are a part of the story, even when they're continuity errors or the fakest fake science in the history of fake science. And believe me, this is a universe with a Cold Gun that shoots cold beams of absolute zero that freezes laser beams. We know from fake science.

In short: if you can believe that Barry Allen is the fastest man alive, then you can believe all kinds of stuff including giant man-eating man-sharks, telepathic super-intelligent gorillas, and that no-one has actually killed Ray Palmer yet.

Time Wraiths, black holes, and timeline remnants are actually internally inconsistent rules/continuity errors made canon due to the sake of the narrative.

While Timeline A proves that Nora Allen's life still resulted in Barry Allen becoming the Flash without (so far as we know) dire consequences for the world, chances are in early season three of The Flash, we will see a Timeline H established to restore the status quo of Barry being raised by Joe West.

But everything else?

Everything else is up for grabs, because near as I can tell, there really is no such thing as returning to the Bottle City of Kandor. And that genie is, well...

You know what I mean.

Time travel makes everyone's head hurt. And sometimes makes me want to drink copious amounts of alcohol. But I hope that this RIDICULOUS TOME actually helps you (the reader) understand the sometimes flawed but always entertaining Temporal Mechanics of the SuperLegendaryFlarrowVerse!

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