

The Curse of Fatal Non-Monotonicity:
Time-Travel Narratives in Steven Moffat's
Doctor Who, 2010–2017

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I should explain.

This is a blog post that got out of hand. The starting point was straightforward enough. In November 2013, the BBC broadcast Steven Moffat's 'The Day of the Doctor', the centrepiece of its year-long programming to celebrate the 50th anniversary of *Doctor Who*. In the episode, Moffat, at the time the 'showrunner' of *Who*, takes a position with respect to existing story content established during the tenure of previous showrunner Russell T Davies – and to a degree even earlier – that struck me as deeply unsettling, in a number of ways. It has something to say about the nature of information as presented in narrative form, what it means for this information to be seen as mutable, and how mutability might affect the reader's¹ response to narrative. It also relates to the very idea of ownership of fictional work.

Rather than shout into the abyss a few tweets apparently loaded with fan-entitlement – *Moffat isn't doing Doctor Who my way!* – I wanted to step back and make a real case for my unsettlement, partly to put my thoughts into some sort of order,

1. Without getting too precious, by 'reader' I mean the human processor of a narrative, whatever form it's in. I will also use 'viewer' when I'm specifically referring to the act of viewing an episode of *Doctor Who*.

and partly to be rid of them: *there*, I could say; *read that*, *it's all I have to say on the matter*. But pulling on the single thread gradually unravelled the whole jumper. What happens in 'The Day of the Doctor' feels like the culmination of an attitude towards time travel in narrative across all of Steven Moffat's work for *Doctor Who*.

Writing about time-travel narratives is complicated, for exactly the same reason that the narratives themselves are complicated: there's an inherent slipperiness which means they're typically just beyond our grasp. We persist in imagining that there's such a thing as *how time travel works*, which we could understand if we tried hard enough, but there really isn't. Writing about time-travel narratives is like writing about Calvinball, or Mornington Crescent, as if they were real games. What I've tried to do here is to focus on time travel as a narrative device: how it's *used* in narrative; how it works – or doesn't work – on those terms; and how time travel interacts with information and reader response.

What I've ended up writing looks something like a dissertation-length epistemology of time-travel narratives – focused on Steven Moffat's work on *Doctor Who*, to be sure, but which hopefully has a little to say about a more general case. I don't know who the readership for this is, besides me. If it's

you: welcome. You likely won't agree with everything here. But let's start with something solidly axiomatic.

Introduction

This we know: Steven Moffat likes to play with time. He's always liked to play with narrative structure, but his involvement in *Doctor Who* opened up the whole toy box. While he was writing under Russell Davies, there was still sufficient restraint that – whether from the need to tell smaller stories delimited by episode boundaries, or because these were the stories he wanted to tell – he kept to the broad narrative heuristic that it's safe to play with time to *create* problems, but riskier – slippier, more destabilising – to play with time to *solve* problems. 'Blink' (Steven Moffat, 2007)² presents a monster which literally feeds on time, but which is finally vanquished using a very practical trick. 'The Girl in the Fireplace' (Steven Moffat, 2006) is driven by the idea of a dislocation of time, and its tragic resolution is that the dislocation cannot be overcome. It resists an easy, tricky solution. All of this is consistent with an episode from

2. Episode writers will be listed as credited. Usual caveats about various uncredited contributions from showrunners and script editors apply.

Davies's first series, Paul Cornell's 'Father's Day' (2005), which takes an even more explicit position: that messing with time to one's advantage is inherently dangerous, in some way poisoning of the fabric of the universe.

But once in control of the production, Moffat immediately started to expand how the series dealt with time. More than ever before, it became *about* time; not just flitting between tableaux each fixed in their own time, following the original programme blueprint, but playing with the very idea of what it means for something to have happened at all, for one thing to happen before or because of another, and for anything to be immutable in the face of time travel. His first series arc is a Möbius strip of causality: cracks in reality are swallowing people out of history, and seem to have been caused – we gradually learn – by a cataclysmic event at a specific, known future time. This introduces a key structural device that would become dominant in Moffat's writing for *Who*: something bad has already happened, which is sufficiently bad that it must not be allowed to have happened.

Moffat's second series arc reiterates the device, this time raising the stakes by putting the something bad in the first episode, right in front of our eyes, and stripping away any ambiguity about what it might be: the Doctor is killed.

Notwithstanding the fact that this is *Doctor Who*, so anything is possible (and the meta-level information that Matt Smith clearly wasn't leaving the series anytime soon), at the time of original transmission Moffat did everything he could to deny that there were scare quotes around 'killed'. It was really the Doctor, and we really did see him killed, cross his hearts and hope to die. The point here isn't that Moffat was – of course – dissembling, but that we were properly intended to approach the series assuming not that we'd misinterpreted what we'd seen, and that it would turn out to be a sleight of hand, but that something very very bad had indeed happened, and must not be allowed to have happened. The resolution wouldn't involve revising the information we'd acquired about what had happened – because we weren't mistaken or misled about it – but actually un-doing what had happened, nullifying it.

After a great deal of dithering around with the origin and identity of the Doctor's new companion, Moffat's third series arc moves towards a conclusion at the location of the Doctor's grave. When that year's Christmas episode – notably, 'The Time of the Doctor' (Steven Moffat, 2013) – the last for the eleventh Doctor (and for Matt Smith – though the meta-level information of the casting of the twelfth Doctor again provided reassurance), returns to the same location at an earlier time,

Moffat co-opts some *Who* apocrypha which seems to limit the Doctor's ability to regenerate, in order to once again insist that this is the end. We saw his grave, how can it not be? This is where the Doctor dies. Died. Will die.

I've specifically not bothered to talk about the mechanisms by which in each case the something bad is un-done, because they're not all that relevant here – I'll talk about them later. What's relevant here is that the something bad does in each case happen (or has already happened), and then is un-done, not by means of a revealing of more information which changes how we see it – again, the issue here isn't interpretation of what happens; it's *what happens* – but by a causal obliteration of the actual event. This is important, because I think it might have something to say about how Moffat's *Who* can be divisive. It also reveals how comfortable Moffat is with non-conventional causality in narrative, and – crucially – how in Moffat's *Who* everything is potentially mutable, including other writers' work.

Time for a digression.

Monotonicity, Non-Monotonicity, and Narrative

A property of certain simpler systems of formal logic is that they're *monotonic*. What this means is that once something

is true in such a system, it will always be true, and cannot become untrue as more information is added. The set of true propositions can only grow. Monotonic logics are stable, and at a procedural level they're relatively simple to maintain, because the amount of housekeeping needed is low: find what else is entailed by new information, and you're done. Such logics are an abstract curiosity, though, because practical, real-world human reasoning is very much *non-monotonic*. We proceed through our daily lives constructing a mesh of defeasible assumptions, defaults and heuristics, any of which might turn out to be false as more evidence becomes available. Most things in our brains are provisional. That we manage such processing instinctively shouldn't obscure the fact that non-monotonic reasoning is messy, unstable, and complicated. The procedural machinery needed to maintain a formal, non-monotonic logic is significantly more elaborate than for a monotonic logic.

A story, then, occurs as the interplay between two concurrent logical systems. The narrative itself is an ordered release of information about a story-world. This information is typically monotonic. To be sure, the ordering of the release of information is often carefully unhelpful, even manipulative, but the information itself is generally trustworthy. Conversely, as a reader, our *processing* of the narrative is every bit as non-

monotonic as our processing of the information provided by everyday life, and necessarily so, because the cognitive activity as we process a story involves far more than just an assimilation of the narrative information: we ask questions; we anticipate; we hope, we dread; we're pleased, and surprised, and relieved. We construct an ongoing, non-monotonic *model* of the story-world. Creation and manipulation of this reader model is how a story functions: the core monotonic logic of the narrative orchestrates the surrounding non-monotonic logic of the reader model of the story-world.

Monotonicity of the narrative is important. At issue here is trust. The reader wants to be able to cede to the storyteller some control over their cognition, and ultimately their *affect*, but the storyteller must in exchange play fair. It's that trust in the stability of the narrative, its monotonicity, which licenses the outward and speculative non-monotonic reasoning about the story in the reader's mind, and the investment of mental effort that involves. We enjoy ceding physical control to the roller-coaster because we trust in the rigour of its construction. We want to be baffled by the magician, but there are rules: no stooges, no camera tricks.

Stories that do play with non-monotonicity need to step carefully. Where the apparent epistemic solidity of a filmed

narrative is undermined, that's usually achieved by presenting an internal or otherwise unreal narrative using a skewed visual grammar. The (filmed) Poirot whodunit model plays with a soft non-monotonicity as it enumerates the possible solutions to a murder, enacted by the same characters. Here, there's no intent to deceive; the (potentially) untrue accounts are there not as narrative axioms, but as prompts for our own non-monotonic reasoning about the mystery – this is often reinforced with a soft-focus, sepia filter or other visual cue. *The Usual Suspects* (1995) treads a finer line, embedding an unreliable narrator in an otherwise reliable, monotonic narrative. The reliable and unreliable sections of the story are deftly interleaved, at first in large chunks and with clear signposts, but later with a blurry frequency and undifferentiated visual style, such that we – at least on first viewing – lose track of which is which. This is tricksier, but perhaps akin to the honest dexterity of a close-up magician. A useful contrast is with the 2003 film *Identity*, which tilts towards wholly unreliable narration. A seemingly random group of people are stranded at a desert motel, whereupon they begin to die horribly, one by one. The increasingly surreal events promise a humdinger of a practical solution, but the story has other plans: we've been watching multiple personalities inside the head of a serial killer,

brought together under medical supervision in an attempt to kill off all but one, and by doing so restore the killer's sanity (and save his life). It's an elegant, original concept, but its non-monotonicity is more than many people are able to accept. I saw the film at an early screening in Hollywood – often a film-literate and hard-to-please audience – and the big reveal met with a significant number of vocal objections. There was a real sense of *betrayal*.

The more a narrative is itself non-monotonic, the more it risks alienating its reader; the reader's own investment – and an investment is exactly what it is – of non-monotonic reasoning about the story is wasted, and trust is lost. *The Usual Suspects* holds things together because, at heart, its shape is that of a whodunit. Rather than *who is the murderer?*, the main plot question turns out to be: *which of the people we've already seen is actually Keyser Söze?* The answer to that question involves a reconsideration and reworking of information already gathered, but little of it is actually rendered invalid. *Identity*, conversely, utterly changes its very frame of reference late in the game, and almost all non-monotonic reasoning so far is more or less junked in a moment. Non-monotonicity piled on top of non-monotonicity turns out to be too much.

Identity's portrayal of an internal narrative isn't necessarily a problem. It's true that dreamscapes and other inner worlds are inherently slippery – and therefore much better suited for conveying symbolism (Sam Lowry's flying alter ego in *Brazil* (1985)) than plot – and that there are people for whom internal narratives are just less satisfying (*pretend real* being somehow more real than *pretend pretend*), but there's no reason why they can't be monotonic. Information about the activity within a brain is still information. Recast *Identity* as a *Fantastic Voyage* (1966) of the mind, rather than of the body, with a suitable framing narrative, so that the ontology of the internal world is mapped out in advance, and it would become just another whodunit of sorts: *which motel character is the serial killer's real/dominant identity?* This might or might not make a better story, but objections to the story based on its non-monotonicity would be gone. In the film as made, it's the late revelation of the internal narrative that's a problem, not the internality itself.

I've been talking about the soft non-monotonicity of stories in which something appears to have happened, but actually hasn't – at least, hasn't in the way we're initially led to believe. Achieving the harder non-monotonicity in which something is properly true, and then properly untrue, or in

which something properly happens, then properly has not happened, requires screwing around with causality, which typically means playing with time.

Time-travel fiction has not been eager to see causal mutability as a positive thing. For H. G. Wells, time travel was a form of tourism, any significant causal ramifications being either unconsidered or ignored. Ray Bradbury's 1952 story 'A Sound of Thunder' set the modern template, overlaying onto a Wellsian tourism narrative the idea of small causes magnified by time into huge – and inevitably deleterious – effects, his use of a butterfly as a causal fulcrum eventually fixing the concept in popular culture.

Almost all modern time-travel stories which play with causality involve a pull towards the status quo, against a threat of instability, heeding Bradbury's warning. There is a broad taxonomy. An accidental change to the past might create a threat to the known present, and the threat must be resolved: in *Back to the Future* (1985), Marty McFly's sudden insertion into his town's past threatens to prevent his parents from getting together, and he literally watches himself vanishing from his own present, via a handily-placed Polaroid; he must save himself

by making sure things work(ed) out for his parents.³ Or an antagonist might deliberately try to change the past, in order to create a different present/future, and must be thwarted: in *Back to the Future Part II* (1989), Biff Tannen travels back to 1955 with a 2000 sports almanac, which he uses to get rich, ruining the town in the process – so the almanac must be destroyed. In *The Terminator* (1984), The T-800 cyborg arrives from the future with the goal of killing the (future) mother of a significant human resistance fighter; it must be stopped. Or, conversely, a protagonist might deliberately try to change the past in order to heal a broken present, but fail (the time travellers of *La Jetée* and *12 Monkeys*). A causal loop variant of this model reveals that the excursion into the past creates the past that was always there: the protagonists of *La Jetée* (1962) / *12 Monkeys* (1995) have childhood memories of seeing deaths that turn out to be their own; the protagonist of much-loved BBC play *The Flipside of Dominick Hide* (1980) becomes his

3. In *Back to the Future*, fixing the past creates a *better* present. This is acceptable because it's an afterthought – a punchline of sorts – and never a narrative goal. It turns out to be an effect of essentially the same past happening in a slightly different way; nothing is removed from the status quo, and the story would be basically the same without it. But note that the instability caused by the net-positive outcome then becomes the catalyst for the plot of *Back to the Future Part II*.

own great-great-grandfather by means of a temporally-illicit dalliance.⁴

These narratives resist non-monotonicity, closing around it as if to seal a wound. Whatever specific threats the narratives present, the underlying threat in each case is non-monotonicity itself – the deletion of established, axiomatic information. The story-world is threatened by Marty McFly's mother's crush on him, or by corrupt Biff's de facto rule over Hill Valley, or by the T-800; but the *story itself* is threatened by the instability that non-monotonicity brings. Crucially, in each case monotonicity is reasserted in a practical manner: Marty McFly's father impresses his mother with a singular act of bravery; the almanac is burned; the T-800 is hit by a truck, then blown up, then crushed. A non-monotonic wound cannot be dressed with a non-monotonic bandage. This narrative heuristic is strong enough to deny even an honest protagonist's desire to create an unequivocally better world.

4. Dominick Hide leaves a future newspaper for his (past) love, which she can use to win the football pools, in order to support herself and his son. Again, this is acceptable because it's a minor tangent to the main plot, and – presumably – also how things always were.

***Doctor Who* and Causal Mutability**

Even *Doctor Who*, the most sustained time-travel narrative that has ever existed, has been remarkably sparing in its references to causal mutability, and just as resistant to non-monotonicity as any other genre work. In early story 'The Aztecs' (John Lucarotti, 1964), companion Barbara Wright, mistaken for a physical manifestation of an Aztec god, plans to prevent a human sacrifice intended to bring rain. In response, the Doctor defines his own – and the programme's – initial Bradbury-esque objection to even the smallest tweak of existing history:

BARBARA. This is the beginning of the end of the Sun God.

DOCTOR. What are you talking about?

BARBARA. Don't you see? If I could start the destruction of everything that's evil here, then everything that is good would survive when Cortez lands.

DOCTOR. But you can't rewrite history. Not one line!

Confronted with the actual characters and history of the French Revolution in 'The Reign of Terror' (Dennis Spooner, 1964), there's an even-more emphatic statement – that changing history isn't just ill-advised, but fundamentally impossible:

IAN. Yes, Doctor, but suppose we'd written Napoleon a letter, telling him, you know, some of the things that were going to happen to him?

SUSAN. It wouldn't have made any difference, Ian. He'd have forgotten it, or lost it, or thought it was written by a maniac.

BARBARA. I suppose if we'd tried to kill him with a gun the bullet would have missed him.

It took a couple of years before *Who* cautiously extended its reach beyond the Wellsian tourism that had sugared its initial quasi-educational remit, and began to explore the territory. 'The Romans' (Dennis Spooner, 1965) strongly suggests that the Doctor inadvertently gives Nero the idea of burning Rome. The Doctor is naughtily amused, but the story doesn't go further than proposing that Doctor might be a contributor to established history. 'The Space Museum' (Glyn Jones, 1965) takes further baby steps, presenting a future of uncertain status in which the Doctor and his companions discover themselves as frozen exhibits. But this serves merely as a device by which to create narrative jeopardy. When the threatened fate is finally averted, it's unclear by what mechanism this was achieved, and there's no real discussion of space-time ontology; notably, any sense of non-monotonicity relates to an extremely vague

potential future. In 'The Time Meddler' (Dennis Spooner, 1965), a first in many ways, a renegade Time Lord – the 'Meddling Monk' – hiding in northern England in 1066, takes aim at real Earth history. He seeks to use anachronistic weaponry to defeat the Norwegian invaders under Harald Hardrada, obviating the need for King Harold to challenge the Norwegians, and strengthening his subsequent defence against the Norman invaders from the south later in the year. The thwarting of the Monk's plans is presented here as a matter of unquestioned principle, rather than mere expedient; it is not at all clear, for example, that his intended tweaks to the history of Western Europe would not have a net-positive effect. The Doctor, still representing the Time Lord ethos (though before they were named as such), resists meddling with time not because of any anticipated chaotic effects – this isn't Bradbury's universe – but because it's just *not done*:

DOCTOR. Are you quite mad? You know as well as I do the golden rule about space and time travelling.

Never, never interfere with the course of history.

MONK. And who says so? Doctor, it's more fun my way.

Later, in 'Invasion of the Dinosaurs' (Malcolm Hulke, 1974), the Doctor is confronted by a plan to reverse time on Earth, back to a 'golden age' before humans had spoiled the

planet through pollution and over-population, wiping everyone from existence aside from a hand-picked few hundred. He tries to convince UNIT soldier Captain Mike Yates, who has become involved in the plan through a misguided but well-intentioned ecological passion, of its foolishness. The Doctor's appeal combines a claim of the sanctity of existing life, and a dogged hope for its future:

DOCTOR. There never was a golden age, Mike. [. . .]
You've got no right to take away the existence of generations of people.

MIKE YATES. There's no alternative.

DOCTOR. Yes there is. Take the world that you've got and try and make something of it. It's not too late.

'City of Death' ('David Agnew' (David Fisher, Douglas Adams and Graham Williams), 1979) has a much less nuanced premise: Scaroth, the last of his race, was fragmented and scattered across time when his ship exploded hundreds of millions of years into Earth's pre-history – an explosion which also happened to kick-start the evolution of complex life on the planet. Scaroth's plan to go back in time and prevent the explosion therefore threatens the entire history of life on Earth. Needless to say, the plan – a non-monotonic grand slam – must be thwarted.

The Doctor himself is no more able to subvert the heuristic. When he's tasked by the Time Lords, in 'Genesis of the Daleks' (Terry Nation, 1975), with the destruction of the Daleks at the moment of their creation, his own instinct famously stays his hand:

Do I have the right? Simply touch one wire against the other and that's it. The Daleks cease to exist. Hundreds of millions of people, thousands of generations, can live without fear, in peace, and never even know the word 'Dalek'.

The absolute resistance here to the notion of genocide, in a story which references Nazi imagery, is clear, but the resistance is also to the specific idea of genocide by non-monotonicity. The Daleks of the Doctor's experience – and, crucially, our own, as viewers – would not be destroyed; they would never have existed in the *Who* universe.

'Day of the Daleks' (Louis Marks, 1972) presents the most interesting discussion of causal mutability in *Doctor Who's* first decades. Human rebels from a future Earth ruled by Daleks travel to our present, seeking to kill the diplomat they believe was responsible for the sabotage of a crucial peace conference, an action which led to crippling world war and a weakened planet ripe for Dalek invasion. The Daleks and their minions follow

close behind as defenders of the future status quo. When it is discovered that the human rebels are acting based on a garbled history, and that the bomb used to sabotage the conference was (paradoxically) actually planted by them in their attempt to kill the diplomat, the loop is broken, and things are easily resolved.

This appears to be a story whose resolution depends on non-monotonicity – the future Dalek rule, we assume, is erased from history – and which basically works, with no significant narrative objections. But the caveats are instructive. In fact, the story is careful to propose only that the peace conference now has a *chance* to succeed – a chance albeit amplified by the knowledge of what might (did?) happen if it fails, but a chance all the same. This uncertainty cushions the blow to the viewer's cognition: the epistemic status of the Dalek-ruled future wobbles somewhat, but is not swept away just yet.

It's also worth remembering that the disapproval of narrative non-monotonicity is a strong heuristic, but only one heuristic among many, and it can be overridden – likely in this case by a basic preference for the protagonists to prevail, bolstered here by them also being human (and not, for example, *Daleks*). Thus, the subversion of a future status quo,

unacceptable in *The Terminator*, is made (more) acceptable by switching the goals of the protagonist and antagonist.

But, crucially, it's a somewhat sketchily-defined future status quo that's threatened with subversion. This matters, because it significantly diminishes the severity of the threat of violence to the cognitive structures we're building as we process the story. Informally, the richer our representation of a story element, and the more profuse its relationships with other story elements, the more jarring – and therefore more resisted, more unacceptable – its removal would be. This richness can come from various sources. An obvious source is a connection to real events external to the story. Outside of a knowing deconstruction of the form, in which playing with reality is the whole point, *of course* the Jackal isn't going to kill De Gaulle; in this case, the dissonance between the basic narrative heuristic which prefers that a protagonist succeed in their plan, and the heuristic which resists non-monotonicity, is precisely where the narrative tension comes from. The Jackal must succeed; but he cannot. In a purely fictional world, an epistemic richness can arise in other ways: through depth of character development, emotional connection, familiarity, meta-knowledge. Even a fictional construct can be represented with sufficient richness and solidity that a threat of its removal is

more or less empty. This turns out to be a weakness of 'Genesis of the Daleks'. Even had the Doctor carried out the intended destruction of the embryonic Dalek civilisation, we'd have no doubt that they would be back. The Daleks' position in popular culture, as well as our awareness of the *Doctor Who* meta-narrative of returning monsters, makes that clear. There would be little practical non-monotonicity as a result. The Daleks turn out to be no less immutable than De Gaulle.

The Dalek-ruled future of 'Day of the Daleks', on the other hand, is entirely mutable, lacking any of the qualities that would protect it: it is thinly defined and unfamiliar; it is, moreover, a thinly-defined, unfamiliar future in a science-fiction story built on a temporal paradox, and can be wiped off the map without much collateral damage. Any non-monotonicity that follows is a negligible tremor.

To be clear, what's at stake here is not the story-world itself, but the reader's model of the story-world. The key mutability is not that of the characters, places, events in the story-world, but of the reader's model of those characters, places and events. A change to the story-world is only significant insofar as, and to the extent that, it causes change to the reader's model of that world. The deletion of a character richly embedded in our ongoing model of a story-world, for

example, is far more difficult than the deletion of an entire planet we knew little about; and a small deletion from a story-world's known present is massively more resisted than an ostensibly much larger deletion from a speculative future. Hence, a sympathetic protagonist *might* be able to create a better future by changing their past, but their goal of creating a better *present* (or a later past) is likely doomed: so much more would have to be rejected that is axiomatic, or at least securely bedded in.

There is a broad spectrum: at one end, there are non-monotonic changes to a story-world which are sufficiently benign that they can be accepted without difficulty (the removal of the potential Dalek-ruled future Earth in 'Day of the Daleks'); at the other end, there are proposed non-monotonic changes which are basically not viable, either because they clash with information content that's treated as axiomatic (De Gaulle was not killed by the Jackal), or because the meta-narrative renders them just not credible (the Daleks are *always* coming back).

Between is the no-man's land where non-monotonicity is possible – where destructive changes are believed, and which therefore affect the reader's model of the story – but is to some significant degree damaging to how the story works. That's where we're going.

Russell T Davies and *Doctor Who*, 2005–2010

After sixteen fallow years, one of the tasks facing Russell Davies was to reassert or reposition each of the significant components of *Doctor Who* lore. He dealt with both the Time Lords and the Daleks at a stroke, proposing back-story in which a long, catastrophic 'Time War' had raged between them, which had ended at the Doctor's hand. Both sides, we learn, had been destroyed by the Doctor to save the universe from the spiralling chaos, leaving him alone, both his perpetual enemy and his own race gone forever. This is the genocide threatened by 'Genesis of the Daleks', finally fulfilled in spades.

This canny bit of narrative plumbing serves a number of purposes. It instantly (re)positions the Doctor as powerful, mysterious, solitary. Whatever we might have learned about the Doctor from Hartnell to McGann, Davies and Eccleston's Doctor is immediately unknown again. There's a reset of sorts back to the spiky puzzle-box of Hartnell's Doctor, which we're going to have to slowly find our way into. Whatever we think we know, he knows far more than we do, and has experienced more than we ever could. That we're not intended to doubt that the Doctor's story of events is true – not least because it is independently confirmed by other characters as the series progresses – doesn't

mean that anyone paying attention to the meta-narrative of the programme should question that, for exactly the reasons discussed earlier, the Time Lords and the Daleks will be back at some point, by some convoluted mechanism. Davies's goal isn't – obviously isn't – to wipe them from the series entirely, forever.⁵ But the Doctor, unaware of his own meta-narrative, properly believes them gone, and this massively informs his character at the point where we meet: his guilt and grief and loneliness are real, and deep, and earned. The genocide narrative in 'Genesis of the Daleks' is memorable because of the moral dilemma it discusses, but our awareness of the meta-narrative pretty much kills any sense of genuine threat to our knowledge structures of Daleks and their place in the *Who* universe. Here, the goal is quite different: not threat, but *character*. We don't need to believe that the Doctor is *right* that the Daleks and the Time Lords are actually gone forever to accept that he believes them gone, and to believe his trauma.

The Time War back-story also buys the series some space to breathe. In the aftermath of something so huge, it can go small.

5. 'To Gallifrey or not to Gallifrey? I suppose it does tie up the last four years quite nicely, in which the Time War, and the Doctor's loss and loneliness, have been so central – stuff that Steven [Moffat] is, naturally, going to want to move on from, I suspect, because it's about time we did [. . .].'
 Russell T Davies and Benjamin Cook, *The Writer's Tale: The Final Chapter* (London: BBC Books, 2010), 511.

The Doctor has every reason to seek refuge from the horror with a very ordinary Earth-girl and her family, and for a while at least things can bumble along with chips and farting aliens and Charles Dickens, as the human relationships are forged. Arch-villains and universe-scale problems will be coming soon, but not just yet.

Davies's tenure is also notably bookended by two stories which take a clear position on the issue of narrative mutability. 'Father's Day', from Davies's first series, is as powerful a manifesto for monotonicity as the programme has ever created. As the payoff to an earlier suggestion that new companion Rose Tyler was ultimately seduced into adventuring with the Doctor by the fact that the TARDIS can travel in time as well as space, she persuades the Doctor to take her back to the moment of her father's death in a hit-and-run accident, so she can at least be with him when he dies. After a false start, Rose impulsively acts to save her father from harm, creating a wound in the fabric of space-time. In the absence of the controlling hand of the Time Lords (as we are once again reminded), terrifying creatures begin to cauterise the wound by removing all humans in the vicinity from existence. The Doctor is powerless. Rose's father eventually realises that the only

possible solution is for monotonicity to be restored: he must allow himself to be killed once more.

'The Waters of Mars' (Russell T Davies and Phil Ford, 2009) presents the Doctor in decline, his survivor's guilt and loneliness having become a reckless arrogance. He saves members of a human outpost on Mars from a zombie-creating water-borne virus, despite knowing that the tragedy of their deaths would/will inspire a subsequent golden age of space exploration. The outpost's leader, Adelaide Brooke, ultimately rejects the Doctor's actions, and commits suicide in order to restore the timeline.

What we see here is that narrative monotonicity is a serious business: people die when it's violated, and they die in order to restore it. 'Father's Day' reasserts that messing with causality is a really bad idea, echoing 'The Time Meddler', but backs this up with a monster which serves as an avatar, a champion of monotonicity. 'The Waters of Mars' goes further, proposing at least one hefty practical reason *why* messing with time might be a bad idea: you can't know how anything will turn out, and even tragedy might have net-positive effects in the long-term. This is a far less pessimistic perspective than Bradbury's threat of inevitable chaos, but it's still a stern warning. And Davies and Ford use the Doctor's disregard for the

integrity of the timeline as a specific marker of his failing judgement. He has, finally, become the Meddling Monk, and regeneration is close.

'The Waters of Mars' also revisits the earlier idea that manipulating causality isn't just ill-advised, but actually prevented by some universal law. 'Day of the Daleks' introduces the 'Blinovitch Limitation Effect', invented by then-script editor Terrance Dicks and producer Barry Letts to provide a canonical objection to recurrent uses of time travel to fix the same problem – an objection which is fundamental to the drama of any time-travel narrative, but rarely made explicit.⁶ 'The Waters of Mars' achieves the same objection from another direction, asserting that there are 'fixed points' in space-time, which, because of their significance in the timeline, either must not or cannot be altered. These conceits are a crucial dramatic kryptonite to the too-powerful superpower of time travel; they are inevitably hand-wavy, and become even more so with further use, but they provide useful in-story codification of the

6. 'We weren't anxious to explore the effects of time travel; we were anxious to conceal and avoid them as much as possible. If you have totally controllable time travel, you can't do the story. Because if the Doctor gets into trouble, why doesn't he go back before he got into trouble and not do whatever caused the trouble?' Terrance Dicks, in 'Blasting the Past'. 'Day of the Daleks' DVD. London: BBC Worldwide / 2 entertain, 2011.

underlying narrative monotonicity heuristic, shoring it up. It doesn't matter that they're not clear or consistent. Their job is to respond to the child's insistent 'But why?' with a parent's unequivocal 'Because I say so'. And that's enough.

As Davies passed *Doctor Who* to Steven Moffat, then, its support for narrative monotonicity had been consistently reasserted: as tradition, in the Doctor's own ethos, and conversely in the failure of the Time Lords – as presented, the Time War's eventual, hideous scope was a direct consequence of their manipulation of time for purposes of warfare; as temporal law, in the Doctor's deranged, futile challenge to the idea of a fixed point in 'The Waters of Mars', and the subsequent realignment of time by means of personal sacrifice; and by practical expedient, in the form of 'Father's Day's Reapers, callous cleaners of the temporal debris left behind when monotonicity is disturbed.

The underlying function of each of these devices is exactly the same: to construct a story-world bulwark against narrative non-monotonicity. Any well-formed narrative which plays with the possibility of using time travel to manipulate causality must take the position that in-story non-monotonicity is, all other things being equal, a threat, because a threat against in-story monotonicity constitutes a threat to the reader's continued

investment in the story, since it undermines the epistemic foundations that the reader's developing model of the story-world is built on. Thus, the in-story threat and the extra-story threat become one. The time-travel story is often therefore literally about fighting against threats to the structural integrity of its own narrative. It's no surprise, then, that *Doctor Who*, über time-travel story, has over the years accumulated a body of reasons why, in its own universe, monotonicity cannot or should not be violated.

The Curse of Fatal Death (1999)

The Curse of Fatal Death (1999), Steven Moffat's first work for television within the *Doctor Who* universe, is an odd artefact. A great deal of its oddness arises inevitably from the circumstances of its creation, as one of the star attractions of the BBC's night of programmes for the 1999 Comic Relief appeal. It's broken into small pieces, to be spread teasingly across the night, and is full of splashy headline cameos. Despite its thinness and playfulness, it's come to be seen as one of a few quasi-canonical stepping stones between old and new series proper. But there's something else: it's also just a very odd *Doctor Who* narrative. What it's *not*, and what it would have had every right to have been, in context, is parody. There's a rich

seam of *Who* parody in British popular culture. Moffat was doing something else entirely: he was playing with the lore from the inside, bending it and stretching it to see how it would cope. In stark contrast to *Dimensions in Time*, the rough analogue written by David Roden – in producer John Nathan-Turner’s heavy shadow – for the BBC’s 1993 Children in Need appeal, which became a conventional exercise in compressing as much as possible that was familiar – monsters, companions, past Doctors – into fifteen minutes, *The Curse of Fatal Death* barely looks back at all. Its second half is a parade of regenerations which serve as a kind of three-way speed-dating between the star-turn Doctors – from Rowan Atkinson to Richard E. Grant, to Jim Broadbent, to Hugh Grant, to Joanna Lumley – Julia Sawalha’s companion, and Jonathan Pryce’s Master. Never mind that *Curse* is played for laughs; the idea of the Doctor as a sexual being was new in anything remotely approaching canon.

The Curse of Fatal Death’s first half is more relevant here. It plays out as an (over-)extended gag in which the Doctor and the Master duel, each alternately claiming to have travelled further and further back in time to lay a physical trap for the other, with the assistance of the architect of the castle they find themselves in, or to undermine the other’s trap, having predicted their intentions. It’s all overtly cartoony. The

Doctor, Road Runner to the Master's Wife E. Coyote, ultimately wins the duel, the Master actually hanging Coyote-like in mid-air at one point before plunging into the castle sewers – then immediately reappearing, having taken hundreds of years to climb out, and then having travelled back in his TARDIS to continue the narrative. The same joke is then repeated, twice, tripling the (by now, extremely old) Master's ordeal.

Again, this isn't parody. The sequence doesn't refer back to any specific *Who* episodes or wider tropes, other than the Doctor and Master as duelling adversaries. If there is an echo of earlier *Who*, it's the general idea of an antagonist seeking to change the past in order to create an altered present ('The Time Meddler'; 'Invasion of the Dinosaurs'; 'City of Death'). Rather than merely thwarting the attempt, however, motivated by the conservative Time Lord ethos, here the Doctor prevails by manipulating time *more successfully* than the Master. To *Curse's* Doctor (which is to say: to Moffat's Doctor), causality is freely mutable, and if it can be manipulated by an antagonist, he can manipulate it right back again, and win by doing so, with no qualms or ramifications. Time is just another dimension; just another corridor to run down. There's no reference – not even an insider's wink to the audience in passing – to the narrative

imperatives underlying the earlier creation of the Blinovitch Limitation Effect and other brakes on non-monotonicity.

It seems absurd to pull apart in this way something that was written as fluff for a very specific, non-canonical broadcast (and that, to be frank, isn't very good), but it's not at all an anomaly in Moffat's writing for *Doctor Who*. In particular, the treatment of time, time travel, and the free mutability of causality in *The Curse of Fatal Death* strikingly foreshadows his work in canonical *Who* on a much grander scale. Moffat's *Who* occupies a properly four-dimensional universe. Any legacy of *Who*'s origins as a Wellsian tourism narrative is finally gone, and Bradbury's warning of temporal chaos is at the very least marginalised. A legitimate solution to a problem can be to chip away at it for millennia, or just to wait for geological time to pass. And travelling back in time in order to change the present is unexceptional. In short: suddenly narrative non-monotonicity is *fine*. *Curse*'s jokiness serves to hide the beginnings of a fraying at the edges, though.

'The Big Bang' (2010)

At the start of 'The Big Bang' (Steven Moffat, 2010), the final episode of Moffat's first series as *Doctor Who* lead, things are going about as badly for the Doctor as one can

imagine. He's been locked in an escape-proof personal prison – the Pandorica – by a coalition of his enemies, and companion Amy Pond has been mortally wounded. Meanwhile, the explosion of the TARDIS at a future date has caused the total collapse of all space-time outside of a radius including the Earth and not much else, and what's left is fading fast. The solution to this painting-into-a-corner turns out to be a double time loop: the first gets the Doctor out of the Pandorica; the second fixes space-time. I'm going to discuss each of these in turn.

The narrative implications of the mechanism by which the Doctor is released from the Pandorica are deceptively profound. Here's what happens (and it's genuinely no more elaborate than this brief description suggests): a version of the Doctor from a future date appears by means of a 'vortex manipulator' – a hand-wavily expedient time-travel device – provides his sonic screwdriver as a hand-wavily expedient skeleton key to open the Pandorica, and vanishes. Once released, the Doctor then knows he must complete the loop by carrying out the actions by which he was released. Basically, the Doctor uses time travel to rescue himself. The episode sprinkles some glitter and presents these events as a brain-bending paradox.

I'd like to pause for a moment and consider what a paradox *is*. Let's assume, as a working definition, that a paradox is

something which *seems* impossible, but actually isn't. Underlying that definition is the notion of a physics which determines what is and isn't impossible. A paradox, then, is something which behaves entirely according to that physics, but which our flawed reasoning gets wrong – an optical illusion which depends on our colour perception, for example, or the twin paradox often used to illustrate special relativity. There's a problem here, which is both obvious, and fundamentally misunderstood by the part of our brain which processes stories: stories have no built-in internal physics. We know this. It's a trivial thing to say. And yet maintaining it in the face of the power of narrative is a real struggle. Actual story text is at best a keyhole summary of the events it describes; what we know for sure about the story-world is what we are explicitly told, and only that, and it's a tiny amount of information. The great majority of what we then perceive as the complete narrative is added by our personal, idiomatic, non-monotonic reasoning. This comes from knowledge of our real world, our meta-knowledge of stories generally, and specific story genres and specific story-worlds. In order to process stories in any practical way, then, we *have to* assume, as a default, that the characters behave like real people, that physical story objects behave like real physical objects. We have to assume that stories do have an internal physics.

But this essential part of the processing of narrative can lead us astray. At an extreme, for example, it creates confusion for some viewers between soap opera actors and the characters they play – the narrative inertia necessary to carry information forward from one episode to the next causes the ontology to leak out. For all of us, the necessary assumption of an internal physics for a story-world means that we consider asking, for example, what *might (or even would) have* happened after a story ended, or what a character *might (or even would) have* done in some hypothetical situation, as if those were remotely meaningful questions to ask.

To be sure, a story-world is often given a quasi-physics, which claims to define what is and is not possible in that world, but this is a very different thing from physical law. Such a quasi-physics is upheld or undermined anew with each line of text, and is only ever provisional. While it holds, a story-world quasi-physics has a couple of important functions. It bounds the reader's non-monotonic reasoning, by marking which of the profoundly many potential branches outward from what is known about the narrative are worth considering. This helps to make the ongoing processing of a fictional narrative feasible at a practical human level. And, it sets out the rules of the game that the author intends to play with the reader's response to

the narrative. The Blinovitch Limitation Effect, for example, does both of these things. By drastically limiting what the narrative claims is possible using time travel, it prunes at the root countless branches of outward non-monotonic reasoning which would otherwise proliferate, allowing fewer but healthier branches to thrive. And it defines an in-story quasi-physics which limits how the characters can act. Notably, it limits how threats can be averted by means of time travel: the resolution must be sought elsewhere. But the Blinovitch Limitation Effect has no fundamental physical reality in any world, fictional or otherwise. As a narrative device – as a brake on time travel, and therefore a protector of monotonicity – it exists only insofar as it is explicitly upheld by the narrative, line by line. Otherwise, it vanishes in a puff of green paradox.

Our necessary tendency to infer real-world physics in a story-world gets us into particular difficulties with the idea of time travel. We start to imagine that there is such a thing as *how time travel works*, which somehow binds cause and effect and does the accounting. If time travel obeys basic physical law, then, how could it possibly be damaging to the integrity of a narrative? If only we thought about a time-travel paradox in the right way – we suppose – it would all make sense. But there's really no such thing as a time-travel paradox, because

there's no underlying physical system which time travel can create a paradox with respect to. Time travel itself – the fully-functioning version in the *Who* universe, at least – is no less a pure narrative device than the Blinovitch Limitation Effect, instantiated in the *Who* story-world as a quasi-physics, utterly unbound by actual physical law, and upheld or undermined line by line.

Moffat's use of time travel as a narrative device in this specific case is a clear statement of intent. It brings the unrestricted scope for time travel and causal mutability introduced in *The Curse of Fatal Death* into *Doctor Who* proper, front and centre, and utterly rejects both the story-world quasi-physics represented by the Blinovitch Limitation Effect, and the very ethos of limiting non-monotonicity – and by doing so protecting narrative integrity – that prompted its creation. Anything is now trivially possible. Anything may also be trivially undone.

Stripped of the meaningless philosophical razzle-dazzle Moffat adds to 'The Big Bang' – because, again, time travel here is a functional narrative device bound by nothing at all, and not quantum physics with an arcane but solid reality – the Doctor's escape from the Pandorica is dramatically empty. As a narrative device, time travel fails, as it always must when

unrestricted. What's called for here is a sleight-of-hand: clever but honest, bound by genuine, established practicality. What the story provides is akin to a camera trick: a solution unearned, dishonest, and which violates the implicit contract with the reader. Breaking this contract has a couple of important ongoing effects. It diminishes subsequent perception of jeopardy: the bathos of resolving a threat which the narrative has overtly raised to a singular intensity with such a cheap trick serves to cry wolf, and this is remembered. And the scope of the reader's outward non-monotonic reasoning about Moffat's *Who* has become problematically, paralytically vast. Anything is possible. Nothing is fixed. Removing the pruning effect of a quasi-physics such as the Blinovitch Limitation Effect might have liberated the narrative, but at a significant cost for the reader model. How can the reader decide what, and how, to project non-monotonically outward from such an unstable, unprincipled core?

This promiscuity with time travel and causality accumulates, wearing the narrative thin. A later story, 'The Angels Take Manhattan' (Steven Moffat, 2012), places the Weeping Angels from 'Blink' in 1930s New York, where they exist by 'farming' the time energy released as trapped humans are repeatedly sent back in time. In the episode's denouement,

companions Amy Pond and Rory Williams escape from this fate by attempting/committing suicide, the resulting paradox returning them to the present day and seemingly destroying the Angels. But there's a tragic twist: a weakened Angel, surviving in present day New York, sends Amy and Rory back to the past once more, and they are separated from the Doctor forever.

The weak expediency of Moffat's time-travel quasi-physics is clear by now. There's no consistent sense of how he intends a time paradox to behave, for example. In 'The Big Bang', it's a handy (and literal) Get Out Of Jail Free card, with no apparent ramifications for space-time. In 'The Angels Take Manhattan', it creates a vague cataclysm which happens to work for the best. None of this inconsistency matters in itself – because there is no such thing as *how time travel works*, there cannot be a violation of that; what matters is that it confounds and diminishes the reader model. Resolving a major threat with an expedient, hand-wavy application of a poorly-defined quasi-physics is unprincipled – a camera trick; and a poorly-defined quasi-physics can't be used as a solid basis for outward non-monotonic reasoning about ongoing narrative. In this specific case, the intended emotional gut-punch of Amy and Rory being trapped in the past – the weight of which had been anticipated at a meta-level for months, as the actors discussed in the

popular media their sadness at leaving the programme, and the intensity of filming their final scenes – is utterly undercut by obvious, immediate objections to the claimed finality of the situation. The Doctor has a *time machine*, and an unrestricted time-travel quasi-physics. How, exactly, are Amy and Rory trapped?

Moffat can only resort to special pleading. He argues that space-time at that moment, in that location, has been so weakened by the Angels' extended meddling that it has become inaccessible to further time travel. In response to the entirely reasonable proposition that the Doctor could travel to a different location – Washington, D.C., say – using the TARDIS, and by conventional means from there to New York, his position is merely repeated:

New York would still burn [. . .] there is so much scar tissue, and the number of paradoxes that have already been inflicted on that nexus of timelines, that it will rip apart if you try to do one more thing. He has to leave it alone.⁷

This is weak, and late. Reader response is to the narrative *as presented*, and can't be gainsaid by post-hoc argumentation.

7. Cameron K. McEwan, 'Moffat on the "Washington Theory"', *Blogtor Who*, August 3, 2013, <http://blogtorwho.com/exclusive-moffat-on-washington-theory/>.

You can't create affect by explaining to a reader why it should exist. If a quasi-physics is used as a narrative device to create what is intended to be properly cathartic emotional closure, and readers find themselves waving and pointing to a solution to the situation that is entirely in keeping with that quasi-physics, the narrative device is broken, and there's no catharsis. Notably, Moffat's description of the in-story damage to space-time caused by a piling up of paradoxes serves also to describe the damage to the narrative itself. Integrity of in-story space-time and integrity of narrative are the *same thing*.

Is it, then, even possible to create a sense of true closure in a narrative which allows time travel as a quasi-physics? Moffat's own *Who* stories written for Russell Davies show that it is. 'Blink', his introduction to the Weeping Angels, works because, while the Angels themselves have access to a malign form of time travel – time travel is their weapon of sorts – the protagonists do not. There is tragedy, as secondary characters are ripped from their lives and families, with no way to return. And there is genuine threat – the point-of-view character is given indirect assistance by the Doctor, but she is not the Doctor, and also has no access to time travel. 'The Girl in the Fireplace' plays out as tragedy, defining an extremely circumscribed form of time travel which operates using a clear,

consistent quasi-physics: a window in space-time allows the Doctor to jump repeatedly into a different timeline, but with uncertain synchronisation, and only in a forward direction. There must, therefore, come an end, and it's sooner than expected.

It's not hard to see that the drama in these cases arises as a direct consequence of *limiting* access to time travel. Terrance Dicks and Barry Letts knew this, and codified the basic heuristic as the Blinovitch Limitation Effect – a nonsense name for a deeply solid bit of story engineering. It's not reasonable to suggest that Moffat isn't also aware of the corrosive effect of time travel on narrative. So what's going on? The change of approach from the *Who* stories he wrote under Russell Davies – generally adhering to the show's caution with respect to time travel, and using that caution to the advantage of narrative – to those written for his own tenure is striking. His first two-part story for Davies, 'The Empty Child' / 'The Doctor Dances' (Steven Moffat, 2005), might be relevant here, despite involving time travel only as Wellsian tourism. An alien hospital craft has crash-landed in wartime London, releasing its payload of 'nanogenes', which blindly attempt to repair damage to humans wherever they come across it. But the model they've obtained of an undamaged human is askew, so their repairs result

in crude mutations, which threaten to spread unchecked. The Doctor averts this threat by presenting the nanogenes with an amended model of a normal human body, and they reverse the mutations. Everyone is fixed. 'Just this once,' the Doctor exults, 'everybody lives!'

They do slightly more than just *live*, though. It's played for a laugh – and gets one – but there's a twist which has resonance in hindsight. A woman has a problem with her leg – lost, we assume, as a result of a bomb or other wartime attack. Thanks to the nanogenes, it's grown back. The twist transforms the narrative from a conventional one about threat averted, to one of *damage undone*. Albeit in a small way, the narrative ends with the story-world in a *net-positive* state relative to that at its beginning. For *Doctor Who*, this is not typical, as Moffat's words in the Doctor's mouth celebrate. *Who's* meta-narrative has generally been one of threat averted, often with some unfixable damage along the way – a resulting state that's net-negative, but far better than it might have been – and that's been enough. Moffat wants more than that; he wants narrative to *heal*. His Doctor is literally, explicitly that. In 'The Empty Child' / 'The Doctor Dances', the method is not time travel, but the nanogenes, a physical surrogate. But how much more can be healed

if time travel is available. What was properly done can be properly undone.

This, finally, leads to the second time loop in 'The Big Bang' – that which fixes the collapsing universe. As with the first loop, the mechanism can be described simply. The Doctor flies the Pandorica into the singularity caused by the explosion of the TARDIS, which is occurring simultaneously across all of time. The Pandorica's 'restoration field' – an essential component of its function as the perfect prison – is then able to project a memory of the universe from the matter it contained, effectively restarting space-time. 'Reboot the universe,' the Doctor glosses – though a better tech metaphor might be restoring an earlier saved state. This isn't a conventional portrayal of time travel – and especially not within the *Who* universe, where the movement is typically that of the TARDIS against a *somewhat* static background of space-time. Here, it's space-time itself that moves, with static protagonists as a fixed point. But it's the ontological shift that matters; restoring an earlier point in space-time is equivalent to travelling to that point.

The specific point in space-time that is restored/travelled to in this case has significance for the narrative. An ongoing threat during this first series of Moffat's tenure is the

appearance of cracks in space-time – which turn out to be echoes of the ('later') explosion of the TARDIS. These cracks serve as initial hints of the ontological collapse. Characters swallowed by the cracks don't merely die; they vanish from all of space-time – have never existed. Our entry-point into the series narrative is the mystery of Amy Pond's apparently solitary childhood, and the odd crack on her bedroom wall. When the universe is restored, Amy's partner Rory is returned to existence, his disappearance into a space-time crack having served as the series' main bit of collateral loss. But Amy's parents, literally forgotten after they were swallowed by a crack at some point during her childhood, are also returned. In both cases, this is a matter of profound healing, of *damage undone*, since their wiping from space-time wasn't merely threatened, but actually carried out. They were properly gone, and only manipulation of space-time could bring them back. But the parents' return has an additional epistemic weight. By starting the narrative after their disappearance – so far as the reader is concerned, they genuinely have never existed – Moffat arranges for their return to constitute totally new information. They are the regrown leg, the healing which creates a narrative that, in the end, is net-positive.

There's a real tension between the integrity of the narrative and the reader model, and the welfare of the story-world and its characters. A narrative which plays with time travel typically must choose between the two. Moffat's time-travel stories under Davies, both of which deny their protagonists any control over time, are conspicuously *not* net-positive for their story-world. 'Blink' is a typical *Who* narrative of threat averted, by practical, non-temporal means, but a great deal of its emotional heft arises from profound loss experienced by secondary characters – loss which in theory could be prevented using a benevolent time travel, but is not. 'The Girl in the Fireplace' takes control of time away from the Doctor himself, maintaining a distanced, principled stance with respect to its progression towards a dark resolution. 'Father's Day' remains a model here, arguing that narrative integrity – in the form of the integrity of space-time – and character welfare are in direct opposition, and ultimately making a powerful case for the necessity of loss, of letting go. It's not a story about time travel, so much as the process of grieving, and the acceptance of death. But the direct effect on space-time of *not* letting go brightly illuminates the choice.

Moffat's later stories, conversely, privilege the welfare of the story-world and its characters, and become reluctant to

see anything as irretrievable: a partner's death can be reversed; parents swallowed by oblivion can be found again; an entire collapsed universe can be restored from a saved state. They are willing to consider unlimited perturbation to space-time, and therefore to narrative integrity – to monotonicity – in order to achieve this. This is only amplified in Moffat's second series in charge of *Who*, where the damage that must be undone is the Doctor's own death.

'The Impossible Astronaut' to 'The Wedding of River Song' (2011)

When the Doctor is apparently shot dead on the shore of a remote Utah lake by a mysterious figure in a spacesuit towards the start of 'The Impossible Astronaut' (Steven Moffat, 2011), the first episode of Moffat's second series arc, Moffat quickly sets to work to address a couple of narrative imperatives. If this event is to have the resonance he intends, he must convince the viewer that, despite everything they know and assume about the Doctor's nature, and the massive facility for causal mutability provided by time travel, the Doctor is genuinely dead, and that this situation isn't non-monotonically reversible. This is made more urgent by the need to undercut the Doctor's comically facile use of time travel to escape the

Pandorica in 'The Big Bang', the previous episode proper. Never mind about last time, he says. This time there really *is* a wolf.

Meta-knowledge also casts a shadow here. *Doctor Who's* position in British pop-culture means that the planning of the next year or two of the programme's future is more or less public knowledge, and significant writer and cast changes are increasingly public events. Notably, the Doctor does not regenerate without this having been anticipated for some months. Story-world claims, and meta-knowledge of the programme, therefore combine at this moment to create an inconsistent set of assumptions: the eleventh Doctor, played by Matt Smith, really is dead; but Matt Smith cannot be leaving the programme, otherwise casting of a new Doctor would have become known; besides, the Doctor cannot regenerate if he truly is monotonically dead; and yet, the programme is continuing. Something must give. Pragmatically, we understand that real-world meta-knowledge takes precedence: if Smith has been contracted for the remainder of the series, and filming has taken place, he must be continuing to play the Doctor, whatever the in-story explanation. This leads the reader to assume one of two resolutions to the inconsistency: either the story-world claim that the Doctor is dead will be maintained, and the programme will continue using a timeline which postpones

(perhaps indefinitely) the moment of death in the narrative; or, the Doctor's death, despite every insistence, will prove to be non-monotonic. There are significant pragmatic objections to a resolution which merely delays the Doctor's death in the programme's presentation of the narrative, however.

Notwithstanding the freedom *Who* allows itself to warp causality in all sorts of unexpected ways, the actual, monotonic death of the Doctor would create a massive road-block in the programme's narrative (if he dies as Matt Smith's Doctor, can there be any more regenerations?); significant paths would be gone forever. This would be an extraordinary and unmotivated step to take – except perhaps for the sake of surprise – especially given the BBC's push for an expanded global audience for one of its core creative assets. The *reasonable* assumption, then, is to assume non-monotonicity: there will be some trick which reverses the Doctor's death, or a revelation of new information which allows the reader model to otherwise be settled.

Moffat works hard to undermine such an assumption, however. As the Doctor's death – an event he clearly has prepared for – approaches, he waves, in acknowledgement and farewell, to a distant figure we later learn is Canton Everett Delaware III, an FBI man we will come to know as a trusted ally of the Doctor. Afterwards, Delaware, speaking ostensibly to the collection of

companions the Doctor had gathered to witness his death, confirms that '[t]hat most certainly is the Doctor, and he is most certainly dead'. This is Moffat, totally without subtext, speaking directly to the audience, marking this information as authoritative. Weight is added by the invention of an entirely plausible mechanism by which the Doctor might be killed: he is shot, triggering a conventional regeneration, and then shot again mid-regeneration – a time of canonical frailty. In the episode of *Doctor Who Confidential*, the BBC's companion programme, shown immediately after the initial broadcast of 'The Impossible Astronaut', Moffat's intentions could not be plainer. He insists, without equivocation, that the Doctor is dead: 'He really does die in that first scene, and that really is him.'

The series proceeds as the companions are united with a younger version of Matt Smith's Doctor – anonymously summoned, as they had been, by the older Doctor, but unlike them not to witness his own death – and set off on adventures. Parallel through-lines then trace his growing awareness of what's coming, and their conflicted reluctance to threaten the integrity of space-time by warning him. Later in the series, in 'Let's Kill Hitler' (Steven Moffat, 2011), the Doctor learns the specific time and place of his death from the records of the 'Teselecta', a shape-shifting robot controlled by a Numskull crew, whose

mission is to dispense vigilante justice across time and space. Reacting to events which suggest the Doctor is in premature jeopardy, the captain of the Teselecta asserts the claim of monotonicity: 'The Doctor must always die exactly then [at the lake]. He always has. And he always will.' Moffat's voice is again heard clearly here, this time slamming the door on any possibility that the Doctor's death might be averted by means of an alternate timeline. Further, the mission which brings the Teselecta and its crew into the Doctor's orbit is their attempt to execute companion-with-a-murky-past River Song, revealed to have been the Doctor's murderer.

As the series arc approaches its conclusion, in 'Closing Time' (Gareth Roberts, 2011), the Doctor, accepting that his death cannot be avoided or postponed any longer, embarks first on what he refers to as 'a bit of a farewell tour', during which he visits an old friend, and wistfully encounters estranged companions Amy Pond and Rory Williams. Much of the grammar of this episode strikingly echoes the departure from the role written by Russell Davies, in 'The End of Time' (2010), for David Tennant's tenth Doctor. A sequence towards its end, as Matt Smith's Doctor says goodbye to a group of random, slightly bewildered children playing in the street, clearly recalls Tennant's Doctor's oblique farewell to Rose Tyler, first

companion of modern *Who*, on a snowy night some months before their first proper meeting in her timeline. Finally, the Doctor attempts to call his old friend – and ours, as fans of the programme – the Brigadier, to say goodbye, only to discover that he is already dead. Narrative and meta-narrative merge: the beat also recognises the death earlier that year of Nicholas Courtney, who played the Brigadier alongside many previous Doctors. ‘It’s time,’ says Smith’s Doctor, acknowledging, and resolved to, the passing of his era.

Both narrative and meta-narrative could not, then, be clearer: we are intended to assume as monotonic fact that the Doctor is killed at the lake. The multiplication and insistence of the evidence is overwhelming: trustworthy characters, speaking with literal *authority*, independently confirm that the Doctor’s death at that place and time is a matter of unchanging historical fact; his murderer has been charged and convicted, and has accepted responsibility; a plausible mechanism for the murder of a Time Lord has been presented; the Doctor himself accepts and anticipates the moment of his death; the narrative of the Doctor’s anticipation echoes tonally the specific grammar of the departure of a previous actor’s (and writer’s) Doctor; and Moffat himself plainly states that the Doctor dies. There are no winks here; no implied Saturday-morning serial (or

Saturday teatime) last-second leaps to safety. The moment is played straight, and with emotional integrity. And yet, pragmatically, we still know that the Doctor *cannot* be monotonically dead. The dissonance allows only a couple of conclusions: either there's a solution – an *extraordinary* solution, given the weight of the problem – which somehow respects the truth of the Doctor's actual, monotonic death, yet allows him to live; or the whole structure collapses.

Moffat borrows from an existing *Who* trope to yet further make his case that the Doctor's death cannot be undone, though his treatment of it has a very different shape. The notion of a fixed point in space-time serves to position the Doctor in a far more pragmatic world of cause and effect than the '60s *Who* ethos of principled non-interventionism. It represents an acceptance both that the Doctor does change/has changed space-time, and that such changes can have net-positive effects. If there are to be restrictions on non-monotonicity within the narrative, then, they cannot come from a simplistic position that meddling is bad. The Blinovitch Limitation Effect serves in a limited way as such a restriction. The idea of a space-time *paradox* as intrinsically limiting is a more general principle, but it remains an abstract, arbitrary effect – why *should* someone meeting another version of themselves be a problem for space-

time, for example? Conversely, in 'The Waters of Mars', Russell Davies and Phil Ford locate the notion of a fixed point in space-time at a deeply human level. Their quasi-physics is such that a fixed point arises as a consequence of *significance*: an event is harder to change the more it affects what comes after; the density of the mesh of cause-and-effect creates a sort of causal inertia. Notably, this organic notion of a fixed point can therefore only – like speciation in a gene pool – be identified retrospectively. It denies the everything-is-significant reframing of causality popularised by chaos theory, but it feels right. We understand intuitively the idea that some events matter more as part of a complex system of human endeavour. It feels less like a narrative device than just *how things work*.

In 'The Impossible Astronaut', Moffat remakes the idea of a fixed point in space-time as a purely expedient narrative device, stripped of its intuitive human-level heft. His conceit is that a fixed point can be planned and created more or less out of nothing, to achieve a specific goal. Paradoxically, this is identified as *easier* when the moment is physically (and therefore causally) isolated – such as at the Utah lakeside.

DORIUM MALDOVAR. It's a still point in time. Makes it easier to create a fixed point. And your death is a

fixed point, Doctor. You can't run away from this.

('The Wedding of River Song')

The contradiction with the Davies/Ford model isn't necessarily a problem here, but the differences are significant. As a narrative device, with a quasi-physics totally of his making – and not tied to any for-free sense in the reader model of how things work – Moffat's usage of the concept of a fixed point in space-time lives and dies entirely according to the consistency and plausibility with which it's used. Here, the claim is that the Doctor's death has been engineered by an obscure religious order ('The Silence') – by a mechanism the specifics of which are entirely glossed, and for reasons that aren't finally explained until the conclusion of the following series arc – so that it exists as a fixed point and cannot be undone, even by a Time Lord in possession of a time machine. As we have seen, the truth of the claim of monotonicity is woven deeply into the fabric of the narrative and meta-narrative of this series arc. We are intended to believe it.

We come, then, to Moffat's solution to the problem of the Doctor's ostensibly monotonic death. The death scene itself occurs three times in the series narrative. The first instance, in 'The Impossible Astronaut', carries the weight of the claims of monotonicity. This truly is the Doctor's death, we're told,

and shown – and we share the shocked point-of-view of the invited companions. His body is burned in a funeral ritual. As the series proceeds, we then travel back to the same events, but the long way round, following the younger Doctor's sense of impending doom, the companions' ambivalence about revealing his fate, and the machinations by which River Song is positioned to be his murderer. The second instance of the death scene occurs at the start of 'The Wedding of River Song', the final episode of the series arc. This time, our point-of-view is entirely different. We've tracked the Doctor's increasing awareness and resignation – 'This is where I die. This is a fixed point. This must happen. This always happens'; we've accepted the overloading in the narrative and meta-narrative of the claim that the Doctor's death is a fixed point in space-time; we've seen the fixed point play out once already. This is the moment where the dissonance between the narrative imperative that the Doctor must die, and the pragmatic imperative that he cannot die, will be resolved.

And this time, the Doctor – of course – does not die; is not killed. River Song discharges her gun away from the Doctor, defying her programming in her love for him, and her defiance of the very idea of a fixed point in space-time:

DOCTOR. But it's fixed. This is a fixed point in time.

RIVER. Fixed points can be rewritten.

DOCTOR. No, they can't. Of course they can't.

The moment encapsulates the privileging of character welfare over narrative integrity, and the result, a crude, lumbering, too-obvious illustration of the fact that integrity of narrative and integrity of space-time are the same thing, is the collapse of in-story space-time to a chaotic soup. In modern London, there are suddenly trains in the sky; pterodactyls; Roman chariots on the streets; Dickens on live TV. Churchill is Roman Emperor; his home is 'Buckingham Senate'. The loss of any foothold for a reader model is at this point more or less complete.

From its start, the narrative of this series arc is a debate about its own quasi-physics. In 'The Impossible Astronaut', the companions argue about the dangers (or otherwise) of warning the Doctor about his murder at the lakeside, and there isn't much clarity:

RIVER. He's interacted with his own past. It could rip a hole in the universe.

AMY. Except he's done it before.

RORY. And, in fairness, the universe did blow up.

Moffat tries to smuggle some revisionism here under cover of the joke. The intention is to reassert into the quasi-physics

the idea that paradoxes are inherently dangerous, in order to reinforce the perceived monotonicity of the Doctor's death. But Rory's retort is a bit of broad authorial mis-direction: the collapse of the universe during the previous series arc had nothing at all to do with the Doctor's use of a whopping great paradox to free himself from a seemingly escape-proof prison. Once again, the status of a temporal paradox as a narrative device is wildly uncertain.

It's also not clear what, exactly, we see as River refuses to kill the Doctor. This clearly isn't the event we saw in 'The Impossible Astronaut', but from a different point-of-view, as we might have been expecting. But why not? What's changed? Our position as observers has certainly changed: this time, we share the Doctor's anticipation of what's to come. But the Doctor who knowingly faces death in 'The Wedding of River Song' is the *same Doctor* who knowingly faces death in 'The Impossible Astronaut'. Our having witnessed the events leading up to his death doesn't, in itself, provide any reason to suggest that those events might have been altered.

Most damagingly for narrative integrity, the status in Moffat's quasi-physics of the notion of a fixed point in space-time — foundation stone of the claim of the monotonicity of the Doctor's death — is thrown into confusion. When the captain of

the Teselecta crew asserts that the Doctor 'always has' died at the lake; when the Doctor himself asserts that it 'always happens' – these are not small claims about the nature of the fixed point. And yet, Moffat's reworking of the device, stripped of the deep human significance it was given in 'The Waters of Mars', fails at the first test. If all we know about a fixed point in space-time is that *it's fixed*, and we see that it *isn't* fixed, in what sense can it ever have been thought to be fixed? What, then, *is* a fixed point in Moffat's quasi-physics?

A narrative constantly arguing with itself about its own fundamental quasi-physics provides no solid foundation on which a reader model of the story-world can be constructed – and from which to speculate, anticipate, dread. If the narrative doesn't itself know what's possible and what isn't in the story-world, and cannot therefore communicate to the reader a coherent quasi-physics, it's hard for the reader to be anything other than paralysed and passive – and a passive reader is plainly less invested emotionally. Moreover, the *overselling* of a quasi-physics which turns out to be untrustworthy further squashes the reader's motivation to invest in speculative outward propagation of their model of the story-world.

The situation, then, is a familiar one: someone is alive who should not be, and the anomaly is a problem. At this point,

we recall that the resolutions of both 'Father's Day' and 'The Waters of Mars' involve nobility, sacrifice, and catharsis. The specific function of a fixed point in space-time as a narrative device is deeply relevant here. In both of the earlier stories, the idea of a fixed point is used to properly constrain what is possible: characters push against a fixed point, and the drama arises out of it being firmly reasserted. In 'Father's Day', Rose Tyler's father comes to see the wrongness of his having been saved from accidental death, and his choice is clear. In 'The Waters of Mars', Adelaide Brooke's revulsion at the Doctor's reckless, arrogant attempt to privilege her life over the greater integrity of space-time drives her to suicide. These are solidly Aristotelian narratives, in which character frailty – Rose's impulsive desire to see her father again; the Doctor's rage against his own powerlessness – lead directly, and inevitably, to tragedy and catharsis, with the notion of a fixed point in space-time as a narrative fulcrum. The integrity of space-time wins, character welfare loses, and the calculus multiplies the dramatic heft many times over.

Moffat's use of a fixed point as a narrative device in his second series arc is profoundly different. The device is already weakened and blurred in the final episode, as River Song refuses to kill the Doctor, hurtling space-time towards chaos and

impending total collapse. But this, at least, shows that a fixed point has *some* meaning within the quasi-physics. The remainder of the episode then treats the idea of the 'fixed point' – scare quotes seem necessary by this point – of the Doctor's death as a challenge, a problem to be overcome. There is much debate about whether it can be overcome, and endless empty assertion that it can't – as there has been throughout the series. River Song attempts to convince the Doctor that his welfare, and her own, matter more than space-time:

RIVER. You've decided that the universe is better off without you. But the universe doesn't agree.

DOCTOR. A fixed point has been altered. Time is disintegrating.

RIVER. I can't let you die.

DOCTOR. But I have to die [. . .] we are ground zero of an explosion that will engulf all reality. Billions and billions will suffer and die.

RIVER. I'll suffer if I have to kill you.

DOCTOR. More than every living thing in the universe?

RIVER. Yes. ('The Wedding of River Song')

In the context of such colossal story-world stakes, the resolution is banal. We witness a third and final iteration of the death scene by the lake, and the Doctor, in the end, seems

to have decided to sacrifice his life to save space-time from obliteration. However, an epilogue reveals that what appeared to be the Doctor was actually the Teselecta, having assumed his form (the shape-shifting facility having been foreshadowed neatly enough earlier in the series); the Doctor is safely (we assume) protected inside. He does not die. And that's it: space-time, which collapsed utterly, and at once, as River Song turned her gun aside, allows the Doctor to creep past as if it were a dozing minion – as if what mattered here was what appeared to happen, rather than what happened; as if space-time was somehow merely vaguely observing. The Doctor is saved from certain, absolute, monotonic death, woven into the fabric of space-time, *promised* by the narrative and meta-narrative, because he wears a *disguise*. Space-time is fooled by a physical disguise. None of this makes sense.

And so much is diminished here. The notion of a fixed point in space-time as a narrative device, wholly dependent upon the fidelity and consistency of its application – and a key bulwark against non-monotonicity – has been rendered meaningless. Trust in the narrative, and in the voice of its author, has been damaged, as the constructed quasi-physics collapses, and the extraordinarily insistent claims made by the narrative and meta-narrative are revealed to have been, at best, legalistic

obfuscations. The nature of those claims should be emphasised. This is not at all the standard genre dance of loudly questioning whether, *this time*, our hero has met his match – and knowing that of course he hasn't. That rhetorical game belongs as part of the genre; we understand what it means, and our expectations are consistent with that understanding. Here, Moffat steps outside of the normal genre rhetoric, and leverages every gram of authorial weight available to him – in his own voice; speaking directly to the reader through characters; using grammar understood from previous *Who* narrative – to insist that, no, we must accept that the Doctor is properly, monotonically dead. It's not enough to suggest that the pragmatics of the meta-narrative require us as readers to understand that those claims were always likely to be false. We know that. As readers, as processors of narrative, we're not naive cheerleaders for character welfare such that we celebrate a positive outcome – find it *satisfying* – no matter how it was obtained. Privileging character welfare at the expense of narrative integrity is already corrosive. To privilege character welfare so cheaply, by negating the very narrative device that had been used to construct the threat to that welfare, causes any sense of drama to implode.

The Doctor himself is also diminished. Once again, comparisons with 'Father's Day' and 'The Waters of Mars' are instructive. The narratives – specifically, events which threaten the integrity of space-time – place Pete Tyler and Adelaide Brooke, ordinary humans, in extraordinary circumstances, where their choices reveal and elevate character. 'Father's Day' allows Pete Tyler – a well-meaning but irresponsible parent – the time and space to redeem his relationship with his daughter; and she obtains a sense of closure. But their time is necessarily limited, and, having become a *better man*, he must allow himself to be killed once more in order to save her. Adelaide Brooke is faced with a more practical dilemma: if she lives, the world will be different, and quite likely worse in many ways, but life will go on. Because the stakes are smaller, more human, this is even more revealing of character: she has a real choice. Her suicide, then, is all the more tragic – because it need not happen. The universe doesn't demand it; and yet it does.

This is the true sense in which narrative can privilege character: not by allowing character welfare to distort and damage the integrity of space-time, and therefore the integrity of narrative; but by *applying* the integrity of space-time, and therefore narrative, to enrich character in the heat of

catharsis. Contrast the emotional seriousness and resonance of the resolution of these two stories with the bathos of 'The Wedding of River Song'. The analogue of Pete Tyler's noble sacrifice, of Adelaide Brooke's despairing suicide, sees the Doctor hiding inside a robot version of himself, potentially – for all he knows – threatening the stability of the universe. Do we think more of the Doctor, Time Lord in possession of exceptional knowledge and power, that he acts ostensibly for love, when Pete Tyler, ordinary human, gives up his life for the same reason? The narrative of 'The Waters of Mars' presents the Doctor in a diminished state – worn out, lost, untethered – with the specific goal of showing that, by privileging his own choices over the integrity of space-time, his *Doctor-ness* is failing.⁸ The choice that Moffat's Doctor ultimately makes in 'The Wedding of River Song' is intended to be seen as a *triumph* – love wins over causality! – and to elevate his character; but the narrative actually presents that choice as diminishing of him, and the contrast between intention and receipt of narrative is brutal.

The clumsiness of Moffat's resolution to 'The Wedding of River Song' might be seen as a mismatch between the narrative

8. Note that the later demise of Tennant's Doctor, in 'The End of Time', comes as his own redemption. He sacrifices his life to save that of a single human.

grammars typical of traditional and modern *Who*. Notwithstanding the advances in budget, film/video technology and narrative speed, it's modern *Who*'s commitment to an emotional seriousness underpinning fantastical situations that sets it apart. But the Doctor's tricky, catharsis-dodging escape from monotonic death is akin to the episode recaps from the '60s and '70s, routinely re-edited or even reshot to cheat the scale of the previous week's unrecorded, hazily-recalled cliffhanger. The loss of emotional heft and integrity is such that when the Doctor and River Song marry as part of the episode resolution, the scene is completely garbled. It's not clear what it means, what it changes, whether it is in fact real. It just happens.

'Asylum of the Daleks' to 'The Time of the Doctor' (2012–2013)

Jenna Coleman's appearance in 'Asylum of the Daleks' (Steven Moffat, 2012), the first episode of Steven Moffat's third *Doctor Who* series, is played at first as surprise – she'd been announced more than five months earlier as the replacement for Karen Gillan and Arthur Darvill's Amy Pond and Rory Williams, but they were yet to leave, and wouldn't until the series' fifth episode, 'The Angels Take Manhattan'. When Coleman's character, Oswin Oswald, is apparently killed in the

same episode, it's played as a *puzzle*: what's going on? That year's Christmas episode, 'The Snowmen' (Steven Moffat, 2012), the first after the departure of Gillan and Darvill, clarifies the nature of the puzzle: Coleman appears again, as Clara Oswald, a barmaid in Victorian London who moonlights as a governess. Again, her character dies in the same episode. The loud echo in the character names isn't subtle: this is, *in some way*, the same character. But what's the connection between them? The answer to this question – which we pursue at the same time and speed as the Doctor; he has no more insight than we do – strikes at the heart of the very idea of monotonicity across the entire history of the programme.

The remainder of the series introduces a third incarnation, a modern-day 'Clara Oswald', who becomes companion proper; it pokes gently at the Clara problem, but doesn't really get anywhere until the final episode, 'The Name of the Doctor' (Steven Moffat, 2013), at which point matters quickly converge. A collection of the Doctor's friends and allies are kidnapped and taken to Trenzalore, a planet which is revealed to be the site of the Doctor's (eventual, future) tomb, there to serve as bait for the Doctor himself. The Great Intelligence, a formless, malevolent creature – revived from Troughton-era stories 'The Abominable Snowmen' (Mervyn Haisman and Henry

Lincoln, 1967) and 'The Web of Fear' (Haisman and Lincoln, 1968) – which inhabits and controls the bodies of others, seeks entry to the tomb, which requires the Doctor's real name. Inside, the last trace of the Doctor's existence is a wound in space-time, which allows access – more or less – to his entire timeline.

The Great Intelligence, in the form here of a Dr. Simeon, inhabited since Victorian childhood, enters the wound, and is shattered into a million pieces, each of which is then able to attack and subvert the Doctor's existence at a different point in space-time. Within seconds, the Doctor's victories and achievements have been so utterly undermined that the stars actually begin to go out. The Doctor himself is at the point of death. Modern-day Clara understands what she must do – what she learns that she has *already done*: she also steps into the wound and is shattered across the Doctor's timeline, allowing her to fight for the Doctor across all of space-time – but, in particular, in the episodes where we've seen her do exactly that. The Doctor's history is saved.

The epistemic core of this climactic scene, a single word in a line of exposition from Silurian ally Madame Vastra, is underplayed:

Simeon is attacking his entire timeline. He's dying all at once. The Dalek asylum. Androzani.

'The Dalek asylum' refers to the events in Moffat's own 'Asylum of the Daleks', which we have already seen at the start of the series arc: Oswin Oswald, a splinter of the complete, modern-day Clara Oswald, saves the Doctor from death (regeneration, whatever) at the hands of a collection of (more-than-usually-)insane Daleks. Her actions in this specific case are not shown to be in direct opposition to malign intrusion by Dr. Simeon/The Great Intelligence, but that's easily waved away: the puzzle narrative requires that Oswin's back-story and motivations are left unexplored at that stage; besides, there's plenty of space for a reader who wishes to imagine an off-screen Simeon pulling the strings to do that. None of this is especially problematic.

'Androzani', on the other hand, opens up a universe of complication. The reference is – surely – to Robert Holmes's 'The Caves of Androzani' (1984), the final story of Peter Davison's Doctor, in which he signally does not prevail, succumbing to poisoning which ultimately triggers his regeneration into Colin Baker's Doctor. At a stroke, Moffat extends the scope of non-monotonicity way beyond his own work, and his own tenure of *Doctor Who*, to encompass a story broadcast almost thirty years earlier, whose writer and producer were long dead. As filmed and broadcast, 'The Caves of Androzani' is

unaltered, but Moffat leverages time travel, and the full weight of canon, to materially change a reasonable reader model of how the story plays out. 'Androzani' makes plain that, in this new model, Simeon is at least complicit in the Doctor's death (regeneration, whatever), and plausibly directly responsible. 'The Caves of Androzani' is a curious choice here. Clara's wider victory over Simeon's attacks would be shown far more clearly if Vastra's allusion was to an old story in which the Doctor wins out – as he does in Moffat's own, more-recent 'Asylum of the Daleks'. That Moffat chooses – and not accidentally, one assumes – a story in which the Doctor falls entails that Simeon has his own victories: Clara wins the war, but she can't win every battle.

What we have, then, is *The Curse of Fatal Death*, writ large. Simeon and Clara are set to duelling across all of time and space, much as the Doctor and Master duel in *Curse's* castle, with time travel and causality as their weapons of choice. The events of 'The Caves of Androzani' are referenced directly in 'The Name of the Doctor', but – and this is important – every single *Doctor Who* story throughout the programme's history (and future), every bit of *Who* lore, is now within the scope of this non-monotonic meddling. There, in every scene, just beyond the edges of our peripheral vision, are Simeon and Clara, he seeking

to undermine the Doctor's plans, she fighting to at least maintain the status quo. Mostly she wins; sometimes, evidently, she does not.

This description isn't an unwarranted extrapolation – Moffat makes it very plain. 'The Name of the Doctor' begins with a scene, constructed from contemporary shots of Jenna Coleman as a splinter of Clara, and shots of William Hartnell as the first Doctor repurposed from 'The Aztecs' and colourised to provide a broad consistency, in which she directly advises his theft, deep in *Who* back-story, of the TARDIS – warning against an alternative, malfunctioning TARDIS. A montage follows – also repurposing existing episode footage – which shows Clara-splinters in the footsteps of each of the other Doctors. Moffat lets (some version of) Clara remark in voiceover on the *curious* phenomenon that, other than in the events seen in 'Asylum of the Daleks' and 'The Snowmen', and in his own hacked-together episode prologue, the Doctors don't perceive her presence:

I always know it's him. Sometimes I think I'm everywhere at once, running every second just to find him, just to save him. But he never hears me. Almost never.

Nevertheless, she, and Simeon, are now canonically there as active participants at every moment in the Doctor's

extraordinary timeline, at least potentially in every story. Unless one wishes to deny the very idea of canon, these stories are now changed. The combination of in-story time travel, and authorial weight of canon, provides Moffat with a TARDIS of sorts, with which he can influence, and actively change, back-story across the entire *Who* universe. Never mind what was *filmed*, way back when in Lime Grove Studio D or Riverside 1. So much of story is back-story, and changing back-story does actually change story, as processed by a reader, since it bears upon the reader model of the story every bit as much as the text. Just as Simeon, inhabited by The Great Intelligence, endeavours to undermine the Doctor's past; just as the Meddling Monk seeks to change English history; so does Moffat's work change the history of *Doctor Who*. At best, 'The Name of the Doctor' shows a blithe indifference to muddying the programme's canon in order to raise that episode's stakes. What one imagines ought to be a *real*, totally non-negotiable fixed point in *Doctor Who* – the work of writers, producers and other creative staff from previous decades of the programme – turns out not to be so. Earlier, the rebooting of the universe in 'The Big Bang' cedes authorial control of that universe to Moffat: any desired subsequent change or anomaly can then hand-wavingly be attributed to side-effects of that process. 'The Name of the

Doctor' then cedes authorial control of the entire *Doctor Who* canon to Moffat. At this point, it belongs to him.

There is a punchline. According to the events in 'The Name of the Doctor', the Doctor's tomb – actually his TARDIS, though distorted in external size as its power finally failed – sits on the site of his final battle, on the planet of Trenzalore. And, indeed, the episode shows the site as a massive wasteland that's part battleground, part cemetery. That year's Christmas episode, 'The Time of the Doctor' (Steven Moffat, 2013), sets out to portray this final battle – and, therefore, the Doctor's death. Further to having presented the Doctor's actual *grave* at this location, Moffat ramps up the hopelessness of the Doctor's situation by buffing up a throwaway line from 'The Deadly Assassin' (Robert Holmes, 1976) which suggests that Time Lords are limited to twelve regenerations – the Doctor seemingly having now come to the end of his many lives. Even regeneration can't save him. But Moffat draws from a by-now very familiar well here, so, despite the considerable (if increasingly disingenuous) narrative pleading, and with half a meta-narrative eye on newly-cast Peter Capaldi waiting in the wings, it comes as a surprise to no-one when the Doctor does not die, but merely acquires a fresh set of regenerations.

How this happens isn't especially important here, but the narrative implications are both vast and uncertain. If the Doctor doesn't die on Trenzalore, his grave isn't there. If his grave isn't there, the space-time wound sought by Simeon in 'The Name of the Doctor' isn't there, neither he nor Clara enters the wound, and the whole of 'The Name of the Doctor' makes little sense. Those episodes which feature splinters of Clara ('Asylum of the Daleks', 'The Snowmen') also make no sense; episodes which consequently depend on the Doctor attempting to solve the problem of Clara-splinters (especially 'The Bells of Saint John', Steven Moffat, 2013; 'Hide', Neil Cross, 2013) are at best undermined. The prologue of 'The Name of the Doctor', which shows a further Clara-splinter advising Hartnell's Doctor – and which implies that she saves him from actual harm – now has no basis. Does he steal a different TARDIS? What cumulative effects might *that* have? The events of 'The Caves of Androzani' are also thrown into confusion: if we are intended to believe that Simeon's actions, and possibly Clara's counter-actions, change the events in this story, what's left when those actions are removed? Does the Doctor, in the end, regenerate?

These are only the obvious direct effects of the resolution of 'The Time of the Doctor'. Beyond that, what's left is a scattering of uncertainty across the entire *Doctor Who* canon.

Unless we are to believe that the actions of Simeon-splinters and Clara-splinters are ultimately net-neutral with respect to causality across the Doctor's entire timeline, such that removing both has no effect – which certainly seems not to be the implication of this series arc; Simeon and Clara battle, and there are victories on both sides – then there's debris all over the place.

Here we should reiterate the obvious point that time travel in *Doctor Who* is a narrative device, and nothing more, and that there is no formal accounting – no quasi-physics or algorithm which might help us resolve the vague and conflicting epistemology. The removal of Simeon-splinters and Clara-splinters certainly provides no *clarity*. This isn't even an instance of clean non-monotonicity, where something was once true but unambiguously no longer is. An argument that *all* of the events shown in the series arc occurred in some alternate timeline – the Doctor both died and did not; Simeon and Clara both entered the space-time wound and were splintered, and did not; and so on – is of no practical use, a reaching for a lazy, convenient, ultimately empty profundity. Where it matters, in the reader model, the narrative fireworks are positively destructive. Which of the information in the entirety of this series arc can be considered sufficiently solid and monotonic by

the time of its end to form the foundation of a reader model of *what actually happened*, from which to project non-monotonically outwards and forwards with anticipation, and fear, and a meaningful sense of possibility? Barely any of it.

'The Day of the Doctor' (2013)

On November 23rd, 2013, fifty years to the day since the largely unheralded broadcast of the first episode of *Doctor Who*, the world was watching. The anniversary episode, 'The Day of the Doctor' (Steven Moffat, 2013) – squished between 'The Name of the Doctor' and 'The Time of the Doctor', but largely independent of them – was broadcast simultaneously in 94 countries, in many cases including cinema screenings.⁹ The programme had never been bigger; its cultural reach never as far. In this context, with this audience and attention, the episode goes to a place that's extraordinarily unsettling in its willingness to rewrite existing canon – unsettling in that it totally changes how significant existing narrative and character choices can reasonably be seen; and unsettling because these changes are based not merely on enhancing the episode's own

9. 'Millions tune in for Doctor Who 50th anniversary show', *BBC News*, November 24, 2013, <http://www.bbc.com/news/entertainment-arts-25076912>.

narrative, but on a clash of fundamental perspectives on what the Doctor might or might not be capable of doing, and, ultimately, *who the Doctor is*. Moffat is intent on applying canon to fix things he disagrees with.

'The Day of the Doctor' has two narrative threads, which become somewhat tangled, but are not causally linked. The first concerns a Zygon plot to invade modern-day Britain using pan-dimensional Gallifreyan artworks as portals from the 16th century. This is cleaned up in plenty of time for the second thread to form the dramatic weight of the episode. This second thread aims at the very heart of the back-story constructed by Russell Davies at the beginning of modern *Who* – and aims to overturn it. Fissures in space-time throw together three Doctors: Matt Smith's (current) Doctor; David Tennant's (previous) Doctor; and an unknown, rogue Doctor played by John Hurt, glimpsed very briefly at the end of 'The Name of the Doctor', but introduced properly here. It was Hurt's Doctor, we learn, who ended the Time War – raging then on and around Gallifrey itself – by wiping out the Time Lords and Daleks both. We're therefore exploring territory only shortly before the start of 'Rose' (Russell T Davies, 2005), the beginning of modern *Who*. A prologue of sorts takes Hurt's Doctor to the moment of decision, faced with the weapon itself: 'The Moment',

a sentient device played – teasingly – by Billie Piper. Seeking to test his resolve, the device throws him forward into the paths of Smith and Tennant, there to discover what becomes of (future versions of) him, if he acts.

Matters eventually take all three Doctors back to the moment of decision, and it appears that their solution – such as it is – is to share the responsibility for the genocide. This amounts to an act of redemption of sorts for Hurt's Doctor, and of reconciliation between them; a reversal of the conscious act of forgetting by which Hurt's Doctor had been shunned – this forgetting being Moffat's accounting for the insertion into canon of an unknown bridge between previous Doctors. But, at the last second, there is a more complete redemption: a mechanism is devised by which the TARDISES of all thirteen Doctors (Hurt's and Capaldi's Doctors included) so far can combine to zap Gallifrey off to a parallel, 'pocket' universe – perhaps not to survive, and perhaps never to return, but with some small hope of both. In the chaos, the Daleks are destroyed in friendly fire. Without the implied finality of the Doctor's genocide, we therefore entirely expect to see them back, and he is exonerated. Hurt's Doctor bids farewell, throwing into the mix some special pleading which attempts to lash together existing and revised canon:

DOCTOR (HURT). I won't remember this, will I?

DOCTOR (SMITH). The timestreams are out of sync. You can't retain it, no.

DOCTOR (HURT). So I won't remember that I tried to save Gallifrey, rather than burn it. And I have to live with that.

He then begins regenerating into a slightly wonky simulation of Christopher Eccleston's Doctor – the real Eccleston having not wanted to be involved. And the back-story Russell Davies constructed to underpin the programme's renaissance is, from this moment, so far as *Who* canon is concerned, undone.

Moffat's revision of the back-story leaves no room for ambiguity about what happened; there are no alternate timelines to then unpack and somehow resolve – as is the case, for example, in the previous series arc which begins with the Doctor's apparent death in 'The Impossible Astronaut'. This new back-story doesn't clash with Davies's; it simply, actually, replaces it. The single timeline is clear. Before the moment of decision, Hurt's Doctor is thrown forward. He returns with Tennant and Smith's Doctors, and together they devise a solution which avoids the double genocide. Hurt's Doctor then forgets that he's done this. Seeing Gallifrey gone, and the Daleks wiped

out, and remembering only that he *intended* to destroy them both, he assumes that this is what happened. Eccleston and Tennant's Doctors then carry the weight of this guilt: they've also forgotten what happened, because they are the same Doctor, moved forward by a regeneration or two. There is now no reasonable timeline in which the genocide occurs.

What, then, of the back-story which Russell Davies sets up in 'Rose' and subsequent episodes? Is Moffat's revised back-story accessible as a reading of Davies's earlier work? More or less – Moffat is careful enough to make sure that the dots are joined. But also trivially so. Given unlimited in-story time travel – Moffat's caution, for solid narrative reasons, of the dangers of the Doctor interfering with his own timeline/s is once again absent here – and the authority of canon, modifying back-story in a way that's more or less coherent is no great achievement. And neatness of narrative epistemics is hardly the point, when so much else is changed.

Moffat's motivations don't need to be guessed or inferred; he was entirely clear about them:

I remember thinking, 'what was the most important occasion in the Doctor's life?' Obviously it was the day he blew up Gallifrey. Then I tried to imagine what writing that scene would be like, and I thought

literally – there’s kids on Gallifrey and he’s going to push the button. He wouldn’t. He wouldn’t. I don’t care what’s at stake, he’s not going to do it. So that was the story – of course he never did that. He couldn’t have. He’s the Doctor, he’s the man who doesn’t do that. He’s defined by the fact that he doesn’t do that. Whatever the cost, he will find another way. So it had to be the story of what really happened that he’s forgotten.¹⁰

Elizabeth Sandifer states very clearly what Moffat only alludes to: that this is a matter of deep disagreement between Moffat and Davies about the Doctor himself:

But what’s more important, ultimately, is the reasoning behind that change. It’s not just that The Day of the Doctor reverses the outcome of the Time War, after all. It’s that it does so as part of an argument about the Doctor’s nature. This is, to a real extent, an outright moment of disagreement between Moffat and Russell T Davies. Moffat has said that he never really thought the Doctor would commit double

10. Dan Martin, ‘BuzzFeed caught up with showrunner Steven Moffat at the official celebration event at London’s Excel’, *BuzzFeed*, November 24, 2013, <http://www.buzzfeed.com/danmartin/steven-moffat-explains-this-big-the-day-of-the-doctor-twist>

genocide, and here he makes that argument explicit [. . .]. The resolution of the story, in other words, is a statement of what Doctor Who is for, as a cultural object, which in turn justifies the existence of another fifty years of it.¹¹

It's not enough that Moffat and Davies disagree about the nature of the Doctor, though; they must also disagree about the nature of the universe the Doctor inhabits. The tragedy of Davies's Doctor isn't that there's a solution to the double genocide that he's somehow missed; it's that there really is no such solution. The narrative universe presents him with a grotesque situation in which wiping out the Time Lords and the Daleks is a properly ethical choice – the cauterisation of a wound which otherwise would result in the death of the whole body. This is the same universe – more or less – in which Captain Jack Harkness sacrifices his own grandson to save the lives of millions ('Torchwood: Children of Earth', Russell T Davies, John Fay, and James Moran, 2009). Davies pushes these characters into the fire: they must choose, and bear the consequences. Dramatically, as a cathartic narrative device and as a device to define character, it's rich and resonant.

11. Elizabeth Sandifer, 'The Moment Has Been Prepared For', *Eruditorum Press*, February 2015, <http://www.eruditorumpress.com/blog/the-moment-has-been-prepared-for-the-day-of-the-doctor/>

Conversely, Moffat's Doctor is only *able* to reach for a happier resolution because Moffat places him in a narrative universe which always allows for that. This is more than simply a different reading of the Doctor's nature; it's an entirely different universe – one closer to that of a fairytale,¹² in which happy endings are always possible; in which narrative can always reach beyond *threat averted* to *damage undone*; in which character welfare can always be privileged. When Moffat states that '[w]hatever the cost, he [the Doctor] will always find another way', this is a claim not just about the Doctor, but about what the Doctor's universe allows. In 'The Day of the Doctor', Moffat doesn't merely change the Doctor as defined by Davies; he changes Davies's entire narrative universe. As is typically the case in Moffat's *Who*, the mechanism by which the

12. 'I remember at the time, Piers Wenger, who was exec-ing my first two series with me, said, "We need to make a statement about what kind of *Doctor Who* you're going to make", and I was saying "I'm going to make the kind with the blue box and the Time Lord, that's what I'm going to make. It'll be different every week." But he insisted on something, and he suggested "fairytale". So we trotted that one out endlessly – "it's more like a fairytale". It's not. It's just that, if you choose to look for every clue about fairytale-ness, you'll find them.' Steven Moffat, interview with Toby Hadoke, 'Episode 232', *Who's Round*, December 27, 2017, <https://www.bigfinish.com/podcasts/v/toby-hadoke-who-s-round-232>.

fairytale-ness of his universe is guaranteed combines time travel and non-monotonicity.¹³

But consider the implication of Moffat's words, and Sandifer's commentary, which they themselves don't address: the profoundly unsettling notion that a writer might disagree with another writer's work, and be in a position – and willing – to apply the hard non-monotonicity that's enabled by in-story time travel, and the full weight of canon, to actually change that work. Actually change it. That this might be seen as acceptable, *justified*.

To be clear about what this *isn't*: it isn't contradiction. The history of *Doctor Who* is shot through with contradiction. The origin stories of iconic monsters like the Daleks and Cybermen; what devices like the TARDIS and the Doctor's sonic screwdriver can and can't do; how the TARDIS was named; the Doctor's age and own origins (and future) – inconsistencies and outright contradictions in all of these things and loads more

13. An analogy from a different universe entirely: Davies's Doctor faces the Kobayashi-Maru test honestly; Moffat's Doctor cheats. Kirk's cheating works in *Star Trek* because his avoidance of the test is itself character-defining – and because it foreshadows a very real situation in which that sort of choice must be made (though not by him). In *Who*, the avoidance is Moffat's, not the Doctor's. All it reveals of the Doctor is that he can/will indeed always find a way – privileging of character welfare will always prevail over narrative heft. Dramatically, there isn't much to say about that.

are waved through, sometimes as a function of alternate timelines or parallel universes, but often with no explanation at all. And it doesn't really matter. Or, rather, it matters in that it playfully identifies a faithfulness to consistency as both impossible, given the scope of the programme, and *not the point*; it matters only that the narrative works *now, here, in this* story. The Doctor can be 450 years old, and 750, and 900, and all of those can be true. What matters is that he's *old*. Such piling up of truths remains entirely monotonic. Formally, the contradictions don't nullify each other; they accumulate.

Conversely, in 'The Day of the Doctor', Moffat approaches existing canon directly. In seeking to overturn it, to nullify it, he takes its epistemology seriously. He shows that it matters enough to go to the trouble. This is tonally quite new for *Doctor Who*.

Sandifer addresses the plumbing of Moffat's revised narrative onto Davies's back-story for modern *Who*, but there are striking absences:

(It's also worth addressing the way in which Moffat handles the issue of the Doctor spending seven seasons thinking he's committed a double genocide, namely by declaring that the Doctor doesn't remember this adventure until it happens to Eleven. Moffat actually

goes to considerable length throughout the story to make sure it fits meticulously with existing Doctor Who continuity, and so this is no surprise. But there's also an emotional honesty to it that rarely gets remarked upon. It's significant that it's Matt Smith's Doctor who gets to figure out how to save Gallifrey, and not Hurt or Tennant's. It's not until the Doctor accomplishes this - until he actually finds a better way - that he gets absolution. This is, in fact, entirely fitting. Eccleston, Tennant, and, until this story, Smith all thought they made the best choice available to them, and so lived with the consequences of that belief. It's not that the Doctor was wrong about Gallifrey being destroyed in the Davies era - it's that he hadn't saved it yet.)¹⁴

Sandifer considerably oversells the elegance of Moffat's revisions here. Davies's Doctors aren't vague about what they think happened, as if misremembering; their memories are specific, and clear. Moffat allows for no timeline in which Gallifrey was destroyed - no matter how that happened - yet Eccleston's Doctor saw it:

14. Sandifer, 'The Moment Has Been Prepared For'.

DOCTOR. My planet's gone. Dead. It burned, like the Earth. It's just rocks and dust. Before its time.

('The End of the World', Russell T Davies, 2005)

DOCTOR. Your race is dead! You all burnt, all of you. Ten million ships on fire. The entire Dalek race wiped out in one second.

DALEK. You lie!

DOCTOR. I watched it happen. I made it happen.

('Dalek', Robert Shearman, 2005)

He's not extrapolating from what he imagines happened; he *saw it*. Such continuity issues are of questionable relevance – Moffat's revision is such a crushing steamroller that, at least at that level, he more or less gets away with it – but they point to a much more basic problem. Once again, it's an obvious point; once again, it's seems easy to miss (except – no, it really really really isn't easy to miss): creative works are artefacts of the specific time and circumstances of their creation. In writing for the 2005 series, Davies was faced with a very particular set of problems, and his work is a very particular response to those problems. Approaching the non-monotonic reworking in 'The Day of the Doctor' of the back-story Davies created for this series as if it's simply a matter of lashing together some revised continuity – however well that's

done – is a profound misstep. Moffat’s perspective on *Who* narrative might well assume that in-story time travel can combine with the weight of canon to allow anything he disagrees with to be epistemically obliterated, but it really can’t – not properly. At best, what remains is a simultaneous, ugly duality between Davies’s original goals and intentions – which don’t somehow magically disappear – and Moffat’s. Of course Sandifer understands that narrative is a function of culture, and culture is a function of a specific moment in good old-fashioned linear time, but her perspective seems to ignore this, focusing instead on the idea of in-story continuity as a spurious measure of the elegance of Moffat’s work in ‘The Day of the Doctor’ – as if there were a quasi-physics that somehow retrospectively does the accounting to make ‘Rose’, and the episodes that follow, genuinely coherent with Moffat’s later plan.

Someone late to *Doctor Who* – and oblivious to the broadcast chronology – who watches ‘Rose’ after ‘The Day of the Doctor’ sees a very different narrative than someone who watched it on first broadcast in 2005. Someone who *revisits* ‘Rose’ after ‘The Day of the Doctor’ sees a different narrative again. In each case, the difference that matters is the nature of the Doctor himself. A couple of early scenes in the 2005 series define

Davies's Doctor, as played by Christopher Eccleston – one from 'Rose', another from 'The End of the World', the second episode.

ROSE. Really, though, Doctor. Tell me, who are you?

DOCTOR. Do you know like we were saying, about the Earth revolving. It's like when you're a kid. The first time they tell you that the world's turning and you just can't quite believe it 'cause everything looks like it's standing still. I can feel it. The turn of the Earth. The ground beneath our feet is spinning at a thousand miles an hour. And the entire planet is hurtling round the sun at sixty-seven thousand miles an hour, and I can feel it. We're falling through space, you and me, clinging to the skin of this tiny little world, and if we let go That's who I am. ('Rose')

Davies is, of course, aiming the Doctor's speech directly at a new audience here, as well as at Rose herself. Neither that audience, nor Rose, knows much yet about who the Doctor is, and this speech doesn't provide actual information. What it does is position the Doctor as not just alien, but vast and ineffable. Tonally, and functionally, there's an echo of Roy Batty's dying words ('I've seen things you people wouldn't believe') – the capturing of a scale that is genuinely beyond our grasp.

Harrison Ford's Blade Runner Deckard isn't quite *diminished* as a consequence, but there's a shift in perspective that places him very differently in relation to Batty. The same is true here of Rose and the Doctor – and of the *audience* and the Doctor. Davies sets the Doctor at a distance: he will always know more than we do, have experienced more than we have, see things more deeply than we can. He has, literally, seen things we wouldn't believe. That's who the Doctor is. That's who the Doctor has always been.

DOCTOR. My planet's gone. Dead. It burned, like the Earth. It's just rocks and dust. Before its time.

ROSE. What happened?

DOCTOR. There was a war, and we lost.

ROSE. A war with who?

DOCTOR

ROSE. What about your people?

DOCTOR. I'm a Time Lord. I'm the last of the Time Lords. They're all gone. I'm the only survivor. I'm left travelling on my own 'cause there's no-one else.

ROSE. There's me. ('The End of the World')

Their first two adventures over, the second of which involves them witnessing the far-future death of the Earth, the Doctor is ready to remove a layer of avoidance and spikiness. He speaks to Rose simply and openly, about who he is, and about the

war of which he's the only survivor. We don't yet know that the war ended at his hand, but we know his planet is destroyed – not gone, *destroyed* – and along with it his people. It's the first time we see him express the grief, and loneliness, and survivor's guilt that define him at this point in the programme's trajectory. This is an important and resonant scene – it's really the culmination of the beginning of modern *Doctor Who*. It places the Doctor and Rose firmly within the narrative space, and fuses them together as companions. Davies's writing is deft; Eccleston and Piper are genuine, connected; it's strikingly shot, on a busy street, in natural light, from a distance, and with no music, placing the two of them densely among oblivious Earth-dwellers going about their business.

So much of this work, of the Time War and the Doctor's place in that back-story, is about defining *character*. This is what clangs in Sandifer's analysis: Moffat might provide in 'The Day of the Doctor' a broad alternate reading of the epistemology of the Doctor's back-story, but with respect to the Doctor's character it's a crude narrative cut-and-shut. A viewer processing 'Rose' and 'The End of the World' – and subsequent episodes – for the first time after 'The Day of the Doctor' is intended, if the idea of canon is to mean anything, to see Eccleston's Doctor as a deluded, pathetic figure. He's Roy Batty

no longer, but closer to Sean Young's replicant Rachael – a very different experiment – living a life built on implanted memories she believes are real, and diminished as a consequence, evoking pity most of all. There is tragedy in Davies's Doctor, but it's in the grandeur of what he's done, what he's seen; it's not the tragedy of delusion, of dramatic irony. And canon isn't enough to make the joins good. A viewer might bring Moffat's back-story for the Doctor to 'Rose', and to 'The End of the World', but those episodes remain infused with Davies's back-story, as written for the 2005 series – and therefore with Davies's Doctor – and the two are hard to resolve. A viewer familiar with these episodes who revisits them after seeing 'The Day of the Doctor' is in the difficult position of having to negotiate with larger conflicting demands on their reader model. At best, even if they choose to remain true to Davies's original intentions, and their original model, Moffat's voice is intrusive and demanding: *Of course, this isn't how it happened. I rewrite it in eight years' time.* On what basis can Moffat's voice be denied, and what would be the effects on the processing of the wider *Doctor Who* narrative of such denial?

It shouldn't be lost that Moffat's rationale for rewriting Davies's character-defining back-story was specifically to

return the Doctor to his – Moffat’s – idea of the Doctor’s true essence:

So that was the story – of course he never did that. He couldn’t have. He’s the Doctor, he’s the man who doesn’t do that. He’s defined by the fact that he doesn’t do that.¹⁵

And yet, in order to destroy Davies’s Time War back-story as it relates to the Doctor’s character, Moffat must invert the single most consistently Doctor-like characteristic across the programme’s entire history, and a dozen distinct characterisations: he knows more than we do. This is, more or less, the Doctor’s role within the programme’s meta-narrative: he’s our guide, and our safety. From the moment Eccleston takes Billie Piper’s hand at the beginning of ‘Rose’ and tells her to run, this is continued by Davies. When this fails – in ‘The Waters of Mars’, for example – it’s unsettling and anomalous, a sign that the Doctor is losing himself. Conversely, as viewers, we know *more* – profoundly more – than Moffat’s revision of Davies’s Doctor. We know more than he does about *himself*. There’s really no way around this: Davies’s back-story can’t be wiped without significant character problems elsewhere. This is

15. Dan Martin, ‘BuzzFeed caught up with showrunner Steven Moffat’.

not to say that the Doctor cannot change; change is fundamental to *Doctor Who*. But an argument that Moffat's destructive rewriting in 'The Day of the Doctor' is justified since it brings the Doctor back to some objectively true identity is on shaky ground indeed.

So what, then, is Moffat to do, if he genuinely believes that the Doctor could not, *did not* (whatever on Earth that's supposed to mean) commit double genocide to bring the Time War to a close? Write fan fiction with his alternate version of events? I'm not especially joking: isn't that sort of fork from established canon what fan fiction is *for*?¹⁶ He could also *contradict* Davies without this being too epistemically clumsy – *Doctor Who* is great at assimilating contradiction, if necessary; certainly, when one has resolved a plot by *rebooting the universe*, there's little that can't be achieved monotonically. He could also do nothing. He could leave – and respect – Davies's work (and Eccleston's work, and the work of everyone involved) as it is, and move forward. Davies himself, in an interview for Toby Hadoke's *Who's Round* podcast, captures this spirit of pragmatic monotonicity:

16. 'I woke up this morning and thought: the Gallifrey idea is shit. I really did. My heart was in my boots. Gallifrey seems so backward-looking. Restoring it almost seems like fan fiction.' Davies and Cook, *The Writer's Tale*, 511.

Who's got the life that they want, for long? Not many people. But you make the best of it. Like watching *Doctor Who*, you have to sit through revelations that he's half-human. And you live with it. You put up with what you've got, and actually make something wonderful of it.¹⁷

But, no. Moffat chose to make use of the leverage provided by in-story time travel, and the acquired authority of canon, to actually, and significantly, change Davies's work, because he *disagreed with it*. And not just an isolated episode or two; granted its narrative significance diminishes a little, but the back-story Davies created underpins the entirety of his work on *Doctor Who*, and how his Doctors – Eccleston and Tennant – are written and played. I want to express again how unsettling it is that a writer might feel able to take such a position, and to act on it in this way. It strikes me – and no less at the time of writing than in 2013 – as an obvious violation of the basic

17. Russell T Davies, interview with Toby Hadoke, 'Episode 99', *Who's Round*, December 22, 2014, <http://www.bigfinish.com/podcasts/v/toby-hadoke-s-who-s-round-99-december-22>. (Davies is gently defending Ursula's situation as a living paving slab at the end of 'Love & Monsters' (Russell T Davies, 2006).) Note the echo here of Pertwee's Doctor's plea to Captain Mike Yates in 'Invasion of the Dinosaurs', combining respect for that which came before, and optimism for what can be made of it.

idea that any writer owns their work, and of the integrity of that work.

There are a few defences of Moffat's actions that I can imagine, but all are difficult. One is that 'The Day of the Doctor' doesn't *actually* change anything in Davies's work, because the episodes themselves, as written and filmed, haven't changed. This is a naive view of how story works, and how much of it arises and exists in the reader's model as a function of a much wider epistemology. Besides, it would be hard to argue that Moffat himself didn't specifically *intend* to change how Davies's work is seen – or, at the very least, that he didn't accept those changes as necessary in the service of his own narrative goals. A second defence might be that the *Doctor Who* meta-narrative is inherently linear, and is (should be) processed as such, the implication being that, for example, the entire epistemology of 'Rose' remains exactly that which existed in 2005 at the time of broadcast, and that this cannot be changed by later episodes. This is a position of hopeful monotonicity which doesn't survive contact with Moffat's work. It also misses the extent to which the whole history of *Who* is now processed at once, and repeatedly. Aside from the missing episodes, every extant story is in print. And those missing episodes are the stuff of legend – even rumours of their recovery become news

across the world. Old episodes of *Doctor Who* are in no way in the past. A somewhat related defence is that Moffat's meddling doesn't matter much because this is *only Doctor Who*, *only* an ephemeral television programme. Aside from the mistake of underestimating the medium itself, there are very few cultural artefacts that have the same reach and popular iconography. Russell Davies is a major writer for television, and *Doctor Who* represents about seven years of his professional work.

A more interesting defence might be that modern *Who*, at least, exists as a single creative entity, legitimate control of which – if not exactly *ownership* of which? – passes in its entirety from one showrunner to the next.¹⁸ The longer and wider narrative arcs in modern *Who*; the sense of it as a single narrative, rather than distinct or loosely-connected stories –

18. HADOKE. You took over a very successful show, which had a big individual stamped all over it. When you took it over, what were your thoughts about what you wanted to do to make it – with a conscious decision to go, this will make it more like my show than his? MOFFAT. I never gave it a thought. Never. I mean, no. And I doubt Russell ever thought about that. We've never spoken about it. I never thought about that. I thought about trying to make *Doctor Who*, which I never regarded as mine. I couldn't regard it as *mine*. I grew up watching it. The specialness of the job is that it isn't yours; that you're handed this incredibly precious national heirloom, and you curate it for a while, you look after it for a while [. . .]. I suppose in certain respects it would seem like I did because there would be a particular style to it, but that just happens. You don't think about that.' Steven Moffat, interview with Toby Hadoke, 'Episode 232'.

these lean towards the idea of a more fluid epistemology, which presupposes a more fluid sense of creative ownership. Indeed, modern *Doctor Who* is exceptional in even meeting the tricky requirements for a situation in which disagreement between writers can lead to true narrative non-monotonicity between their work: there must be unrestricted in-story time travel, and a forgiving quasi-physics, or none at all; custody of canon should reside with a single creative individual; but the meta-narrative should last long enough that such custody transfers periodically, in an orderly, accepted fashion. There should also, of course, be *disagreement*. These are theoretical requirements, though, and they address neither ethical considerations, nor the fact that cultural artefacts will always remain a product of the time and circumstances of their creation. No matter how insistent a later custodian of canon might be, and no matter how easy it might be for them to send a character back in time to fix a perceived wrong, they cannot themselves travel in time, and nor can their work.

Curiously, at the time of the broadcast of 'The Day of the Doctor', Moffat framed his reluctance to use Billie Piper as Rose Tyler in terms of Russell Davies's *ownership* of that character's story, and its existing integrity.

I thought the story of Rose, which was beautiful, was done [. . .]. I didn't want to add to it, and I didn't feel comfortable adding to it, really. That was always Russell's story. But we did want Billie. And I liked the idea of bringing back the Bad Wolf version. The way Russell ended it in 'The End of Time,' by just sort of looping it around, was perfect. I didn't want to stick another bit of it in. That would be wrong. I just wanted to get Billie Piper, one of the absolute heroes of *Doctor Who*, back in the show, but without interfering with the story of Rose Tyler. I just thought I might spoil something. I might trip over my bootlaces doing that.¹⁹

That he saw neither the same ownership, nor the same integrity, in Davies's writing of the Doctor himself – or, at least, found them less relevant given his own intentions – is baffling. It makes little sense to speculate, but he was certainly aware of the difficulty of the territory:

But we did coordinate around some stuff and I said to him I was possibly treading on your toes, so here's

19. Kevin Wicks, 'Doctor Who: Steven Moffat Explains Billie Piper's Role in the 50th', *BBC America*, November 2013, <http://www.bbcamerica.com/anglophenia/2013/11/doctor-steven-moffat-explains-billie-pipers-role-50th/>.

roughly what we're going to do. He said, 'I read half your email and then I stopped.'²⁰

Is Davies's position with respect to the changes to his work in 'The Day of the Doctor' relevant? Clearly, yes – at least to some degree. If this is an issue of *ownership* of his work, and he willingly ceded ownership of that work to Moffat, then the issue doesn't arise. Things are more complicated than that, though. Davies left *Doctor Who* very consciously not wanting to look back – his own professional ethic,²¹ and his desire to return to a fan's-eye perspective again,²² requiring a

20. Wicks, 'Doctor Who: Steven Moffat Explains Billie Piper's Role in the 50th'.

21. SKINNER. Christopher Eccleston, of course, was the ninth Doctor. Scarred by the Time War, because he destroyed both the Time Lords and the Daleks. DAVIES. We thought, until we discovered they all just missed each other. SKINNER. Were you in any way miffed that you had invented this fabulous piece of *Doctor Who* folklore, and then Steven Moffat thought, 'No, I don't like it, I'm going to rewrite it'? DAVIES. When you leave *Doctor Who* you have to take a deep breath and think, it's all up for grabs now, it's all there to be rewritten. SKINNER. But not retrospectively, surely. DAVIES. You're very clever. It was an interesting evening. But I love that episode. I love that episode. It wasn't so much – oh stop it, this is naughty. It wasn't so much the Time Lords disappearing, it was all the Daleks shooting themselves. Couldn't any of them dodge that? Russell T Davies, interview with Frank Skinner, *The Frank Skinner Show*, Absolute Radio, September 19, 2017. Davies is magnanimous as ever, but it's clear from the tone that it's awkward territory and he'd rather move on as quickly as possible.

22. 'Will Russell write for TV's *Doctor Who* again? "No, I'm looking forward to watching it as a viewer, for the first time in 21 years. I can't wait."' Russell T Davies, interview with

clean break. But not wishing any hand in the programme going forward isn't at all the same as giving permission for existing work to be materially changed. The scope of the non-monotonicity in Moffat's *Who* is significant, and the extent to which it crosses over into Davies-era *Who* doesn't really have any precedent. Besides, there is such a thing as basic artistic integrity in a creative work itself, and if this piece is arguing for a single position above any other, it is that – permission or no – in 'The Day of the Doctor', and related episodes, Moffat consciously, actually undermines the narrative integrity, and therefore the *artistic* integrity, of Davies's work on *Doctor Who*. That sounds like hyperbole, but I mean it.

It should also be emphasised that, though Davies was creative lead, *Doctor Who* during his tenure represents the work of a huge team of creative professionals, and that any ceding by Davies of ownership of that work shouldn't be seen to subsume theirs. This perhaps falls most heavily on the shoulders of Christopher Eccleston. Eccleston's is in many ways a forgotten Doctor. His first and only series was a process of finding out how to make *Doctor Who* for a modern audience, with no guarantee that it would succeed; it would take a few years yet before it

Benjamin Cook, *Doctor Who Magazine*, September 18, 2008, quoted in Davies and Cook, *The Writer's Tale*, 436.

became a global property. Eccleston's departure from the role was clumsily announced by the BBC only a few weeks after the broadcast of 'Rose', his first episode – turning attention already to David Tennant, his successor.²³ Look to the thin representations of Eccleston's Doctor in toys, in cosplay, in wider popular culture. None of this is Moffat's doing, but it is nonetheless the background against which he co-opted a simulation of Eccleston's likeness – Eccleston's direct involvement having been sought but not obtained – in order to sell the destructive rewriting of his character, of his performance. And yet, that performance, following Davies's writing, had reinvented the Doctor from scratch, against real odds.

This, then, is the end of the story of non-monotonicity in the first four years of *Doctor Who* under Steven Moffat. It really begins much earlier, with *The Curse of Fatal Death*, whose blithe cartoony playfulness with time showed exactly where Moffat would go with *Who* proper. The story arc which ends with 'The Big Bang' takes a clear position that time travel as a narrative device, and as a tool to be used by the Doctor, is more or less unrestricted – in stark contrast to the Bradbury-

23. 'David Tennant confirmed as the tenth Doctor Who', BBC Press Office, April 16, 2005, http://www.bbc.co.uk/pressoffice/pressreleases/stories/2005/04_april/16/tennant.shtml.

esque warnings of early *Who* and the subsequent pragmatic inventions of Terrance Dicks and Barry Letts. The arc which begins with 'The Impossible Astronaut' then invests hugely in the concept of a fixed, immutable point in time in order to create considerable dramatic tension, only to leave the entire concept broken and meaningless, privileging character welfare over the integrity of both space-time and narrative – the two being deeply related. 'The Name of the Doctor' reaches from its own narrative across all of *Doctor Who* canon – though gently at this stage – showing that Moffat saw the potential scope for non-monotonicity extending far beyond his own work. Finally, 'The Day of the Doctor' aims squarely at significant, character-defining back-story created by Russell Davies at the beginning of modern *Who*, with which Moffat disagreed, and employs unrestricted in-story time travel and the full weight of canon to materially change that back-story.

In terms of character, Davies's (and Eccleston's) work is undermined. For a reader, the work is muddled and compromised. Epistemically, Davies's work is falsified. Canonically, the work is changed. Using the – inherently limitless – power of in-story time travel and non-monotonicity against another writer's work is unsettling. When this is done from a position of *disagreement*, in order to fix a perceived wrong, it's shocking.

On Monotonicity, Non-Monotonicity, and Complexity

Steven Moffat's tenure of *Doctor Who* was punctuated by claims that things had become too complicated for what remained a programme aimed at a younger audience – longer story arcs, more intricate plotting and character relationships, a greater need to keep up in order to understand any given episode.²⁴ These claims were then typically rebuffed with counter-claims that, no, it's no more complex than it had ever been. I'm not especially interested in that debate – I suspect that in conventional ways Moffat's *Who* is at least as complicated as the programme has ever been, but also that stories and story arcs from the 1970s and 1980s are more complicated than people often remember.

What I'd like to suggest is that there is something qualitatively new in *Doctor Who* under Steven Moffat – *non-monotonicity* – and that this contributes to a real perception of

24. See, for example: Dan Martin, 'Has Doctor Who got too complicated?', *The Guardian*, September 20, 2011, <https://www.theguardian.com/tv-and-radio/tvandradioblog/2011/sep/20/doctor-who-too-complicated>; Tim Liew, 'Has Steven Moffat made Doctor Who too complex for viewers?', *MetroUK*, December 23, 2013, <http://metro.co.uk/2013/12/23/has-steven-moffat-made-doctor-who-too-complex-for-viewers-4223730>; Nathan Bevan, 'Has Doctor Who become too complicated?' *Wales Online*, August 27, 2011, <http://www.walesonline.co.uk/lifestyle/showbiz/doctor-who-become-complicated-1818175>.

complexity (perception in this context being sort of the point), even over-complexity. For very good reasons, which have to do with how we process the information presented, and the narrative machinery that's needed, hard non-monotonicity is extraordinarily rare in narrative fiction. The licence provided in Moffat's *Who* by unrestricted time travel and the full weight of canon is exceptional, and he pushes it significantly further than it's been seen in any other work intended for a mass audience.

For most of us, narrative non-monotonicity isn't just new and unfamiliar; it confounds how we process narrative, how we construct a model as a reader of the story-world of how things will progress and resolve. We want to predict and guess, to anticipate and dread, and the instability that non-monotonicity creates in that reader model makes the cognitive investment so much harder. I am suggesting that the effect for many is disengagement, which can be perceived to be a consequence of complexity in the narrative.

Clearly, though, this effect is far from universal – or, at least, its magnitude is far from universal. Moffat's *Who* can polarise, but it has passionate defenders. It seems reasonable to propose that one aspect, among many, of that polarisation is a reflection of different ways of processing narrative,

different cognitive priorities. A scene from the second part of 'The End of Time', Russell Davies's final story for David Tennant's Doctor, is a useful illustration here.

In *The Writer's Tale*, Davies discusses a perception that his writing for *Doctor Who* feels unplanned; that he seems to be making things up as he goes:

What I'm saying is, I can see how annoying that looks. I can see how maddening it must be, for some people. Especially if you're imposing really classical script structures, and templates, and expectations [. . .], even unconsciously. I must look like a vandal, a kid, or an amateur. No wonder some people hate what I write. Of course, I'm going to win this argument. (Did you guess?) Because the simple fact is: all those things were planned. All of them were my choice. They're not lazy, clumsy, or desperate. They're chosen. I can see more traditional ways of telling those stories, but I'm not interested. I think the stuff that you gain from writing in this way – the shock, the whirlwind, the freedom, the exhilaration – is worth the world. I've got this sort of tumbling, freewheeling style that somersaults along, with everything happening now – not later, not before, but

now, now, now. I've made a *Doctor Who* that exists in the present tense.²⁵

The oral tradition sense of story not existing until it's narrated is one that's deep in our story-processing machinery, but of course, as Davies makes plain, there is a mountain of planning behind his work. What he's not especially interested in is making that planning evident in the form of foreshadowing.

Foreshadowing functions in a couple of ways, one pragmatic, the other epistemic. Pragmatically, it shows the writer's working, and by doing so provides an assurance that things *aren't* being made up as they go along – this being psychologically useful for the reader even with respect to a television programme that's patently the end-product of months of work and hundreds of contributors. It also, epistemically, primes the reader model, encouraging the building of knowledge structures to be augmented, or confounded, later: foreshadowing is an explicit cultivation of non-monotonic reasoning about the story-world. In the absence of foreshadowing, a story does indeed skew towards a constant present tense, because so much more of the processing in the reader model concerns the addition of new (monotonic) information, rather than a reevaluation of existing non-monotonic reasoning.

25. Davies and Cook, *The Writer's Tale*, 679.

Despite his claims, in 'The End of Time' Davies orchestrates a moment that's a small masterpiece of foreshadowing. Billionaire industrialist of dubious ethics Joshua Naismith has acquired alien technology which he thinks he'll be able to use to make his daughter immortal. The physical set-up is very particular. Radiation emitted by the room-sized device is managed from a pair of interlocked glass booths: at any time a technician must be inside one of the booths; to let them out, a second technician must enter – and be locked into – the other. Davies:

These Two Doors need to be *strongly established*. We need to see them operate in 4.17 ['The End of Time, Part One'], really clearly, even boringly, we should see them operate two or three times, and repeat in 4.18 ['The End of Time, Part Two'].²⁶

This is exactly how the episodes function. The hand-waviness of the physics of the device is of no real importance, because the narrative machinery is honest and clear; Davies plays the game fairly. Initial exposition of the booths' function is sufficiently explicit that application of anything like a maxim of relevance (we're being told this because it's relevant) causes a flag to be planted right here. But, this

26. Davies and Cook, *The Writer's Tale*, 476 (my emphasis).

takes place early enough in the pair of episodes that the flag then becomes a part of the landscape: the set design and shot choice is such that we see the booths continue to operate, literally, *boringly*, in the background, as weightier matters occupy the foreground.

In parallel, Davies has been setting up a pair of related expectations. In 'Planet of the Dead' (Russell T Davies and Gareth Roberts, 2009), the first of the cycle of extended episodes which served as David Tennant's final series as the Doctor, Davies seeds the idea that his end will be connected with something returning, and, more specifically, someone *knocking four times*:

CARMEN. You be careful, because your song is ending, sir. It is returning, it is returning through the dark. And then Doctor . . . oh, but then . . . he will knock four times.

Tennant's departure having been public knowledge since the previous October, there is no reason to doubt the remainder of the prophecy. When John Simm's Master returns in 'The End of Time', the riddle seems to be solved. A four-beat drumming in the Master's brain, which in Tennant's second series had signalled the Master's madness, is now deafening, unbearable. A quiet moment in the second part of 'The End of Time' joins the

dots: quasi-companion Wilfred Mott (Bernard Cribbins) introduces the idea that it will be the Master that kills Tennant's Doctor, and the Doctor agrees, resigned to this. Again, Davies plays fair. Given the information available to Wilf and to the Doctor, their inference is entirely reasonable. That the exchange communicates the same expectation to the viewer is also reasonable, since the transfer arises from seeing the characters reacting honestly and plausibly to their world. This is not at all the use of a direct authorial voice to mislead – Moffat's ventriloquism of old Canton Everett Delaware III to speak directly to the reader after the Doctor's apparent death in 'The Impossible Astronaut', for example. The scene, then, is set: the Doctor will be killed by the Master. Somewhere in the background, likely already forgotten, is the expected relevance of the booths. Likely *discarded*, rather than forgotten, is the business of someone knocking four times, this seemingly having served its purpose of foreshadowing the Master's direct involvement in the Doctor's death.

Naismith's men abduct the Master and set him to work repairing the immortality device, the Doctor trailing behind. But the Master has other, much grander plans. Employing both the retooled device, and the drumbeat in his head as a link to his home, the Master pulls Gallifrey – the entire planet – out of

space-time moments before its destruction (at the Doctor's hand, remember).²⁷ A three-way stand-off ensues between the Master, the unleashed and unhinged Time Lords, and the Doctor between. It's huge stuff: the future of everything on a knife-edge. At the last moment, the Doctor irreparably damages the immortality device, causing it to spin out of control, and the Time Lords and the Master are dragged back to Gallifrey's doom.

In the exhausted quiet which follows, the Doctor is stunned and baffled: he's still alive. The viewer is likely a bit baffled too; Davies's misdirection has been properly deft. But there's something we've all forgotten. There's a soft *tap tap tap tap* from inside one of the booths.

Because [. . .] it's *not* the Master who causes the Doctor to regenerate. No way. Oh no. You should spend the whole story thinking that's going to happen ... and then the story ends, the Master has been destroyed

27. Because, of course, Davies was always going to be able to bring Gallifrey back, when the time was right: 'Today I thought, what if the Master can pull Gallifrey out of the Time War (with a handy bit of un-timelocking) by replacing it with the Earth? A planet-swap. Earth gets thrown into the last seconds of the Time War, to die a horrible death, and Gallifrey replaces it in the solar system. The Time Lords live!' Davies and Cook, *The Writer's Tale*, 510. Note how important it is here that the plan is the Master's. Retrieving Gallifrey in this way leaves the Doctor's emotional baggage unaltered: his *actions* are the same, and he knows exactly what he did. Conversely, Moffat's revision saves Gallifrey, but at the cost of transforming the Doctor into a pathetic embodiment of dramatic irony.

[. . .], and the Doctor is standing there, shattered, amazed, 'I'm alive!' [. . .,] actually thinking he's changed events to prevent his regeneration. And then – this is the point – he realises, behind him, there's some dumb bloody technician stuck in Booth #2, which is going to flood with radiation. Someone has to open Booth #1 to let him out.²⁸

As described here, the scene would have worked perfectly. The Doctor saves the technician (Davies calls him 'Keith') and absorbs the radiation flood, which leads directly, knowingly, to his death. The simultaneous rightness and wrongness of the Doctor giving a life to save a single human of no real consequence, a moment after saving the universe – and, seemingly, himself – is full of resonance. And we get the catharsis we need from the story, but not at all in the way we expect. All of this plays out in the episode itself in two nearby but distinct moments of huge epistemic adjustment: first, the *wait, what?* moment, as we share the Doctor's amazement that he has survived the encounter with the Master and the Time Lords, and think, briefly, impossibly, that he might somehow survive this; then, *oh, right*, we hear the tapping on the glass and work it out. Crucially, in each case the adjustment is

28. Davies and Cook, *The Writer's Tale*, 476.

entirely in terms of the non-monotonic reasoning about events that Davies has cultivated: first, the provisional structure that we've built which anticipates the circumstances of the Doctor's death at the Master's hand must be hastily reconsidered; then, as we hear the tapping (and, of course, we do *hear* it first), a new non-monotonic structure is thrown up, quickly, from pieces we already had, but which had lost focus: *the booths!* Finally, as the Doctor does in fact enter the first booth to save the occupant of the other, our reconfigured non-monotonic structure of anticipation collapses into solid monotonic knowledge of the story-world.

This isn't quite the scene as broadcast, though. Davies had another idea:

Hold on. Oh God. OH MY GOD! What if it's Wilf in Booth #2? Tapping on the glass? With the radiation count rising, about to flood? Poor Bernard's sad face. The Doctor realising that he has to open Booth #1 to save the old man. He survived the Master, but it's bloody Wilf who brings him down! The marvellous thing is, Wilf would *know* what's at stake. Wilf would be saying, 'Leave me here. Don't do it. I'm old. I've had my time. Don't kill yourself. You're more important than me.' I've been living with Keith the stranger for all

these months – I love him, I love the randomness of it – but now, oh, just think of the *acting!* Bernard and David! Through glass! Christ, I’m tearful just typing this. I’m not kidding, I really am. It’s making me cry.²⁹

It’s not some inconsequential technician that the Doctor saves, then, but Wilf. As Davies suggests, much as ‘the randomness of’ technician Keith would have been *fine*, using Wilf in his place retains the essence of inconsequential humanity but adds a very different layer of affective consequence. This is partly an effect of Wilf as a character having become gently beloved to the *Who* audience. It also – as Davies again makes clear – cannot be separated from the fact that Wilf is *Bernard Cribbins*. Cribbins brings to the role, and to the scene, not just his barnstorming theatricality, but decades of British popular culture: he’s Right Said Fred; he’s *The Railway Children*; he’s *Jackanory* and *The Wombles*. He’s a million memories from the childhoods of three generations.³⁰

29. Davies and Cook, *The Writer’s Tale*, 477.

30. Cribbins’s appearance in the second of the Peter Cushing *Doctor Who* film adaptations might also, to a section of *Who* fandom, be a reference point. In any event, my guess is that this scene plays quite differently to an audience that didn’t grow up with him.

I'd like to emphasise how complex this scene is – in its planning and execution; in the reasoning and epistemic adjustment it requires of its audience; and in the affective load carried by both the Doctor's fatal gesture and the crucial role that Wilf/Cribbins plays in that gesture. Though they occur at broadly the same time, the epistemic/structural and affective complexities are distinct. With inconsequential Keith, rather than consequential Wilf/Cribbins, the scene would remain just as structurally complex, Davies's foreshadowing and payoff just as elaborate. Without that foreshadowing, the Doctor's acting to save Wilf/Cribbins would be just as emotionally complex. Reader response is, in the end, *all* affect, but it's possible in this case for a viewer to respond far more – or, at least, very differently – to one aspect of the scene than the other: to the swooping elegance of the epistemic changes – the *structural* complexity of the narrative machinery; or to the resonance of the interaction between the Doctor and Wilf/Cribbins – the *affective* complexity of the Doctor's sacrifice. Note, in passing, the difference between Davies's descriptions of the two aspects of the scene. He sets out the business with the machine and the booths and the knocking with a calm meticulousness, consistent with this being a process of precise manipulation of epistemology. The involvement of Wilf/Cribbins, on the other

hand, hits him as a wave of pure emotion, as it should us, as viewers of the scene.

My argument, however, is that neither of these aspects of the scene's narrative complexity – structural/epistemic and affective – is *perceived* as complex. When viewers and critics remark that modern *Doctor Who* might have become too complex – whether one agrees with them or not – this scene is not what they mean. This has to do, I think, with an ease of information processing. The issue here isn't how much information processing a narrative requires, but how easily such processing occurs. Here, I return again to the important distinction between monotonic and non-monotonic reasoning. Complex as it is, Davies's scene is properly traditional storytelling, in which the narrative itself provides a core of ordered monotonic information about the story-world, which then *triggers* a pattern of speculative non-monotonic reasoning in the reader's model of the story-world: questions, expectations, and the affect which results from those. The overall effect of the story derives from that balance, and it's one that our brains are familiar with, and process easily.

Part of what I've tried to argue is that Steven Moffat's use of non-monotonicity within the core *Doctor Who* narrative itself has significant consequences for a reader's processing of

that narrative. The *voluntary* non-monotonic reasoning that we engage in as a response to a monotonic fictional narrative is the very purpose of fiction; but it depends on, is built upon, the solidity of that core monotonicity. A non-monotonic narrative isn't merely harder to process, increasing perceived complexity – though that alone would be a problem. It also serves to diminish reader response, by damaging the two aspects that are illuminated so brightly in Davies's 'The End of Time'. Response to *structural* complexity is diminished, since the unreliability of the compromised core narrative deters – whether consciously or not – the voluntary non-monotonic reasoning by which we speculate, anticipate, question. What can we assume to be true, that we can build on? Response to the *affective* complexity of catharsis is also diminished, since true catharsis depends wholly on monotonicity. *Especially* in matters of death, we learn that Moffat cannot be trusted. The slipperiness of Moffat's epistemology is, once again, best encapsulated in his own writing, as the Doctor summarises the very-much-non-monotonic travails of companion Rory Williams:

And Rory wasn't even there at the beginning. Then he was dead. Then he didn't exist. Then he was plastic. Then I had to reboot the whole universe. Long story. ('A Good Man Goes to War', Steven Moffat, 2011)

Moffat's defensive position that the Weeping Angels' use of massively-looped time travel in 'The Angels Take Manhattan' had worn space-time dangerously thin, to counter the patently-plausible 'Washington Theory', reveals how fragile the narrative itself had become. The collapse of space-time in 'The Wedding of River Song' represents the collapse of narrative integrity. In a similar way, Moffat knowingly refers here to the over-complexity ('Long story') that non-monotonicity entails for his own narrative. In no case does this awareness help to mitigate the effects for the reader, however.

And yet, all of this notwithstanding, Moffat's work in his first four years running *Doctor Who* is beloved to many, and passionately defended. Clearly that cannot represent a naive blindness to the undermining of the principles of traditional story-telling. A facile explanation would be that Moffat's supporters just want different things from narrative. I'm more interested in the inherently polarising idea that someone might be actively drawn to the non-traditional aspects of narrative in Moffat's work on *Who*. That which diminishes reader response for some, can at the same time enhance reader response for others. Take away the careful cultivation of non-monotonic reasoning in the reader's model of the story-world, and what's left is much closer to the present-tense style that Russell Davies describes

aiming for, but perhaps pushes it much further. There is beauty in seeing elegant structure from a distance, appreciating the shape and construction of its entirety; there's also the passive but affective flood of the first-person ride on a roller-coaster, not *anticipating* what might come next, but merely experiencing moment by moment. In a similar way, Moffat's retreat from traditional catharsis creates a narrative sandbox for his characters, in which they can be manipulated and abused in all kinds of ways, and always bounce back for more. This approach is perhaps even more capable of creating strong association between reader and character: we see and feel their triumphs and tragedies, but they're still very much present.

Anything which alienates some, cannot help but strengthen a sense of inclusion for others: there can't be an in-group without an out-group. Stories which rely for their full effect on a deeper awareness of characters' back-story, of the history of a programme, and of its canon, might well be impenetrable to a casual audience, but the benefit for the invested fan is a balance: canon can be folded in on itself to create a beautiful origami swan. Note, finally, the extent to which Moffat's *Who* is identified with shibboleth-y catchphrases ('Hello, sweetie';

'Spoilers!').³¹ The Doctor's famous speech from 'Blink' which characterises the nature of time is most significant here:

People assume that time is a strict progression of cause to effect, but actually, from a non-linear, non-subjective viewpoint, it's more like a big ball of wibbly-wobbly, timey-wimey . . . stuff.

This serves as a manifesto of sorts for Steven Moffat's approach to time and narrative in *Doctor Who*. It says: time travel can allow pretty much anything. Don't expect any rigour with respect to causality – certainly don't expect *monotonicity* – and don't think too hard about it. Just enjoy the ride. It is, to be clear, in fundamental opposition to the principles of traditional narrative structure which underlay so much of early *Who*, which resisted the corrosive, destabilising effect of playing with causality. It does, on the other hand, make a cool t-shirt.

31. Davies's *Who* isn't without catchphrases – Eccleston's 'Fantastic!'; Tennant's 'Allons-y' – but these are typically specific expressions of the Doctor's character. Moffat's catchphrases tend to reflect in some larger way how his *Who* universe works.

Afterword: Capaldi, 2013–2017

Peter Capaldi's twelfth Doctor was never going to be part of this piece, but it's taken so long to write that Capaldi has come and gone, so it's worth saying a few things at least. What's perhaps surprising is that there isn't that much to say. Time is still a significant dimension of the world that Steven Moffat creates for the Doctor, but the approach is simpler, more thoughtful, and much less destructive. There's a real sense of Capaldi's *Who* as a return to an earlier model of how the programme approaches time-travel narrative; and as a step back from the sweeping non-monotonicities of Matt Smith's years.

Two-parter 'Under the Lake' / 'Before the Flood' (Toby Whithouse, 2015) approaches the idea of causal mutability very carefully, as if for the first time. The Doctor, presented with the idea of going back in time to find out what caused the calamity that's befallen an undersea lab, is initially extremely reluctant, citing the dangers of a 'ripple effect' of any changes. This retreat to the Bradbury-esque caution of early *Who* is a bit jarring after Smith's Doctor, but the reset makes sense, with a new Doctor – Capaldi's characterisation itself a knowing throwback – and potentially a regenerated audience. The Doctor's qualms turn out to be more than unfounded: in a flip of 'Day of the Daleks', the story's resolution is the (monotonic)

assertion of a positive causal loop – the Doctor goes back and saves the day, and it turns out he already had – rather than the (non-monotonic) destruction of a malign one. The story goes further in its reflection on the nature of time travel and causality. In the opening of 'Before the Flood', the Doctor presents, to camera, the abstract paradox which the remainder of the episode will play out:

So there's this man. He has a time machine. Up and down history he goes, zip zip zip zip zip, getting into scrapes. Another thing he has is a passion for the works of Ludwig van Beethoven. And one day he thinks, what's the point of having a time machine if you don't get to meet your heroes. So, off he goes, to 18th century Germany. But he can't find Beethoven anywhere. No-one's heard of him. Not even his family have any idea who the time traveller is talking about. Beethoven literally doesn't exist. [. . .] [T]his is called the bootstrap paradox. Google it. The time traveller panics. He can't bear the thought of a world without the music of Beethoven. Luckily, he brought all of his Beethoven sheet-music for Ludwig to sign. So he copies out all the concertos, and the symphonies, and he gets them published. He becomes

Beethoven. And history continues, with barely a feather ruffled. My question is this: who put those notes and phrases together? Who really composed Beethoven's Fifth?

This idea of explicitly encouraging ('Google it') viewers to consider the philosophy of a causal loop in *Doctor Who*, five years after 'The Big Bang', is a measure of how far Capaldi's Doctor is a step back from assumed non-monotonicity. There's something odd going on here, though. It only makes sense to ask the question if there is such a thing as a meaningful answer – not even a *right* answer, necessarily; just a meaningful one. For that to be the case, there has to be such a thing as *how a causal loop works*, which somehow binds cause and effect and does the accounting – or, at the very least, a solid and consistent in-story quasi-physics to which an answer might refer. Without that, the situation is of Whithouse (and, one assumes, Moffat) asking the viewer to explain his/their own fantastical narrative device, in a tone of misplaced profundity. This presentation of a narrative device as if it had the status of an understandable physical process is confused. We might as well be asked, seriously asked, how the Ark of the Covenant works, or the Force – or, for that matter, a narrative device like the TARDIS. That really isn't the point.

What matters is that a causal loop is a narrative device which can, if used in the right way, be effective in a story; and also, especially relevant here, that the revelation of a causal loop is a *monotonic* way of using time travel in narrative. Comparison with the causal loop by which the Doctor rescues himself from the Pandorica in 'The Big Bang' is useful. There, the causal loop exists *only* to free the Doctor from what the story has presented as a uniquely dire situation; and, importantly for how the narrative is processed, the loop is only introduced *after* the direness is fully realised. The effect is of the story deliberately painting itself into a corner, and then creating a magic portal in the wall: the moral is that no matter how impossible things might seem, time travel can always provide an easy solution. Such *easiness* becomes damaging to the narrative. Even though the loop itself is monotonic – no information is retracted in this case – the causal loop in 'The Big Bang' opens up a world of potential non-monotonicity by removing any reasonable assumption that causality is protected from the effects of time travel. 'Under the Lake' / 'Before the Flood', conversely, describe a complex mystery set into time many decades earlier, the resolution of which is *discovered* to be a causal loop which already existed. This distinction might seem technical, but it's crucial: completing a sealed causal

loop which is already firmly established in the narrative implies nothing about wider causality.

A fertile narrative device explored in some detail during Capaldi's *Who* is the idea of time running at different speeds or along different paths – but otherwise conventionally, monotonically forward. The strength of such a device derives from its brutal monotonicity; from using time to separate and distort and hinder, but allowing no easy temporal solution. The general device isn't new in Capaldi's *Who*. The narrative trajectory of Captain Jack Harkness, created by Russell Davies, models the agony and isolation of extreme longevity. Steven Moffat's 'The Girl in the Fireplace' plays out the tragedy of unreconcilable temporal paths. In 'The Big Bang', an Auton/plastic duplicate of Rory Williams that believed itself to be a Roman centurion is shown to have watched over Amy Pond for almost two thousand years as she was imprisoned in the Pandorica. Later, 'The Girl Who Waited' (Tom MacRae, 2011) is a rare example during Steven Moffat's tenure of straightforward catharsis: companion Amy Pond has been split by means of a handy narrative device into two versions of herself, aging at different speeds; the resolution demands that one dies so that the other may live.

While not new, it does feel significant that big, series-arc-sized ideas in Capaldi's *Who* make use of these monotonic temporal devices, rather than the comparable non-monotonic devices that defined Matt Smith's time. A through-line in Capaldi's second series arc follows Viking girl Ashildr – Moffat's own Captain Jack Harkness – after the Doctor saves her life using technology which renders her effectively immortal ('The Girl Who Died', Jamie Mathieson and Steven Moffat, 2015; 'The Woman Who Lived', Catherine Tregenna, 2015; 'Face the Raven', Sarah Dollard, 2015; 'Hell Bent', Steven Moffat, 2015). Without Captain Jack's mountainous confidence and the personal and material resources available to him for space travel,³² Ashildr lives a very different life – the life of an ordinary human girl in a pre-technological age dealing with what amounts to a curse – and over the centuries she becomes hardened and cynical as a basic survival strategy. There's much that's interesting here. Notably, the business of messing with time is done with at the beginning of Ashildr's story; it then gets out of the way, and allows the human drama to follow its course.

'World Enough and Time' / 'The Doctor Falls' (Steven Moffat, 2017), the two-part climax to Capaldi's third series arc, rework the time dilation of 'The Girl in the Fireplace' and

32. And, it should be said, John Barrowman's performance.

'The Girl Who Waited' using hard science fiction machinery, rather than the fantastical devices of the earlier stories. A vast spaceship is caught on the event horizon of a black hole, and time on its lower decks passes far more quickly than above. When Bill Potts, companion of Capaldi's Doctor, is wounded and taken below by menacing creatures, the few hours which elapse for the Doctor as he seeks to rescue her amount to ten years in her time. The monotonicity here is even emphasised by dialogue which serves as a replacement for the Blinovitch Limitation Effect:

NARDOLE. We could take the TARDIS, go back, and get it right.

DOCTOR. This close to a black hole we'll never be able to pilot her accurately.

This dialogue is not, of course, motivated by a desire to be faithful to any scientific principle; it's just necessary for the story to work. For time to serve as an obstacle within the narrative, the TARDIS must be taken out of action.

In 'Heaven Sent' (Steven Moffat, 2015), Moffat famously pushes the idea of an extended temporal path to something of a limit. Trapped in a Gallifreyan confession dial – instantiated as a mysterious modifiable castle (cf. *The Curse of Fatal Death*) – the Doctor has two choices: reveal to his captors (who turn

out to be the Time Lords) information they seek – the very purpose of his imprisonment; or, literally, punch his way out. Escape is achieved by the Doctor over a period of *billions* of years, made possible only as he is able to reset the dial/castle billions of times, resetting himself – a quasi-regeneration – in the process. Billions of consecutive occurrences of Capaldi's Doctor accumulate billions of punches, and eventually the dial is breached. A comparison with the Doctor's escape from the Pandorica is again instructive. *Time* is once more the key, but rather than non-monotonic trickery, the Doctor makes use of the leverage provided by the effect of small actions magnified across geological time; this is exactly the ratcheting power of monotonicity.

Stripped of the narrative short-cuts licensed by unrestricted time travel, the Doctor's solution to his imprisonment in 'Heaven Sent' seems to be many orders of magnitude harder than his escape from the Pandorica. Indeed, that *difficulty* seems to be the point here – the lengths the Doctor must go to, is prepared to go to, when his usual bag of tricks is taken away. But look again. What does it mean for something to be *hard* for a fictional character? Since there's no meaningful correlation between how hard some task might be in the real world, and how hard it must be in a fictional world –

this is another of those things that we *know* about narrative, that's obvious, but that our brains nevertheless misprocess because of the need to overlay a real-world physics – what we're left with is the idea that difficulty for a character has to be associated with personal cost: they must lose something important, or be otherwise changed in some significant way. This notion of *cost* for a fictional character isn't any less imaginary than the notion of *difficulty*, but it's the best measure we have, because it relates most closely to our own human experiences of change and loss.

That the Doctor's escape from the confession dial is achieved by looping billions of copies of himself doesn't just make the escape *possible*; it also makes it free from any real personal cost. To be sure, he doesn't make use of the manipulation of time in this way – and a manipulation is what it is, albeit less threatening to causality, and therefore narrative, than the tricksier manipulation of 'The Big Bang' – in order to avoid cost, but the vast personal cost which ought to accrue from such extreme passage of time is nevertheless just not there. Each occurrence of the Doctor eventually reaches an awareness that many have come before him, and that he must die in order to create the next, but the experiences are wholly separate and independent. The elapsed time multiplies, but the

ordeal for the Doctor does not. And when he does, finally, breach the confession dial, he steps out swaggeringly unchanged by the unimaginable vastness of the process, into a universe itself unchanged by the length of his imprisonment. What does it then *mean* that he was imprisoned for billions of years, rather than hours or days or weeks or months? Nothing, beyond the idea of it.

'World Enough and Time' plays a similar game. Bill Potts's ordeal is considerable, but is barely connected to the elapsed time. She is certainly *changed*, but what happens to her over ten years might just as easily have taken a day or two. The episode resorts to cutaways to clocks and explicit references in dialogue to suggest the passage of time; otherwise, the characters barely seem to notice, so neither do we. Again, the effect is to present anomalous time as an abstract curiosity, as if the idea of it was enough.

This curious disconnect between Moffat's clear enjoyment in playing with the narrative plasticine of extended time, and the lack of any consequent human cost, is expressed most clearly – before Capaldi's time – in 'The Big Bang'. Rejecting the Doctor's short-cut, Rory Williams – in his Auton centurion form – is resolved to standing watch over Amy Pond, imprisoned in the Pandorica, for the two millennia that both he and the Doctor

know will elapse before she can be/will be released. The Doctor, maddened by frustration and worry, sets out the dire practicalities of the task:

Two thousand years, Rory. You won't even sleep. You'd be conscious every second. It would drive you mad.

Again, Moffat massively oversells. When Amy Pond is finally released, and Williams reappears, he is utterly unmarked by the profound endurance. He might have stepped out of the room for a moment. Presenting the experience of deep time in a jokey, cartoony, consequence-free way isn't necessarily *wrong*, but it clashes bafflingly with the apparent deadly-seriousness earlier in even the same episode. All of this is especially puzzling given the commitment to emotional honesty in the treatment of temporal dislocation in 'Blink' and 'The Girl in the Fireplace', under Russell Davies. By this point, Moffat just doesn't seem interested.

Notably, the two narratives during Moffat's tenure of *Doctor Who* which take the complicating effects of time on the human condition seriously are not his own. Ashildr's path, which begins with 'The Girl Who Died' / 'The Woman Who Lived', is both defined and warped by her immortality. By placing old and young versions of Amy Pond at odds, 'The Girl Who Waited' defines the choice in terms which are anything but abstract. Rather than the

ungraspable billions of years experienced by billions of copies of the Doctor in 'Heaven Sent', and the millennia waved trivially aside by Rory Williams in 'The Big Bang', here the dislocation is within the normal lifespan of a single human. The story's resonance lies not merely in the expression of genuine loss, but in the loss, specifically, of the self. The death of old Amy to save young Amy is the inevitability of aging, of mortality.³³ It's also the loss of youth. Thirty-six years – the gap between old Amy and young Amy – before the broadcast of 'The Girl Who Waited', *Doctor Who* was in its 1975 pomp. For a viewer of 'The Girl Who Waited' with childhood memories of Tom Baker's Doctor, the gap is all too graspable.

In this way, 'The Girl Who Waited' combines the affective response which comes from perceiving the characters' lived experience of the passage of time, and our own, as viewers. As viewers, we obviously can't relate quite so directly to durations much beyond our own experience, but narrative can compress time – up to a point. Even if a character doesn't undergo change or loss, we can at least feel the weight of time bearing upon them, or feel their absence. 'The Girl Who Died' /

33. This is, I would suggest, not at all a Moffat-esque resolution. One imagines old Amy and young Amy shooting off in different time machines to be brought together occasionally for *hilariously* complex and paradoxical adventures.

'The Woman Who Lived' / 'Face the Raven' place Ashildr's story within identifiable historical periods – with episode breaks between, extending the narrative further – so we're able to apply our knowledge of human history to calibrate the extent of her journey. The abstracted setting of 'Heaven Sent' makes this impossible, and its numbers are so far outside of a human scale that they're meaningless. The episode does what it can with repetition and montage, but a billion years is plainly beyond our capacity for affect. Rory Williams's two-millennia vigil by the Pandorica is objectively greater than the duration of Ashildr's arc, but its presentation is comically empty. We can't share his journey, because we see nothing of it; and we can't feel his absence, because we haven't missed him – less than two minutes of screen time elapses between the vigil's beginning and end.

Reaching a little for commonality between the non-monotonic temporal machinery of Matt Smith's years, and the monotonic temporal machinery of Capaldi's, it's the privileging of character welfare that remains. Whereas during Smith's time Moffat tears apart space-time and reconstructs the entire universe to preserve or rescue character welfare, for Capaldi he simply denies that time has any real effect on character. All of

this is thrown into sharp relief by Moffat's repeated denial of death itself.

The idea of *damage undone*, which begins with a woman's regrown leg in 'The Empty Child' / 'The Doctor Dances', passes through the rescue of companion Donna Noble's physical form from a digitally-saved state in 'Silence in the Library' / 'Forest of the Dead' (Steven Moffat, 2008), Rory Williams's final recovery from multiple deaths (and the restoration of Amy Pond's parents) as the universe is rebooted in 'The Big Bang', and the reversing of the Doctor's own death in the story arc which ends with 'The Wedding of River Song', during Capaldi's years becomes something close to resurrection porn. In 'Hell Bent', Moffat pulls Clara Oswald out of space-time immediately before her death in 'Face the Raven', conjures up a stolen TARDIS for her and launches her into a new, potentially-limitless timeline.³⁴ In 'World Enough and Time' / 'The Doctor Falls', Bill Potts is fatally wounded,

34. Accompanied by Ashildr, who the Doctor and Clara encounter at the end of the universe – providing her with her own final escape, from both literal death and the crushing monotonic weight of immortality within a normal human timeline. Ashildr's arc, defined in 'The Girl Who Died' / 'The Woman Who Lived' / 'Face the Raven' by the Doctor's subversion of mortality, is itself, at the last, undermined, and weakened in the process. And consistent with Moffat's lack of interest in the effects of time on character, Ashildr, transformed as a person in the few centuries between 'The Girl Who Died' and 'Face the Raven', appears more or less unchanged by the billions of years which follow.

then converted into a Cyberperson, only to be magically transformed at the last moment by love-interest sentient liquid into a similar form, able to travel through time and space seemingly at will (basically, she *becomes* a TARDIS). In each case, Moffat asks for an emotionally-honest, properly-cathartic response to the actual death of a significant character, subsequently denies this catharsis, and then raises the character to a superhuman state.

In the form of the Doctor's own ability to regenerate – a pragmatic meta-narrative device which became a useful narrative device – the notion of resurrection is built into *Doctor Who*. But note that regeneration is catharsis and resurrection *at the same time*. The Doctor we've grown up with, who we've grown to love – who is *our Doctor* – is genuinely gone, and might just as well have died. The presence of some new imposter character that *calls themselves* the Doctor certainly doesn't diminish the sense of loss; regeneration isn't in any way a denial of death, of catharsis. Denying the death or loss of a companion has a different structure, one which invests entirely in the reader response to damage undone, to the preservation of character welfare. Moffat ties this to the Doctor's own character:

He knows whenever he makes a friend, it's postponed bereavement, because he is going to lose them. He

must, because he's going to live for hundreds of years, maybe thousands of years [. . .]. But naturally, being the Doctor, and having that childish stubborn streak to him, he tries to make someone last forever. He grabs the hand of the person closest to him, and he never wants to let go.³⁵

This might well be a plausible bit of analysis of the Doctor's condition in the abstract, but the fact that it doesn't reflect the history of the programme argues that there's a degree of self-analysis in there as well.³⁶ It's often hard to separate the narratives of the departures of *Doctor Who* companions from the meta-narratives of the casting and production of the programme, but companions have not, before Moffat's time, been clung to so tightly. Hartnell's Doctor actively pushes companion/granddaughter Susan towards a new life when the time is right ('The Dalek Invasion of Earth', Terry Nation, 1964); Ian Chesterton and Barbara Wright leap upon the chance to go home with something like glee ('The Chase', Terry

35. Steven Moffat, interview with Toby Hadoke, 'Episode 232'.

36. Sarah Siegel, 'What Steven Moffat Doesn't Understand About Grief, And Why It's Killing Doctor Who', *Tea Leaves and Dog Ears*, November 27, 2013, <https://tealeavesdogears.com/2013/11/27/steven-moffat-doesnt-understand-grief-and-its-killing-doctor-who/>.

Nation, 1965). Tom Baker and Liz Sladen play Sarah Jane Smith's departure with a delicately understated and symmetric wistfulness ('The Hand of Fear', Bob Baker and Dave Martin, 1976).³⁷ When Jo Grant is pulled away by the beginnings of love, Pertwee's Doctor is lost in the crowd and leaves alone, barely noticed ('The Green Death', Robert Sloman and Barry Letts, 1973). Whatever you might propose about a greater emotional depth to modern *Who*, these moments are far more emotionally honest and resonantly human than the fairytale happily-ever-afters of Clara Oswald and Bill Potts.

In the modern age, Russell Davies's companions have more heightened departures, but which are no less human. No matter how much the Doctor might *want* a relationship to continue, the narrative has other ideas. In fact, both Rose Tyler and Donna Noble are also raised to a superhuman state as a consequence of their companionship with the Doctor, but in each case this threatens their life, and to save them – to return their humanity – the relationship must itself die. To save Rose Tyler, Eccleston's Doctor dooms himself to regeneration – his own death ('The Parting of the Ways', Russell T Davies, 2005); to save Donna Noble, Tennant's Doctor must wipe her memory of him, and

37. Significantly, Sarah Jane Smith's departure scene was written by Tom Baker and Liz Sladen themselves.

all of their adventures, and she must return to a far smaller life ('Journey's End', Russell T Davies, 2008). Rose Tyler's eventual farewell to Tennant's Doctor, the two split between parallel dimensions,³⁸ is an extraordinary portrayal of loss, grief, and ultimately unconsummated love ('Doomsday', Russell T Davies, 2006).

Compare this, finally, with Moffat's resolution to the narrative of River Song, peer, companion, lover, wife (maybe) and murderer (sort of) of Matt Smith's and Peter Capaldi's Doctors, which is a perfect example of a situation where what's dramatically good, where what's dramatically interesting, where what's dramatically *right*, is in absolute opposition to the privileging of character/relationship welfare. The core narrative idea here is that River Song and the Doctor are time travellers whose timelines are jumbled, and broadly reversed; this is set up (during Davies's tenure) in 'Silence in the Library' / 'Forest of the Dead' (2008), which is their last meeting from her perspective, and in which her life effectively ends. A degree of emotional heft is obtained by making clear that the Doctor doesn't know her; that, from his perspective, they haven't yet met. Her ending is crueller, then, for the

38. Davies understands that plausibly separating characters for good in the *Doctor Who* universe requires more than putting conventional time or space between them.

additional loss of the relationship. As viewers, we're not able to reach for too much in the way of affect here, because River Song isn't a character that means anything to us. But, from the beginning, the implication is that there will be a similar moment for the Doctor: that there will be a final meeting in *his* timeline, and she will not know him. Understanding that we will follow the relationship from beginning to end from his point of view, we can then anticipate that final, awful moment, and attach to it all sorts of experiences and fears from our own lives: most obviously, the loss of a partner or parent to dementia some time before their physical failure – but the absolute loss of any meaningful relationship will do. The potential for a deeply human, cathartic end to the Doctor's relationship with River Song is considerable.

This is not what happens. Over the next years, Moffat wraps the relationship between the Doctor and River Song into such a temporal tangle that any sense at all of structure is lost. Once again, Moffat's own in-story reflection on the situation nails the problem with the narrative itself, without in any way ameliorating it:

DOCTOR. People usually need a flowchart. ('The Husbands of River Song', Steven Moffat, 2015)

Moffat might also be reflecting jokily here on the existence of real, actual flowcharts created by fans to help work out what the hell is going on. That such things do exist, are apparently needed, is not, to be clear, a good thing. Narrative is, when everything else is stripped away, *structure*, and reader response comes, in the end, from structure – from the constellation of possibilities orbiting a solid core of ordered, graspable, monotonic information. The problem at the heart of the extended River Song story isn't non-monotonicity, but the epistemic issues that follow are the same ones. Structure that's too disordered to be perceived as a whole – too disordered to be seen as structure – is just as hard to build upon as structure that can't be trusted.

The story ends in grotesque indulgence. In 'The Husbands of River Song' (Steven Moffat, 2015), The Doctor and River crash-land on a planet that he knows, from River's final encounter with him before her end in 'Silence in the Library' / 'Forest of the Dead', will be the location of their last night together.³⁹ Rather than the exquisite, cathartic horror of him having vanished from her mind at the end, of her not knowing him,

39. This is me waving and pointing at the fact that Moffat has by now killed any trust in the idea that anything is final; yet here he specifically asks for the reader response that comes from a trust in finality.

Moffat dilates time once again to warp their last night into a dreamy fairytale pulp: each night on the planet, it turns out, lasts for 24 (Earth) years. The damage of dislocated lives is undone, replaced with something emptily conventional. Character welfare wins; narrative heft loses. A literal 'happily ever after' caption appears.

This was always the purpose of non-monotonicity in Steven Moffat's *Doctor Who*: it provided the epistemic power to push beyond the edge of catastrophe, beyond the edge of death, beyond the edge of tragedy and grief and loss, and then return to a safe, happy place. Even when non-monotonicity was abandoned during Capaldi's years, other machinery could be employed to create the same epistemic effects. The loss to narrative, though, is significant. Catharsis doesn't arise from the dramatic weight of tragedy, so much as *trust* in that weight. If catharsis is undermined often enough, there's no trust left. Moffat's Doctor might be a healer, but the last and most important thing we'll all of us want from a doctor, in the end, is a good death.