

*Adapting Complex Time: 'Story of Your Life' (1998) and Arrival (2016)*

Lauren Molyneux-Dixon, University of Leeds, United Kingdom

The European Conference on Arts & Humanities 2020  
Official Conference Proceedings

**Abstract**

In both literature and film, we're faced with complex characters, complex plots, complex themes, complexity in narration and, occasionally, complexity in narrative structure, all of which have been long present in fictional works and all of which have been addressed extensively by scholars (we've witnessed a resurgence of these terms in academic circles in recent years following the rise of the puzzle film in the 1990s). But what can be inferred when we consider narrative complexity in terms of adaptation? For this study, I consider complexity in relation to nonlinear storytelling and apply stylistic methods of analysis to the blockbuster film *Arrival* (2016) and its source text - Ted Chiang's short story, 'Story of Your Life' (1998). The aim of this paper is to examine narrative complexity in adaptation and address questions surrounding what is adapted in such cases, how it is adapted, and the effects both versions of such a text can produce. The argument that I advance is based on the premise that by breaking down the text (moving image and printed text) into its narrative components, we can develop a better understanding of how complex narratives such as this operate across platforms. My analysis focuses on the nonlinear narration, narrative focalisation and the presentation of coinciding narrative frames that are present in the source text and its film adaptation.

Keywords: Narrative Complexity, Film Adaptation, Nonlinear Narratives, Cinema and Literature

**iafor**

The International Academic Forum  
[www.iafor.org](http://www.iafor.org)

## Introduction

This paper forms part of a larger research project in which the aims are chiefly concerned with the exploration of narrative complexity in adaptation, and this involves not only identifying the elements which contribute to *producing* a text which is complex, but also an examination of how those elements are *translated/adapted* across mediums. As it currently stands, my methodology adopts some key aspects of structural approaches to narrative (including the binary understanding of how narratives operate across two levels – the *story* level and the *discourse* level). The *story* level refers to the events which comprise a text (narrative); the *discourse* level refers to the methods via which those events are presented within the text (narration). This approach has enabled me to distinguish several shared aspects within complex narratives, including structural aspects such as experiments with temporality, chronology and causality within frames, as well as aspects on the level of narration, which constitutes analysis of ‘twist blindness’ (Barrett, 2009, pp. 62-86), and examples of deviant narration/the unreliable narrator. My primary interest is in the examination of how these aspects are formulated on both narrative levels, with the aim to gain a further understanding not only of narrative complexity as a general concept, but also with a specific focus on texts in adaptation.

Both versions of the text that I intend to discuss in this paper – *Arrival* being the film version, and ‘Story of Your Life’ being the written text that it was adapted from (which is a short story) – are *nonlinear*, in that the events of the story are presented out of chronological order. This is one of the elements which enables us to identify both versions of the text as *complex*. Within this paper, I would like to focus on not only *how* this element of complexity is produced within the narrative, but also *how it is adapted* and translated across mediums, from the printed words on the page to the audio-visual medium of film, in order to produce two very contrasting experiences of this story. In order to achieve this, I will introduce some key terms and approaches from the field of narratology, before examining the opening sequence of the film and comparing it to the opening of the written text, in order to try to understand more about how the audience of the film and the readers of the text experience this story in such different ways.

### In the beginning...

‘I used to think this was the beginning of your story,’ Dr Louise Banks (Amy Adams), a professor of linguistics, narrates over the opening shot of Denis Villeneuve’s 2016 science-fiction blockbuster, *Arrival*. Adapted from Ted Chiang’s 1998 short story, ‘Story of Your Life’ – a text which presents a philosophical thought experiment exploring the concepts of choice and free will, the nature of time and chronology, and the complexity of the human experience – the film, like the text, opens with the moment our lead protagonist is faced with the life-altering question of whether or not she would like to try and conceive a child with her partner; a moment which bookends the narrative in both versions.

Only in the film version, the context of this moment is absent. Instead, the focus is placed on the thematic element of memory, and we are provided with a lingering wide-angle shot which frames the floor-to-ceiling window of Louise’s home, overlooking an outdoor space (Image 1). ‘Memory is a strange thing,’ comments

Louise in voiceover. ‘It doesn’t work like I thought it did. We’re so bound by time, by its order.’



Image 1: The opening shot of *Arrival* (2016)

The lingering shot finally breaks into an image of Louise holding her baby after birth, and we’re then presented with a sequence depicting the child’s (Hannah’s) development and, within a few frames, her death as an adolescent. The questions encouraged with Louise’s opening line now seem to gain some answers – the direct address (‘your’) is assigned to her daughter, and our narrator is placed at some point in the *future*, when she has seen her daughter grow and pass away and had time to reflect upon the moment which she can consider to be the ‘beginning of [her] story.’

‘And this was the end,’ her voice resides over a shot of her standing by her daughter’s hospital bed. The apparent flashback sequence then ends on an image of Louise, shot from behind, walking around a seemingly endless hospital corridor following the death of her daughter, before the main narrative frame opens, tracking the movements of Louise through the college where she works. ‘But now I’m not so sure I believe in beginnings and endings,’ the voiceover continues, marking a distinct shift not only in location, but in time as well – we now assume the events taking place are occurring days, weeks, months, maybe even years, *after* Hannah’s death. Initially, chronology follows, and the main narrative frame remains faithful to traditional laws of causality, with images of Hannah only sporadically recurring as flashbacks/formulations of Louise’s memory of the child she’s lost. However, as the narrative develops and temporality is experimented with, the distinctions between separate temporal narrative levels begin to blur, leading up to the film’s narrative twist. When this occurs, it becomes necessary to revisit the assumptions made within this opening sequence and rewrite them.



Image 2: Establishing shot depicting the spacecraft of the aliens

## The puzzle film

*Arrival* provides audiences with a classic example of a contemporary puzzle film in that it ‘rejects classical storytelling techniques and replaces them with complex storytelling’ (Buckland 2009, p. 1). Mirroring quite closely the framework of its written counterpart, the plot of the main narrative frame depicts the arrival on Earth of twelve extra-terrestrial spacecraft, positioned in seemingly random locations across the globe. In the United States, Dr Louise Banks is commissioned by the government to work alongside theoretical physicist Ian Donnelly (Jeremy Renner) to act as an interpreter, provided with a mission to learn the alien language in an effort to be able to put forth two key questions and translate their responses: ‘What do they want?’ and ‘Where are they from?’ Labelling the aliens ‘heptapods’ due to their seven-limbed physical frame, and nicknaming them ‘Abbott’ and ‘Costello’ (‘Flapper’ and ‘Raspberry’ in the written text), Louise identifies their two forms of expression – Heptapod A (referring to what is “spoken”), and Heptapod B (referring to what is “written”). After a number of recorded encounters, Louise is able to determine that; a) the heptapods’ means of communication bear no resemblance to any known human language; and b) that their writing is *semisiographic*, in the sense that it ‘conveys meaning without reference to speech (...) [with] its own system of rules for constructing sentences, like a visual syntax that’s unrelated to the syntax for their spoken language’ (Chiang 1998, p. 131), making communication with them initially impossible.

It follows that, as a theme, questions surrounding time, memory and causality are introduced explicitly within the opening sequence of the film, and are then returned to and reintroduced with each lapse into Louise’s apparent past in which her daughter was alive (via flashback, on the level of narration). Aside from the framework of a nonlinear narrative that the film presents, the complexity of the human construct of time is reinforced thematically in a number of ways. Firstly, in the written and spoken language systems of the aliens, as both adhere to a structure which is nonlinear and neither comply with any logical concept of word order or sentence formation – Heptapod B, the written language, is an ‘entirely nonlinear system of orthography that [qualifies] as true writing (...) That meant the heptapod had to know how the entire sentence would be laid out before it could write the very first stroke.’ (Chiang 1998, p. 129, p. 147). This indication within the written text gives light to several other considerations of complex time as a theme. For example, the flashbacks of Hannah appear incrementally throughout the narrative, occurring more frequently as Louise’s grasp on the alien language develops. In confirmation of the Sapir-Whorf hypothesis<sup>1</sup>, a complete understanding of the language allows Louise to explore and theorise the worldviews of the heptapods, enabling her to deduce that such views are comprised on the basis of the development of a *simultaneous mode of awareness*; with a paradoxical grasp on the laws of causality ‘[they experience] all events at once.’ (Chiang 1998, p. 159).



Image 3: The two heptapods and their written mode of expression, which Louise labels 'Heptapod B'

### **The narrative twist**

In a final visit to the spacecraft of the heptapods, which she attends alone, Louise uses her new skill to translate Costello's responses to her questions about the aliens' purpose on Earth. 'We help humanity,' Costello explains. 'In three thousand years, we need humanity help.' When questioned about the alien's ability to see the future, Costello seems to trigger the appearance of another flashback of Hannah for Louise. In a moment in which our entire formulation of the narrative thus far is erased, Louise asks, 'I don't understand – who is this child?'. The second fork of the twist comes with Costello's response: 'Louise sees future.' The 'weapon' that she has been provided with – the language of the heptapods which corresponds with the simultaneity of their worldview – allows Louise the ability to view time simultaneously. It is with this that we come to understand that the moments in which Hannah has appeared have not been memories from the past, but are rather recollections of events from some point in the *future*. Our understanding of this narrative frame is replaced, and the two key lines of temporality (from the opening sequence and this main narrative frame) are explicitly linked in a way that the audience was not led to anticipate.

### **Simultaneity and *The Garden of Forking Paths***

With consideration of Jorge Luis Borges' *The Garden of Forking Paths*, David Bordwell, in his 2002 essay titled 'Film Futures', coined the term 'forking-path narratives' in order to outline a cohesive theory of the narrative techniques used in complex films such as *Blind Chance*, *Sliding Doors*, and *Run Lola Run*, whereby the protagonist is provided with a number of opportunities to reach an end goal, acting out a new path with each opportunity to create a variation of parallel possible futures. The failure to fulfil a deadline and achieve the narrative goal within the duration of a particular frame (or 'story') effectively triggers a reset, and the protagonist usually finds themselves back at the point within the narrative from which the path originally forked, providing them with another opportunity to fulfil their goal successfully via alternate means and methods. Bordwell argues that the path such a film ends on, depicting the protagonist's final attempt, is usually favoured above those that have preceded it in the interest of securing narrative closure for the protagonist. Bordwell notes that in many films which adopt a forking-path narrative structure, the protagonist appears to learn from prior attempts and thus is able to bring forth any learned knowledge to the subsequent path, which is then used to inform their

decisions on which actions to take or avoid. Such an approach provides an explanation for Lola's ability (in *Run Lola Run*) to knowingly avoid certain obstacles that have blocked her path in previous attempts, thus *several versions* of Lola are created with each hit of the reset button and, like the lines of action depicted, exist in parallel to any previous versions, paths or worlds.

Adopting a similar approach in her essay titled 'Temporality, Reproduction and the Not-Yet in Denis Villeneuve's *Arrival*', Anne Carruthers' understanding of the film identifies the elements of past, present and future as separate locations or narrative worlds, positing that, '[t]he different timelines (...) [run] in parallel' (Carruthers 2018, p. 332). However, *Arrival* does not present a parallel formation of narrative frames; rather, the frames all occur along the same chronological timeline. Louise's life is still unfolding from beginning to end – she does not *physically* time travel between these different moments or destinations within her timeline. Instead, it is her perception which is no longer bound by the programmed chronology and sense of causality that exists within our understanding of how time operates, and the *presentation* of those frames is what breaks chronology in this particular example. In the same vein, it would be a misinterpretation of the text to suggest that *several versions* of Louise exist (i.e. future Louise, present or past Louise). Due to the complexities of temporality explored, and Louise's ability to view time simultaneously (which later analysis will show is an ability she holds from the very beginning, when we are introduced into the first frame), it is reasonable to deduce that there is only one version of Louise, and that is our character-narrator; a Louise who, narrating free from any constraints of time, causality or pressures of the present, is *simultaneously*; a) academic researcher working to decipher the written and spoken codes of the heptapods; b) linguist who has perfected the theories and formulations of Heptapod A and Heptapod B; c) not-yet-mother, mother, and mother of a deceased child; d) single woman, wife, and divorcee.

The simultaneity here presented invokes a paradox, which is introduced via the increasing frequency of tense shifts in the written text, mirrored by the increasing frequency of slips into alternate temporal frames in the film, producing a similar effect in both versions. Full understanding of the experiment being played out here comes for the audience when witnessing the ability for information to be passed between separate temporalities. With separate points in time effortlessly accessed, this acts as confirmation of the Sapir-Whorf hypothesis<sup>1</sup> that the text explicitly references and uses as a basis to reformulate temporal structures and expose a new potential for storytelling, offering up the basis for the thought experiment that the text seeks to explore; an evaluation between free will vs. determinism.

A breakdown in the narrative logic of causality, explored and enacted by the main narrative frame in both the written text and the film, sees open communication between separate temporal levels become possible. A complete understanding of the formulations of the alien language affords Louise the ability to retrieve information from a point at which that information has been learned in the future, and apply that knowledge within the present frame, *before* (logically or chronologically) she could have learned it. The exploration of the nature of time on a macro level, and the

---

<sup>1</sup> The Sapir-Whorf hypothesis is 'the theory that language influences thought to the extent that people who speak different languages perceive the world differently' (Skerrett 2010, p. 331).

presentation of that formulation, prevents chronology from becoming a vital narrative component. Situated outside the accepted laws of cause and effect, Louise is allowed to occupy all roles at any given point within the narrative because, as we come to understand upon a second viewing of the film, she possesses the understanding of time's true nature – that it itself is free from any linear formulation – from the very beginning.

### **The binaries of narrative**

According to Buckland, 'In the end, the complexity of puzzle films operates on two levels: narrative and narration. It emphasizes the complex *telling* (plot, narration) of a simple or complex *story* (narrative).' (Buckland 2009, p. 6). This distinction between the two major aspects of narrative has been explored by a number of scholars, particularly with respect to narratological studies of the 1960s and 1970s, during which time various versions of this binary opposition began to surface. Versions of this set of binaries include, but are not limited to; *story vs. plot* (Forster 1974); *fabula vs. sjuzhet* (Shklovsky 1965); *histoire vs. discours* (Benveniste 1971); *story vs. discourse* (Chatman 1978).

With respect to written narratives, in an attempt to formulate a comprehensive understanding of the ways in which fictional narratives operate, especially those which subvert readers' expectations in some way, Monika Fludernik suggests a consideration of the relationship between the two elements of narrative structure (i.e. the *story* level and the *discourse* level), arguing that an exploration of how they communicate and correspond to one another can help to uncover how the 'concept of *chronology* [appears] within narrative typologies' (Fludernik 2003, p. 118). Whereas the *story* level of a narrative is largely understood as being the chronological version of events as they happened, the *discourse* level refers to the methods via which the story is *told*, and can therefore involve 'several reshufflings' between different narrative frames and temporalities in order to produce '*anachronies*' (Genette 1980, p. 35) – or flashbacks and flashforwards. As Fludernik suggests:

The study of these two temporal orders enshrined in story and discourse inevitably leads to the analysis of chronological distortions on the *surface level* of the narrative text, and therefore comes to connect the study of temporal levels with the surface-structure analysis of *tense* in narrative. (Fludernik 2003, p. 118, emphasis added).

Fludernik is one of many scholars who argue that an examination of narrative elements at a micro level can shed light onto how a structure operates on a macro level. When considering *Arrival* and its source text, an examination of the use of tense within the surface level of the narrative is key to formulating a strong basis of analysis from which a wider understanding of the thematic elements of the text, its complexities and deceptions, and the methods via which they are translated from a written to an audio-visual medium to produce different experiences, can be gained.

## Narration and framing

Both the film version and the written version of this narrative present a case of homodiegetic narration, in that the 'I' who is narrating to us is also a character within the story. As previously highlighted, the opening sequence of the film firmly places our homodiegetic narrator, Louise, within a narrative frame which exists *beyond* the timeline of the story we are being presented with, as she, as though able to watch the images of the opening sequence back with us, is able to *reflect*, 'I used to think this was the beginning of your story.'

By contrast, the present for the narrator of the written version of the text appears to be the moment depicted in the opening shot of the film and occurring before the birth, or conception, of her daughter. She narrates *in the present tense*, 'Your father is about to ask me the question. This is the most important moment in our lives, and I want to pay attention, note every detail.' (Chiang 1998, p. 111). However, although the narrative present in the written text is perhaps less ambiguous and easier to identify than the narrative present within the film, with the contexts of the present moment made explicitly clear, it's important to note here that the distinctions between temporalities, even within the first two sentences of the text, are not as clear as we may initially interpret them to be. Although the third-person singular present tense verb ('is') is used several times within these opening lines and firmly places Louise within the moment of the present action, the contexts which surround the use of this verb indicate some degree of prior knowledge on the part of our narrator – her partner, the 'father', has not yet come to ask her the question, but she already knows what that question will be, and that it will lead to a life-defining moment which she will want to remember 'every detail' of. Not only is it suggested in these opening lines that Louise already knows what to expect of *this* moment in the narrative *present*, but her reference to the 'father' figure also indicates that she has prior knowledge of events that are to occur in the *future* – she knows that this moment will be the moment she makes the choice to try and conceive a child and that, following this, she will birth a child whom she can narrate this moment to. Thus, the key thematic elements of the narrative, particularly with relation to the exploration of our understanding of time and simultaneity, are hinted at within the first two sentences of the written text. The way this subtle indication is translated across mediums for the voiceover narration at the opening of the film can then be interpreted as making a more obvious reference to these aspects of theme: 'We're so bound by time, by its order.'

## Conclusion

Villeneuve's film is not one that has remained unaddressed by academics in various disciplines. Several scholars have approached the film from the theoretical basis of cognition, leading to a shift in focus and highlighting some core aspects of the text that otherwise may not be brought to light with alternative theoretical readings and analyses. Both Anne Carruthers and Hannah Chappelle Wojciehowski raise the motif of Louise's daughter, Hannah, as a key contribution to developing an understanding of the text's experimental chronology. In a feminist reading which finds its analysis closely linked with cognitive attitudes, Carruthers argues for the theme of pregnant embodiment with the exploration of a "not-yet" child and "not-yet" mother, highlighting the importance of an audience's belief that both child and mother have already existed as such (and Louise has now lost her child) at the beginning of the text



in order to fully appreciate the emotional responses triggered by the text (Carruthers 2018). Carruthers claims that such an understanding is crucial, as it underpins the overarching theme of determinism<sup>2</sup>. In a similar vein, incorporating Elsaesser's notes on the mind-game film, Wojciehowski argues that the prevalence of the recurring motif of a dead child (which we are aware of from the very beginning) 'almost certainly has to do with its utility as a mnemonic tool that helps the viewer sort through extraordinary complex information and retain the relevant pieces of the puzzle in memory for later assembly.' (Wojciehowski 2018, p. 57)<sup>3</sup>. Approaching the film from a basis of cognitive analysis, Wojciehowski later goes on to argue that the film poses similar difficulties in terms of audience cognition and understanding to Christopher Nolan's *Memento*, in that 'Louise Banks, the protagonist of *Arrival*, also struggles with memory problems, which place an incredibly large cognitive burden on viewers' memory capacity as the film progresses.' (Wojciehowski 2018, p. 59). I would argue this is a flawed interpretation in the sense that an issue with memory on the part of Louise is not offered as a key character element; it is not that Louise lacks a capacity for memory; rather, paradoxically, Louise struggles to come to terms with her new found access to memories of the future. Whilst existing literature which sees scholars adopt a cognitive approach to this particular text has outlined some aspects of the narrative which may have otherwise been left unaddressed, unfortunately this approach can often be based around largely subjective interpretations, lacking development and failing to provide a comprehensive understanding of how audiences are led to interpret the complex aspects of narrative and produce an understanding of the wider text as a whole.

An examination of the exposition and set-up of narrative frames reveals how the experience differs between the two texts. In the film, we are primed into the narrative to interpret Louise as being the character of 'grieving mother' due to the presentation of the opening sequence depicting Hannah's life and death, which, due to our familiarity with cinematic convention, we are encouraged to read as a flashback sequence. Every recurrence of Hannah that appears in the main narrative frame which follows is therefore immediately interpreted as being a lapse into Louise's memory of the past. In contrast, the written text not only highlights a different temporal frame as the narrative present (or the moment from which we are being narrated to), but it also makes explicit the fact that; a) Hannah is not a part of Louise's past, but instead should be anticipated as a part of Louise's *future*; and b) that Louise has some prior knowledge of this fact. A close reading of the text reveals that this information is offered in the first few pages of the written story, completely negating the possibility of such a twist to occur for the reader.

In the case of *Arrival* and 'Story of Your Life', complexity operates across all levels of narrative. Both texts involve a complex plot which presents a complex story and attempts to address a complex philosophical question via its method of narration: if you knew that an element of your future would cause such a degree of pain (i.e. the death of your child at a young age), would you still choose to enact that future and bring that child to life, knowing all the while what would happen? It is by breaking

---

<sup>2</sup> Carruthers goes on later to link this with issues surrounding sexual consent.

<sup>3</sup> Wojciehowski here calls upon an element/motif of the mind-game film as outlined by Thomas Elsaesser (in Buckland 2009, p. 18): 'A character is persuaded by his – of more often, her – family, friends, or the community that she is deluded about the existence or disappearance, usually of a child – a self-delusion brought upon by trauma, excessive grief, or other emotional disturbance.'

down both versions of this text into their narrative components that we can begin to understand how the contrasting experiences are created for audiences of both versions, and how the complex elements of narrative and narration are translated across mediums.

## References

Barrett, D. (2009). "Twist Blindness": The Role of Primacy, Priming, Schemas, and Reconstructive Memory in a First-Time Viewing of *The Sixth Sense*. In W. Buckland (Ed.), *Puzzle Films: Complex Storytelling in Contemporary Cinema* (pp. 62-86). UK: Blackwell Publishing.

Bordwell, D. (2002). Film Futures. *SubStance*, 31, 88-104.

Buckland, W. (Ed.) (2009). *Puzzle Films: Complex Storytelling in Contemporary Cinema*. UK: Blackwell Publishing.

Carruthers, A. (2018). Temporality, Reproduction and the Not-Yet in Denis Villeneuve's *Arrival*. *Film-Philosophy*, 22, 321-339.

Chatman, S. (1978). *Story and Discourse: Narrative Structure in Fiction and Film*. USA: Cornell University Press.

Chiang, T. (1998). Story of Your Life. In T. Chiang, *Stories of Your Life and Others* (pp. 111-172). New York: Tom Doherty Associates.

Elsaesser, T. (2009). The Mind-Game Film. In W. Buckland (ed.), *Puzzle Films: Complex Storytelling in Contemporary Cinema* (pp. 62-86). UK: Blackwell Publishing.

Fludernik, M. (2003). Chronology, Time, Tense and Experientiality in Narrative. *Language and Literature*, 12, 117-134.

Forster, E.M. (1974). *Aspects of the Novel*. Harmondsworth: Penguin.

Genette, G. (1980). *Narrative Discourse: An Essay in Method*. USA: Cornell University Press.

Shklovsky, V. (1965). Art as Technique. In L.T. Lemon, & M. J. Reis (Eds.), *Russian Formalist Criticism: Four Essays* (pp. 3-24). USA: University of Nebraska Press.

Skerrett, D.M. (2010). Can the Sapir-Wharf hypothesis save the planet? Lessons from cross-cultural psychology for the critical language policy. *Current Issues in Language Planning*, 11, 331-340.

Villeneuve, D. (Dir.) (2016). *Arrival*. USA: Paramount Pictures.

Wojciehowski, H. (2018). When the Future is Hard to Recall: Episodic Memory and Mnemonic Aids in Denis Villeneuve's *Arrival*. *Projections*, 12, 55-70.

**Contact email:** ml15lpm@leeds.ac.uk