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Analysing *narrativised space* in moving images: A multimodal discourse approach to narrative complexity and transmedial comparison

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Abstract

The goal of this paper is to present a multimodal framework for analysing a particular dimension of space in moving images, namely, *narrativised space*. In particular, this paper unravels how the framework offers effective methods for addressing empirical questions which have been extensively debated in recent decades in the studies of moving images such as transmediality and narrative complexity. To achieve this end, I first provide a specific definition of the dimension of narrativised space and move on to discuss what essential properties of narrativised space might support viewers' meaning interpretation paths. This leads to a more fine-grained categorisation of features which function so as to lead the viewers' navigational routes within and across different narrative levels and event spaces. Through applying the framework to analysing Brian De Palma's war film *Redacted* (2007) and Spike Jonze's *Adaptation* (2003), this paper will show the analytical strength of the proposed methods and the potential of the framework for addressing corpus-based empirical questions with regard to puzzle films and transmedial comparison.

Keywords: film space, complex narrative, multimedia frames, transmediation, cohesion and coherence, blending, narrative embedding

1. Introduction

Any investigation of meaning and structure in film must contend with the central issue of the comprehension of *space*. Narrative space is one of the core dimensions of event representation and understanding (cf. Zacks and Magliano 2011); it also plays a central role in the analysis of narrative form, meaning and aesthetics in film (cf. Bordwell and Thompson 1976; Rodriguez 1998; Saxton 2007). The audience's interpretation of the form and function of narrative space in moving images seems at first to be a generally straightforward and well-investigated process (cf. Bordwell 2005; Bordwell and Thompson 2013:84; Jones 2015). Nevertheless, on further reflection on those films where the conventional continuity editing and the mainstream linear spatial-temporal structures are subverted for puzzling effects (cf. Buckland 2009; 2014), the dimension of space in film seems to be particularly intractable. A considerable body of research has attempted to describe kinds of complex spatial manipulations such as narrative embedding, metalepsis, multiple media frames, etc. (cf. Simons 2008; Tudor 2008; Kiss 2012; 2013). Despite the emerging discussions on complex film narrative in recent years, the pursuit of an empirical and systematic comparison of the different degrees of cognitive loads triggered by the mixture of media frames and narrative spaces remains a formidable task.

Against this background, this paper precisely aims to propose a framework for systematically discriminating features of spatial complexity triggered by multiple media frames and narrative levels. In this pursuit, this paper focuses on a particular dimension of spatial analysis, termed *narrativised space*. This analytical dimension lies in how the

discourse relations between different *narrative event space* are realised. The exact analytical focus of narrativised space is exemplified in the preliminary analysis below. It is an analysis of an extract from *Adaptation* (Spike Jonze, 2002), transcribed in Figure 1.

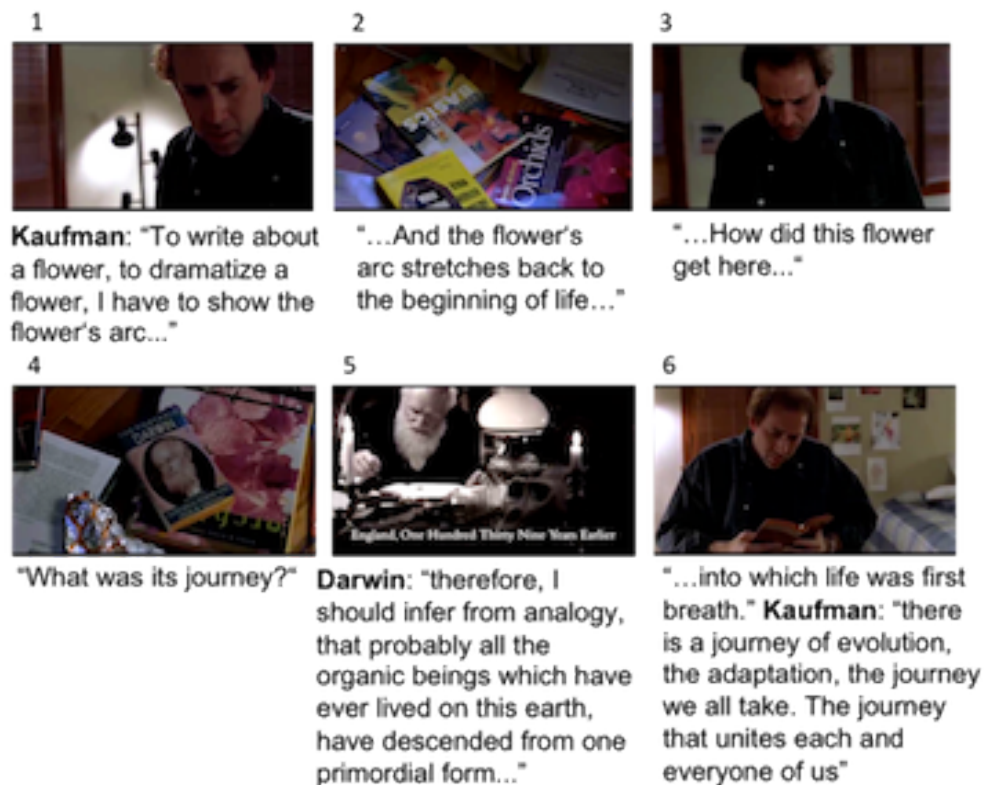


Figure 1: An extract from *Adaptation* (00:38:20--00:38:54)

This scene depicts the main character, the scriptwriter Charlie Kaufman, pondering how he should proceed with adapting the book about orchids into a screenplay. In shots 1--3, Kaufman's voiceover narrates his thoughts about flowers, accompanying the images showing the close-ups of his faces and the books that he has been studying. While his voiceover continues, shot 4 shows a close-up of a specific book, a book by Darwin. This is then cut to shot 5, an imagined scene of Darwin writing the words we hear in his voiceover narration. This is then cut to shot 6, in which Kaufman continues his thoughts presented in voiceover narration.

This brief extract embeds the spatial complexity of three different narrative levels and two types of event space, depicted in Figure 2. The first narrative level (level I in the figure) encompasses the explicit event space, that is, Kaufman's room. Level II in the

figure is the imagined and embedded event space, depicting a space where the stories about flowers in Kaufman's voiceover take place. This event space is not visible in the visualtrack but implied to the viewers via voiceover. At the same spatial level, shot 6, i.e. the scene of Darwin writing his book, is also included in this level of narrative embedding, depicted as a part of Kaufman's thoughts. The event imagined by Darwin in his voiceover then realises the third narrative level (level III in the figure). In other words, this is an event taking place in an implied space embedded in Darwin's writing event, which is then imagined by Kaufman. Apart from the levels and types of event space, these events are interconnected through different types of filmic spatial devices. For instance, the event in Kaufman's room is cross cut with an insertion of Darwin's images, and this yields a broken connectedness of Kaufman's thinking event. The opposite spatial device to this would be a long-take, an unbroken connectedness, such as the long temporal chunks of unbroken spatial connectedness in *Birdman* (2014), Hitchcock's *Rope*, and the German film *Victoria* (2015), in which no editing process is used to bridge spatiotemporal consistency.

The framework of *narrativised space* proposed in the present paper deals precisely with the construction of these different levels, the distinction of the *implied* and the visible *explicit* spaces, and the connectedness within and across narrative events.

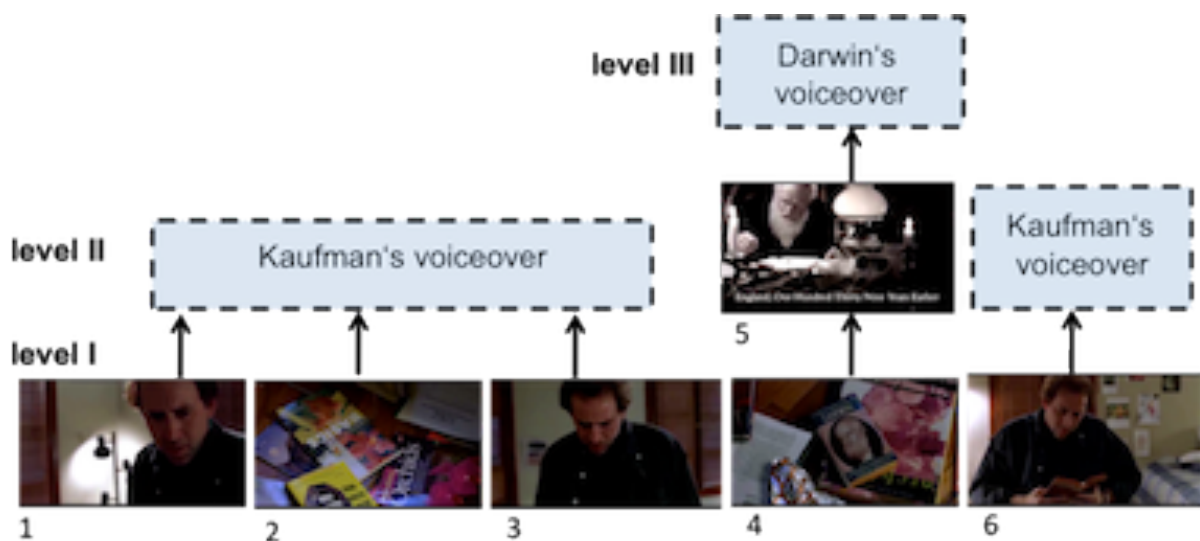


Figure 2: Three narrative levels (I, II, III) and two types of narrativised space (implied space, marked in dotted square, where events in voiceover take place and explicit, visible space in the visualtrack) in an extract from *Adaptation* in Figure 1. The dotted box refers to the implied space where events in voiceovers take place; the arrows are the discourse relations across these levels and spaces.

The significance of proposing such a framework is twofold. First, although the issue of narrative embedding has been debated for more than three decades (cf. Bal 1981; Nelles 1997}, Fludernik 2009: 28-29; Kiss 2012), to the best of my knowledge, there hasn't been any corpus-based empirical investigation into different categories of narrative embedding and their cognitive impacts on the viewers.

Therefore, when multimodal texts such as moving images use a blending platform of dynamic or interactive media or a mixture of linear and non-linear structures, these texts immediately attract criticisms about their disorienting effects and cognitive overload for the viewer.¹ Nevertheless, several recent multimodal studies have shown that under the surface of those multimedia frames and non-linear spatial temporal structures, a high degree of textual coherence is often maintained to guide the viewer throughout the text (Tseng and Bateman 2010; 2012; Tseng 2016; forthcoming).

Drawing on these recent discussions, the present paper aims to address the question of why the multimedia frames of filmic text and the so-called puzzle narratives always elicit similar debates of narrative disorientation and confusion despite the fact that the underlying cohesive patterns are actually well-mobilised. I argue that this issue can be empirically and systematically addressed by examining narrativised space. In particular, through comparing the features of narrativised space across different multimodal texts, similar or different degrees of spatial complexity can be highlighted for addressing the hypothesis of wherein lie the disorienting mechanisms if there are any.

This paper is structured as follows. The approach of narrativised space will be presented in the next section. As the description of the framework will show, the analytical approach can be seen as a theoretical combination of social semiotic approach to multimodal discourse (cf. Kress and van Leeuwen 2001; Bateman 2013), the Bordwellian approach to space in moving images (cf. Bordwell 1981; 2005) and the more recent empirical findings of event understanding (Zacks and Tversky 2001; Radvansky and Zacks 2015).

This framework will be applied to conducting a corpus-based comparative study of spatial complexity of the war film *Redacted* (Brian De Palma, 2003) and *Adaptation* (Spike Jonze, 2002), two films well-known for their disorienting effects but drawing on very different factors --- the former famous for its media overload triggered by multimedia uses and pseudo-documentary elements; the latter, among other films written by Charlie Kaufman, is well-known for its multiple diegetic levels (cf. Daly 2010: 93). Events in the two films will be analysed exhaustively according to the analytical categories of narrativised space. The results will show just how, regardless of the surface differences of media materiality and narrative structure, the approach can effectively compare degrees of complexity within and across the two films, which are otherwise difficult to uncover.

2. Event space as the basic unit for analysing narrativised space

¹ See, for example, the analyses by Provencher (2008) of the multimedia mixture of the film *Redacted* (2003) and by Bauer (2007) of the excess dynamic frames of *Hulk* (2003), as well as several papers on complex narrative structures (cf. Buckland 2009; Daly 2010).

Before broaching the framework presentation, it is necessary to first provide a specific definition of the analytical unit. The basic unit with which this framework deals is an *event space*. That is, the approach of narrativised space focuses on how the construction of spatial levels and types of spaces (implied vs explicit spaces) within and across events are signaled to the viewer. *Space* in events, along with other factors such as time, causality, motivation and protagonists (cf. Zwaan 1999), has long been taken as a significant unit for the investigation of narrative comprehension (Zwaan et al. 1995; Shipley and Zacks 2008), in particular, how the factors of impact on the receivers' event understanding have been empirically identified and also extended to the research of filmic event cognition (Magliano et al. 1996; Magliano et al. 2001; Magliano et al. 2005). Contextualised in this theoretical background, the present paper aims to provide more fine-grained categories beyond space and setting changes or camera directions, and to elucidate how these categories strengthen the empirical inquiry into the impact on the viewers' interpretation routes of narrative events.

Drawing on the analytical focus of event space, we can refer the analytical unit back to the *Adaptation* example of Figures 1 and 2 in the last section. In this extract of 6 shots, 4 event spaces can be identified: (1) Kaufman's room where he is walking, reading and thinking, (2) an event space where the story of the flowers (i.e. the content in Kaufman's voiceover) takes place, (3) Darwin writing in his room and (4) an event space for the story of evolution (i.e. the content in Darwin's voiceover). The analysis of narrativised space shows how these four different event spaces are interwoven across different spatial types (implied and explicit) and levels (levels I, II, and III).

The next section will present the approach of narrativised space for moving images. Each feature within the framework will be exemplified and the overall instantiation of the framework will be applied to the beginning pseudo-documentary scenes in *Starship Troopers* (Paul Verhoeven, 1998).

3. The multimodal discourse framework of *narrativised space* in moving images

The discourse system of narrativised space is presented in Figure 3, and is modelled on a system network, drawing on the theory of systemic functional linguistics (SFL). Within SFL, such networks are used to show the abstract paradigmatic 'choices' available to language users, drawn from the meaning potential of their language (Halliday and Matthiessen, 2004).

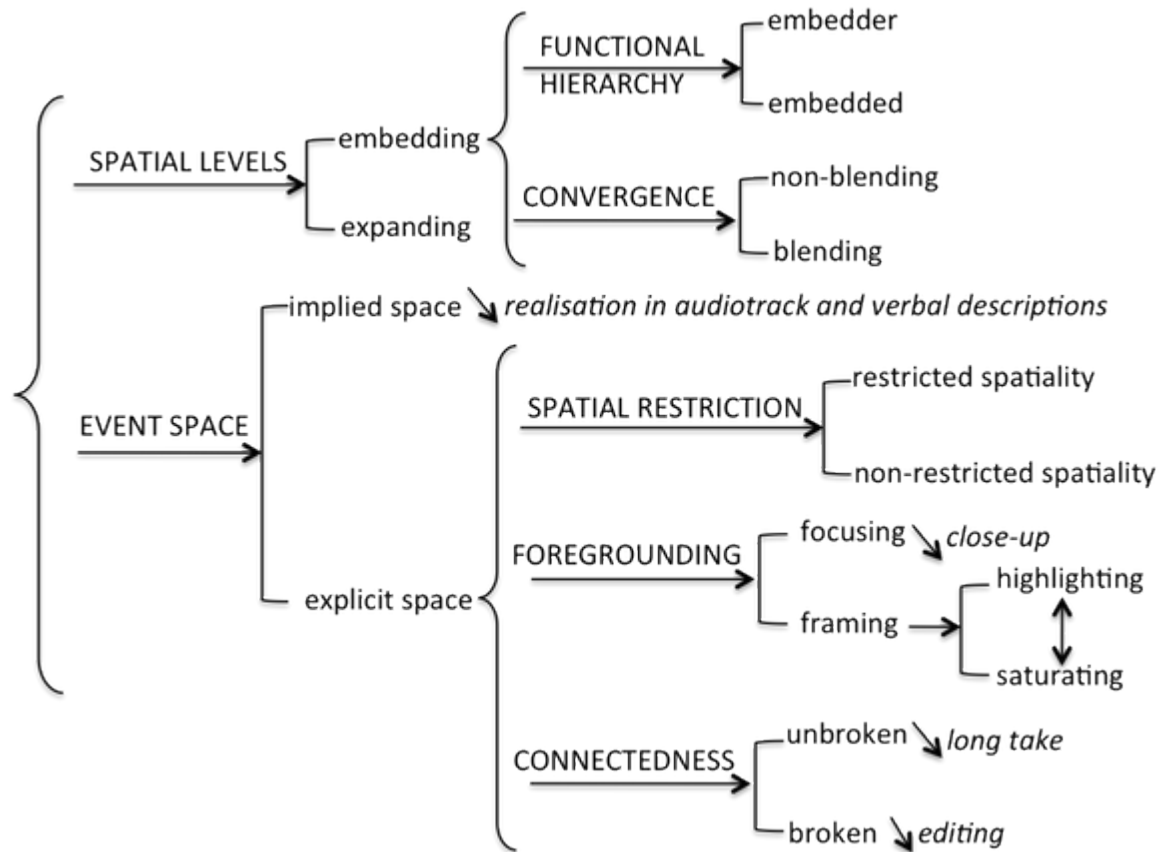


Figure 3: System networks of narrativised space in moving images

Based on the methodology of SFL in systematising paradigmatic choices, the filmic system in Figure 3 shows the functional potential for signaling the viewers' navigation routes within and across events of different levels (e.g. embedded vs expanding) and types (e.g. implied vs explicit).

In these networks, square brackets connect contrasting options together into systems: for instance, in the system of [implied space/explicit space] only one of the two features may be selected at a time. The networks can also employ simultaneously available systems represented by grouping systems together with a curly right-facing bracket. In Figure 3, for example, choices need to be made from the features presented by the three main systems of SPATIAL LEVELS: [embedding/expanding] and EVENT SPACE: [implied/explicit space]. Within the system of [embedding], choices need to be made from the features presented by the two systems of FUNCTIONAL HIERARCHY: [embedder/embedded] and CONVERGENCE: [blending/non-blending]. Analogously, one option from each of the systems of FOREGROUNDING, CONNECTEDNESS and SPATIAL RESTRICTION needs to be selected, thereby giving rise to sometimes quite extensive cross-classification. The discourse function of each choice in the networks is described in the following subsection.

3.1. Embedding vs Expanding

The first system deals with the levels of event space. A space of events can be either [expanding] or [embedding]. The feature of [expanding] operates when spaces of different events are connected and realised at the same narrative level. Its contrast is [embedding], which operates when one event space further encompasses and realises a multi-layered set of events across different event spaces. It is similar to the narratological devices defined by Bal (1981) and Nelles (1997), who put forward two types of embedding: horizontal embedding occurs when a story is told by two or more narrators without a change of diegetic level, and vertical embedding when there is a change of level and of speaker (Nelles 1997: 127-143). Along similar lines but with a slightly different functional pursuit of systematising features aiming to reflect the viewers' path across event spaces, the system proposed in the present paper models the feature [embedding] into two further sub-systems: FUNCTIONAL HIERARCHY and CONVERGENCE. The former describes the functional hierarchy within the kinds of embedding defined by Bal and Nelles -- namely, the narrative embedding when there is a change of narrative level triggered by a change of event space (e.g. the change from Kaufman's room to his thoughts in voiceover) or change of speaker (e.g. the change from Kaufman to Darwin in Figure 2). The two functional roles defined in the hierarchy are the [embedder] (e.g. the event space of Kaufman's room in Figure 2) and the [embedded] (e.g. Kaufman's thoughts and imagination about Darwin).

The parallel system CONVERGENCE deals with [blending] narrative structures within and across spatial levels. Narrative levels can be either explicitly multi-layered [non-blending], such as the distinction between Kaufman's room and the embedded thoughts in his voiceover, or [blending], when two *narrative structures* across two or more event spaces are *blended* into *one* event space. In other words, it is two domains/space converge into one.

In the *Adaptation* example in Figure 1, the embedded space of Darwin writing and thinking about evolution is a blending of two structures: first, it is embedded in Kaufman's thoughts and imagination, and simultaneously it is also a depiction in the book shown in image 4. Figure 4 shows how the narrative structures of the two sources are blended into one spatial construction. The scene of Darwin's study is the embedded event space in the event structure of Kaufman's imagination as well as the embedded space in the event structure of book's depicted content. The two structure domains are blended into one when the event space of Darwin's study is shown to the viewers. This kind of domain convergence is similar to the narrative phenomenon of *metalepsis* (cf. Wolf 2005; Kiss 2012), i.e. a transgression of the boundaries between narrative levels.

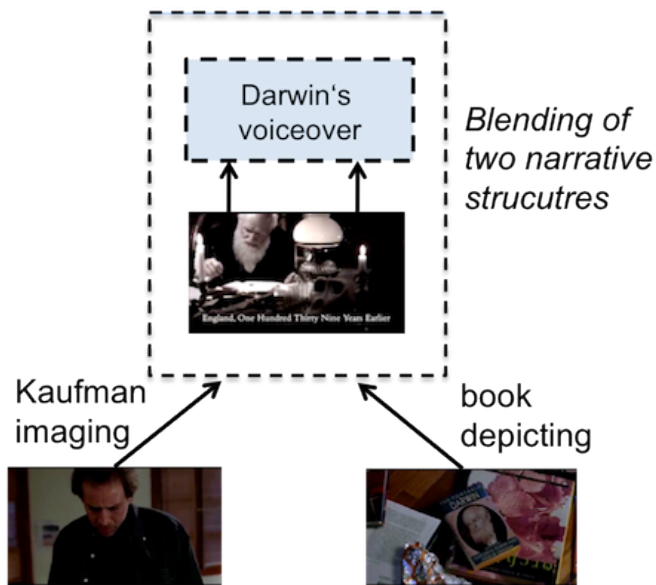


Figure 4: Blending of narrative space in the extract of *Adaptation* depicted in Figure 1.

The mapping of structural blending is analogous to 'metaphorical reasoning' or 'structure mapping' across different domains (cf. Gentner 1983, Bateman 2016). Another example of structural blending is exemplified below in the first scene transition of the war film *Redacted* (2003).

The film *Redacted* is based on a real event that took place in Samara in 2006, when a group of young American soldiers raped and killed a fourteen year old girl, killed her family, and set their house on fire. The film begins with a video diary recorded by the camcorder of Private Angel Salazar, which is the main media source in presenting the development of the events in the film. This is then followed by several other media formats through which the story is told. The film will be analysed in detail in Section 4.2. For the present purpose, the first scene and media transition is shown in Figure 5. Frame 1 is the last shot of the first scene, the video diary of Salazar. This is then cut to the beginning of 'Barrage' (checkpoint). The title already specifies the setting of the scene and after Frames 2 and 3 visually show silhouettes of soldiers and the setting, the next shot, Frame 4, immediately cuts to a close-shot of Salazar, exactly the same soldier the viewer has seen in a close-shot in Frame 1.

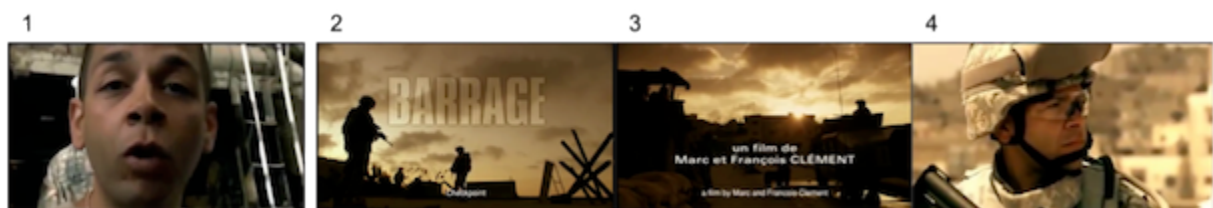


Figure 5: The first scene and media transition in *Redacted*.

Figure 6 shows the structural blending across this transition. Here we can see that the domain of the documentary sequence and the domain of Salazar's story line are blended into one. The blending is substantially realised by the mechanism of *cohesion* (cf. Tseng 2013), namely, the two domains are blended into one because cohesive chains of the same characters are realised across the two scenes. The cohesive mechanism starts with Salazar in Frame 1, and coherently linked to Salazar in Frame 4. In other words, although the verbal text is a non-diegetic, neutral off-screen voiceover, not directly related to particular characters and locations in the film, the visual track nonetheless shows close-shots of the main characters and this signals the contribution of the documentary footage's blending to the story line of soldier Salazar.

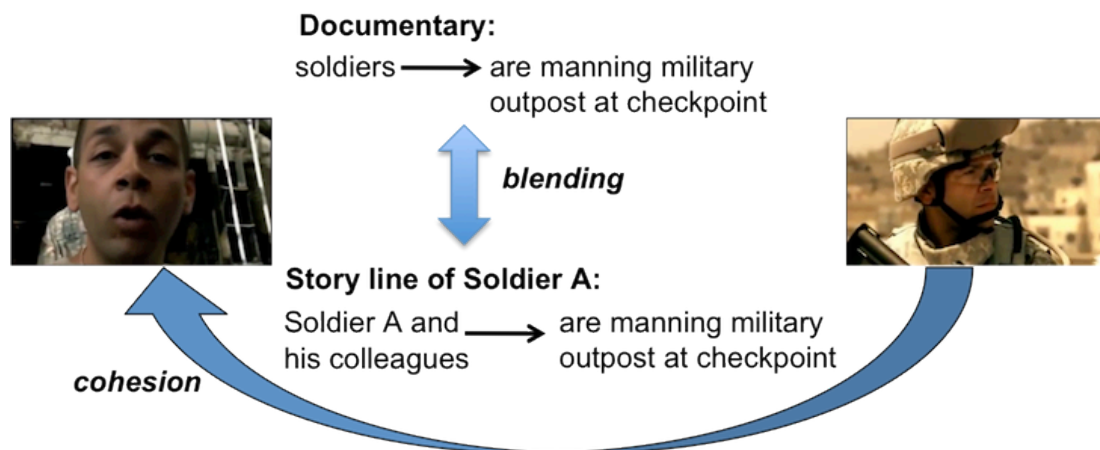


Figure 6: Blending of the documentary space and the event space of soldier A. Salazar's story, established through cohesive chains across the scene transition in Figure 5.

In brief, [blending] needs to be realised by a structural mixture which brings two domains/spaces into one (e.g. the documentary space and the soldier's story integrated into the space of the checkpoint).

3.2. Implied space

The next part of the system deals with different types of event space. A film event can be *explicitly* shown on the screen. It can also be *implied* in many ways as a the story space which is not explicitly shown to the viewers but only imagined by the viewers. For instance, an event space can be verbally described in the characters' dialogues. It can also be realised in audiotrack, implied as an existing off-screen space. For instance, when voiceover is used in a film, the voice in the audiotrack signals an implied space where the narrator is. These features particularly highlight the *multimodal* nature of the entire framework, using cross-modal resources including audio, visual, and verbal modes.

In the system network in Figure 3, the arrow and italic text next to the feature of [implied space] *realisation in audio and verbal descriptions* refers to the form of realisation of this feature. This means that an implied space is often realised when verbal descriptions or audio track signal an off-screen space which needs to be inferred and imagined by the viewers.

For instance, [Implied space] is substantially used when [restricted space] is [embedder] in the previous run through the system. Similar to the theatre stage, one of the main strategies in film to expand the narrative space is to let characters talk about previous events in another story space (cf. Hanich2014-film) implied to the viewers. Apart from combining with [restricted space], [implied space] is often realised when long monologues, speeches and voiceovers depict an event, such as the event in Kaufman's thoughts.

[Implied space] can also be combined with [blending]. Consider the following example of a rather complex scene from *Saving Mr. Banks* (John Lee Hancock, 2013) transcribed in Figure 7.

This extract is an crosscut between two scenes: one scene shows the main character, the author of *Mary Poppins*, Mrs Travers, in the Disney studio listening to the pitchmen performing the song 'Fidelity Fiduciary Bank'. This scene (images 1, 2, 4, 6, 8, 10, 12 in Figure 7) crosscuts back and forth with another scene in Mrs Travers's flashback (images 3, 5, 7, 9, 11 in the same figure), in which her father, Mr. Travers, represents the bank he works for and, at a fair, gives a speech about the bank. The two intercut scenes collide when Mr. Travers improbably begins singing integrated into the same song acted out by the pitchmen in the Disney rehearsal room (images 7--12 in the figure).

The scene encompasses three different event spaces and realises multi-layered embedding, as illustrated in Figure 8. The main event space carries the story line in which Mrs Travers visits Disney's studio. The flashback shows her memory of her father when the pitchmen sing the song. The space of the flashback can be seen as embedded under the main event space. Apart from the two spaces, there is another implied space, the space where the same events in the song and the speech take place. This implied space is embedded both under the main story space and under Mrs Travers's flashback. The construction of embedding here is very similar to that in the *Adaptation* example shown in Figure 2: there is an embedded space (Darwin writing a book and Mr. Travers giving a speech) imagined by the character (Kaufman and Mrs. Travers), which then embed one same event space (Darwin's writing and the implied event space in the song and speech)



Figure 7: An extract of *Saving Mr. Banks* (2013) shows two scenes, which are intercut back and forth rapidly, colliding through the same song simultaneously acted out by the pitchmen in the Disney studio and sung by Mr. Travers.

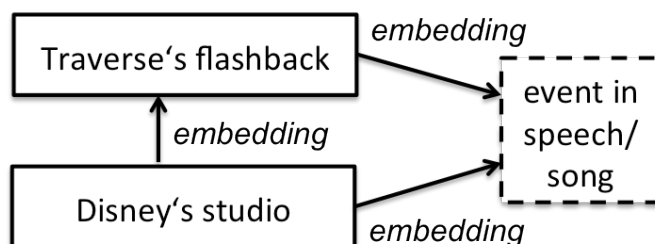


Figure 8: Blending of the implied event space in the speech by Mr. Travers and in the song in the extract of *Saving Mr. Banks* in Figure 7, the dotted box refers to the implied space, where the events in the speech and song take place.

As for a realisation in the audiotrack, an invisible implied space cued by audio elements often functions to create disturbing effects and suspense (cf. Saxton 2007; Stewart 2010). This feature is often used in Haneke's films, such as *Cache* (2005), *The White*

Ribbon (2009) and *Amour*. For instance, in *The White Ribbon*, most violent scenes are implied. One particular example is a scene of family violence in which the brother and sister are beaten by their pastor father for being late for dinner. During the beating scene, the viewer is positioned down a hallway and is not able to explicitly witness the violent event, although each beating sound is clearly audible. The director's manipulation of implied, off-screen space disturbs the viewers by making the violent space invisible while pushing the viewers to construct a narrative path through it.

3.3. Explicit space: Restricted spatiality vs non-restricted spatiality

The system of [explicit space] encompasses three further subsystems: the subsystems of SPATIAL RESTRICTION, FOREGROUNDING and CONNECTEDNESS. This means that when [explicit space] is chosen, three further features from the subsystems can be selected. These subsystems include functional features of how the spectator's spatial navigation is guided throughout an event perceived on the screen space.

The functional features of spatial restriction deal with whether the events of a film take place substantially within a confined space, be it an apartment, a room, a phone booth, an airplane, a boat, or an elevator, etc. More specifically, the system is about whether explicit event spaces across the film are set completely or mostly within a wrap-around space such as those in Hitchcock's *Rope* (1948) or in Haneke's *Amour* (2012), where only the short opening scene is set outside the main characters' apartment. The restricted spatiality in film derives from a theatrical design, which was one of the main spatial strategies in the beginning of last century. Bordwell and Thompson (2003: 95-96) relate this strategy to the German *Kammerspiel* or 'chamber play' film style influenced by expressionism in the 1920s. The *Kammerspiel* cinema restricted itself to minimal settings and focused the stories on confrontations between characters.

Restricted spatiality in [explicit space] within a film very often triggers the realisation of an implied event space. This is because without showing flashbacks and cross-cutting between different settings, the events outside the current restricted settings are often verbally described by the characters.

3.4. Explicit space: FOREGROUNDING

The feature [focusing] is the mechanism which signals salient elements to the spectator: that is, how the viewers' attention should proceed is driven by *close-ups* through camera zoom-in during long-takes, scene breakdown, or crosscutting. To date it is the almost default approach in most parts of the filmmaking world. For instance, close-ups of the main character's face and Darwin's book in Figure 1 realise the feature of [focusing] to foreground significant event elements.

Distinctively, the feature [framing] functions to provide spatial information through theatre-like elaborate performance and staging filmed from a longer distance, termed by Bordwell *tableau cinema* (cf. Bordwell 2005). Two more features are included under [framing]: [highlighting] and [saturating], which are two opposite ends of a continuum. [Highlighting] explicitly leads the viewers' attention to significant narrative elements. For instance, a film can direct the viewers' attention to a character by using the devices such as close-up, camera movement, zoom-in, characters' actions, etc. The opposite end of the continuum is the feature [saturating]. This feature is realised when an overview of a space without specific, foregrounded elements is shown: for instance, the overview of a landscape, city views from higher camera angles, an establishing shot of an overall setting of an event space. The different degrees of highlighting and saturating are represented in Figure 9. Images a and b are screenshots from Hou Hsiao-Hsien's *Flowers of Shanghai* (1998), which explores different devices for highlighting which characters and actions should receive the attention of the spectator, e.g. manipulation of lighting and darkness, slight movement of the camera to carve out foreground and middle ground, or centre and peripheral positions. Image c is a screenshot from Hou's latest film, *The Assassin* (2015). A few scenes of the film start with landscapes filmed in a long take lasting a few seconds before any noticeable characters or objects enter into the saturated space to which the viewer should pay attention. Image d shows the framing style between the two ends of [highlighting] and [saturating]. Several scenes in the film are portrayed in this way -- characters and some carriages are filmed from a very long distance in a protracted long take, immersed in the saturated space.



Figure 9: Screenshots of Hou Hsiao-Hsien's films showing different framing devices in *Flower of Shanghai* (1998) (images a and b) and *The Assassin* (2015) (images c and d)

3.5. Explicit space: CONNECTEDNESS

The system of FOREGROUNDING is cross-classified with the system of CONNECTEDNESS. It refers to the discourse devices of how the contiguous event space is shown to the viewers, either with or without any editing process and spatio-temporal gap. The latter, namely, without spatio-temporal gap, realises [Unbroken connectedness]. With this feature, an event is presented unbroken to the viewer and the event time flows equivalently to the real time minute by minute. That is, no editing process is used to bridge spatio-temporal consistency. It is often realised by a long take such as the long temporal chunks of unbroken spatial connectedness in the extract of live news report from the beginning scene of *Starship Troopers* (1997). The screenshots of this scene are shown in Figure 10. This scene starts with a journalist in a live report (image 1) attacked and swallowed by a monstrous bug. The shaky camera, obviously hand-held by a journalist, shows us a one-minute event in which every soldier is killed by the bug (images 2--3). At the end of the scene, the camera falls on the ground and we

see how the camera man himself is stabbed by the bug and then falls down in front of the camera (image 4--5).



Figure 10: An extract from the beginning scene of *Starship Troopers* (00:01:09-00:02:11)

This event not only employs the feature of [focus] showing close-ups of characters as described in the previous subsection, but also the event space is constructed with a long-take, an [unbroken connectedness], and locates the viewers in exactly the same spatio-temporal frame as the characters.

Using the feature of [unbroken connectedness] yields a restricted narration (Bordwell and Thompson 2010: chapter 3). It confines the audience's range of knowledge to what the characters know. One major affective function of restricted narration is that it effectively builds curiosity, uncertainty and surprises if we know no more than the characters involved in the story events. It is therefore often used in pseudo-documentary scenes when a mediated first-person point of view is presented with the character using a recording technology to give us the story events, such as video diaries in the recent war films.

4. Instantiation of the framework and transmedial comparisons

This section will show how to apply the framework of narrativised space and how the analysis can be used to address the empirical issue of transmedial comparison. First of all, the instantiation of the framework will be exemplified by analysing the opening scene of *Starship Troopers*. This analysis will be expanded and applied to analysing the entire film of *Redacted*. In particular, it will show how the instantiation of features from the system networks can effectively highlight different co-patternings of features, which realise distinctive patterns of spatial configurations and reflect different types of *transmedial blending*.

4.1. Example analysis: Opening scene of *Starship Troopers*

The opening scene of *Starship Troopers*, parts of the transcription shown in Figure 11, is structured in a pseudo-documentary style. It encompasses three main events: First, it begins with a propaganda sequence with a male off-screen narrator, encouraging the viewers to join the mobile infantry (images 1--5). This is followed by a news report with the same voiceover, giving information about an invasion of bugs (images 6--10). This is then cut to the scene depicted in Figure \ref{fig:sht-bug}, a breaking news reported live by a journalist, who is then attacked and killed by the bug, along with all the other soldiers.



Figure 11: Selected screenshot and voiceover transcription of the opening scene of *Starship Troopers*.

The instantiation of the systems of narrativised space is mapped out in Table 1. The first event encompasses two types of event spaces, an unidentified implied space where the voiceover narrator is located and the explicit space on screen, which is embedded, anchored and depicted by the voiceover. The right column of the table shows the features selected from the systems to realise the two event spaces within the propaganda event: first [implied space] is selected with [non-blending] and [embedder] (i.e. the embedder of the embedding relation with the explicit visual space). As for the visual space, features under [explicit space] such as [focus]+[broken connectedness] are selected because the visual space is constructed through conventional editing devices. [Embedded] is also selected, again, because of its role of being embedded in the embedding relation with the off-screen voiceover. In addition, [non-blending], [non-restricted space] is also selected throughout the opening scene.

event	event space	discourse features selected
propaganda	voiceover	[embedder] + [non-blending] + [implied space]
	visual space	[embedded] + [non-blending] + [non-restricted space] + [focusing] + [broken connectedness]
news report	voiceover	[embedder] + [non-blending] + [implied space]
	visual space	[embedded] + [non-blending] + [non-restricted space] + [focusing] + [broken connectedness]
live report	visual space	[expanding] + [non-blending] + [non-restricted space] + [focusing] + [unbroken connectedness]
	adjacent off- screen space of the cameraman	[expanding] + [implied space]

Table 1: Visualising the instantiation of the narrativised spatial systems in the opening scene of *Starship Troopers*.

The second event has exactly the same configuration of feature selection because the same kind of spatial relations between voiceover and embedded visual space continue until the third event, the live report, realises another set of features from the system. Within this event, the feature of [implied space] is also selected but not due to a voiceover. Rather, it is the shaky camera and also the visible cameraman at the end of the event that signals the [expansion] of an off-screen space. Moreover, the construction of the explicit space is [focus] + [unbroken connectedness] because this event is depicted as a live report without any editing process manipulating the visual connectedness.

The instantiation of the three events is visualised in Figure 12. Labels in italics are choices from the systems and the visualisation of the instantiation allows us to distinguish more clearly types of co-patterning across the three events. Events 1 and 2, the propaganda sequence and news report, are realised by employing the features of [implied space] where voiceover is located and [focus+broken connectedness] in explicit space where edited visual informations are shown; these two spaces are interlined through the relation of [embedding], while for the third event, live/breaking news report, a very different set of features are used: instead of [embedding], the relation between explicit and implied space is [expanding] because the implied space is now signaled by the on-spot cameraman, not an off-screen voiceover that anchors the visual spaces.

Discriminating spatial structures of this kind effectively reflects different types of transmedial blending of (pseudo-)documentary elements. In the present example, different types of (pseudo-)documentary strategies are highlighted: borrowing the theory of documentary modes defined by Bill Nichols (2001), the analysis reflects some dimensions of how the first and second events in Figure 12 realise a transmedial blending of *expository* (pseudo-)documentary mode due to the dominant status of implied space, the embedder, which anchors and embeds the embedded explicit visual space, while the third event realises a *participatory* mode due to the expansion of the implied space where the adjacent filmmaker/cameraman is participating the ongoing

event. This kind of transmedial comparison will be further supported by the next example analysis of the entire film *Redacted*.

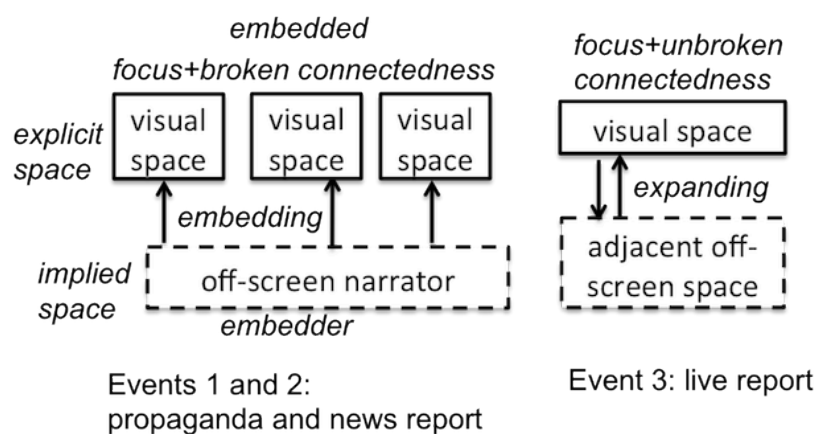


Figure 12: Visualising the instantiation of the narrativised spatial systems in the opening scene of *Starship Troopers*

4.2. Narrativised space in *Redacted*

This section can be seen as the re-analysis of my previous work on cohesion in *Redacted*, which shows how the film is highly cohesive in spite of the multiple frames and digital media used throughout the film (Tseng, forthcoming). In other words, this section examines wherein lies the complexity of this film although my cohesive analysis has shown its straightforward narrative structures as well as the sufficient cohesive mechanisms mobilised to direct the viewers' interpretation path.

The left two columns in Table 2 summarise the events of the entire film. As briefly described in Section 3.1, the film centres on a squad of American soldiers stationed in Samara. One soldier, Angel Salazar, habitually videotapes his platoon members, hoping to get into film school on the strength of his videotaping and the fact that he is a combat veteran. Salazar's videos gradually introduce us to the central characters: the professional Master Sergeant Sweet, (who warns his men not to fraternise with Iraqi children because they are the eyes and ears of the insurgency, but is killed by an IED planted by a Iraqi child, see events (4) and (12) in Table 2); and other members of the squad, including the bigoted Reno Flake, the fat and libidinous Rush, the lawyer McCoy, and Blix.

There are around 36 events presented in different media channels, and most of the events also conform with scene and media transitions. The left column in Table 2 shows that most of the film purports to be made up of a soldier's videotapes. Other fictional segments come from a French documentary, different channels of news clips, web sites operated by Al Qaeda and by McCoy's wife, self-uploaded YouTube videos, and Skype conversations. The right column specifies the co-patterning of features instantiated from the systems of narrativised space.

media	story events	spatial patterns
(1) video diary	First scene. In the camp, Salazar introduces his intention of making video diaries	A + B
(2) documentary	French Documentary Barrage illustrates the pressure on American soldiers at checkpoints to differentiate insurgents from civilians.	C + D
(3) video diary	In the camp, Salazar films Blix reading a book on Samara.	A + B
(4) video diary	Salazar films soldiers interacting with local children and being warned by Sergeant Sweet.	A + B
(5) documentary	The same French Documentary Barrage reports about Iraqi civilians mistakenly killed and records an event of a car dashing through the checkpoint and getting shot at by the soldiers.	C + D
(6) ATV news	The continuing event is recorded and reported by Arabic news which shows that the victim in the car is a pregnant woman. The report is done by an ATV journalist interviewing the victim's brother and then summarizing the entire event.	F + H
(7) video diary	In the camp, Salazar films the soldiers fighting over the event.	A + B
(8) video diary	Salazar films a colonel announcing the extension of their stay in Samara.	A + B
(9) video diary	Salazar films the soldiers complaining and angry about the extension.	A + B
(10) video diary	In the camp, Salazar films himself reading the book of Blix about Samara.	E + F
(11) Al Qaeda website	video embedded in the website, obviously a surveillance camera, showing a child secretly planting an IED near the checkpoint.	G
(12) video diary	Salazar's video records the IED killing Sergeant Sweet.	A + B
(13) Al Qaeda website	The same website video as in (10) repeats the explosion in (11). The chanting in the soundtrack celebrates the killing.	C + H
(14) surveillance camera	Surveillance footage in the basecamp shows two soldiers named Rush and Flake full of rage over the IED explosion and Sgt Sweet's death.	G
(15) ATV news	An embedded ATV journalist follows the soldiers in the act of arresting a suspect in a local civilian's house.	A + B
(16) documentary	The same documentary Barrage shows Iraqi school girls being sexually molested by the soldier Rush.	C + D
(17) video diary	Salazar films the soldiers playing a card game and two soldiers, Rush and Flake, plan to raid the house again	A + B
(18) website	Video in a website titled 'Just a Soldier's Wife' shows the wife of a soldier, McCoy, talking about her worries about her husband and other fellow soldiers looking for trouble.	E + F
(19) video diary	Salazar fixes a mini-cam to his helmet.	A
(20) surveillance	Surveillance footage in the basecamp shows Blix and	G

camera	McCoy threatened by Rush.	
(21) video diary	Footage from Salazar's helmet camera show a brutal rape and killing by Rush and Flake.	A + B
(22) surveillance camera	Surveillance footage in basecamp shows McCoy being threatened again by Rush.	G
(23) ATV news	An ATV journalist interviews the victim's father.	E + F
(24) surveillance camera	Surveillance footage in a psychologist's office shows Salazar is depressed about witnessing the killing	G
(25) Skype	McCoy talks to his father online about the killing.	G
(26) video diary	Salazar's camera shows he is kidnapped by Iraqi insurgents.	A
(27) Al Qaeda website	The embedded video shows a shepherd finding Salazar's beheaded body.	A
(28) Western news	A journalist reports the kidnapping and death of Salazar.	I + F
(29) ATV news	The anchorperson of ATV news shows the video of Salazar's beheading released by Al Qaeda.	I + F
(30) video diary	In front of Salazar's camera, Rush and Flake talk about Salazar.	E + F
(31) YouTube	A YouTube site 'The Get Out of Iraq Campaign' shows a self-uploaded video, where a masked soldier (allegedly McCoy) reveals the atrocity of raping and killing an Iraqi girl.	E + F
(32) surveillance camera	Surveillance footage shows the criminal investigation of McCoy.	G
(33) Western news	A journalist reports the rape and killing of the Iraqi girl and the ongoing criminal investigation.	I + F
(34) surveillance camera	Surveillance footage shows the criminal investigation of Rush and Flake.	G
(35) youtube	A YouTube site shows another self-uploaded video of 'The Get Out of Iraq Campaign'.	E + F
(36) video diary	Back in the U.S., in front of a friend's camera, McCoy talks about the trauma he has been through in Iraq.	A + B

Table 2: Summary of events, scene, media transitions and spatial patterns in *Redacted*.

Due to space constraints, it is not possible to show the detailed instantiation of features for each event space throughout the film. But the rest of this section will elucidate the types of co-patterning found in this film and whether the variations of these patterns conform or do not conform with changes of media frames and pseudo-documentary styles.

On the basis of the analytical method introduced above, there are in all 9 types (A--I listed below) of feature co-patterning found across the entire film, listed as follows; and the right column in Table 2 specifies the types of patterns chosen in each event.

- **A: [expanding] + [non-restricted spatiality] + [unbroken connectedness] + [focus].** Pattern A is often realised when the film signals that someone is using a camcorder to film the events in the explicit visual space. [Unbroken connectedness] is chosen because these sequences are mostly not edited. Events such as sequences in a soldier's video clips (events 1, 3, 4, 7, 8, 9, 12, 15, 17, 19, 21, 26 and 36) and event 27 where a video in Al Qaeda website zooms in to show Salazar's body.
- **B: [expanding] + [implied space].** Pattern B is constructed when an objects or character (in this film, often the cameraman) off-screen is heard and is interacting with the on-screen objects/characters. The combination of patterns A + B is then often realised in soldier's video diary within a restricted space such as events 1, 3, 4, 7, 8, 9, 12, 15, 17, 21, 36.
- **C: [embedder] + [non-blending] + [implied space] and D: [embedded] + [blending] + [non-restricted spatiality] + [broken connectedness] + [focus].** In this film, the patterns C and D are combined in the documentary in events 2, 5 and 16, where the voiceover is located in an implied space, which then embeds and anchors the visual space of the soldiers at the checkpoint. As Section 3.1 and Figure 5 exemplified, the visual space is a narrative blending of two different spatial domains -- the documentary space and the space in the ongoing story line of these characters.
- **E: [embedder] + [non-blending] + [non-restricted spatiality] + [unbroken connectedness] + [focus] and F: [embedded] + [non-blending] + [implied space].** Patterns E and F are combined when the events involve multi-layered embedding. This combination is often realised when an implied space, in which longer verbal description of events are located, is embedded in an explicit space, depicted in unbroken, unedited sequences, such as events of soldiers in front of the camera (events 10 and 30) or the unidentified characters in the YouTube films and soldier's wife website (events 18, 30 and 35).
- **G: [expanding] + [non-restricted spatiality] + [unbroken connectedness] + [highlighting].** This pattern is realised when a non-embedding [explicit space] in a non-edited, unbroken sequence is shown. It differs from pattern A in that it does not use any close-up, zooming-in, or focus. Instead, throughout the event, an unmoving camera shows us a fixed perspective within a space such as surveillance camera in events 11, 14, 20, 22, 24, 25, 32, and 34. The attention shift of the viewers is cued by soldiers' salient actions and dialogues (e.g. Skype conversation in event 25 or interrogation in the criminal investigations in events 24, 32 and 34).
- **H: [embedded] + [[non-blending] + non-restricted spatiality] + [unbroken connectedness] + [highlighting].** In a similar form but at a different level, pattern H realises an embedded explicit visual space presented in an unbroken, non-edited sequence. Combined with its embedder pattern B, event 13 shows how the event space where the IED explodes and kills Sergeant Sweet is embedded in an implied space, which is made salient by the chanting sounds of someone in the unidentified implied space.
- **I: [embedder] + [non-blending] + [non-restricted spatiality] + [broken connectedness] + [focus].** Finally, pattern I realises the co-patterning of an edited [embedder] [explicit space], similar to Kaufman's room in the *Adaptation* example in Figure 2. In *Redacted*, this pattern is combined with pattern F, its embedded implied space, in events 28, 29, 33, when edited visual images of news

reporters verbally describe a longer complete news events, which takes place in an implied space off-screen.

One significant result from the analysis of narrativised space throughout this film is that there is *no* arbitrary conformity between media types and meaning interpretation paths. Table 3 summarises the spatial patterns and media uses in this film. Here we can see clearly that the combination of patterns A and B can be used in a soldier's video diary and also in a journalist's breaking news report. In other words, these two kinds of media employ same features of spatial levels and explicit/implied space in presenting events. So do surveillance videos and Skype sequences where a fixed, unedited sequence is shown to the viewers. Table 3 also shows that media such as a video diary or a news report can be realised in different ways depending on which kinds of spatial configuration are employed.

patterns	A+B	C+D	F+H	E+F
media	video diary, breaking news	documentary	news studio	video diary, YouTube, news interview
patterns	G	C+H	A	I+F
media	surveillance, Skype	video in website	video diary, video in website	spot news reporting

Table 3: Summary of spatial patterns and media uses in *Redacted*.

Although the structures of spatial interpretation do not necessarily conform with media types, the analysis of narrativised space nevertheless discriminates different modes of *transmedial blending*. Drawing on the analysis, a higher-level interpretation of (pseudo-)documentary modes or sub-genres can be distinguished. Similar to the previous *Starship Troopers* examples, we can see that events with pattern B often show a filmmaker's/narrator's interaction with the events (pattern B) and realise a participatory mode, drawing on the definition by Nichols (2001). The combination of patterns F and H often realises a news report in studio with an anchor person describing the event completely. Features of pattern G are similar to the construction of an observatory mode, showing some events without a particular perspective, a filmmaker's intrusion, or any manipulation of the camera. Pattern C often realises an expository mode in this film, supported by the [embedder], a neutral voiceover, in the implicit space (pattern C) combined with the [embedded] explicit visual space.

A broader corpus analysis on (pseudo-)documentary videos needs to be conducted to further test this hypothesis; nevertheless, this pilot study on patterns of narrativised space in *Refacted* already shows a more systematic, fine-grained analysis for transmedial comparison.

The next section employs the same analytical framework to address another empirical issue, namely, the degrees of narrative complexity in film.

5. Comparison of narrative complexity

This section shows just how the framework of narrativised space can be used to compare different degrees of complexity in film. First of all, the same method will be used to conduct an exhaustive analysis of the spatial levels and types of event space in the film *Adaptation* and then compare the configuration of the patterns to the result of the spatial analysis of *Redacted* discussed in the last section.

Adaptation is well-known for its demanding and disorienting narrative effects, and the discussion of this film often centres on its complex time structures (cf. Dzialo 2009). However, as the analysis of narrativised space will show, the manipulation of spatial levels definitely triggers effects of complexity.

The story of the film centres on the main character, screenwriter Charlie Kaufman's struggles in trying to adapt Susan Orlean's non-fiction book *The Orchid Thief* for the screen. The book deals with the story of orchid hunter John Laroche, whose passion for orchids made Orlean discover passion and beauty for the first time in her life. For *Adaptation*, Kaufman intends to be faithful to the book. However, despite Laroche himself being an interesting character in his own right, Kaufman is having difficulty finding enough material in Laroche as well as the beauty of the orchid to fill a movie. Meanwhile, Kaufman is also going through other issues in his life. His insecurity as a person doesn't allow him to act upon his feelings for Amelia. And Charlie's twin brother, pretentious Donald Kaufman, has moved into his house with the goal of also becoming a screenwriter. Together, they feel that there is an interesting subtext in the book on which Orlean herself can only elaborate, if only Kaufman goes to New York to talk to her. However, Orlean won't reveal and elaborate on any further details. The twin brothers decide to find out the meaning of that subtext on their own. They follow Orlean to Florida and find her relationship with Laroche as well as their using a drug extracted from those rare orchids. Orlean and Laroche decide to kill Kaufman. Charlie and Donald escape and hide in the swamp, where they resolve their differences and Charlie's problems with women. Laroche accidentally shoots Donald. Fleeing, Charlie and Donald drive off but crash into a ranger's truck; Donald dies in the accident. Charlie runs off into the swamp to hide but is spotted by Laroche. However, Laroche is killed by an alligator before being able to kill Charlie. Finally, Orlean is arrested. Charlie makes up with his mother, tells his former love interest Amelia that he is still in love with her, and finishes the script. It ends with Charlie in a voice-over announcing the script is finished and that he wants Gérard Depardieu to portray him in the film.

The story lines and event types of the entire film are generally interwoven across three narrative levels, summarised in Figure 13. The first level locates the main story line

about Kaufman's life and struggles over his task of adapting Orlean's book, his interaction with his lover Amelia, his brother Donald, as well as their later interaction with Orlean and Laroche at the end of the film. Most parts of this story level realise spatial patterns combined by the features **[expanding] + [broken connectedness] + [focus]**, marked here as **Pattern J** as following the pattern configuration elucidated in Section 4.2 above, and **Pattern B: [expanding]+[implied space]**, as depicted in the above *Redacted* example. Some parts of the main story line also function as the *embedder* of the other *embedded* levels (II and III). In particular, when the story line depicts Kaufman's thoughts, reading and writing, it often embeds the verbal and visual contents of Kaufman's thoughts and books. In this case, the embedder pattern at the level I **Pattern I: [embedder]+[non-blending]+[broken]+[focus]** is realised, while the embedded level, namely, Kaufman's thoughts in voiceover, imagined visual narratives, contents of his reading and writing, Orlean's voiceover, Orlean's visit and relationship with Laroche depicted in the book, which Kaufman is working on, is either realised as **Pattern F: [embedded]+[non-blending]+[implied space]** (in the case of verbal content) or **Pattern L: [embedded]+[non-blending]+[broken]+[focus]** (in the case of visual images).

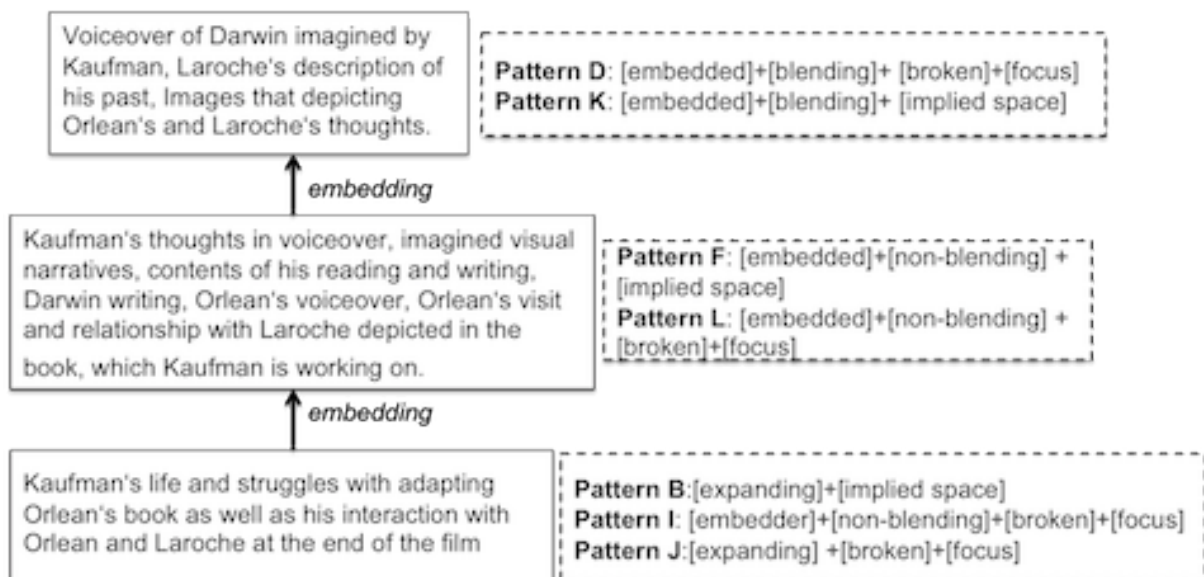


Figure 13: Summary of the three spatial levels in *Adaptation*.

Apart from levels I and II, this film often presents a third level realised with the feature of [blending]. The story lines at this level deal with the verbal and visual depiction of thoughts, reading and writing by the characters portrayed at level II (i.e. Kaufman, Darwin, Orlean and Laroche). The spatial patterns realised at this level are: **Pattern D: [embedded]+[blending]+ [broken]+[focus]** (in the case of visual content) and **Pattern K: [embedded]+[blending]+ [implied space]** (in the case of verbal content). The two patterns suggest the narrative structures from the blended spatial sources: visual and verbal contents are very often directly seen and heard as embedded in characters' thoughts and imagination at level II; nevertheless, they often simultaneously are anchored at spatial sources at level I. The frequent use of blending patterns D and K reflect one dimension of why this film is regarded as demanding and complex. The

viewers are required to construct a dynamic interpretation path across three levels and distinguish blended and non-blended embedding throughout the film.

To take this analysis with this systematic method one step further, we are now able to statistically compare the two films' configurations of narrativised space. In *Adaptation*, there are in all around 150 event spaces, which means there are 150 patterns instantiated from the features in the system network, while *Redacted* has around 63 event spaces analysed in detail in Section 4.2.

Table 4 summarises the number and percentage of each pattern used in the two films. The piechart in Figure 14 explicitly maps the most frequently used patterns across the two film: In *Adaptation*, the most frequently realised patterns are patterns J, F and L.

Pattern J is the non-embedding, conventional Hollywood spatial patterns with edited images and close-ups ([broken connectedness]+[focus]), while patterns F and L deals with *embedded* implied and explicit spaces. The pattern comparison within this film shows how dominantly the embedded patterns are mobilised in the entire film.

In *Redacted*, the two most dominant patterns in are patterns A, B and F. Patterns A and B are non-embedding, expanding type of both implied and explicit space with mostly [unbroken connectedness] and [focus] featured by the non-edited videos filmed by camcorder.

Interestingly, the third most frequently used pattern in this film is pattern F, the pattern realising embedded implied space (often realised in verbal content spoken by characters). As in *Adaptation*, a substantial part of the spatial interpretation path in *Redacted* also requires the viewers to navigate across embedded levels.

What is more, pattern D, the [blending] pattern, also plays a functional role in both films. That is, from the perspective of narrativised space, the viewers of both films are not only required to navigate across different levels of embedding but also to unpack the blended narrative structures in similar fashions.

The comparative study drawing on the systematic analysis provides empirical support for just why many people regard *Redacted* as demanding and complex (cf. Provencher 2008; Stewart 2009; Trafton 2011). The analysis here shows that the complexity is triggered not directly from the use of multi-media, but from certain kinds of demanding cognitive loads on the viewers' spatial interpretation process, similar to that in some of the puzzle films such as *Adaptation*. Surely this cognitive load initially derives from certain kind of media combination. For instance, inserting a documentary film into a

fiction film might often result in blending of narrative structures. Nevertheless, instead of generally talking about *media overload* (Stewart 2009) and linking media directly to the viewers' meaning interpretation process (and since Table 3 already shows that there is no one-to-one relation between media and meaning), we have now a more fine-grained analytical framework to uncover how just different media uses impact or do not impact on the viewers' interpretation path and to what degree these impacts are similar to other kinds of demanding films without multimedia frames, such as *Adaptation*.

	Adaptation 150		Redacted 63	
pattern	number	percentage	number	percentage
A	0	0	16	25.3 %
B	1	0.1 %	13	20.1 %
C	1	0.1 %	4	6 %
D	14	9 %	4	5 %
E	1	0.1 %	5	4.7 %
F	34	23 %	9	14.2 %
G	1	0.1 %	9	14.2 %
H	0	0 %	2	3 %
I	16	1.2 %	3	4.7 %
J	52	35 %	0	0
K	2	0.12 %	0	0
L	28	19 %	0	0

Table 4: The number and percentage of each pattern used in *Adaptation* and *Redacted*

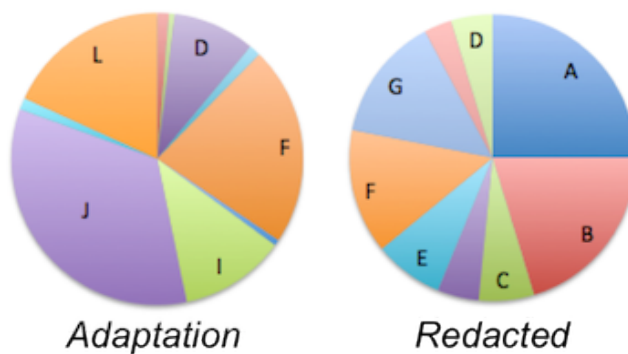


Figure 14: Comparison of frequently employed spatial patterns in *Redacted* and *Adaptation*.

6. Conclusion

In this paper, I have proposed a framework for analysing one significant dimension of space in moving images, namely, *narrativised space*. I first defined and exemplified the analytical unit of narrativised space, formulated and described the system networks with examples, and then applied the framework to the opening scenes of *Starship Troopers* to show how the instantiation of the system network reflects

different types of pseudo-documentary patterns. Furthermore, I applied the framework to conduct an exhaustive spatial analysis of the well-known war film replete with different kinds of multimedia frames, *Redacted*. The empirical result supports the contention put forward by Tseng (2016, forthcoming) that dynamic, multimedia frames do not necessarily trigger dynamic narrative interpretations. My analysis precisely shows that distinctive media types do not always conform to different types of co-patterns of spatial features; rather, fine-grained analytical categories at the level of discursive meaning are needed to unravel how different media uses impact or do not impact the viewers' spatial interpretation path. Lastly, this paper conducted a comprehensive study comparing the patterns in *Redacted* and *Adaptation*. The comparative results uncovered certain analogous manipulations of embedded and blending patterns. Instead of generally commenting about 'media overload' or describing narrative embedding in a problem-solving way, the comparative results in this paper precisely show the strength of this framework for systematically investigating the degrees and types of media and narrative complexity.

The documentary scholar Erik Barnouw (1993) once contended that 'some artists turn from documentary to fiction because they feel it lets them come closer to the truth, their truth. Some, it would appear, turn to documentary because it can make deception more plausible' (349). Through applying the presented framework to reflect on the underlying patterns of different (pseudo-)documentary modes and showing the strengths of this framework at comparing (pseudo-)documentary and fiction modes, I hope to have shown the potential of this framework for further empirical comparative studies of how the representations of fact and fiction are manipulated, reconciled or distinguished.

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