SPATIALISING TIME: PERCEIVING MULTIPLE LAYERS OF TIME IN THE NARRATIVE ENVIRONMENT

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Abstract

There is no escape from time; that includes architecture which dominantly discusses the space. This paper aims to explore more about our understanding of the *various times* within space and its corresponding stories. Notably, this study looks at the context of the narrative environment where stories are imbued in space to enhance their engagement with the audience. Time in a narrative is presented through the narrated time and the real-world time where the audience of the narrative perceives it. Both types of time can be overlapped, whether the audience is consciously aware of that or not. Two case studies are conducted to understand overlapping multiple time layers in the narrative environments. Through a personal visit to Museum Kebangkitan Nasional and participation in the *Secret Cinema* event, data is gathered by taking photos, looking for official publications, and time-count during the experience. It is found that time can be spatialised through the explicit transition of graphics, a play of lighting, and overall spatial organisation that affect the pace and duration of the narrative in space.

Keywords: space-time, narrative environment, exhibition, museum, Secret Cinema

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Once upon a time…

Architecture is occasionally thought of as entity existing in a pause state. It is stated as static, eternal, or famously quoted as 'frozen music.' "While permanence should be celebrated as a particularly architectural quality, inevitably we should be curious about its opposite" (Coates, 2012, p. 16). Architecture exists and is experienced in the flux of time, rather than being captured in one single moment. Whether we are talking about the building, the interior, or the spatial inhabitation, architecture is always defenceless to the passage of time (Franck, 2016; Till, 2013). As stated by Atmodiwirjo & Yatmo (2021), time is a crucial element in the architectural domain because space emerges in relation to "temporality, changes, ephemerality, and the dynamic experience" (p. 136).

This dynamic quality of architecture can be seen particularly prominent in the context of narrative environments. They are "stories purposefully embedded in the environment that can be expressed through multiple explicit and implicit means" (Austin, 2020, p. 20). It includes, but is not limited to, museums, exhibitions, retails, designed old town experiences, or even libraries. The narrative approach perceives those contexts through their dialogue with the surrounding world—including the audiences—rather than being isolated, standing on its own (Francis, 2015).

Potteiger and Purinton (1998) suggest that narrative is always there in the space, "they intersect with sites, accumulate as layers of history, organise sequences, and inhere in the materials and processes of the landscape. In various ways, stories 'take places'" (p. 5). It is also critical to focus on the stories *by* the architecture, letting them become the narrator of their tales (Leatherbarrow, 2017). When stories are embedded into architecture, we can also understand the importance of time because "narrative orients us in time; while environment orients us in space" (Parsons, 2009, para. 2). "Storytelling is thus meaningful to the extent that it portrays the features of the temporal experience" (Lu, 2017, p. 454). Austin (2020) also argues that "a narrative environment is more than just a spatial sequence; it is a triple, integrated unfolding of movement: through space, through time and through story content" (p. 18). It can be understood that in a narrative environment, stories are told via a progression of content through space over time. The reciprocal connection between narrative and environment thus makes a narrative environment complex, multi-layered, and has intertwined spatio-temporal aspects (Greenberg, 2012).

'Once upon a time' served as the introduction of this paper, just like almost every tale. It affirms the tremendous position of time as a starting point, a context of the foreseen events, an integral part of the narrative. While Austin (2020), Coates (2012), Pallasmaa (2016), Till (1996), and Uysal and Aridağ (2012) already discussed the position of time and space in architecture and narrative, this paper aims to explore more about our understanding of *various times* within space and its stories. How can we be aware of them, how do we experience them, and if there are any conflicts between them. By considering time as

part of architectural practice, the space becomes adaptive and responsive to changes (Warakanyaka & Yatmo, 2018)—something that is more relatable than ever in our current world.

Experiencing the weaves of time in narrative environments

"In narrative environments, stories are not just overlain on a space; they are embedded in and expressed through form and materiality" (Austin, 2020, p. 2). The materialised story includes lighting, colours, material, texture, text, or graphics that can transport the audiences into a virtual, narrated space (Hale & Beck, 2018). "The environment node, understood as 'world', translates embodied experience of the 'me-here-now' into cultural narratives and histories of 'they-there-then' through enacting the material semiotics of place" (Austin, 2020, p. 25). It means that a leap of time is experienced in such an environment, forcing the importance of time in a narrative environment and how the audience could feel it. Moreover, the separation of space and time is impossible as they are linked inseparably and essential aspects of experience (Wickerson, 2017). Discussing them as one term also maximises the architectural experience potential (Till, 1996).

Based on Abbott (2021), Austin (2020), Dibell (1988), Dowling (2011), and Genette (1990), time is integrated into a narrative through order, plot, pace, and duration. Order organises sequences in a chronological arrangement: beginning, middle, and end (Abbott, 2021; Dowling, 2011). We can also look at implementing these elements within a narrative environment. The audiences can understand the narrative's order through their encounter with the designed sequential space. Their experience through the space will be chronological (with a sense of the real-world time), from one designed event to another. These events are interrelated and develop a storyline (Austin, 2020), thus supporting and regulating the narrative flow in accordance with the plot.

The plot describes the sequence and links between the constituent and supplementary events (Abbott, 2021; Austin, 2020). It also means that in a narrative, events are organised into sequences (Psarra, 2009). The plot then constructs the wholeness of a story regardless of its representation. Distinctive constituent and supplementary events in a narrative environment also help its audience comprehend the main idea of its story. Even if the narrative discourse's order changes, the story will not. The *reader* seeks connections between events to frame this story plot (Bodenhamer, 2015). It is equivalent to how audiences are expected to understand the story by putting together the experienced events in their mind in a narrative environment. However, it should not be constructed as an utterly rigid story as "open-endedness or uncertainty is also vital to the creation of a stimulating and creative experience" (Hanks, 2015, p. 38).

Pace, on the other hand, builds rhythm and speed to deliver the story effectively by developing narrative movements in the form of pause, as an interruption that gives space in the narrative; scene, as the events presented and realised; summary, as the sum

up of several events that speed up the narrative; and ellipsis, as events that are not related to the narrative (Dibell, 1988; Genette, 1990). Events of the narrative determine pace; how important these events will affect how many are told in the narrative. If an event requires meticulous detail, the pace will likely be slower, whereas it will feel faster if it is not that important. In contrast, duration is associated with numbers to form an interval (Abbott, 2021). Duration then can be seen as external time—the clock time of the real world—and tells how long a narrative space has been experienced. The narrative movement discussed by Genette (1990) in the narrative environment affects the duration used to represent the story. Therefore, in understanding a story-based environment, pace also influences the audience's movement, leading to the duration of experiencing the space.

While the audiences have a duration of their journey through the clock time, another type of time affects their experience. It is the narrative time that relates to the story and its sequence (Genette, 1990; Abbott, 2021). Even so, time can run swiftly or slowly depending on the audience's concentration during the experience (Levinson, 2015). The different types of time can be overlapped in the audiences' experience. Time warp and the relationship of various events require consideration of the clock time and narrative time. The relation between times in the narrative forms a temporal duality that elaborates the representation of a story.

Figure 1. Time overlaps in Disney's Cinderella (Image by authors)
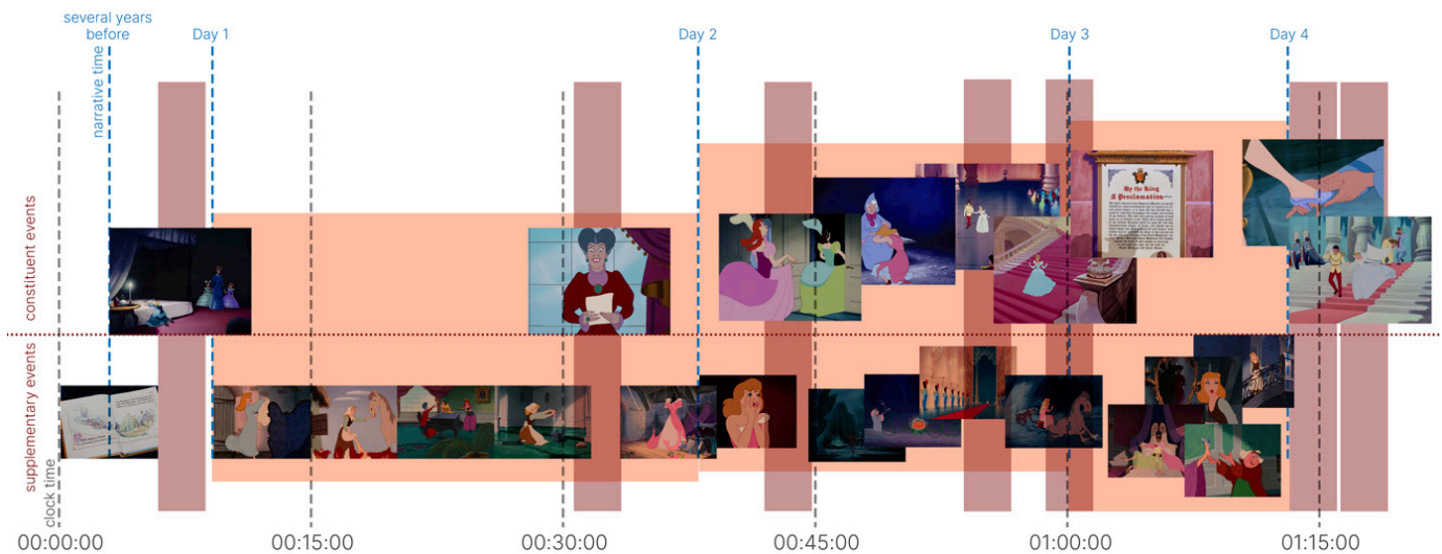
For instance, we can look at Disney's Cinderella movie, where the roughly 3-day events are portrayed into a 74-minute animation (see Figure 1). The first day's pace, the exposition, is slower than the pace of the second day, the rising action. The next day has more primary events, where Cinderella is left by her stepmother and stepsisters to the dance party, encounters her fairy godmother, and finally comes to the castle. All these events were packed faster until Cinderella left the party, where her shoes came off as the climax, in less clock time than the first day.

As discussed previously, audiences of the narrative environment will experience a space chronologically, according to the clock time—which can be recognised easily but is difficult to comprehend (Bodenhamer, 2015). However, a narrative is also related to spatial arrangement. It has a dimension that manifests itself into spatial patterns without the need of following a chronology (Potteiger & Purinton, 1998). It selects, relates, links, and organises places, creating a spatial trajectory (de Certeau, 1984; Doloughan, 2015). The spatial trajectory depends on the interrelationships between spaces that stimulate human perception through their traverse (Coates, 2012; Paramita & Schneider, 2018). The spatial journey is carried out by *going* through direct exploration, considering direction, speed, and time to perceive the narrative (de Certeau, 1984). The act of *going* produces the interactions generated by the sequence, orientation, and spatial placements to shape a spatial trajectory. Through these understandings, the narrative will form a specific spatial trajectory through the relationship of events experienced by the audience.

In a narrative environment, order of events and pace comprise the whole spatial trajectory, which determines the duration of experiencing the narrative environment. Boundaries on the spatial trajectory tend to be established through the spatial organisation, determined by the frequency and duration of the audience's activity that can be defined physically or psychologically (Paramita & Schneider, 2018). Understanding dynamic spatialities and human movement in a narrative environment are fundamental (Paramita & Schneider, 2018). After all, a narrative environment is designed according to expected human movement in it.

Spatial trajectories guide the audiences in doing spatial practices via the connectivity of events and spaces. They can understand the events in a narrative either chronologically or causally through the spatial organisation, in which it will form a circulation path that directs visitors through a map (Ryan et al., 2016). According to Austin (2020), there are three types of spatial organisation: (1) linear, to tell based on chronology; (2) radial, to tell the main object and surrounded by other contextual events; and (3) scattered, used in shaping complex thematic experiences and worlds. Placement of events and content presented in a narrative environment is one way of spatialising narrative that forms relationships between audiences who act as actors, co-authors, and part of the story itself.

We conducted two case studies to explore our understanding of overlapping multiple time layers in narrative environments. As the focus of this study is on the spatio-temporal experience from the visitor's point of view, we positioned ourselves as the first-time audience in a visit to Museum Kebangkitan Nasional, as well as participating in the *Secret Cinema: The Empire Strikes Back* event. We are fully aware that observing our own experience through the case studies might poses a higher risk of bias and subjectivity. However, it also gave us first-hand experience in analysing the narrative environments.

These particular cases are chosen because of their diverse participation forms. Museum Kebangkitan Nasional uses a conventional museum experience through objects, captions, images, and some life-size dioramas to convey their stories. On the other hand, *Secret Cinema* captures its audiences through an interactive cinematic experience to immerse them into the story world. The data is collected by taking photos and counting the time during the experience. For the second case study, we collected in-event photos from various official sources because using a camera during the event was prohibited (to keep it a *secret* cinema).

From both cases, we aim to reveal how the time of the narratives' content is manifested in space and eventually deliver the whole story to its visitor while being contrasted with the "real" time experienced by them. The following section discusses each case starting from their brief introduction, various stories narrated in space, the overlapping time experience, and finally, the spatial trajectories that guided the visitor experience.

Pandemi at the Museum Kebangkitan Nasional

Museum Kebangkitan Nasional is a dedicated museum to the history of the first Indonesian nationalist political society, located in Jakarta, Indonesia. As stated by Museum Kebangkitan Nasional (n.d.), the building was originally a medical school for natives named STOVIA (*School Tot Oplending Van Inlandsche Artsen*) that eventually marked the awakening of Indonesian youth political organisation. It consists of several exhibition rooms with dioramas, texts, and collections of objects located in a building complex. As a historical building complex, the architecture is also subtly telling its story, which potentially creates many modes of the visitor experience and interpretation on top of being a reconstruction of the historical time (Lu, 2017).

There were two permanent narratives and one temporary narrative at the time of our visit (May 2021). The permanent narrative is about the socio-political narrative of the Dutch East Indies up to the birth of the national awakening movement and the history of Indonesian medical education in STOVIA. The temporary narrative back then was the *Pandemi* exhibition, which told the story of various pandemics throughout history. The whole experience created three stories of imbricated museum stories: the permanent exhibition, the temporary exhibitions—not to mention the story of the building itself—and the audience's perceived experience.

When entering the museum, visitors are directed to visit the South area of the museum. The audience went around the museum area by entering the national awakening narrative area first, followed by the temporary exhibition, and ending with the medical education narrative. To softly direct the visitors, some stickers are placed on the floor as a hint to indicate the flow. The narrative of national awakening presents sequences of a story from Indonesia's natural resources that attracted foreign nations to come to the emergence of colonialism in Indonesia to form resistance until the emergence of Boedi Oetomo in

shaping the spirit of resistance of thought. The overall duration of this narration was 1 hour, 10 minutes 36 seconds.

In the embedded narrative—*Pandemi* exhibition—there was a summary of the pandemic in the world from the year 541, followed with the conditions of the Dutch East Indies community in the 19th-century pandemic. The narrative then continues to the history of medicine and the pandemic after Indonesia's independence until the COVID-19 pandemic. The narrative ends with education about vaccines and the invitation to vaccines that have no connection with the historical stories and the condition of society during the pandemic, which can be understood as an ellipsis. It was in line with the 'story' of our world at that time, where the Indonesian government promoted vaccination to combat COVID-19. The total duration of this narration is 45 minutes 24 seconds, so the total spent time is 1 hour 58 minutes 4 seconds.

The last part of the exhibition was the narrative of medical education and STOVIA. In this narrative, several dioramas of the medical education state in STOVIA act as supplementary events. Still, the plot tells the history of medicine and medical education in Indonesia, specifically STOVIA, which tells the circumstances of the meeting of the formation of the Boedi Oetomo organisation to the graduates of STOVIA. The duration of this exhibit was 31 minutes 49 seconds, with the accumulated total time experiencing the Museum Kebangkitan Nasional being 2 hours 26 minutes 32 seconds.

Our journey of experiencing Museum Kebangkitan Nasional eventuates an understanding of the narrative and timing of events. The spatial organisation is presented in a linear flow which surrounds the museum building. By exploring the contents presented in each space, a sequence of events in the plot of the narrative is generated. The narrative shows a sequence of stories as a big idea rather than a chronological one, although each story presented has a chronological order. Narrative movement is also developed through the pace, contents, and activities to experience space. Every object presented, be it texts, dioramas, or collections of objects, can be understood as a scene that comes from the narrative.

Audiences will feel a pause when they stop understanding the events in the narrative, as well as during the process of moving from one story to the next. However, to further help them, the museum provides exhibition rooms descriptions that clarify an overview story of each room. There are also notable lighting plays in showing the exhibits. Every scene is spotted and differentiated by the amount of light. Understandably, each room's central scene or object received more exposure than the others. As a comparison, some extensive information about particular objects and characters that are not influencing the main plot can be understood as the ellipsis. Thus, the highlighted scenes suggest the need for a longer pause which influence the pace of the audience's travel time and perceived narrative time. The lights' positioning can be read then as an expansion of the time in space.
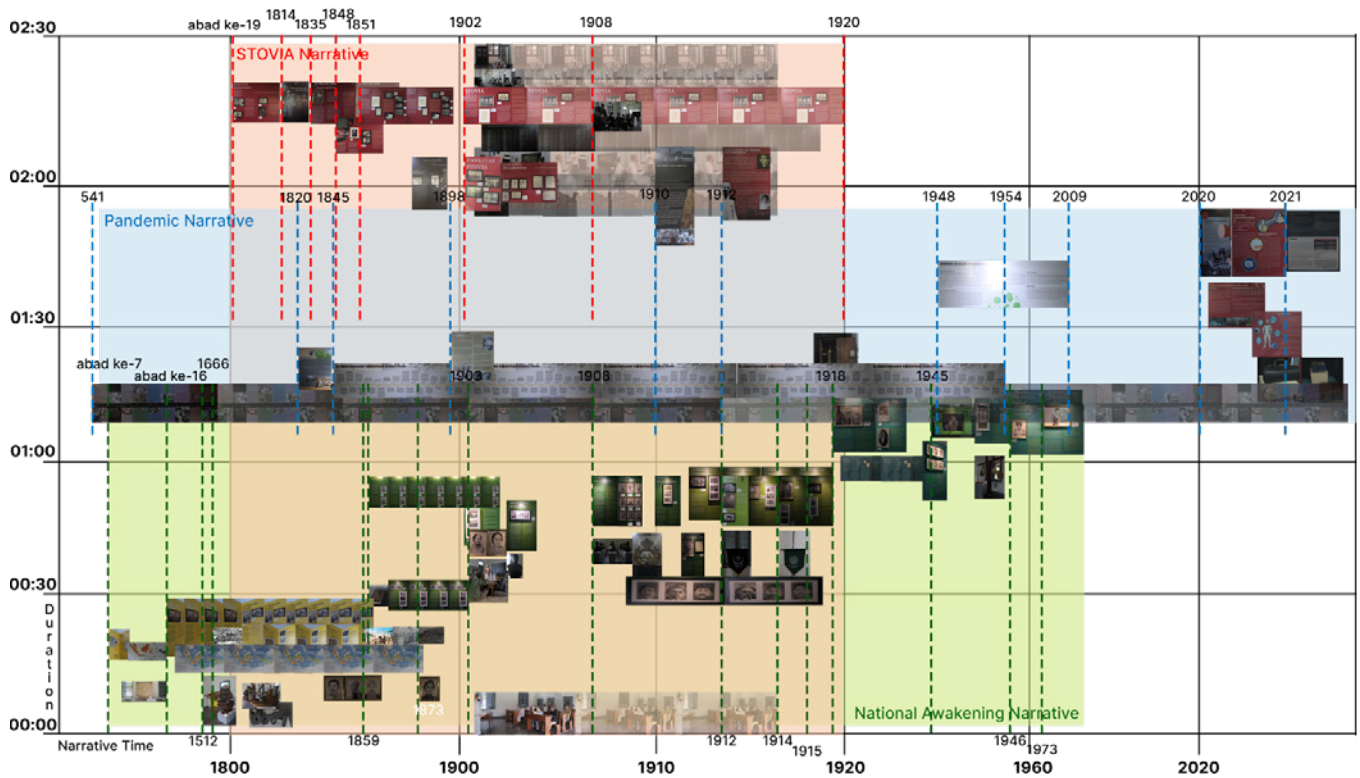
Overlapping layers of time are present due to accumulation of multiple stories in the museum experience (see Figure 2). The existence of the overlapping time devises an understanding of the relationship between events, chronologically and causally. The analysis of the overlapping narratives discloses a causal relationship to the whole narrative. Events that are experienced earlier and have a long-time span are continuous events. They are the cause of subsequent events. For example, Dutch Colonialism had a continuous span that caused physical resistance and developed into a critical resistance through the formation of Boedi Oetomo.

We realised that all the stories lap each other in a sequence while walking through the museum, demonstrating how the narrative time of each area overlaps as shown by the difference in panel colours and explicit text that inform the events' year. In addition, the placement of vaccine education graphics at the end of the exhibition accentuates how it detaches itself from the overall exhibition's flow of time. However, at the same time, we can understand that it still belongs to *that* period and is related to the current real-world time too. Despite those circumstances, the understanding of STOVIA's presence as one of the pioneers of the national awakening movement is still being recognised, which is the place where Boedi Oetomo was initially constituted.

Figure 3 demonstrates the spatial trajectory that is set up linearly around the STOVIA building in the museum. The interrelationships between events composed from the time overlap form a spatial trajectory that connects each event through a spatial narrative flow. The connection between each permanent story presented in both narratives is both

chronological and causal. The chronological relationship is formed through a direct relationship that follows the flow of space formed and experienced, from the earliest space encountered to the most recent space. A causal relationship is also present, although indirectly, establishing a relationship between the two narratives to become a continuous narrative presented at Museum Kebangkitan Nasional.
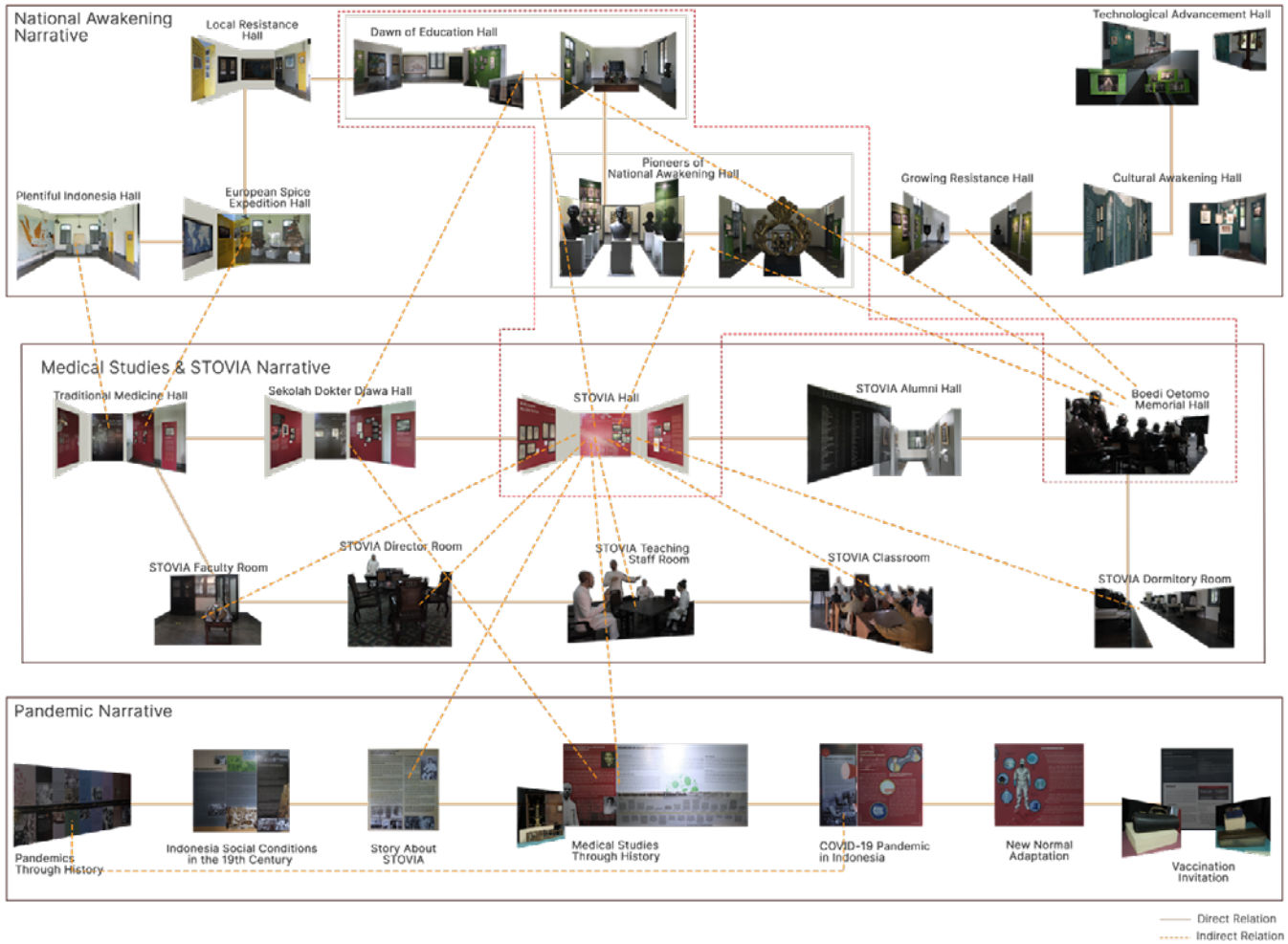
This case study shows that the manifestation of time in space unfold through a more linear museum experience. The plot of each exhibitions' narrative was laid down according to their timeline to guide the audiences to understand the whole story fully. The permanent and temporary exhibitions can be seen as separate exhibitions and have a different focus. However, at the same time, the overarching story was still about the school of medicine and the sense of nationality.

Figure 3. Formed spatial trajectory based on the permanent exhibition's narrative (Image by authors)

Secret Cinema's The Empire Strikes Back

In a secret location, we open up the doors to an evening of suspense and spectacle beyond any film-lover's imagination. Dressed as part of the cast, you can choose to blend right in with the crowd or take centre stage as your reality blurs with that of the story. (Secret Cinema, 2021)

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Secret Cinema is an immersive theatrical experience born from the ideas of Fabien Riggall. It transforms the audience as part of the movie world by having a journey in a secret location. When someone participates in it, they are willingly (and being guided) to dress as the character of the movie and be involved in its scenes most of the time. After living in the story world, audiences will have the movie screening. It could be considered a full-throttle cosplay and become a character in the movie, combined with the cinema experience.

We participated in the 2015 event that brought the classic *Star Wars: The Empire Strikes Back* to life for this case study. It runs for 6 months with around 1500 audiences in a day, resulting in more than 100,000 people at the end of the event (Galusha, 2015). "Secret Cinema's team transformed a 10-acre site in Wapping, London - incorporating an old newspaper printing plant - into locations from Star Wars including the desert town of Mos Eisley and the Death Star" (Rosser, 2015a). In contrast with the first case study, the narrative of the existing architecture is irrelevant in this event.

The narrative of being in the *Star Wars* world started even months before the main event (see Figure 4). After buying the ticket, we were sent a series of emails to prepare for the main event. It involves a quiz to determine our identity (name, role/job) in the storyworld, mainly setting up a secret communication channel as the *rebel*. The emails also informed participants' secret base (a pop-up store to buy costumes and merchandise, although it is not mandatory to have it from there) and a private party (essentially a bar with a *Star Wars* theme). The final email informed the location of the main event and the exact time to arrive. This pre-event synchronises the audiences' clock time with the narrated time, making it a seamless combination of the two worlds. On the way to the main event, the audiences potentially meet their fellow across all transportation modes; tube, bus, walk, or anything else by recognising their costumes. These accidental meetings created a sense of collective identity and expand the narrative further than the actual event location.

Once they arrived at the location, the audiences rode a kind of motion simulator that "transported" them to outer space. After that, they landed on one of the planets in *Star Wars* and essentially experienced the prequel of *The Empire Strikes Back* before they watched it as a direct continuation. Audiences were also given various 'missions' based on their role and got the useful reward to proceed to the next scene.

> The second part of the evening opens up the experience further and feels suitably cinematic, although it wasn't exactly clear where the audience should go or what they should do. Stormtroopers and villainous generals provided an answer to such confusion that encouraged the audience to move along. (Rosser, 2015b)

The overall experience tended to be loose and non-linear with a scattered spatial organisation. The audiences also had a sense of more control over what they wanted to do. They can explore places, encounter the villain, fictionally learn mind

tricks, and hang out at the café (the infamous *Cantina*), all the while doing the missions.

Because the distinction between actors and participants in attendance was never clear (except for the main characters), it felt natural as if the audiences were living a *Star Wars* world. There are also designated surprises that keep the audiences hooked (Galusha, 2015), causing them to understand which minute of the movie they experience. We can see this as the ellipsis, the embedded narratives that revolve around the main narrative. The narrative order is loose in this part, but the plot is kept by unfolding main events in space through time. It could be in the form of some actions from main actors that trigger the next event or a straight direction from the crew that affect the movement of all participants, leading to the progression of the plot.

Figure 4. Time overlaps in Secret Cinema: The Empire Strikes Back (Image by authors)
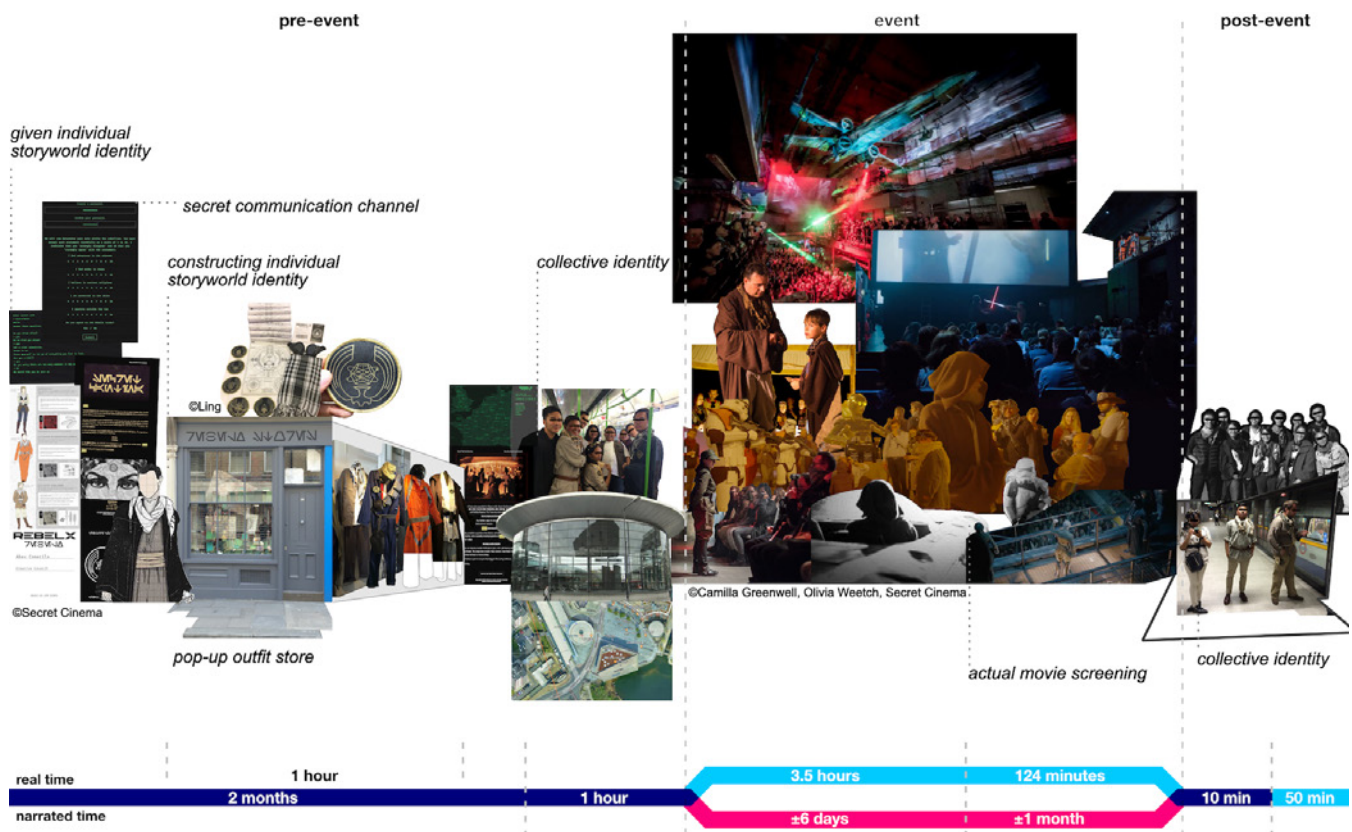
In terms of pacing, it has a slow one at this point as they intentionally let the audiences explore and be immersed in the story world. However, it became fast when the event progressed towards the end of the prequel. People were invited to enter a 'spaceship' once they retrieve a reward from their mission, and the actors would give to those who do not yet have it. It leads to a rectangular area where all the audiences were gathered and just watched the actors play the last act of the prequel. The total duration of this stage was about 3.5 hours which were compressed to roughly six days in the narrated time.

Instantly after that, the audience was directed to another big room to watch *The Empire Strikes Back*, something that should have lasted for at least three years in the original launching of

the two movies, and unknown—but not in an instant—narrated time. Just like how we watch it in a non-secret-cinema, it took 124 minutes of our clock time that compressed the roughly a month event of the narrated time. Then, the event ended, but its narrative would still leaked for several moments through the existence of the audiences in costume passing by around the area on their way to return home.

We want to highlight a few more aspects of this theatrical event in relation to how time is spatialised. First, the black screen transition in a typical *Star Wars* movies fashion indicate the changing of its temporality or its spatial settings. This transition translates as a gradation of the environment setting. An example is when the participant was going through a restricted spaceship area once the overall progression of the movie is reached. Such scene was mainly achieved by the play of lighting, where a spaceship can turn into the *death star* and then moved forward to the last scene of the prequel. By making the environment dark with a ray of blue, red, or green, the audiences are given the illusion of moving places in *no time*. In this case study, the play of lights successfully transported the participants through different times of the movie even though they were essentially existing in the same physical space.

Secondly, spatial trajectories in the event were quite chaotic in its prequel movie part. The trace of participants' steps was apparent as the ground was covered in sand. Nevertheless, the actual trajectories were more complex as they depended heavily on each audience's role. Once the audience moved into the spaceship until the end of the experience, the spatial trajectories were rather linear and more straightforward because it was the only path the participants can experience. The distinction between the live scenes was also recognisable because it is part of the movie's iconic key events. Again, the smoothness of this narrative environment is helped by its targeted participant being the movie's fans, who already have the overall plot and order of the story in their mind.

Conclusion

We may conclude that in a narrative environment, time is vividly apparent. As an essential part of representation, it is experienced through our awareness of the stories' order, plot, pace, and duration. As reflected in both case studies, one narrative environment might have more than one yet interconnected timeline and stories. Narrative movement can be presented as one of the new qualities of time in space. The sequence and the interrelationships between events form a spatial trajectory that gives the audience an understanding of the whole narrative. They experienced all spatial acquaintance with the "going" process, exploring directly through the designed environment.

The story's internal narrated time and the real-world clock time always exist in every narrative environment. Both times can overlap, intertwine, or stand independently, but still forming a spatial trajectory which shows the relationship

between chronologically and causally related events. Designers present such trajectory by ordering events chronologically and seeing the cause and effect of an event through a time span jump. Spatial trajectory connects events of narrative through the sequences constructed in the plot.

Time can be spatialised through the explicit transition of graphics, a play of lighting, and overall spatial organisation. In Museum Kebangkitan Nasional, the transition of graphics and objects dominates the space as the stories being told are targeted to educate a broader audience. So, there is a need to give the information more explicitly. In contrast, in the *Secret Cinema*, it is almost non-existent as the event was aimed to be an immersive cinema experience. Because the audiences are fans of such pop culture, they project the narrative to their experience without the need for an actual text. It is more vital for them to be a part of the storyworld rather than knowing everything about it (as they might already know anyway).

Regarding the play of light, we can see how it is used in both cases, although with different implementations. The museum used it to highlight the main attractions in the room, giving it a pause for the visitors. The lights emphasise the clock time; how its intensity and scope give more *time* for the exhibit to be enjoyed. It suggests the pace of the exhibit's particular scene that led to the duration of the audience's visit. A more dramatic play of lights works in the second case study to inject a sense of time skipping in the narrative. The changes in light colours gave a different atmosphere to the space and created an illusion of certain events in the narrative's plot. This one focuses on the narrative time, as the play of lights is performed prominently in the latter phase of the event; it controls the fast-paced narrative that progresses the participant through the climax.

The various spatial organisation also helps the narrative to be told and presented in space. By understanding time in narrative and the sequence of events formed in space, the audience will fully engage with the space and its stories. Both case studies demonstrate how linear and non-linear spatial organisation can convey the plot effectively. The audience might experience the ellipsis in a different order or even none at all. Nevertheless, in both cases, the space conductor ensured that the main events would be understood.

That being said, these three findings do not intend to be the only factors in spatialising the time. Neither do they all need to be present in every narrative environment. As stated earlier, our first-hand experience might have enriched the findings to be more personal and authentic to the audience's perspective. However, it may influence limitation of this study in gaining more objective findings. Further research could benefit from following or interviewing third party respondents to collect new sight on this matter. Penultimately, we hope time could be seen in a more in-depth way in the architectural practice—especially in a narrative environment—as part of a quest to adapt to the space scarcity.

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