

5 Story Telling

Having looked, in the previous chapter, at some of the ways content is defined, sourced and structured in narrative environments, this chapter explores how content is *told* in narrative environments, a process of telling in which space acts as a medium of communication. This chapter looks more closely at the relationship between the narrative and environment nodes in the tripartite narrative environments network. The examples below demonstrate that the spatial dimension of narrative environments has often been considered secondary to the content; in other words, the narrative node in the three-node network has often been privileged over the environment node. This is partly because of the higher status afforded to the written word over the visual and the spatial. Language is conventionally seen as anchoring communication and meaning production, despite, as W. J. T. Mitchell (1996 and 2003) argues, word and image being inseparable and all media being multimedia because they open out onto each other. It is also partly because space is so much part of our everyday lives that it is taken for granted (Perec 1997; Massey 2005) and its communicative capability is overlooked and underestimated. Finally, it is also due to a lack of vocabulary for articulating knowledge about space as a medium of communication, outside the specialist discourses of architecture, design and phenomenological research concerning the impacts of space on experience. The intellectual, emotional and physical effects of spatial environments are felt by everyone in their daily lives, but the words, methods and diagrams used to analyse, develop and produce space are not readily available or generally circulated. Space is often considered a technical and functional aspect of the world, but the examples below show its pervasive role in communication, argumentation, the formation of individual and social identity, as well as economic and political narratives.

Following narratology, storytelling, sometimes called narrative discourse (Chatman 1978), involves the organisation and expression of the events and the transformation of characters or entities which result in the rise and fall of dramatic tension. In literature and film, dramatic tension emerges through the causal relationships between one event and the next and this is called the plot. The twists, turns and unfolding of the plot and the changes to the characters keep the reader's or viewer's attention and it is tempting to map the notion of plot onto narrative environments. However, plot is an ambiguous and contested term with at least three different interpretations. Firstly, sometimes plot is used as a synonym for story. Secondly, sometimes it is used to describe the chronological sequence of unfolding events in linear narrative media. Thirdly, it is taken to mean the causal link between one event and another that generates anticipation, ambiguity, surprise or revelation. The third interpretation is of great interest to the inquiry here, which explores how narrative environments generate drama, but due to its ambiguity, the word 'plot' will be avoided. Instead, the phrase 'dramatic arc' will be used.

Dramatic Arcs

Dramatic arcs follow the rising and falling action which move stories forward. Movement is key to the notion of dramatic arcs. Stories follow a pattern; they rise to a peak of tension or climax and then taper off towards resolution. This understanding of dramatic structure was diagrammed and described as a narrative arc by the German novelist and playwright Gustav Freytag (1900) who analysed ancient Greek and Shakespearian drama. The single arc visualises five parts or acts: exposition, rising action, climax, falling action and denouement (Figure 5.1).

According to Freytag, exposition introduces the context and current or normal state of affairs. It is where audiences first encounter characters and their backstories enabling them to envisage the world of the story. In plays and film, this is achieved through the actions and dialogue of actors in designed or selected spaces, although the exposition is occasionally delivered through a live commentator in plays or a voice-over in films. As dramatic conflicts are introduced, rising action is developed through a series of events. Audiences identify with the characters and empathise with their situation as they face growing challenges and dilemmas. This prompts the audience to imagine the consequences of the characters' actions and potential actions. The climax is the most extreme moment, the turning point, which shapes the main character's fate. Falling action charts the steps in the triumph or tragic downfall of the main character and reveals the outcome of the catalysing conflict. As matters are resolved the character returns to normality but is nevertheless transformed by their experience. The audience shares a sense of catharsis or release from tension. The denouement describes the outcomes of the resolution.

Freytag intended his pyramid to be a guide for writers to plan dramatic arcs. To an extent, Freytag follows Aristotle (1996: 13) who defines a play as a single whole with a beginning, middle and end. However, Aristotle described a two-part structure, complication leading to a metaphorical knot followed by the unravelling of that knot. The Roman

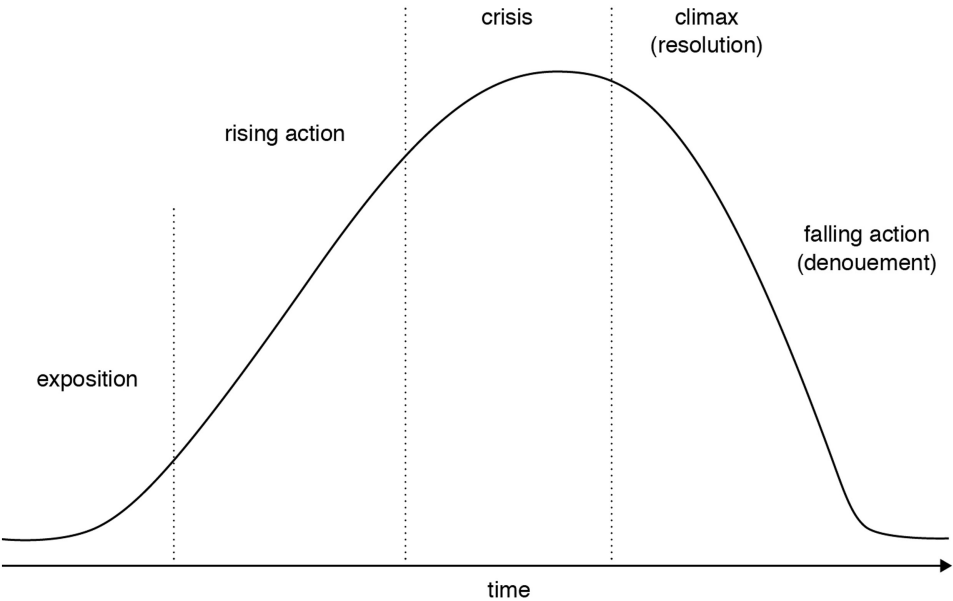


Figure 5.1 The narrative arc.

lyric poet Horace argued there should be five acts in a play. Others have explored three-act, four-act, six-act and eight-act structures. Experiments in modernist and postmodernist playwriting have produced plays with numerous acts. However, no matter how many acts are conceived, there still remains a dramatic arc.

Dramatic arcs unfold in relation to events but increasing the number of events does not necessarily increase the dramatic tension. It is their arrangement and relationships that amplify dramatic tension. There is a debate in literary circles about how many events or changes in state are required even to create a story. Some theorists maintain that just one event can constitute a story (Porter Abbott 2002: 12). Others maintain there should be at least two events (Barthes 1977), and some that events should be causally related (Bal 1997; Bordwell 1985). The view taken in this book is that narrative environments may vary from representing just one event to multiple, strictly sequenced events or multiple non-sequenced events. An example of a narrative environment with one main spatial event is Bunker 599, a national monument in the Netherlands. It takes the form of a single powerful gesture. In 2010, the architects Atelier Lyon and RAAAF 9 (Rosenfield 2013) sliced a passage through a redundant Second World War concrete bunker originally built in 1940. A long wooden boardwalk defines the slice and leads visitors through the bunker and out onto the adjacent water. To those who know the history of the Second World War, the slice evokes the intertwining of landscape and war in a remarkably poetic and concise way, compressing the events of the Second World War into a single resonating experience (Figure 5.2).

By contrast, multiple events can be represented in the chronological strategy taken by the world-renowned Holocaust Museum, Washington. The story is structured as a



Figure 5.2 Bunker 599, RAAAF | Atelier de Lyon, the Netherlands 2012.

three-part unfolding sequence with causal links. The extraordinarily moving exhibition starts on the fourth floor with 'Nazi Assault, 1933 to 1939'. It moves to 'The "Final Solution" 1940 to 1945' on the third floor and then to 'Aftermath – 1945 to present' on the second. It finishes with the Reflection Space that aims to give audiences an opportunity to digest their experiences and transition back to their everyday lives.

Historical examples also reveal a structuring, sequencing and intensification of experiences through particular ceremonial spaces. Rising action can be designed into a space by the careful sequencing of zones, for example, Peng Liu (2018) describes how provincial officials, going to meet the Emperor in Imperial China, would experience rising levels of bodily restraint, physical discomfort and anxiety as they were escorted by eunuchs on the 2-kilometre procession through the multiple courtyards of the Forbidden City in Beijing. The bodies of the officials were disciplined to become docile (Foucault 1991: 138). During the walk, the silenced officials, wearing cumbersome ceremonial clothes, instructed to walk calmly and steadily, became disorientated and exhausted and ever more aware they were exposed to scrutiny as they crossed the vast squares. Their sense of fear gathered momentum as they moved ever more submissively, eventually kneeling in front of the Emperor. Here space and body interact to reinforce powerful political and social hierarchies.

Human Movement through the Story

Human movement through space, engaging with a narrative dramatic arc, is not just a means of getting from 'a' to 'b'. It is a highly symbolic passage. Parades of sacred images or objects and processional performances, structured according to a certain pace and rhythm, are examples of time-based spatial narratives. They have a spatio-temporal start and end. However, many narrative environments are more open to the visitor to decide on the duration of the experience. This is true for visitors to exhibitions, memorials, themed hotels, branded urban quarters and participatory art installations in the public realm. Duration is nevertheless a meaningful design consideration. It is one of the dimensions that links story content, story telling, audience expectations and spatial context. It follows that the framework of visitors' interaction with the space needs to be designed. Visitors may stop, enter installations, touch, listen, take photographs and speak to each other. These opportunities for interaction are often envisaged by using visitor experience storyboards.

World expos and theme parks are interesting, as a genre, in their structuring of the temporal system of visits. Visitors are often pulsed through zones. Some walk-through experiences at Disney, for example, will admit a certain number of visitors and give them a five-minute media introduction before doors open to the next zone. The next group of visitors are then ushered in. In subsequent zones, the exhibits are designed to last no more than 30 seconds to a minute so that the designers can be sure the small crowd will move on rapidly. Regulating crowds can be achieved by putting in spectacular rides as part of the linear journey. At the *Titanic Experience* in Belfast, designed by Event Communications, about half-way through the exhibition, visitors can ride in pods that shuttle them through a three-dimensional, life-size representation of the ship's internal construction, diving up and down, moving towards and away from the giant infrastructure. Visitors then emerge to experience further object displays and media environments. Interactive experiences are also timed to pulse visitors through. For example, at the Playzone at the Millennium Dome in 2000, Land Design Studio, who pioneered interactive narrative environments in the UK, enabled children sitting on a big bed in the centre of the 'bedroom' to transform the bed imaginatively into a boat by

pretending to row and, as a result, triggering media on the walls taking them on a virtual journey down the Amazon River. Once they had ventured down the river they moved on to the next experience. Movement and capacity are key design considerations if the experience is expecting thousands of visitors a day. Design can also be used to *increase* visitor dwell time, often desired by the cultural, retail, urban development and tourist sectors. Increased dwell time is achieved by adding a variety of experiences, providing social spaces, designing engaging content, rich activities and, importantly, offering safe and convivial places to rest.

Symbolic bodily movement through space is also present in one strand of modernist building design. The twentieth-century architect Le Corbusier (1995), writing on the architectural promenade, describes incremental points leading up to the threshold or entrance to the building which marks the transition between two realities. He is renowned for designing the pivoting door which serves both to unite and divide the exterior and interior. He calls the space immediately after the threshold the sensitising and reorienting vestibule. This is where people become accustomed to the different atmosphere inside the building. Corbusier envisaged moving from the sensitising vestibule to a large open space which he described as *savoir habiter*, which translates as ‘knowing how to live’. Here people can make their own choices about where to go in the space, nevertheless, in his design, Corbusier draws attention to a material focal point, frequently a staircase which takes visitors upwards. This reorients them, literally elevates them and delivers them to the roof as the culmination of the journey. According to architectural academic Flora Samuel (2010: 66), this underlying sequence is a hallmark of Corbusier’s buildings and she describes the pattern as “Le Corbusier’s narrative path”. Corbusier used stories, such as that of Orpheus, Mary Magdelene, Rabelais’ Panurge and Theseus as well as the Christian story of Jacob’s Ladder, to coordinate the bodily sequence and spiritual progression, often with a redemptive character. As the writers and designers above concur, spatial sequencing is a powerful structural device for the design of meaningful spatial experience.

Considerations of spatial orientation and symbolic sequencing reach beyond functionality. In the design of narrative environments, the triple movement of the body, firstly, over time, secondly, through different spaces and atmospheres and, thirdly, through different representations of content is crucial to shifting visitors emotionally, intellectually and normatively away from the expectations of the everyday and into the world of the story. Sudden changes can disorientate and unsettle audiences. In order to build anticipation, designers need to enable audiences to savour changes. Anticipation is key to audience engagement. Anticipation in narrative environments is created by structuring the communication with audiences. In conventional rituals, such as weddings or funerals, the spatial steps and bodily codes of behaviour, expectations of the sequence of the narrative arc, are passed down through multi-generational cultural practice. Novel narrative environments build on and transform familiar sequences, beginning with invitation to enter and take part, which might take the form of verbal or textual address, print or digital media, or indeed be physical structures such as welcoming or intriguing entrances. Anticipation can be heightened by seeing the entry structures from afar, reinforced by cues at the threshold, such as posters, sculptures, or even glimpses of, or symbolic references to, the forthcoming space. People will not generally venture into a spatial environment unless they recognise what it is offering. Anticipation is sustained through narrative environments partly by the unfolding story but also by having a mental model of the space gleaned from a map and/or, for example, panoramic views offering different clusters of material to look at, touch or listen to.

Making attractive and inviting places is important to the commercial sector, where the notion of experience design has deep resonance. Commercial narrative spaces have been developed all over the world in the form of shopping malls, theme parks, brand visitor experiences, restaurants and hotels. Massive investments of money and thought have been made into how to create successful commercial narrative environments. Christian Mikunda (2004), Austrian experience design writer and consultant, has written several books on the topic, bringing spatial dynamics, cognitive theory and marketing together. Mikunda discusses brand spaces, recommending ways marketers can sequence space and make them coherent, enjoyable visitor experiences and successful commercial spaces. Mikunda argues Baroque castle grounds are the prototype for all staged places because they were designed to delight. He claims their principles translate into shopping malls, hotels, entertainment complexes and theme parks. He cites the gardens of Schonbrunn Castle in Vienna where people would traditionally promenade on Sundays. He suggests visitors relish the view of the central axis between the castle, its flight of steps and the Gloriette, the imperial pavilion on the slope opposite. They stroll down the central axis which is visually reinforced and punctuated by statues set against pruned trees and floral arrangements. The main axis is crossed by several smaller axes, “drawing visitors’ attention into the distance” Mikunda (2004:18). The smaller axes lead people to well-remembered or mnemonic locations, such as the old maze or the palm house, that they regularly revisit, not unlike visiting an old friend.

Mikunda (2004: 13) identifies four specific spatial characteristics he believes are needed to create rewarding visitor experiences in commercial environments. They are landmarks, the encouragement of strolling along axes, concept lines and core attractions. He argues landmarks attract our attention and draw us in. Shop windows, views into restaurants, advertising billboards and human activities all vie for people’s attention as they move through cities. For landmarks to be effective, they need to be more spectacular than their surroundings. Some may use scale, for example, the London Eye, which reaches high above neighbouring buildings and the River Thames. Large-scale, symbolic architectural form, decorative motifs and courtyard spaces were deployed to produce grand, elaborate nineteenth-century museum entrances, such as the British Museum, fashioned after a Greek temple with a vast forecourt that frames the facade. Twentieth- and twenty-first-century museum architecture has produced dramatically shaped buildings that attract attention through their aesthetics and apparent technical prowess, although many of these are heavily criticised for being unfit for purpose in many other ways. Shops may use what Mikunda calls a ‘header’ landmark, by which he means a large symbolic object at the entrance or on the facade to attract attention. Another landmark device is a form of dramatic reveal where passers-by can see through facades of shops, restaurants or hotels to glimpse a core attraction inside. These spatial devices parallel visual attention-seeking devices developed in print and digital advertising.

Mikunda writes that once attracted through the entrance, brand spaces such as malls and entertainment centres need to encourage people to stroll through the space and make purchases. To encourage potential customers to circulate, malls need to encourage a searching and finding state of mind, by enabling the customer to develop a cognitive map which aids navigation but also brings the comfort and pleasure of knowing a space. The requirement for the visitor to develop a cognitive map is equally true for museums, theme parks and city centres hoping to attract tourists. Whether as visitors or customers, people need to internalise the main axes and crossings in malls in the same way they might explore a city, by walking down the main street and looking down the side streets. The axes lead to central squares or mnemonic points which, in a city, might be a

Cathedral or a monument but in a shopping mall might take the form of a flagship store or an indoor fountain. As visitors walk, they build up a sense of districts to produce a cognitive map. Districts were traditionally distinguished in cities by clusters of similar shops, for example, bakers, butchers and furniture-makers. In shopping malls and entertainment hubs this typically translates into the café and restaurant area, an entertainment area, a fashion area and a digital technology stores area. Signage is provided in-store to help customers build their cognitive maps. Some visitor attractions, such as large zoos, offer a paper map or an app. Brand experiences, such as Disney, have a hub-and-spokes layout, with the castle in the centre that visitors can see from any point. They are never lost. Others, like Tivoli Gardens in Copenhagen, the first amusement park ever built, are designed as a maze, where you very quickly feel lost. However, Tivoli provides a new surprise around every corner which stimulates a sense of adventure and *dérive*. The serpentine format also creates the illusion that the space is larger than it actually is.

Mikunda suggests that, since shopping malls and brand experiences are often very large, they need concept lines: an overall story and set of messaging with what might be called leitmotifs or recurrent themes that are repeated every so often to create a sense of a whole. This was embraced as ‘theming’ in the 1980s and early 1990s, using imagery from popular movies to create the feel of, for example, the Wild West, sci-fi, the circus or the rainforest, conspicuous in themed restaurants such as Planet Hollywood. These fell out of fashion, becoming associated with superficial staging that did not relate to the brand. As a result, visitor experiences were refocused to emphasise characteristics more related to the actual location, the history of the location or the brand, for example, sparkling immersive environments at Swarovski Crystal World in Tyrol, Austria.

Mikunda’s final key characteristic is the core attraction. He gives the example of acrobats moving up and down ropes to select bottles for customers from the 17-metre-high wine store in the middle of the Aureole restaurant at the Mandalay Bay Resort in Las Vegas. The wine cellar, normally below ground, has been turned upside down and this unexpected inversion adds to the spatial height effect. Mikunda describes core attractions as mechanisms to create anticipation and internal suspense. He describes them in terms of cognitive dissonance: a pleasant experience that, according to the dramatic arc, needs to be released through a spectacular experience. Other examples are the fountains at the Bellagio Hotel, Las Vegas, fireworks on New Year’s Eve and sky laser shows. These light shows are often accompanied by music and attract enormous crowds. Projection mapping technology has provided the means to create such large-scale events to promote brands and cities.

Weaving Story into Space

Some of the most explicit tools and techniques for weaving stories into space have been developed in exhibition design. Duncan McCauley is an award-winning exhibition design company based in Berlin which works predominantly for museums and cultural institutions. It was founded by architects Noel McCauley and Tom Duncan in 2003. They have developed a dynamic process to combine content and space in the development of exhibitions. This process reveals how content is often shaped and inflected by the space it inhabits. Noel McCauley (2018) explains that, in the cultural sector, there is always content at the start of a project. This is mostly gathered by the museum or specific curators who may be cultural historians, art historians or archaeologists. Public bodies, such as national museums, will already have had to get the project signed off by a public funding body before they come to Duncan McCauley, so they normally have a very clear

and specific idea about what they want to say and where the exhibition will take place. Sometimes, they have a more generalised idea and ask Duncan McCauley to do more content research in order to turn the material into a format that will engage visitors. In the Brickworks Museum, Zehdenick, Germany, Duncan McCauley gathered information from historical witnesses and complemented this with archive material from public institutions to create a narrative structure that contextualised the industrial and social heritage of the site. The development of content in parallel with the design presented the opportunity for content and design to cross-influence one another to shape the narrative.

Duncan McCauley finds content often comes in the form of raw information, not story. It naturally reflects the professional standpoint of the subject experts; for example, a cultural historian may have a timeline of dense information in text format and multiple objects to back it up. To become a story, the items of information and objects need to be combined by identifying an overarching connection among individual pieces. To do this, all material needs to cohere around an organisational thread or storyline, structured so that the spatialised ambience conveys rising action and dénouement and moves the story forward. There is also the question of the transformation of the visitor as protagonist. Some exhibitions are more like literary narratives, in that they represent characters or entities as protagonists who transform as a result of the story. As in film, theatre and literature, the visitor identifies with that transformation and is transformed in turn. Other exhibitions do not have a literal depiction of an entity's transformation but the physical experience of moving through the space conveys a sense of transformation which is experienced implicitly through the bodily sensations of the visitor. In either case, there is a cumulative effect that initiates transformation in the story and the visitor. Some of Duncan McCauley's projects can be compared to novels or films that have one overarching dramatic arc; others are more like a collection of short stories or episodes in a television series. Sections of exhibitions can be quite different from each other; they may jump centuries, introduce new ideas and use different visuals, materials and spatial layouts in different sections, but all the sections need to add up to a whole when the visitor reflects on the entire experience. For example, in *Botticelli Reimagined* at the V&A, London, designed by Duncan McCauley, the exhibition spaces varied from a dark and elaborate entry to a final white space gallery (see Plates 1 and 2), but the narrative about Botticelli and his influence on others created a coherent whole.

Duncan McCauley often begins a project by running workshops to tease out the key messages and the main elements of the narrative that the client wishes to communicate. McCauley says it is always worth discussing with the client whether a story format is even appropriate. However, using story as a means of communication is often chosen because spatial story can translate information into a temporal, causal and physical experience, distinguishing it from the overload of information already in our environments. Duncan McCauley believes translating information into stories makes the information more accessible, engaging and memorable. McCauley explains that the storyline can be inspired by the space. At Vischering Castle in North Rhine-Westphalia (Münsterland), the existing rooms in the castle were spread over three separate levels with access and vertical circulation across a central courtyard. Not only did the structure and pacing of the spaces influence the narrative but also the atmospheric qualities of the individual spaces themselves. In Vischering Castle, three self-contained storylines were developed to exploit the existing situation, but all used 'mindfulness' as the central tone of voice as a unifying device.

The sheer volume or scarcity of content also needs to be considered against the space available. Long and complex stories can be compressed into video to fit in smaller spaces

and short pithy stories can be expanded by adding more contextual information, multiple perspectives or critical commentary. As a result, content always needs to be edited or expanded. This can take lengthy conversations to accommodate the vision of the curatorial team. Specialists from two different backgrounds, curating and design, need expert skills in negotiation and trust building because they are making something neither could do alone.

The division of content into subsections or chapters will also be affected by the nature of the space. A space with five zones, for example, will lend itself to five story segments. McCauley (2018) explains,

In most museum spaces, particularly historical buildings, there is a strong spatial sequence and the narrative cannot easily break out of that sequence. The story has to be structured to fit the space. A fork in the path with a choice of left and right needs to be reflected in the narrative structure. There needs to be a fork in the story. The story is more malleable than the place you are telling it in. The story and space need to work together as in the three-way fork in the basement of the Jewish Museum in Berlin [for example].

Not only does the story have to align and resonate with the space, it needs to unfold over the particular period of time of a visit and provide a rising and falling emotional journey for the visitor. Some exhibitions are designed to be longer or shorter than others. Duncan McCauley integrates all these factors into diagrams through a process they have developed which they call ‘emotional mapping’. Sometimes Duncan McCauley’s diagrams are just words, sometimes they are words and images but they are always trying to capture space, content, what the visitor is doing and what the visitor is feeling. In their emotional maps, time lies along the horizontal axis and the other dimensions are on the vertical axis as shown in Figures 5.3 and 5.4. Narrative structure is an important part of their planning process and they often reference film in creating a framework for a museum experience (Duncan 2018).

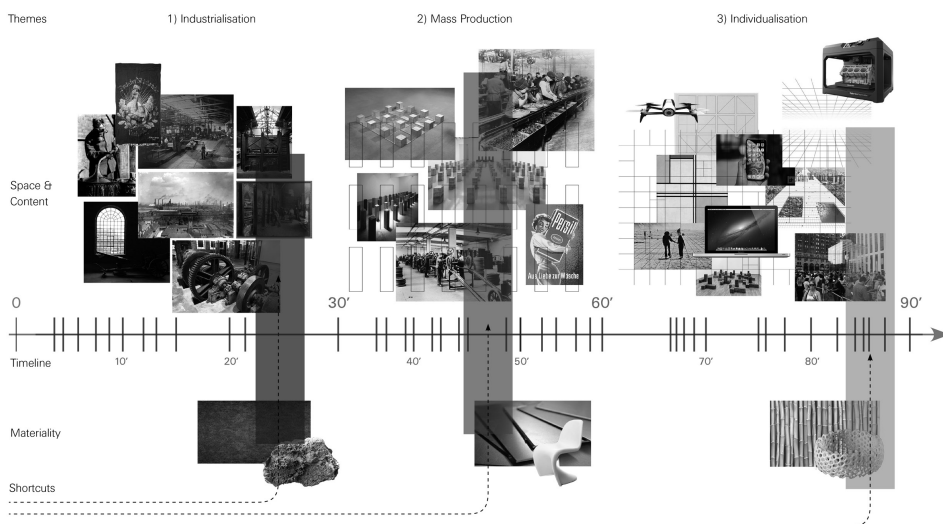


Figure 5.3 Emotional map of the Potsdam Museum, Germany, Duncan McCauley, 2013.

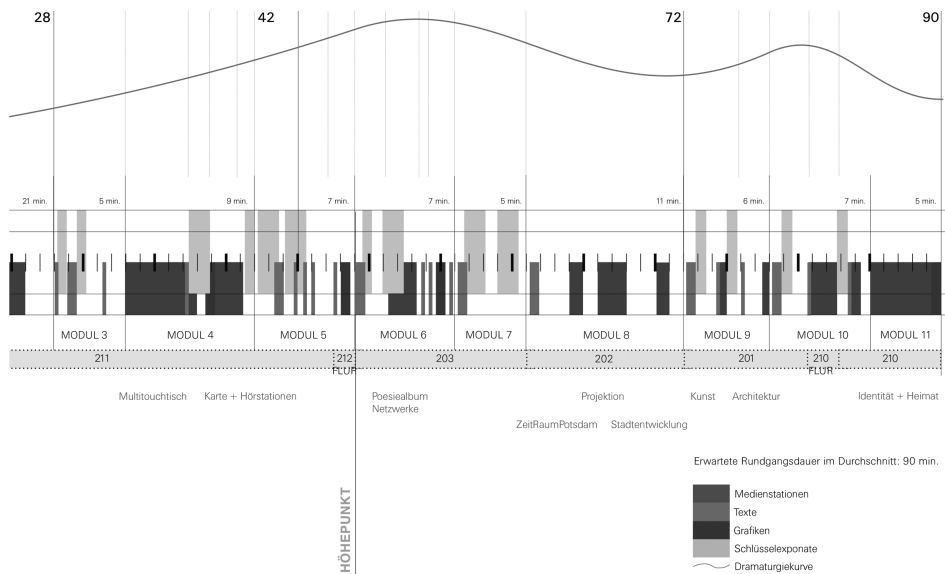


Figure 5.4 Emotional map of the Industriemuseum Oberhausen, Germany, Duncan McCauley, 2018.

In the processes of emotional mapping, Duncan McCauley works together with specialists in spatial communication and specialists in content development to evolve the storyline and envisage the visitor experience. They use a verbal and visual approach, talking through the content, referring to written documents but always alongside architectural plans and images of objects. As they are creating something visual, the discussion needs to be supported by a plethora of visual materials. The exhibition team debate the merits of potential configurations and sequences to judge how particular information or objects would create meaning in a specific room and how this would relate to the next room, creating dramatic tension and moving the story along. They sketch out the dramatic structure, the series of dramatic peaks, through careful placement of objects, using the media that best suit the communication of the content:

The content and space both play a role in the experience, sometimes the space plays a stronger role and sometimes the content plays a stronger role [...] sometimes the space will force your hand.

(McCauley 2018)

Duncan McCauley thinks through story, object, spaces and media at the same time. The emotional map starts as a rough sketch and evolves in parallel with discussion. It is important to the emotional mapping process at the design stage to be able to envisage the exhibition through the eyes of the visitor. Duncan McCauley often employs role playing activities, which not only bring the design team and the curatorial team closer but help everyone to envisage the expectations and potential experiences of possible individual visitors. At an early stage, they bring in a huge floor plan on a large table at a scale of 1:50 or 1:25. They have figures cut out, for example, groups of three young people, a mother, father and child group and a group of 20 older people. For the role play, they

give cards out to the client; they write down names, ages and expectations of the characters they are playing, put the figures into the floor plan and introduce themselves to each other. Everyone feels free to speak because they are no longer in their professional roles. Duncan McCauley also provides a long sheet of paper with areas on it for the comments. This process of role play loosens people up, gets them thinking imaginatively and throws up new ideas.

Duncan McCauley has developed three spatial typologies: linear; radial hub-and-spokes; and dispersed, multidirectional spaces, such as multiple islands in a single exhibition space or the multidirectional urban context. Linear spaces are useful for chronological stories. Hub-and-spokes are useful for stories with a hero object that can be placed in the centre of the space surrounded by contextual information. Multidirectional spatial arrangements with dispersed stories are useful for thematic experiences and complex worlds (Figures 5.5, 5.6 and 5.7).

Tim Gardom Associates Communications (2006: 37), who pioneered interpretive planning in the UK, has worked closely with exhibition designers for many years and developed a comprehensive range of spatial typologies for narrative environments that they call storyshapes. On the prescribed route, visitors cannot turn back and this is fitting for chronological stories where the understanding of each element builds upon what is seen before. Linear visitor experiences can be further articulated in various ways such as 'the inner sanctum', which build on visitors' anticipation, concealing the hero elements until visitors reach the dramatic reveal. Pulsed flow is also prescribed and is commonly used in expos and theme parks, as described above, to control the flow of visitors. In

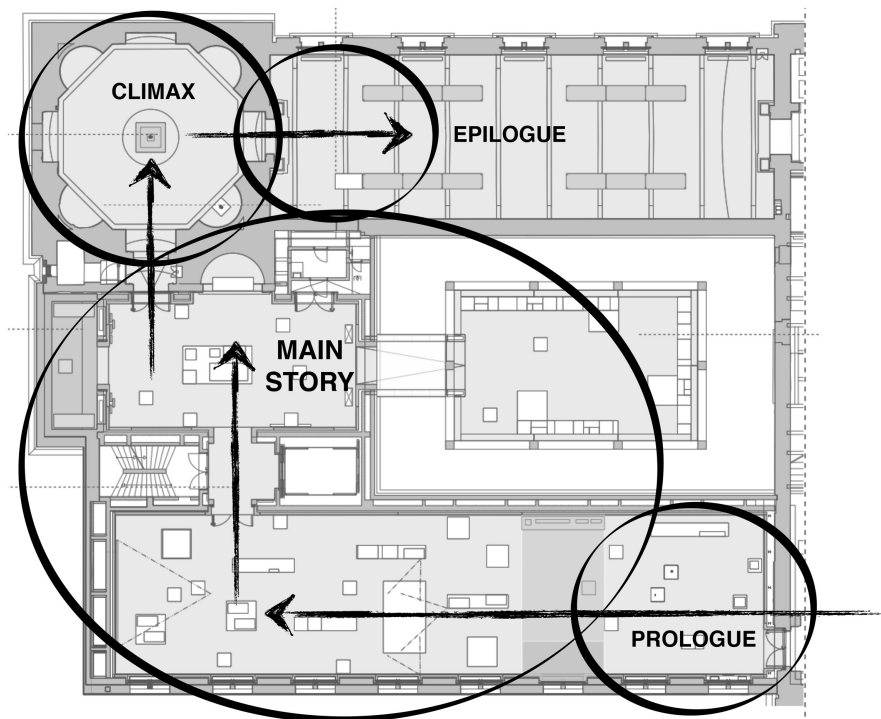


Figure 5.5 Linear narrative format of the exhibition *In the Light of Amarna* at Neues Museum in Berlin, Duncan McCauley, 2012.

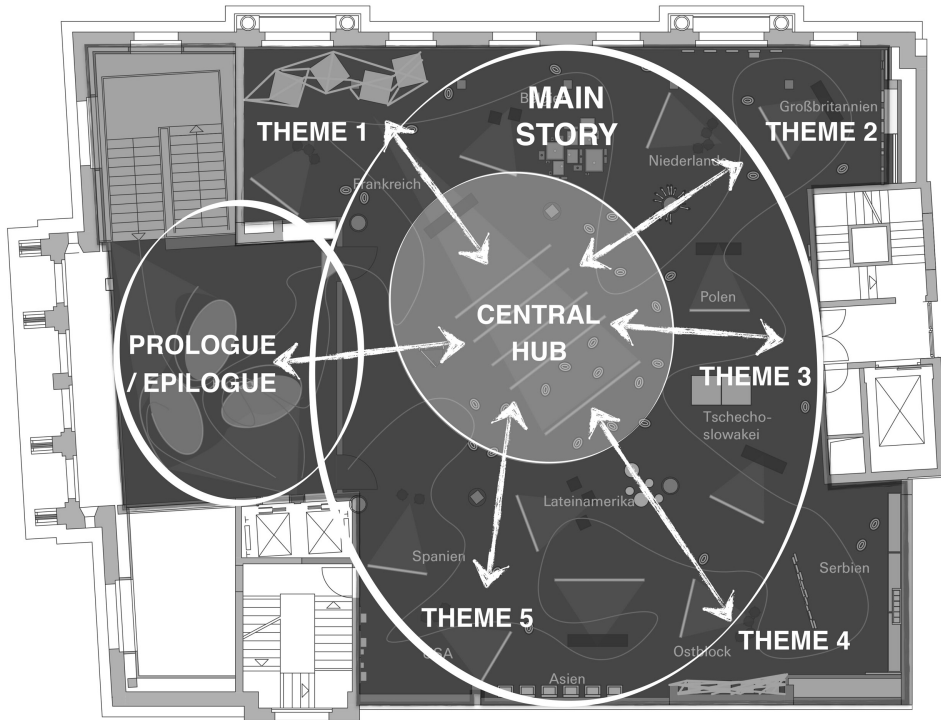


Figure 5.6 Radial format of the exhibition *Conscious Hallucinations: Surrealism in Film* Deutsches Filmmuseum, Frankfurt am Main, Germany, Duncan McCauley, 2014.

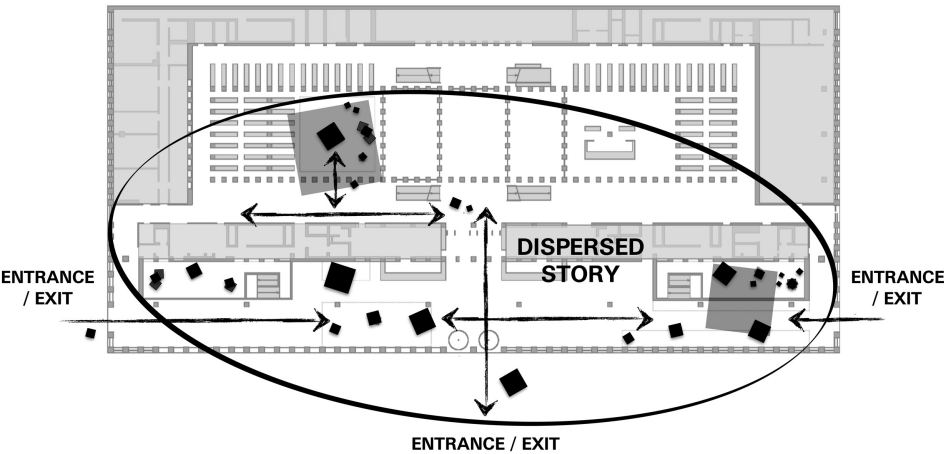


Figure 5.7 Dispersed narrative format of the exhibition *A University Makes History*, Humboldt University Berlin, Duncan McCauley, 2010.

the ‘there and back’ storyshape, visitors enter and exit through the same door allowing them to see objects twice. This double viewing enables visitors to reflect on how differently they think of the objects once they have learned more about them. Tim Gardom and Alison Grey (2019) give the example of an exhibition about slavery where a block of sugar, seen as a harmless historical item on the way in, would be understood as the cause of greed and untold suffering on the way out.

The MA Narrative Environments has synthesised the Duncan McCauley and the Tim Gardom Associates Communications insights to provide two top-level categories of spatial typologies or storyshapes: linear and non-linear narrative environments, each with subcategories, as shown in Figures 5.8 and 5.9.

Figure 5.8 shows four different subcategories of linear storyshapes: prescribed routes, pulsed flow, there-and-back-again and inner sanctum. Figure 5.9 shows three different subcategories of non-linear storyshapes. ‘Hub-and-spokes’ are often arranged around a hero item in an exhibition or a central building or space in a city. People can move backwards and forwards as they wish between the centre and the spokes. The ‘matrix’ arranges content on two axes. The axes might be, for example, themes and chronology allowing visitors to choose between following a theme or following a timeline, or swapping from one to another as they wish. The final subcategory is ‘islands’, which are typical of science centres and city planning. Visitors can visit the different islands in whatever order they wish.

Storyshapes are useful as they quickly summarise the cumulative and relational logic of the story elements. They allow designers to interrogate that logic and consider amendments. The storyshapes prompt thoughts about how to create transitional experiences between the story sections and the potential effects of the parts on the whole narrative environment. The storyshapes can also be used as a clear and concise means to communicate with clients or an extended design team. Storyshapes are vital in the design of narrative environments, as it is the first step in linking the story to the space and envisioning the visitor experience. Storyshapes also act as a framework for the further layers of content that are added as the project progresses.

The MA Narrative Environments has also developed a design tool called the story matrix. It is a diagram whose sources of influence are Duncan McCauley’s emotional map

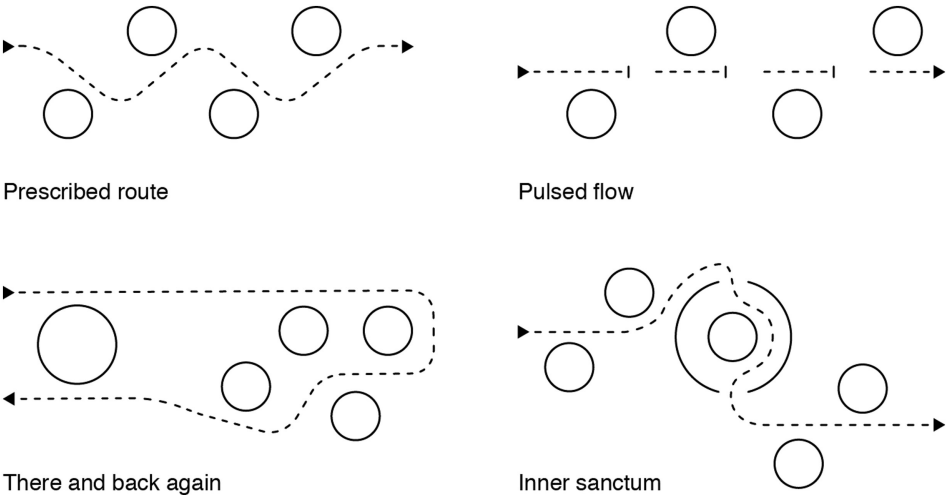


Figure 5.8 Linear storyshapes.

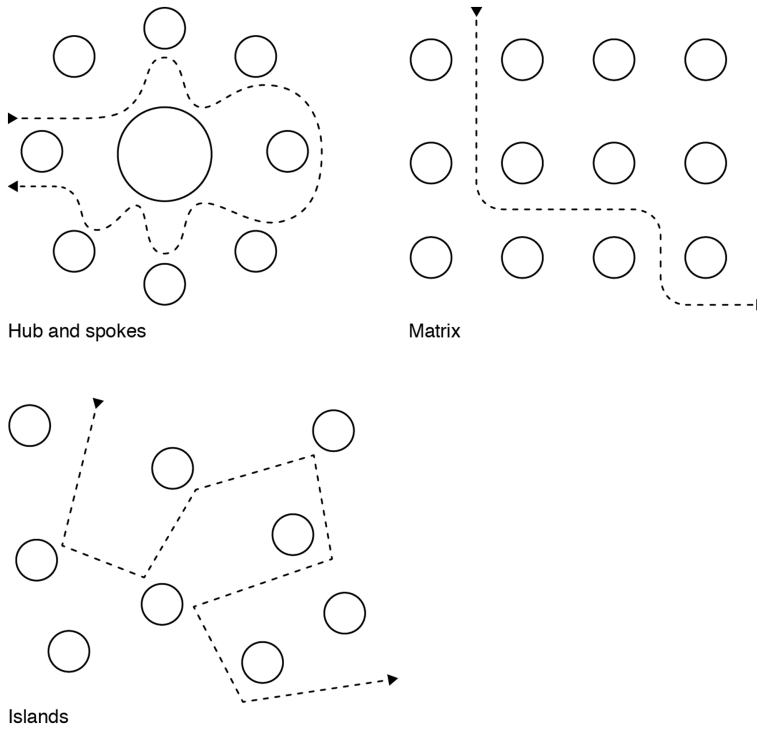


Figure 5.9 Non-linear storyshapes.

and Robert McKee's (1997) story units. McKee posits that the smallest units, beats, create scenes; several scenes create a sequence; several sequences form an act; acts cluster to create subplots, which together create a global story. The story matrix uses the principle of identifying smaller elements which are grouped together to create zones, subsequently aggregated to create the overall story experience. However, each zone retains a distinctive feel and the transitions from one zone to another contribute to the dramatic arc and emotional experience of the visitor. The story matrix summarises and aligns a number of different dimensions of a narrative environments experience. For a linear experience, the spaces are named and numbered along the top horizontal bar. The narrative elements, the messages, the tone of voice, the design elements showing the look and feel, the potential visitor interactions and anticipated visitor emotions are arranged on the vertical axis against each space. The cost and delivery dates can also be added for project management purposes. Images can be used if they summarise the factors clearly. For non-linear experiences, the elements on the vertical axis are mapped onto a storyshape of the space. Using the matrix ensures no aspects of the visitor experience are overlooked. However, the story matrix is not a creative device. Rather, it ensures that everything that has been discussed is included and that the client understands what the design team is planning.

Story Telling in Non-Linear Space

As explained above, chronological stories suit linear spaces because audiences encounter events in a predictable order. This allows the design team to plan the cumulative effects

of content, spatial design, emotional peaks, dénouement or reflective moments. Part of the skill of designing an impactful narrative environment is the consideration of the anticipation of the visitor before and during the visit, and consequently the step-by-step orchestration and pacing of the experience and encounter with the story elements. This means creating cues for the forthcoming experiences. These are articulated through the design of physical thresholds, movement through different zones that produce a rhythm, effective transitions, pauses in the journey for rest and concluding spaces that allow visitors to digest and reflect on what they have experienced. Linear spaces offer control over the pace of the visitor experience. Large open spaces can also be divided into linear experiences by introducing partitions that snake around the space. Linear spaces offer the design team a great deal of control but visitors can find it quite tiring and restrictive and there is growing interest among designers and clients in softening the linearity in many narrative environments.

In non-linear spaces, narrative works in a different way. Non-linear spaces may be, for example, large open interior spaces, buildings with several routes through them, clusters of buildings or open spaces in the urban fabric. The question arises as to how the design team can tell a story when people can go wherever they want. In this situation, the designer can neither predict what visitors will see nor in what order. These spaces are more suitable for thematic clusters of related or nested stories that can be placed like islands within the whole, enabling visitors to move freely among them. At each island, there may be a linear story that audiences can access and delve into. Nevertheless, the overarching message, the spatial territory and the borders of the narrative experience need to be clear throughout the narrative environment. The design challenge is how to design and then connect the islands of the story. As will be seen below, there are many spatial, audio, graphic and performative ways to do this. Interestingly, both linear and non-linear narrative environments require the designer to think of the space as a continuum. The continuum may be varied and contain dramatic, surprising, even disconcerting contrasts but needs to maintain a distinctive identity as a coherent story space.

Skellon Studio, based in the UK, tackled a non-linear space when they designed the Battle of Britain Bunker visitor centre in Uxbridge, London, in 2017. Exhibition designer Katherine Skellon (2018) explains that the visitor centre is next to the underground bunker which housed the Royal Air Force (RAF) Fighter Command's No.11 Group Operations Room throughout the Second World War. The bunker, 60 feet below ground, is where all information about aircraft movement during the Battle of Britain was represented by coded blocks, denoting enemy and RAF aircraft. The blocks were moved across a large central table-map by women with push sticks. The streams of information coming in were translated into constant updates on the table-map and enabled strategic battle decisions to be made. Hillingdon Council, which owns the site, decided to provide a visitor centre next to the bunker because the site was judged to be of considerable historical importance but the 67 steps down to the operations room made it inaccessible to many people. Skellon explains that the brief was very open. The Council asked her to develop the story content as well as its manifestation.

At the start of the project, Skellon Studio was faced with very complex content about the system of communications, called the Dowding system, which was developed to collect information for the table-map. The system relied on a number of different groups of people making observations or acquiring knowledge of enemy aircraft activity and passing the information through a number of intermediaries until it reached the bunker. For example, there was radar, ground observation, searchlight observation and aircraft-to-aircraft observation of incoming Luftwaffe aeroplanes. The information was

sent through a number of intermediary communication hubs to central command in the bunker by telephone. Skellon Studio quickly realised that its main challenge was to find a way to make this complex technical system understandable to visitors of all ages and backgrounds.

Inspiration came from the double-height visitor centre building that had a walkway all the way around on the inside that allowed a view of the ground floor below. This provided an opportunity to create another map, in the spirit of the table-map, that showed the 10 different sources of information, each taking the form of a table station with a display. Each table station was linked to a central table-map by floor graphics. The view that visitors see from the balcony is like a diagram of connections played out in three dimensions. Visitors can go down the steps and walk among the table stations to learn more. Each station had a star object, a small interactive, some peripheral objects and a standard graphic panel. Skellon Studio included very engaging personal effects from women soldiers, for example, their diaries. High above the ground, near the ceiling, she hung two full-size replica aeroplanes, a Spitfire and a Hurricane, apparently flying towards the big glass windows at the far end where there are vinyl graphics of incoming Luftwaffe (Figure 5.10).

The content works on three different levels. The replica aeroplanes and window graphics create an all-encompassing dramatic context that enacts the events of the Battle of Britain. The three-dimensional map on the ground gives an overview of the Dowding system, the core story. Visitors can then find out more about each station by looking at objects explained in the text panel, stepping out of the core story into the personal stories available through the oral testimonies and objects relating to the characters, feeling what it was like to work in the bunker. The visitors can move, as they wish, from the context to the overarching story of the system to the personal, more emotional stories of the people who worked there. They can take in a top-level story or discover numerous details



Figure 5.10 The Battle of Britain Bunker Visitor Centre, UK, Skellon Studios, 2018.

about specific content that may interest them. As a result, different people can experience the visitor centre according to their interests. It is worth noting that the core story for the client, Hillingdon Council, was the operation of the Dowding system and the events depicted in that story are central to moving the story forward, whereas the women's stories add emotional context but are not essential to the Dowding story. In theoretical terms, the events showing the Dowding system were constituent events and the women's stories were supplementary events. However, a visitor with a feminist perspective may well see the actions of the women as constituent events in a bigger story about how women's contribution to the war effort may have been overlooked. The experience is open to both interpretations and, indeed, other interpretations.

The experience literally provides an overview and a mental map of an overarching context with nested stories within it. The overarching context provides orientation and explanation of the relationship of the parts to the whole. There are various layers of information and story available through different media. On a larger scale, these principles can be applied to non-linear city narratives.

Non-Linear City Narratives

The narratives that are embedded in cities play out as non-linear experiences. City narratives are expressed through numerous architectural and urban design characteristics and are sensed through specific materials, scales, temperatures, particular light effects, movements, sounds and smells. Product and graphic cues also orientate and remind you that you are in a specific city. Very recognisable urban features are the dense neon signage of Kowloon, the tree-lined boulevards and vistas of central Paris, the Redstone facades of New York, the hooting of cars and auto rickshaws of Delhi and the fluttering bunting, domes, minarets and bridges of Istanbul. While these features give clues to narrative through the environment node of the tripartite model of narrative environments, the pace and qualities of street life relate the physical environment to the people node of the tripartite model. Lefebvre (1992) uses the word *rhythmanalysis* to describe methods for analysing urban spaces through the rhythms of social practices. Thus, people moving through the physical and lived characteristics of cities, read or experience narratives that may peacefully co-exist, be contested or be competing for dominance. These different narratives are reinforced by traditional and online media representations, cinematic imagery and literary myths. The multiple, porous layers of cities, their varied authorship and their large geographic scale suggest they have extraordinary potential as complex and intriguing narrative environments. Nested and related stories can be dispersed across city districts. City narratives are sometimes narrated explicitly through audio or GPS-enabled locative media trails or guided walks. Cities are such powerful storytellers that governments invest huge sums of money, not only in enabling the smooth running of the city, but also to ensure they communicate a desired narrative identity.

One example is Skopje, the capital of a relatively new country, the Republic of North Macedonia in the Balkans in Southeast Europe. From 2014 to 2016, the conservative government implemented a scheme, Skopje 2014, to overlay the socialist architecture in the city centre with neoclassical and neo-Baroque facades and to populate the public space with approximately 600 new 'classical' statues. The country was established in 1991 as a result of the break-up of the former Yugoslavia. However, its official name was only agreed in 2018. The delay in agreeing its official name was the result of a long-running dispute with its neighbour, Greece, whose northern province is called Macedonia. As a new country without an agreed name, the Republic of North Macedonia was left

in a state of limbo regarding its identity. The government sought to address this lack by evoking a classical Greek history. The Republic of North Macedonia no doubt provoked Greece with its 'Skopje 2014' development project. It not only co-opted neoclassical architectural styles but also renamed the airport and the motorway to Greece after 'Alexander the Great', the legendary Greek king of ancient Macedon, who conquered lands from Greece to northwestern India, but never visited Skopje.

The city centre was 'restyled' by the ruling conservative party, the Internal Macedonian Revolutionary Organization – Democratic Party for Macedonian National Unity (VMRO-DPMNE). While the new facades are all classical in style, the statues range from across the Antique period to include Alexander the Great, his father Philip II and his mother Olympias of Epirus; the saints of early Christianity; famous historical figures who were born or ruled in or around Skopje, such as the Byzantine Emperor Justinian I, the Byzantine Tzar Samuel and Mother Theresa; as well as a more recent group of freedom fighters who fought for Macedonian independence. There is also a Triumphal Arch and a new museum narrating a fictitious history of the Republic of North Macedonia.

Critics of 'Skopje 2014' argue that it is recalling a past that did not exist. The Triumphal Arch on the central square to the city lacks historical veracity. There were no great military victories in Skopje's history. It seems that, from its establishment as an independent country in a period of political and economic upheaval, the Republic of North Macedonia sought a new strategic narrative to 'invent' the idea and history of Macedonia.

In the middle of the central square, the key landmark is a gigantic statue called 'Warrior on a Horse'. The spatial narrative is set out in a loose hub-and-spokes formation. The square and statue is the hero object and the bridges, the Vardar River and roads leading off the square are the spokes. The Eye bridge flanked with numerous stiff, neoclassically styled statues, all men, leads over the Vardar to the archaeological museum with its full set of neoclassical columns and pediment (Figure 5.11).



Figure 5.11 The Eye Bridge, Skopje, the Republic of North Macedonia, 2018.

To the left lie administrative buildings, each sporting rows of similar facades, spot-lit in colour at night (see Plate 3) and dotted with numerous statues to create a flamboyant scenographic vista. On the south side of the river, two boat-themed hotel-restaurants are planted in the river, their artificial feel reminiscent of theme park simulations. The huge Triumphal Arch is located on the southeast side of the square. If people walk south along Macedonia Street, which leads from the central square and other surrounding streets, they see the neoclassical facades of a new theatre, the national archives, the foreign ministry, the constitutional court and the electronic communications agency. No matter which route they take, visitors and inhabitants are confronted by the same monumental neoclassical architectural facades and neoclassical sculptures, the style generally taken to symbolise power. Carved inscriptions on the facades and antiqued metal plaques are also positioned on walls and in squares to provide 'historical' details. Linear sequence is substituted by adjacency, proximity and repetition, so that visitors are surrounded by a specific interpretation of national history. The characters are featured as sculptures and the dramatic arc of the proposed national history is played out in people's minds as they encounter, and are surrounded by, the figures positioned against the strongly symbolic, large-scale, neoclassical facades. The same message is repeated again and again: the Republic of North Macedonia has a powerful and heroic past. Tourists may also have seen the promotional video 'Macedonia Timeless Capital Skopje 2014' (2014). The polished production, set to rousing music, uses the medium of film to lend support to the physical manifestation of the narrative. Tourists will also come across themed wine, marketed using the same story. To find the explicit details of the history, people need to visit the Museum of the Macedonian Struggle, on the north side of the riverbank. The museum opened in 2011. It contains over one hundred life-size wax models of historical figures and several look down from the first floor on visitors as they enter. Entry is by guided tour only. The museum runs scripted tours past large nineteenth-century-style paintings of historical events, populated with male politicians, yet all the paintings were produced in the twenty-first century and it is disputed as to whether some of the events depicted actually happened.

Skopje 2014 has been described as a memorial park of false memories which has produced a neoclassical and Baroque theatre set and laughable kitsch sculpture (Milevska 2014). Milevska suggests the imitation is not intended ironically or as a playful mockery of the obsolete, but rather to send a serious message to the world that North Macedonia is on the map of bourgeois societies. She argues that the city is measuring itself according to the number of monuments, archaeological artefacts and archived documents, worshipping antiquity as 'material content' that guarantees its existence in history according to an accepted chronology of events. She points out that, in fact, the government have partly erased the city's twentieth-century past. Skopje is not like Las Vegas; it lacks a dimension of irony. Nor is it postmodernist, nurturing plural styles (Žižek 1989). It forms a single architectural and socio-cultural code signalling North Macedonia's aspiration to be a super state.

Thomas Sevcik (2019), urban strategist, points out that there are precedents for cities receiving scathing criticism for their urban development. Venice, for example, rose to prominence as the most prosperous city in Europe in the late thirteenth century and at that point many powerful families built grand palaces. As a result, it was criticised at the time for being gaudy and pretentious. Now it has become a European treasure. Other cities, such as London and Washington, D.C., undertook huge urban renewal projects in the nineteenth and twentieth centuries respectively, installing neoclassical buildings, just as much a borrowed style as the Skopje example. This architectural expression of power

was accepted in the UK and the USA but the superficial and materially insubstantial facades of Skopje, poorly sculpted figures and the Disneyfication all undermine its intent. The scheme reads as empty rhetoric and fails to convince.

Sevcik (2019) observes that the phenomenon of cities and city quarters adopting narratives is gathering pace. As cities expand and redevelop, new quarters, private and semi-private special zones and edge cities are being built, often feeling very bland. As new city quarters, often driven by functional requirements and investment opportunities, they lack historical, social or cultural substance. Sevcik suggests they need to develop one overarching narrative to be understood in the market, whether that be industrial or touristic. He points out that cities across the world are locked in competition for economic resources, people and prestige. The numerous second- and third-tier cities in China, for example, need to differentiate themselves and discourage their inhabitants from moving to bigger cities. Local government in China is investing heavily in reinforcing the distinctive identities of smaller cities. Cities need to be aware of their unique qualities and build upon their authentic qualities and assets. Narrative city positioning is an important area for the design of narrative environments. The power of narrative is that it can hold together multiple entities and complex layers of meaning.

In summary, the role of environment is essential to storytelling in narrative environments, regardless of whether they are brand spaces, cultural environments or urban realm. The examples show how space is replete with meaning. It is not an empty form onto which story is inscribed but partakes in the story content. The linear or non-linear spatial sequencing reinforces dramatic arcs which shape visitors' physical and emotional journeys. At the scale of the urban, spatial forms and sequences not only narrate city identity but become inseparable from social practices. This reiterates the central methodological principle of the design of narrative environments: people, place and story form a necessary co-dependent coexistence. Spatial environments are effective and affective media that act upon people rationally, emotionally and normatively through telling stories.

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- Titanic Belfast. <https://www.titanicbelfast.com>

Plates



Plate 1 The first room of *Botticelli Reimagined*, Duncan McCauley, the Victoria & Albert Museum, London 2016.



Plate 2 The final room of *Botticelli Reimagined*, Duncan McCauley, the Victoria & Albert Museum, London 2016.



Plate 3 The ‘antiquitisation’ of Skopje, the Republic of North Macedonia 2017.



Plate 4 Mesa Musical Shadows, Phoenix Arizona, USA, Daily Tous les Jours, 2016.



Plate 5 Amateur Intelligence Radio, St Paul, Minnesota, USA, Daily Tous les Jours 2014.



Plate 6 The Gobbins cliff pathway suspension bridge, Northern Ireland 2016.



Plate 7 *Fair Enough* exhibition, Russia pavilion, Venice Architecture Biennale 2014.



Plate 8 Communist architecture tour booth, *Fair Enough* exhibition, Russia pavilion, Venice Architecture Biennale 2014.



Plate 9 Virtual reality encounter with streams of energy in *We Live in an Ocean of Air*, London, Marshmallow Laser Feast 2019.



Plate 10 Virtual reality encounter with a giant Sequoia tree in *We Live in an Ocean of Air*, London, Marshmallow Laser Feast 2019.



Plate 11 *Outings* Jerusalem, Israel, Julien de Casabianca 2015.



Plate 12 *Songboard* London, MA Narrative Environments and BA Architecture, Central Saint Martins, UAL 2012.



Plate 13 Digua Community basement library, Beijing 2015.



Plate 14 Digua Community basement view, Beijing 2015.



Plate 15 Chrisp Street On Air, The Decorators, London 2014.



Plate 16 *Open Burble*, Usman Haque, Singapore, 2006.



Plate 17 *VoiceOver Umbrellium*, East Durham, UK 2017–2018.