

Narrative spatial architecture as a model for the creation of non-linear narrativity in carnavalesque storyworlds

T Nigrini

 orcid.org/0000-0002-0872-5263

Dissertation accepted for the degree Magister Artium in
Graphic Design at the North-West University

Supervisor: Dr L Combrink

Co-supervisor: Mr H Fourie

Graduation: June 2023

Student number: 27412768

Declaration

I hereby declare that the dissertation submitted for the degree M Graphic Design, at the North-West University of Potchefstroom, is my own original work and has not previously been submitted to any other institution of higher education. I further declare that all sources cited or quoted are indicated and acknowledged by means of a comprehensive list of references.

T. Nigrini

Acknowledgements

I would like to thank my supervisor Dr L. Combrink and co-supervisor Mr H. Fourie for their guidance, support, and patience in the creation and completion of this Master's study, for without them it would not have been possible.

I would furthermore like to thank

- The library staff for their support and guidance in finding the relevant research articles.
- Ellynette Lartz for inspiring me to embark on the journey of a Master's in Graphic Design and providing a helping hand in completing any and all administrative documentation.
- My family, friends, and my fiancée for their continued support and patience during this endeavour.

Soli Deo Gloria

Notes

This study is accompanied by a practical artefact, a navigatable 3D storyworld, and presented in the context of a website, as well as a process book with documentation of the steps taken during the execution of both the mini-dissertation and practical artefact. These can be accessed using the below links.

Artefact: <https://tian.laney.co.za/StoryWorld/>

Process book: https://drive.google.com/file/d/14CibN9ob8Mvmi-cxBRFd6nBwtiUZlIXf/view?usp=share_link

Abstract

This is a practice-led study that culminated in the creation of an artefact that comprises a narrativised 3D interactive storyworld with various spaces. The storyworld is called; *CARNIVALESQUE CONVIVIALITY: FOLLIES, FUN AND FORNICATION AT JOOL*, and is predicated upon the leitmotif of *JOOL* (or *RAG*), a student festival that I argue has a carnivalesque nature. To this end, Bakhtin's conceptualisation of the carnivalesque is explored in terms of its spatial storyworld possibilities. I thus use the notion of the carnivalesque to inform the creation of a storyworld with spaces that have characteristics of this construct, such as absurdity, reversal of social hierarchies and – significantly for the present study – a non-linear narrative that allows the user to co-construct narrative meaning constructed by spatial elements. Furthermore, the related notion of the chronotope (also a Bakhtinian concept) adds to the present study's contention that a carnivalesque space is ambiguously experienced in terms of time and space.

This notion of time-space aids in creating storyworld spaces that are predicated on narrative clues that facilitate non-linear narrative experiences. The use of narrative clues is inspired by Jenkins' (2004) work on narrative architecture where he investigates the different ways in which a narrative is embedded into a storyworld. Jenkins' theory is predicated on the idea of spatial storytelling established by Ryan (2012), and holds that a user can engage within a spatial environment through means of navigation and exploration. This engagement with the surrounding environment through exploration ties with narrative spatial architecture's notion of exploration of a space in order to understand its narrative possibilities. In an interactive digital platform, the user's exploration of a mediated space, with different entry and exit points, results in the creation of a non-linear narrative.

This non-linear experience through user exploration of storyworld spaces will result in unique narrative experiences that may be as immersive as they are exciting, allowing for the creation of some unique storyworld spaces, and narrative experiences.

Table of contents

Declaration	ii
Acknowledgements	iii
Notes	iv
Abstract	v
CHAPTER ONE: INTRODUCTION	1
1.1 Introduction and contextualisation of the study	1
1.2 Theoretical framework.....	5
1.2.1 Non-linear narratives and interactivity.....	5
1.2.2 The carnivalesque and the chronotope	8
1.2.3 Narrative space and narrative architecture	10
1.3 Problem statement and aim	11
1.4 Research questions and objectives.....	11
1.5 Central theoretical statement.....	12
1.6 Artefact	13
1.7 Literature study.....	13
1.8 Methodology.....	14
1.9 Contribution of the study.....	17
1.10 Workplan.....	17
1.11 Ethical considerations	18
CHAPTER TWO	19
THEORETICAL FOUNDATION – SPACE, TIME (CHRONOTOPE) AND THE CARNIVALESQUE (NON-LINEARITY)	19
2.1 Space	20
2.1.1 Space as abstract and philosophical concept	20
2.1.2 Outer space	21
2.1.3 Narrative space	22
2.1.3.1 Defining narrative space	22
2.1.3.2 Structure and types of spaces in a narrative	22
2.1.3.3 Storyworlds	27
2.1.3.4 Contrary spaces.....	30
2.1.4. Conclusion.....	32
2.2 Time	33
2.2.1 A brief history of time as abstract and philosophical concept	33
2.2.2 Narrative time	36
2.2.2.1 Defining narrative time	36

2.2.2.2 Different types of narrative time	37
2.2.3 The chronotope.....	41
2.2.3.1 Time and the chronotope	42
2.2.3.2 Space and the chronotope.....	44
2.2.4 Conclusion	45
2.3 The carnivalesque	46
2.3.1 Reversal of hierarchies.....	48
2.3.2 Eccentric behaviour	50
2.3.3 Non-linearity	52
2.4 Chapter Summary	54
CHAPTER THREE:	58
METHODOLOGY	58
3.1 Practice-led research	58
3.2 Proposed methodology.....	60
3.2.1 Structure	60
3.2.2 Agile methodology	64
3.3 The present study as practice-led research: some reflections	65
CHAPTER FOUR:	72
CREATING A CARNIVALESQUE STORYWORLD	72
4.1 Introduction	72
4.2 Pre-Production	73
4.3 Production.....	85
4.3.1 Sprint 1: Modelling of the storyworld.....	85
4.3.2 Sprint 2: Texturing of the storyworld.....	95
4.3.3 Sprint 3: Execution of user flythrough	96
4.4 Post-production	98
CHAPTER FIVE:	101
FINAL CONCLUSIONS	101
5.1 Summary	102
5.1.1 Problem statement & aim:.....	102
5.1.2 Research questions and objectives:.....	102
5.2 Contribution of the study.....	105
5.3 Limitations.....	106
5.4 Further research	106
BIBLIOGRAPHY	107

Table of figures

<i>Figure 1: Lord of the Rings recommended reading order</i>	66
<i>Figure 2: Example of the Sindarin language as seen in the storyworld of Lord of the Rings (1954)</i>	66
<i>Figure 3: Conceptual drawing of the Dark Souls storyworld</i>	67
<i>Figure 4: Screenshots from the Dark Souls (2011) video game.</i>	68
<i>Figure 5: Initial story world layout sketch (own reference)</i>	73
<i>Figure 6: Floating storyworld of Sword Art Online (Kawahara, 2012)</i>	75
<i>Figure 7: Arrietty climbing the inside of a wall (Arrietty 2010)</i>	77
<i>Figure 8: Screenshot from my process book (own reference)</i>	80
<i>Figure 9: Mobile home from Howl's Moving Castle (2004)</i>	81
<i>Figure 10: Example of Cape Dutch architecture</i>	82
<i>Figure 11: Example of Cape Dutch architecture as seen on the Potchefstroom campus.</i>	82
<i>Figure 12: Screenshot from my process book (own reference)</i>	83
<i>Figure 13: Abstract from process book (own reference)</i>	84
<i>Figure 14: Abstract from process book (own reference)</i>	86
<i>Figure 15: Abstract from process book - Beer tent outside view (own reference)</i>	88
<i>Figure 16: Abstract from process book - Beer tent inside view (own reference)</i>	88
<i>Figure 17: Abstract from process book - Story world outside view (own reference)</i>	89
<i>Figure 18: Abstract from process book - Storyworld inside view (own reference)</i>	89
<i>Figure 19: Abstract from process book - Stage (own reference)</i>	91
<i>Figure 20: Abstract from process book - Storyworld train (own reference)</i>	92
<i>Figure 21: Abstract from process book - Cape Dutch building exploded view (own reference)</i>	93
<i>Figure 22: Abstract from process book - Buildify base building (own reference)</i>	94
<i>Figure 23: Abstract from process book - Giraffe building (own reference)</i>	95

Title: Narrative spatial architecture as a model for the creation of non-linear narrativity in carnivalesque storyworlds

Keywords: Carnavalesque, Chronotope, *JOOL* / RAG, Narrative spatial architecture, Non-linear narrativity, Space, Storyworlds, Interactive space design

CHAPTER ONE: INTRODUCTION

1.1 Introduction and contextualisation of the study

This study is concerned with the creation of a practice-led research project towards the completion of the North-West University's master's degree in Graphic Design. The study comprises two main components, one theoretical, and the other practical. This chapter acts as the introduction and is concerned with the outcome of three modules; GRFN 873 (Graphic Design: Mini-dissertation), GRFN 874 (Graphic Design: Process), and GRFN 875 (Graphic Design: Practical Portfolio). The study integrates a practice-led research methodology with a game design methodology, for the successful completion of each module. This research dissertation is thus concerned with the production of a project-related process document, a project-related Graphic Design project, and a project-related report.

In this study, I set out to create a carnivalesque storyworld, called *CARNIVALESQUE CONVIVIALITY: FOLLIES, FUN AND FORNICATION AT JOOL*, that uses the concept of narrative spatial architecture as a model for the creation of non-linear narrativity. In the context of digital visual entertainment, a viewer may experience a narrative¹ in a non-linear manner whilst exploring narrative space, often in an interactive manner. Narrative spatial architecture, in the context of the present study, refers to an amalgamation of Jenkins' (2004) notions of narrative spaces together with insights gleaned from authors such as Lefebvre (1991) on the social constructedness of space. I approach the notion of narrative in the present study as a non-linear possibility, in line with Dávid Katona's (2012) view of non-linearity as potentially possessing a particular kind of narrativity.

¹ Narrative, broadly, refers to a spoken or written account of connected events; a story. A linear narrative is a type of narrative wherein events are portrayed in chronological order, that is, telling the events in the order in which they occurred (Abbott: 2014). In the context of postclassical narratology (see Iunescu, 2021 – Postclassical narratology: where do we stand), of course, terminologies such as narrative, space and the like formulated for the context of literary study are augmented and fine-tuned for use in contexts other than text-based narratives, such as the present study.

The concept of storyworlds was first introduced by Pavel in 1986 in his book *Fictional Worlds*. In this book, Pavel explores imaginary worlds with a specific focus on their origin and reason for existence. Ryan (2014) views storyworlds as an imaginary space created in the reader's imagination that is influenced and based on their cultural knowledge and real-world experiences. Understanding the concept of storyworlds is important when dealing with spaces within a narrative and will be discussed to a further extent under 2.1.3.3 Storyworlds.

Narrative space refers to the physically existing space (usually imagined in the reader's mind or otherwise portrayed in filmic or digital mediums) in which characters live and move (Buckholz & Jahn, 2005:2). In turn, narrative architecture refers to the (in the case of a sound narrative, complex and carefully designed) structure of a narrative. Spatial architecture is defined by Jenkins (2004) as one of the structural components that make up stories as part of the narrative structure of storyworlds. Storyworlds can be defined as a fictional world comprised of spaces in which narrative events can unfold, and in which characters can live, move, and perform their actions (Pavel, 1986).

This study proposes the concept of narrative spatial architecture, which in this sense, is a more focussed approach that includes the carefully designed structure of the narrative spaces that contain various visual narrative clues which can be explored by a user in order to gain an understanding of the larger narrative of the storyworld². This user exploration in turn, results in a non-linear narrative experience. As noted, narrative spatial architecture embraces narrative potential as well as the social constructedness of spatialities, within a given 3D environment (Lefebvre, 1991; Jenkins, 2004; Jencks, 1977).

In this vein, Jenkins (2004) proposes that a non-linear experience of the narrative can occur because of a viewer's ability to identify and interpret (a) space(s) through exploration in digital contexts. In video games, for example, users gain an understanding of a storyworld space like a house through physically exploring the space using their in-game characters. Since each viewer's choices and exploration of a storyworld space is different, there is no predetermined movement through the storyworld, and thus no fixed narrative experience. Furthermore, the narrative

² Pavel (1986) notes that storyworlds (fictional worlds) are imaginary realms wherein various creatures and beings of the imagination dwell. He propounds that fictionality encompasses entire realms of being.

experience in such contexts is non-linear (Jenkins, 2004:2). Also, the ability to re-experience or re-read a narrative entails that the same reader (or, in many instances, consumer or viewer of a “text”) will have a different experience every time he or she engages with the digital narrative. For example, in the video game “Minecraft”³ (2009), a new storyworld⁴ is generated every time a new player saves his or her progress in the game. This results in all players having a uniquely different experience. Although I am not creating a video game, I set out to create a non-linear storyworld space that shares many features with spaces in video games (in the sense of storyworlds designed for digital contexts, as well as the freedom to navigate, the interactive experience of the spatial environment and the like).

As is the case with all narratives, interactive digital narrative spaces comprise various clues charged with meaning, referred to as narrative clues, which in the case of interactive digital narratives may include objects, colour and ambient sounds and various other elements imbued with meaning (Jenkins, 2004:126). One can imagine, for example, an indoor space that has a high ceiling with large stone pillars along the walls supporting an arched roof. At the end of the room there is a single large, decorated chair situated upon a series of steps. On this chair sits the lone figure of a skeleton with a golden crown on its head. Based on the given visuals, viewers might interpret this space as a throne room. The skeleton sitting on the chair might be that of a king or queen. The chair upon which the skeleton sits can be interpreted as a throne. Such narrative clues contribute towards an understanding of a narrative space and its relevance vis-à-vis the overall narrative structure, without the aid of characters or a narrated voice.

A theoretical concept useful for the present study because it aligns both space and non-linearity in terms of the thematic structure of a narrative has been formulated for literary contexts by the Russian scholar Mikhail Bakhtin (1895-1975) in his

³ Minecraft game synopsis: Players are placed in randomly generated worlds wherein they mine for different materials to build strongholds and fight off monsters at night-time. Additionally, the game features a creative mode giving players unlimited building materials and the freedom to create whatever they want (Minecraft Wiki, 2021).

⁴ Storyworld: As noted, a fictional world comprised of spaces in which narrative events can unfold, in which characters can live, move, and perform their actions. A story world can be anything from a fleshed-out fantasy world spanning thousands of kilometres or found underneath a child’s bed, depending on the narrative at hand (Grove 2011).

conceptualisation of the carnivalesque. The carnivalesque is, thus, originally a literary concept that is concerned with the presentation of chaotic experiences through, among others, the suspension of order and social hierarchies. I apply the notion of the carnivalesque to the present study as theoretical point of departure, together with a theoretical and practical explanation of non-linear narrativity and interactivity.

According to Bakhtin (1984), the carnivalesque has characteristics such as familiar and free interaction between participants, eccentric behaviour, absurdism, a reversal of hierarchies (of personae as well as hierarchical spaces, for example) and, significantly, a non-linear unfolding of events (Wood, 2018). The combination of different narratives all happening within the same space and at the same time give rise to the carnivalesque's non-linear nature. Meanings associated with carnivalesque narratives and spaces also become part of this unstable, fluid narrative.

A setting that demonstrates the concept of the carnivalesque that I chose as narrative (with spatial corollaries) in this study is the North-West University of Potchefstroom's *JOOL*⁵ student festival (RAG in English, although, since I experienced the festival as an Afrikaans student, I identify more closely with the Afrikaans term *JOOL*).

JOOL is a student festival held annually at the start of each new year, hosted by the North-West University's Potchefstroom Campus. The explicit aim of the festival is to raise funds for various charities under the umbrella of the *JOOL* Committee (comprising a member of the Students' Representative Council and representatives of the House Committee of each students' residence). It is, however, widely seen as a way to kickstart the social calendar, giving students a place and reason to party, and to experience new and famous musical artists in a weekend-long party and jollification. Thus, while the stated purpose of *JOOL* is to promote support for charity organisations

⁵ The term RAG has had numerous explanations. However, the most applicable would seem to be Raising and Giving, as this supports the spirit of the enterprise. In Afrikaans, the term *Jou Onbaatsugtige Opoffering vir Liefdadigheid* (English: RAG – Raise and Give) underscores the meaning and intention of this highlight of student life. This activity dates back to 1942 at the Potchefstroom University (now the NWU) and has since 1988 collaborated fully with the Students' Community Service, in that the total amount of money raised (by now up to R3 million per annum) goes to the work of the Students Community Service, which is now also called the Students' Rag Community Service. At some point this activity was known as *Karnaval* (Carnival), but the old name of *Jool* was reverted to again. Predictably *JOOL* involves much student jollification, culminating in building of floats (to parade in town to collect money), music concerts featuring a number of bands, and other student fun also involving beer-drinking and generally letting one's hair down just before the start of the academic year (Van Eeden, 2006: 350 - 351).

and to generate funds for new and existing charity projects, for most students, it is a brief period of partying, drinking, and “jolling”. For the duration of the *JOOL* festival, apart from structured events such as the float parade, the order (or the fairly traditional) unfolding of events is, for the most part, not pre-determined, resulting in a non-linear narrative flow. The envisioned design thus uses the student festival *JOOL* as an inspiration for the narrative and context of the storyworld. Furthermore, the envisioned spatial environment is entirely fictional. The non-linear dimension of this event is what inspires the exploration of narrative space to understand the narrative and backstory⁶.

1.2 Theoretical framework

A theoretical investigation into non-linear narrative, narrative space, and narrative time, establishes the conceptual foundation, clarifies the production process, as well as the possibilities of engaging with the *JOOL* storyworld by the user. This investigation is conducted in terms of video game theory, as the end result of my creative production should be applicable to such a context. These notions are then linked to aspects of the carnivalesque as a further theoretical point of departure that will find practical expression in the envisioned artifact.

1.2.1 Non-linear narratives and interactivity

Conventionally speaking, a narrative is a series of events, happening within a specific space and spanning over a certain amount of time (Porter, 2002). Thus, text-based narratives tend to follow an ostensibly linear path, meaning that such narratives commonly have a beginning, a middle and an end – even though the narrative may comprise of, for example, flashbacks, the reading process unfolds in a linear manner (Abbott, 2011). This linearity may feature in other narratives such as medical or

⁶ A spatial backstory refers to the history or histories of particular spaces. A space's backstory can be understood through identifying, analysing, and linking various narrative clues found within the space (Ryan, 2012).

forensic structuring of events (Spafford, 2004) although, as I demonstrate below, digital platforms are often characterised by non-linearity.⁷

In recent years, interactive narrativity⁸ has received significant attention in the literature. Interactive narrativity is a form of narrativity wherein the narrative can be shaped based on the desires and choices of a viewer or player (Ryan, 2006). This type of narrativity is most commonly found in digital platforms such as video games or interactive story books.

Therefore, in the ambit of postclassical narratology (Iunesco, 2019), narrativity is explored in a range of contexts other than written textual narratives. A few salient issues pertain to most narratives, however. In order for a narrative to exist, Neitzel (2014) foregrounds the space in which the events can unfold, and the narrative's transmission of a sense of time, specifying when these events took place, and how long they took, and so on. Bal (1978) more comprehensively propounds that the four central elements of space, time, character, and event make up a narrative. However, narrative potential may be lodged in spatial or temporal context, and thus one speaks of narrativization of spaces and temporalities. Shoshan (2013:1) refers to narrativity as, "the extent to which a text portrays transition and change." In other words, narrativity is predicated upon a change of state, and the present study thus explores the notion of narrativized spaces as well as temporal corollaries. Of significance for the present study is the notion that if the space and time within a narrative can be freely explored by a viewer or player, then the outcome and flow of the narrative becomes unpredictable and ever-changing, resulting in a non-linear narrative⁹ (Neitzel, 2014).

To summarise, a non-linear narrative, as opposed to a linear narrative, is therefore a narrative in which the unfolding of events is not portrayed in a chronological order

⁷ In, linearly unfolding narratives, the beginning of a narrative sets the scene and tone of the story, while the middle generally contains the main conflict and climax of the story. Finally, as the name suggests, the dénouement entails the end of the story and establishes a sense of closure (Abbott, 2011).

⁸ See Ryan (2001) *Narrative as virtual reality*, Neitzel (2014) *Narrativity of computer games*, and Jenkins (2004) *Game design as narrative architecture*.

⁹ I am aware of the theory of the notion of non-Euclidean narrativity; however, for the purpose of this study the term "non-linear narrative" is appropriate without overcomplicating the theoretical aspect of the project.

(Darwin, 2017). Non-linear narrativity is used in a variety of different mediums including literature, film, theatre, hypertexts, and video games (Kim *et al.*, 2017). Non-linear narrativity can create a unique sense of mystery because it is predicated on unpredictability and often induces a sense of excitement.

Video games and other digital platforms are therefore narratively active storyworld spaces that can relate multiple narratives as opposed to one singular narrative (Panabella, 2015). This ability to tell more than one narrative at a time is possible because such platforms allow for the exploration of space in an interactive and thus non-linear fashion. Nicole Basaraba (2018:48) coined the term *interactive digital narrative (IDN)* as an umbrella term that refers to the different digital formats a narrative can be created in. *IDN* includes the functionality, aesthetics and the way multimodal content is incorporated within transmedia stories, hypertext fiction and video games. Interactivity in a digital platform is often referred to as interactive media. Interactive media is concerned with a user's ability to interact with a digital software program which allows them to alter their experience and the outcome thereof. This interactivity can occur in many different ways, such as video games, interactive novels, virtual or augmented reality¹⁰, and can also result in a deeper feeling of immersion. Because the results of interactive digital media are not always pre-determined, interactivity within a digital platform usually has a non-linear character.

Of great significance in these contexts is that with interactive media, the user is a *co-creator* of narrative meaning and thus an active participant who shapes his/her own choices and, ultimately, their own narrative experience.

In short, a user's exploration of non-linear narrative experience offered by interactive digital platforms alters the conventional narrative path of linear unfolding, thus creating various possible narrative outcomes. These possible narrative outcomes result in each user's experience of a specific spatial storyworld being unique. In a carnivalesque space such as the one the present study explores, the exploration of disjointed space and time helps to establish a sense of the absurd, allowing endless possibilities, and

¹⁰ Augmented reality entails experiencing virtual graphics within real world setting using a camera, typically that of a smartphone. Virtual reality on the other hand entails a complete immersion into a virtual world. Unlike augmented reality where the graphics are projected into the real world, virtual reality allows a viewer to enter into a digital world through the use of a virtual reality goggles.

resulting in open-ended narratives (non-linear) possibilities. I therefore posit that this open-ended experience relates to the carnivalesque, as argued below.

1.2.2 The carnivalesque and the chronotope

The carnivalesque is a literary concept created by the Russian philosopher, literary critic and scholar, Mikhail Bakhtin (the notion of the carnivalesque was first introduced in this scholar's book *Problems of Dostoevsky's poetics*, published in 1929; cf. Haynes, 2009:6). The carnivalesque is concerned with overthrowing the social structure by means of humour and chaos, whilst challenging authority, tradition, and rules (Wood, 2018:1). The carnivalesque is, in this sense, an achronological concept that aims to disrupt the social *status quo*. Because the carnivalesque is not concerned with only ignoring rules, but rather intentionally breaking them, Wood (2018:1) argues that the carnivalesque is not always a conscious decision by the artist, and a narrative can be carnivalesque in nature without the author or artist realising it or having intended it as such. The idea that the carnivalesque is temporary also, strangely, comforts the reader (or other consumer) of a carnivalesque text (I use "text" in the broadest sense to include visual or designed instances that can be "read" and thus interpreted) with the knowledge that, no matter how bizarre things get, everything will eventually return back to normal (Wood 2018).

The three main characteristics that make up carnivalesque narratives are: (1) the reversal of hierarchies, (2) eccentric behaviour, and (3) a non-linear pattern of events. The reversal of hierarchy quite literally refers to the topsy-turvy nature of the carnivalesque. This characteristic entails a shift in the social norm where kings could become non-important whilst someone like a common beggar could become a ruler, filled with importance. In this way, conventional hierarchies are reversed, resulting in uncommon character types along with unique narrative situations among others. For the present study, I believe that this has a bearing on the design of spaces within carnivalesque storyworlds that could be felt to transform under the pressure of the festivities of the carnivalesque. In other words, there is not only a shift in social hierarchies, but a concomitant shift in the narrative and spatial structure of the actual storyworld. A prime example would be to imagine a space in which the rules of gravity are ignored or changed to function differently.

Eccentric behaviour, in its turn refers to the sometimes-bizarre way characters, and the storyworld itself, behave in relation to what is seen as “normal” in the “real world”. Eccentric behaviour is associated with absurdism, which is another characteristic of the carnivalesque. Lastly, during a carnivalesque festival, there are many different events all happening at the same time and space, resulting in a mixture of different narratives that have no fixed beginning or end, that give rise to the experience of a non-linear narrative.

Bakhtin (1981) further elaborates on the carnivalesque through the addition of the notion of the chronotope¹¹. The chronotope is the unity of time and space inherent to a narrative (chrono=time + topography=space) and points to the inseparability of time and space. Einstein is well renowned for his theory of special relativity, stating that large objects such as planets are situated upon a four-dimensional plane that is warped by the mass of each object, creating a curving, or warping of the plane. Simply put, Einstein propounds that this warped plane around each object becomes its gravitational field and the reason why objects are attracted to one another (for example the earths attraction towards the sun, and the moon to the earth). The sun being the largest object in our solar system is the reason why all the other planets rotate around it (Stein, 2021). On the contrary, the Ptolemaic view of the universe argues that according to observations done by the Roman astronomer Ptolemy, the earth is the centre point of the universe with all other planets and stars rotating around it. While the present study explores carnivalesque storyworlds in spatial terms, mostly, it also engages with time as a salient corollary of space (cf. Perrino, 2007).

The theory of the chronotope has a bearing on the way a certain setting looks and behaves, based on various combinations and/or transmutations of time and space. Bakhtin (1984) expands on how the different formations of time and space can lead to the identification of different types of chronotopes, such as the chronotope of the castle. This type of chronotope would, for instance, be linked with narratives concerned with medieval or Gothic style castles (temporal aspects related to space). This type of chronotope allows for mentally speaking, the experience of space as

¹¹ A prominent publication that further explores the theory of the carnivalesque, and which also further elaborates on the concept of the chronotope is Bakhtin's *Rabelais and his world* (1984).

malleable together with a sense of free-flowing time. The same is true for all types of chronotopes (Perrino, 2007).

1.2.3 Narrative space and narrative architecture

As noted in the introductory paragraphs above, a narrative space relates to the notion of a storyworld. It refers to the physical space in which a narrative unfolds (Buckholz & Jahn, 2005:2). An example of different narrative spaces can be seen in the storyworld of “Alice in Wonderland” (1865), where characters enter different spaces all within the same storyworld. In this story, the main character, Alice, lives in a space which is regarded as the real world. However, after entering the magical rabbit hole, Alice finds herself in a contorted version of the real world, called wonderland. The wonderland space is depicted as an upside-down version of the real world, complete with new rules, magical creatures, and fantastical landscapes. This notion of an upside-down reality fits the theme of the carnivalesque, making the storyworld of “Alice in Wonderland” (1865) a prime example of a carnivalesque storyworld.

According to Elliot Gaines (2006:1), space in a narrative usually supports meaning-making but is rarely given its own meaning. In other words, Gaines (2006) argues that in a narrative, space is generally used as a backdrop or a stage for more “important” objects or actants. It seems, thus, as if space is regarded as only a backdrop for characters – the latter seem to be more often viewed as being more salient than space. From my perspective, however, space should be regarded as equally important as character. I demonstrate this argument in my artefact where space is narrativised and central to meaning-making in the non-linear storyworld I set out to create. In concurrence with Jenkins (2004:3), I argue that spatial design is, therefore, utterly salient as it aids in the creation of spaces that are rich with narrative importance and relevance.

Jenkins (2004:1) singles out four narrative strategies relating to the structuring of space that may contribute towards enhanced narrative immersion¹². Briefly, these four strategies are (1) evocative spaces, (2) enacting stories, (3) embedded narratives, and (4) emergent narratives (Jenkins, 2004). All four of these elements do not need to be

¹² Narrative immersion entails methods used to get readers fully invested in an imaginary storyworld, up to the point where viewers feel like they are a part of that world (Qin *et al.* 2007).

present at the same time; however, a combination of these strategies may result in a greater sense of narrative immersion. Jenkins relates this structuring of space to narrative architecture. According to Jenkins (2004), narrative architecture is inspired by the idea of spatial storytelling. Spatial storytelling allows a user to engage within a spatial environment through means of navigation and exploration. This engagement with the surrounding environment through exploration ties with narrative spatial architecture's notion of exploration of a space in order to understand the broader narrative. In an interactive digital platform, the user's exploration of a mediated space, with different entry and exit points, results in the creation of a non-linear narrative (Hameed & Perkins, 2018).

The concept of narrative links narrative architecture to storytelling, whereas the concept of spatial architecture links narrative architecture to the creation of a storyworld structure. Narrative architecture, in this sense, is deeply entwined with the structure of a narrative.

1.3 Problem statement and aim

In which ways can the notion of the carnivalesque guide the creation of narrative spatial architecture, specifically narrativized spaces, with a non-linear spatial and temporal narrative structure? *The main aim of the present study is to explore the creation of a 3D digital storyworld whose spaces embody salient spatial and temporal aspects of the carnivalesque, in order also to demonstrate the mutual interdependence of the selected theoretical, contextual, and practical components of the study.*

From the problem statement, the following research questions as well as objectives emerge:

1.4 Research questions and objectives

- How is the carnivalesque conceptualised in the literature? *This question is answered by establishing the achronological and hierarchy-inverting nature as well as related aspects of the carnivalesque as guiding principles as gleaned from the literature.*
- How does the carnivalesque relate to non-linear spatial and temporal features in the context of narrative spatial architecture? *From a literature study on space, temporalities*

and the carnivalesque, I demonstrate how the salient features of the carnivalesque relate to non-linear spatial and temporal structures within the context of narrative spatial architecture. With this theoretical consideration in mind, I set out to create a carnivalesque 3D storyworld in which the notion of a non-linear narrativized space is foregrounded. These spaces have a carnivalesque nature because of their non-linear structure, which is strengthened by the interactivity of the digital realm in which these spaces are presented, thus also allowing for a measure of co-construction of narrative content by the user.

- How can these concepts be made manifest in the context of a digital 3D portrayal of a storyworld that relates to the experience of the JOOL festival? *The JOOL festival serves as a narrative and spatial leitmotif that guides the backstory of this project's practical component which presents a carnivalesque storyworld that can be explored in a random manner, resulting in a non-linear narrative experience.*

1.5 Central theoretical statement

In this study, I argue that narrative spatial architecture, with reference to Jenkins' (2004) conceptualisation of spaces with narrative potential, here called narrativized spaces, can be developed and used as a repeatable model for the creation of an interactive digital, non-linear carnivalesque storyworld. Furthermore, the addition of narrative clues aids in the interpretation and understanding of narrative space through the use of interactive digital space design. These narrative clues are typically identified and interpreted when a user spatially explores a storyworld through navigation. The identification of various narrative clues, for example key buildings, patterns, textures, colours, and lights that structure specific spaces to communicate certain narrative key points are a precursor for storyworld formation that takes place in the mind of the viewer as co-constructor. The study thus proposes the creation of a storyworld in the context of digital narrative spatial architecture as a repeatable approach for the creation of non-linear digital spatial experiences by means of interactive engagement with space as narrativized experience. This will result in a carnivalesque narrative and spatial experience because a connection can be drawn between carnivalesque and non-linearity since both concepts are known for being achronological and utilising the principles of a reversed hierarchy, along with the temporary suspension of reality, time, social norms, and rules. Together, these elements result in a unique non-linear narrative experience.

In terms of a practical application, a carnivalesque storyworld has been created which can be viewed and explored in the form of a 3D artefact. A user can interact with the storyworld using a computer mouse. The navigational aspects of the storyworld were designed in such a way as to generate an experience of confusion and disorientation, which is different for each user, further enhancing the non-linear and carnivalesque experience.

1.6 Artefact

The envisioned artefact drew on the theory of the carnivalesque as non-linear structural principle in order to create narrative spatial architecture, with reference to Jenkins' theory of spatial architecture (2004). This was done by applying theoretical perspectives on narrative spatial architecture to explore and demonstrate narrative spatial architecture in an interactive digital storyworld. Therefore, the final artefact is a storyworld representing spaces and navigational possibilities imbued with narrativity. The user can explore the storyworld space in an immersive sense and relate these objects to a larger (non-linear) narrative. The format of the artefact is an interactive 3D construction that viewers can interact with and explore using a computer mouse. Through clicking on the different establishing shots, users can explore the different narrative spaces of the storyworld, while exploring the non-linear narrative suggestions. The concept of carnivalesque is, in short, applied to the design of a 3D digital storyworld context based on my student memories of *JOOL* in order to create narrativized spaces that the user can interact with. These spaces are characterised, as is the carnivalesque, by chaos, absurdism, and non-linearity. The spaces are, furthermore, based on a fictionalised re-creation of my memories and actual contextual information pertaining to the *JOOL* festival.

1.7 Literature study

Relevant databases such as Google Scholar and JStor have been consulted. Salient sources used for the literature survey include *Problems of Dostoevsky's poetics. Volume 8* by Mikhail Bakhtin (1984), *"Theatre of the absurd"* by Richard Hornby (1961), *Game design as narrative architecture* by Jenkins (2004), *Narrative space/spatializing narrative: Where narrative theory and geography meet* by Marie-

Laure Ryan (2017), *The living handbook of narratology: space* by Marie-Laure Ryan (2012). For methodological purposes, the article “Practice-based research: Tracking creative creatures in a research context” by Combrink and Marley (2009), “Documentation as a practice-led research tool for reflection on experiential knowledge” by Maarit Mäkelä, (2018), and “The new methodology” by Martin Fowler (2005) were used. A NEXUS search indicates that no similar study has been undertaken.

1.8 Methodology

This study uses a practice-led research framework. Practice-led research (PLR) entails gaining significant amounts of knowledge through both research, and practical execution (Cowan, 2021). This type of research is especially relevant for any project within the creative arts, that inevitably leads up to the creation of a physical artefact, exactly like this project does. PLR is becoming increasingly popular within the university environment when referring to any research done that involves a level of creative work (Smith & Dean, 2009:2).

The PLR framework followed in the present study entails two parts: a mini-dissertation detailing theoretical insights and discoveries in the form of a written report. Also, the PLR entails a practical body of work in which the theoretical insights are put to the test and applied to a creative project (the practical component). In this case, PLR is expanded upon through the use of game design methodology (Basabara, 2018:51), along with the implementation of the agile software development method (Fowler, 2005), for the creation of a non-linear storyworld. The spaces that are presented in the practical component can be seen as finding application in a gaming context at a later stage. Noteworthy sources of additional information and insight into practice led research include; *Art practice as research: inquiry in visual arts* by Sullivan (2010), *Art practice in a digital culture* by Gardiner (2010), and *Thinking through practice: art as research in the academy* by Duxbury et al. (2008).

The practical component is accompanied by a process document that outlines challenges, processes, solutions, and brainstorming – a journal-type document presented in a digital format.

Game design methods are a viable expanded methodological solution for the present study because it involves the creation of the aesthetics, architecture, and backstory of a storyworld (Basabara, 2018:51). Game design is concerned with the structure of a narrative space linking to the concept of narrative spatial architecture. Lamminmäki (2017) argues that on a basic level, video games use a development process similar to that of the film industry. This means that a game design methodology similarly follows the basic structure of pre-production, production, and post-production. In addition to these three phases I will implement a research and reflection phase. Thus, the final methodological phases are research, pre-production, production, post-production, and reflection.

Once the research phase has been completed, the pre-production phase began. **Pre-production** contains a further **research** phase, which involves a literature study of the various key concepts in order to explore a number of salient topics as well as emergent links between these. The research process also demonstrates the different steps taken to arrive at a practical body of work, based on a strong theoretical foundation. Pre-production also involves the planning, strategizing, ideation¹³, identification of the production pipeline and finally the creation of a game design document. Furthermore, pre-production is concerned with creating a production pipeline for the creation of the final artefact, and its execution. The final phase of pre-production involves the creation of a game design document, containing the core concepts and outcomes of the project. Pre-production is then followed by production. **Production** as the second and most labour-intensive phase involves the creation of the physical artefact, along with the core iteration process. Production thus involves the completion of all the necessary features and their implementation. The production phase is finalised once the artefact is complete, and ready to enter the post-production phase.

Finally, **post-production** involves a shift in focus from the production of new content to refining what has already been created (Antero, 2017). Once this has been concluded, **reflection** begins. This involves reflecting on challenges, solutions, the interplay of theory and practice as well as identifying improvements and suggestions for future projects. Reflection also includes mention, where relevant, of *feature*

¹³ Ideation involves brainstorming and finding visual inspiration for the final artefact (Dam, 2020).

*creep*¹⁴, as well as changes to rather optimistic schedules and noting challenges of research and production (Antero, 2017). These three phases of production offer a detailed step by step process of development which results in a strong foundation for the creation of the envisioned artefact.

To supplement these processes, I made use of an **agile** methodology (Fowler, 2005), specifically during the **production** phase. This approach helps to ensure that the project is approached in “bite-size” challenges. The agile methodology is a project management methodology that tends to focus on building products within short work cycles (Sharma, 2020). These cycles are referred to as **sprints** and result in fleeting production and constant user input and revision. Sprints are designed to break down a large project into smaller more manageable pieces. Each sprint consists of its own small cycle of, pre-production (and theoretical research), production, post-production (together with reflection) phases. Such sprints are repeated until the final artefact is completed (Keith, 2020). Sprints are an effective way of managing a large and complicated project. After each sprint has been completed and its reflection has been done, the following sprint can begin (Sharma, 2020). The agile methodology thus focuses on frequent small development and reflection cycles to ensure successful project delivery within a given time frame (Raluca, 2016). This research project uses a combination of video and voice recordings at the end of each sprint in addition to traditional written notes as a means of ensuring substantive process at the end of the project.

In summary, the sprints associated with agile methodology can be represented as follows:

Sprint 1: [Title] Design requirements: <i>Identify and research the main theoretical topics</i>	Sprint 2: [Title] Design requirements: <i>apply basic 3D principles to the development of an environment</i>	Sprint 3: [Title] Design requirements: <i>Method for the development of spaces that contribute towards narrative formation and understanding</i>	Sprint 4: [Title] Design requirements: <i>Add carnivalesque element using interactivity that aims to give viewers the experience of JOOL</i>
---	--	--	--

¹⁴ Feature creep refers to the continuous addition of new features that were not part of the initial planning phase (Batterbee, 2020).

Pre-production	Pre-production	Pre-production	Pre-production
Production	Production	Production	Production
Post-production	Post-production	Post-production	Post-production

1.9 Contribution of the study

Ryan (2012) highlights the significance of exploring the design of "spatial architectures" for interactive digital platforms such as video games in the broader sphere of narrative space. Spatial architectures are defined by Ryan (2012:13) as the design of narrative spaces that allow users to participate actively in a storyworld while exploring this world.

Jenkins (2004), whose work on spatial architecture is salient for the present study, is among the few scholars who has endeavoured to establish how the structure of a narrative is influenced through a user's spatial exploration. Thus, further exploration of the concept of narrative architecture deems merit, specifically in terms of exploring narrative space theory and combining it with the notion of narrative clues in enhancing the development and experience of a non-linear narrative, within a carnivalesque themed storyworld using the narrative of *JOOL*, created for this practice-led study. The study thus sets out to contribute to the body of knowledge on narrative spatial design for digital contexts. Furthermore, I hope to develop a repeatable methodology for the creation of digital storyworld spaces that contain narrativity and can convey a narrative through user interaction, and exploration, resulting in the experience of a non-linear narrative.

1.10 Workplan

This project consists of process work documenting the process of the project and study (GRFN874). This process work consists of various notebooks, printed and digital articles with specific notes, along with a digital notebook containing additional research, and is presented as a digital document.

The above-mentioned processes gave rise to an envisioned creative output (GRFN875) in the form of a 3D modelled storyworld that implements all of the chosen theories in a practical way. The textual component of the study (GRFN873) is a mini-dissertation containing the theoretical and practical insights that were gained through the creation of this research project.

The dissertation component of this study is presented according to the following work plan:

Chapter 1 entails the introduction which is concerned with establishing the context and background of the project along with identifying the core problem statement and research goals. The introduction concludes with the establishment of a clear communication goal for the study at hand. Chapter 2 presents an investigation into the core theoretical underpinnings of the study with a specific focus on narrative spatial architecture. This leads to an investigation into non-linear narratives, and its effect on the relationship between narrative space and time. These are considered in the context of the carnivalesque, and specifically as being guiding principles for imagining a carnivalesque story world. Chapter 3 presents the methodology for the creation of digital storyworld spaces that contain narrativity and can convey a narrative through user interaction, and exploration, resulting in the experience of a non-linear narrative. Chapter 4 presents an investigation and discussion of the created artefact and the acquired insights, results, reflections, limitations, and propositions for further study. The final chapter, Chapter 5 presents final conclusions key findings, and recommendations for future research.

1.11 Ethical considerations

This is a no-risk study, as the theoretical component entails a literature survey, and the practical component entails the creation of fictional spaces. Ethical clearance to this end was granted by The Ethics Committee of the Faculty of Humanities at the North West University.

CHAPTER TWO

THEORETICAL FOUNDATION – SPACE, TIME (CHRONOTOPE) AND THE CARNIVALESQUE (NON- LINEARITY)

This chapter presents a discussion of the core theoretical underpinnings of the study, namely space, time, the chronotope, carnivalesque, and non-linear narrativity. Space is the theoretical point of departure of the present study and is explored with a view to demonstrating how the foregrounding of space aids in the understanding, or in this instance, co-constructing, of a narrative. In my created storyworld, I also structured the spaces in such a way that they are narrativized¹⁵. Time is intricately interwoven with space (in the sense also of the chronotope) as one of the two fundamental elements that structure our existence. As a narrative leitmotif for the storyworld (*CARNIVALESQUE CONVIVIALITY: FOLLIES, FUN AND FORNICATION AT JOOL*) I created, I used the *JOOL* student festival as the basis for creating a non-linear, carnivalesque storyworld. The theory of the carnivalesque is a time-space instance that acts as a guiding principle for my created storyworld and its various spaces.

I first explore space in various contexts, after which I present an investigation of narrative space followed by its structure and the different types of spaces in a narrative. This is followed by a discussion on storyworlds and contrary spaces, and their impact on the structure of a storyworld. Secondly, I explore time in various contexts, similarly starting off with an investigation of narrative time and its definition followed by its structure and the different types of narrative time. The investigation is expanded with an exploration of the chronotope and its relation to time and space. Lastly, the chapter engages the concept of the carnivalesque through an investigation into its grounding principles.

¹⁵ The notion of narrativized, which relates to narrativity, entails imbuing story elements with narrative possibility (Abbott, 2007).

2.1 Space

This section explores three types of spaces, as briefly discussed below. These spaces are (1.) space as an abstract and philosophical concept, (2.) space as in outer space, and (3.) spaces in stories, known as narrative space.

2.1.1 Space as abstract and philosophical concept

Space is, in the most general sense, the non-entity between objects. To put it more poetically, space is the nothingness which envelopes everything and anything. Space exists in two forms, namely positive and negative. Matt Fussel (2010) describes positive and negative space as tools for the creation of successful compositions within art. Positive space is best understood as the physical objects, characters / creatures, or focal points in a composition. Conversely, negative space refers to the encompassing area within which these objects, characters / creatures, and focus point, are found.

When dealing with space, it is worth noting that there is a difference between space and place. Philosopher Yi-Fu Tuan (1977) writes that space can be perceived as abstract, as an empty space has no meaning attached to it. Tuan (1977) elaborates, explaining that space is almost like the opposite of place, which is a location that is created by human experiences and thus has meaning. In line with the views expounded by Tuan, geographer Edward Relph (1977) describes space as something that is conceptual and without meaning, while place is concerned with a person's awareness and experience of a certain piece of space, thus place = space concretized, takes place over time, which ultimately gives that piece of space (place) meaning.

Mathematician Hermann Minkowski first introduced the notion of space-time in 1908 following ideas introduced by his student, Albert Einstein (Lorentz *et al.* 1952). To simplify matters for present purposes, Einstein's theory of space-time purports that time, essentially always, works in conjunction with space and vice versa. In Marie-Laure Ryan's (2012) view, space can be perceived as the dimensions (height, width, depth) within which all things exist.

Minkowski (1908) argues that, before the advent of the twentieth century, time was generally perceived as moving along its own, one-dimensional axis. Albert Einstein's general theory of relativity, which gave rise to Minkowski's theory of space-time, suggests that time and space exist together within a four-dimensional plane, with encompassing gravitational effects. Einstein (1905) thus argues that time and space are linked as the one cannot exist without the other. Furthermore, Ryan (2012) states that space, along with time, are the two fundamental elements that shape human existence as humans physically exist in a space while moving through time.

Russian scholar Mikhail Bakhtin explores space and time in the form of temporal space, which he calls the chronotope (Perrino, 2007). Simply put, the chronotope is a theory concerned with how different configurations of time and space are represented in a narrative. The chronotope is further explored in Chapter 3.

2.1.2 Outer space

Space is often associated with the notion of outer space and space exploration performed by research groups such as NASA (National Aeronautics and Space Administration of the United States of America). Although outer space and space exploration are not the focus of this chapter, a brief look into the definition of space itself provides a richer foundation for further inquiry into the notion of space.

Outer space is typically seen as the best example of what space is and how it can be interpreted as an overwhelming mass of emptiness within which all physical things such as planets, stars and whole solar systems are found. According to the Oxford English Dictionary (2021), space is an uncountable amount of area that is empty, and which can be filled with various physical entities, be those entities inanimate or living objects (Oxford English Dictionary, 2021). Howell (2021) describes outer space in a more mathematical and scientific way as a zone which is found 100 kilometers above the surface of the earth and that stretches into what seems like a never-ending nothingness. Space is seen as a vacuum where there are very few molecules resulting in outer space having no sound. This lack of molecules is also why space is dark, unlike the blue skies as seen from the vantage point of earth that appear blue due to the condensed mass of oxygen molecules that make up our ozone layer (Howell,

2021). That said, outer space is not entirely empty, as it is filled with various planets, meteorites, stars and even space dust, that are all thousands upon thousands of kilometers away from one another.

2.1.3 Narrative space

This section contains an investigation into narrative space, which is one of the core focus theories of the present study.

2.1.3.1 Defining narrative space

Marie-Laure Ryan (2012) explores the definition of narrative space with a specific focus on spaces within narratology. Ryan (2012) describes narrative space as the physical spaces in a storyworld that contain the events that propel the narrative forward. Furthermore, a narrative space entails the full extent and depth of narrative subject matter that may be part of a story; indeed, Ryan (2012) suggests that space needs not necessarily be depicted in the form of a conventional linearly unfolding narrative, but that all narratives suggest the existence of a space within which its events unfold, even when information and details of a particular space are retained, such as in literature descriptions.

In the context of a narratologically informed study concerning space in a narrative, digital contexts such as the present one aid in understanding how spatial manipulations give rise to spaces in a storyworld.

2.1.3.2 Structure and types of spaces in a narrative

In this section, I present a brief discussion of different authors' views regarding space in narrative, in order to glean useful pointers for purposes of creating a 3D storyworld.

According to Ryan (2012) there are seven features that act as a combination of commonly found design principles and literature techniques that are always present when creating a narrative. I present these in conjunction with Bal's (2009) four

elements¹⁶ of narrative, namely space, time, event, and character. These seven features are:

1. Plot
2. Atmosphere
3. Characterization
4. Theme
5. Point of view
6. Scene design
7. Setting

(1.) The plot of a narrative comprises various elements such as the backstory (which is concerned with the historical events and their unfolding that led up to the narrative time of interest), flashbacks, flash-forwards, and foreshadowing (these do not need to be defined). These plot-driven elements are, in essence, various ways of telling a story using a combination of events that are laid out over a certain span of time that are jumbled to create narrative tension. (2.) Atmosphere works in conjunction with (4.) theme in order to create a certain mood or tone of voice for the narrative. (3.) Characterisation aids in the creation of spaces and objects that directly or indirectly reflect the personality traits of its inhabitants. (5.) Point of view and (6.) scene design aid in creating scenes that evoke a certain emotion from its viewer, often resulting in an immersive experience. (7.) Lastly, setting is concerned with the creation of a space in which narrative events unfold, otherwise known as narrative space.

In a related vein, Ryan (2012) suggests that narrative space consists of different levels, which are discussed in the following paragraphs. These levels are (1.) *spatial frames*, (2.) *setting*, (3.) *story space*, (4.) *narrative (or story) world*, and, lastly, (5.) *narrative universe*.

(1.) ***Spatial frames*** constitute the immediate surroundings of events, as described by Ronen (1986). According to Ronen (1986), spaces in narratives are depicted through

¹⁶ According to the eminent Dutch scholar Mieke Bal (1978; 2009), any narrative consists of four different elements. These are: (1.) a space that acts as container for the storyworld objects and characters, (2.) a time within which events can unfold, (3.) an event that is performed which drives the narrative, and lastly (4.) a character that performs actions which sets the event in motion. Bal's four elements underpin any narrative, but can be expanded upon through the addition of features such as design principles and related techniques.

the use of frames. A frame is a spatial concept which constitutes the immediate surroundings of characters, objects, and places (Ronen, 1986: 421).

I unpack Ronen's levels below, because these levels, together with insights gleaned from Bal (1978; 2005 and Ryan, 2012), are useful for present purposes, namely the creation of a carnivalesque 3D narrativized space.

Spatial frames: Various spatial frames can be interpreted as the different places within a narrative that together comprise a fictional storyworld. The way in which a narrative expresses its frames has an impact on the way they are perceived. Ronen (1986: 422) propounds that frames in textual descriptions can either be described directly or indirectly. These two ways of describing a frame have various effects on the way a certain space is perceived in the mind of a reader. A direct textual description would give as much descriptive information about specific spaces and objects as possible without being vague. Bingham (2016) points out that direct textual descriptions tend to focus on writing in such a way as to utilize all the viewer's senses. Direct textual descriptions would, for example, talk about a pastel blue room, with rough textured walls and white curtains that smell of lavender. The room has a warm and soft yellow light shining in through a large open window that is located behind the lavender curtains. In this way, a reader not only has a much better understanding of what the room looks like but can also make informed predictions as to the time of day and even the season, due to the added level of direct descriptive information. Direct textual descriptions stand in contrast with indirect textual descriptions where indirect descriptions are vaguer.

Ronen (1986) uses the novel *Emma*¹⁷ (1815) by Jane Austen as an example of an indirect textual description of a frame. The novel indirectly describes the location where one of its characters, Mr. Knightley, lives through the identification of an object which acts as one of the frame's boundaries. In this particular instance, the novel describes Mr. Knightley's residence as being "about a mile from Highbury". Highbury in this frame acts as a boundary to describe setting's (and frame's) spatial parameters. Due to the indirect description of the frame, along with the lack of any other descriptive information, it is as Ronen (1986: 423) states that "Mr. Knightly could, with equal

¹⁷ *Emma* is a novel by Jane Austen (1815), which revolves around the youthful and romantic lives of characters living in the fictional country village of Highbury and surrounding estates.

probability, live in a mansion or shack, given the indirect mode of expressing the place he inhabits”.

(b.) **Setting** is generally perceived as a sequence of descriptive objects and places relating information about the characters and events that make up a storyworld (Pavel, 1986). Ronen (1986) argues that “the domain of settings and surrounding of events, characters and objects in literary narrative, along with other domains such as story, character, time and ideology, constitute a fictional universe.” Ronen (1986:423) explains that setting differs from frame, as setting is a combination of places which together forms the geographical setting of a narrative. Setting is “the *actual immediate* surrounding of an object, a character or an event” [Ryan’s italics 1986: 423]. However, some frames may be constructed that form part of the storyworld, although these frames never function as the immediate surroundings of objects, characters, or events. Dreams are an example of frames that do not form part of the “actual” setting, as they describe possibilities that never become the immediate surroundings of object, character, and events. In essence, this means that these potential frames cannot form part of the same setting, even though they do in fact form part of the storyworld. These possible frames create their own setting which exists in an imaginative realm. This leads to the next level of narrative space, namely *story space*.

(c.) The **story spaces** are spaces relevant towards the narrative of the story without having to be the immediate surroundings of events, characters, and objects. These can be spaces that have been visited or even created within the minds of characters of the story (Ryan, 2012). In the story *Eveline*¹⁸ (1904), for example, both the physical house in which Eveline lives and the space she dreams about in South America form part of the story space of the narrative (Ryan, 2012).

(d.) The **narrative (or story) world** is concerned with spaces created by the reader’s (or user’s) imagination that have not been shown or described by the text in any

¹⁸ The story of *Eveline* (written by James Joyce in 1904) is concerned with the life of a young girl who plans on leaving her hometown of Ireland in search of a better life alongside her lover, Frank, in Buenos Aires.

degree of detail (“gaps¹⁹”). The concept of a storyworld is important with regards to this study and is explored in greater detail in the following section titled 2.1.3.3 Storyworlds. These created spaces are influenced by readers’ cultural knowledge and experiences of the real world (primary world) (Ryan, 2012). For example, in the novel *Eveline* (1904) readers are introduced to two different places that are based on two real world locations, viz. Dublin and South America. Readers who are familiar with geography ought to know that there is an ocean between Dublin and South America, even though the text never goes into the detail of explaining this. In this way readers’ knowledge of the real world is used to create a fictional world in their imaginations when reading a literary work.

(e.) Lastly, the **narrative universe** is concerned with possible worlds that are either hinted at or made reality within the bounds of the narrative. For something to form part of the *narrative universe*, it must be hinted at or described in the text.

From a creative point of view, these levels can be used to describe narrative spaces in the storyworld, and thus guide the creation of a text (an artefact) that can be interpreted by a reader or consumer of the narrative through the unfolding of the text (Ryan, 2012).

Ryan (2012) notes that a text becomes narrativized once the space is described as a *place* that acts as container for the unfolding of events over time. In my created storyworld, I utilized Ryan’s different levels in order to structure the created spaces in such a way that they have the ability to become narrativized. For example, David Lean, director of the film *Doctor Zhivago* (1965), planned and created the different settings of the storyworld to generate a great deal of emotion in the viewer, and to suggest the narrative importance of space. One such example can be seen in the snowy landscape often seen in the film which acts like an endless desert in which the characters are trapped. The emotions that are expressed by these landscapes have a bearing on viewers’ experience of the storyworld, further immersing them in the narrative.

¹⁹ The notion of a viewer or user who participates actively in the creation of meaning in a narrative context relates to Iser’s (1968) Reception Theory, which holds that the imaginative filling in of “gaps” in a narrative requires an active reading / using process.

The idea of using setting – a term related to narrative space – to convey narrative salience is often related to the genre of a text. Certain instances have more dependence on its setting, such as war films where the accurate representation of a battlefield is important in terms of establishing a sense of tension, danger, and anxiety that the soldiers would experience during the war. Other genres such as popular romantic comedies arguably pay less attention to the setting where a generic trope of middle-class living often dominates, thus relegating space to a minor position.

2.1.3.3 Storyworlds

As noted in the introductory chapter of this study, the concept of storyworlds was introduced and coined by Pavel (1986) as the physical spaces in which fictional narratives unfold. Storyworlds are thus the spaces in which characters and creatures of a fictional world reside, and where events unfold that set forth the creation of a narrative (Grove, 2011). Pavel (1986) notes that storyworlds (fictional worlds) are imaginary realms wherein various creatures and beings of the imagination dwell. He propounds that fictionality encompasses entire realms of being. Grover (2011) further elaborates on storyworld as a fictional world comprised of spaces in which narrative events can unfold, in which characters can live, move, and perform their actions. A story world can be anything from a fleshed-out fantasy world spanning thousands of kilometres or found underneath a child's bed, depending on the narrative at hand. the creation of fictional worlds, space is often referred to as setting. While setting is broadly regarded as those places in which narrative events unfold, I resonate with Ryan's (2012) description of setting as the "*socio-historical-geographical environment*" in which events unfold. The setting thus aids in establishing the backdrop and mood for a story and is often referred to as the encompassing storyworld. As storyworlds can be regarded as over-arching series of settings, investigating the structure of a setting could aid in the creation of a storyworld.

Elements that typically make up a setting include culture, historical period, geography, plot, character, theme, and style. Wolf (2016), focused on setting as perceived in three basic forms: (1.) *Natural world*; this type of setting is influenced by its encompassing natural landscapes, along with the creatures that live within these landscapes. Furthermore, this type of setting is influenced by the different seasons and weather

conditions that have altered the natural world in order to create what can now be perceived as the natural world.

(2.) The second type of element is the *cultural and historical background*, revolving around how historical events have impacted on the cultural background of characters living within a certain space, along with the various locations that are found in each space. The ways in which these spaces are depicted along with the way characters perceive and interact with them, based on historical events, are what establishes a sense of significance and importance. Lastly, a setting can exist as a (3) *public or private place*, which is quite literally concerned with spaces that have been created, maintained, and resided in by the characters of the storyworld. Common examples of public and private places include houses, public parks a street and educational buildings such as a school.

* * *

When creating the setting for an imaginary world, the real world (primary world) is often used as a blueprint or at least as a guiding principle that is altered in different ways in order to create something realistic, new, or even bizarre (Wolf, 2014). Ryan (1980) calls this phenomenon the principle of minimal departure. In agreement with Wolf (2016), the principle of minimal departure states that a world is designed as a backdrop for a story which is developed based on the requirements of a narrative. Such a world relates to the real world sufficiently so that consumers of the narrative can relate some aspects of the storyworld to personal knowledge of the actual world. Wolf (2016) notes that there are various aspects to consider when creating a storyworld, such as size, scope, shape, and boundaries. Shape and boundaries in storyworlds work together to govern much of the viewer experience. A narrative inherently creates boundaries, dictating the extent to which a storyworld is explored or explorable, and shown to the consumer of the narrative. The rest of the storyworld is then left unexplored as it does not fall within the ambit of the narrative. This leaves room for creative freedom on the consumer's side, whilst adding flexibility for later instalments or expansions upon the narrative.

The size of a storyworld refers to the various means of data transfer used to describe the world itself. This includes TV shows, novels, books, video games and other mediums that aid in establishing the storyworld. Scope refers to the actual size of the storyworld itself. Storyworlds can physically be as large or small as necessary and are, therefore, governed by the requirements of the narrative. Together, size and scope determine the density of a storyworld, which may result in storyworlds that are filled with detail that aids in creating an immersive viewer experience (Wolf, 2016; also see Anderson, 2019).

Wolf (2016:72) argues that the design of fictional storyworlds should have sufficient detail to give viewers a thorough and immersive experience. This immersive experience is established by paying special attention to the use of aspects such as terrain, weather, food, clothing, shelters, and various other natural resources that establish the foundation of the culture that resides in a storyworld. When creating the various cultural dimensions of a storyworld, it is important to keep in mind that the way a slice of a culture is depicted should be based on how the culture fits into the encompassing environment (Anderson, 2019). Thus, special attention should be paid to the architecture, clothing, costumes, technologies, means of transport, and various other details to ensure that the inhabitants of a storyworld actually fit within the spaces that they are found in.

According to Wolf (2016), storyworlds can also be evaluated based in terms of their degree of *invention*, *completeness*, and *consistency*. *Invention* is concerned with what makes the storyworld different from the primary world. Moreover, invention is concerned with which elements or aspects of a created storyworld attract and keep the attention of consumers. *Completeness* deals with the degree to which a storyworld is created to make it feasible, giving a great deal of information about the storyworld using different mediums such as books, movies, and video games that all depict different aspects of the same storyworld (this phenomenon is also referred to as transmedia storytelling, which falls outside of the scope of this study). *Consistency* refers to the extent to which elements within a storyworld agree with each other without contradiction, while also remaining logically and aesthetically pleasing. Consistency should also (as far as possible) be ensured between different mediums (books, movies and video games that depict the same storyworld). If a character in a book is described

as having one arm, blue eyes and blonde hair, their movie and video game counterparts should be depicted in the same way to ensure consistency.

2.1.3.4 Contrary spaces

This section focuses on the use of incompleteness and inconsistency within the creation of a story world through the notion of contrary spaces. Contrary spaces are spaces that represent the opposite of what viewers expect and can enhance a narrative through the manipulation of the viewer's expectations. A storyworld that is unpredictable is immediately more interesting as predictability is known to be boring. For the purposes of my study, I focus on incompleteness and inconsistency as means of creating contrary spaces in my storyworld.

Lubomir Dolezel (1998:169) states that a measure of incompleteness regarding literature storyworlds is also necessary, because it allows consumers to imagine the storyworld in their own minds, resulting in a more immersive experience. This idea of incompleteness can be seen in other media such as movies and videogames, where the viewer or player is only shown specific spaces of a storyworld that is applicable to the current narrative situation. However, there are still various other spaces in the storyworld that are not shown but only hinted at in the form of world maps or mentioned in conversations between the characters of the storyworld. This allows the consumer (viewer or player) to imagine the rest of the storyworld as they please using the existing (or previously given) locations as a reference.

With regards to inconsistency in narrativity, Lessa and Araujo (2016) add that narrative authors can use inconsistency to create spaces and events that are contrary to what viewers expect. That said, it is important that these unexpected events be explained in such a way that they are believable and make sense in the larger scheme of things (Lessa & Araujo, 2016). One such example can be seen in the TV series *Lost* (2004-2010) where there are polar bears that live in a tropical island area. Immediately these polar bears stand out and attain a degree of importance, as polar bears are generally not found in warm tropical areas such as the setting of *Lost* (2004-2010). This mystery is solved in later episodes where it is revealed that the tropical island was once a base of operations for researchers who did experiments on animals such as polar bears

(Lessa & Araujo, 2016). In this way, inconsistency aids in establishing a point of importance while giving subtle clues as to the narrative of the storyworld. For the purposes of the present study, the conceptual impossibility of spaces in the film *The Shining* (1980) provides food for thought, as my story world also imagines an inconsistency / impossibility.

Another example of inconsistency in the spaces of a storyworld can be seen in the use of impossible architecture in *The Shining* (1980). *The Shining* (1980) is a horror film featuring the Overlook Hotel, a space with various hallways and windows that do not make logical sense within the layout of the hotel space. One such example of an impossible window can be seen in the manager's office (Ager, 2011). This office is located at the ground level of the hotel and is not positioned against any of the hotel's outer walls. However, the window in the office shows the outside of the hotel with sunlight shining in and leaves brushing up against the window. And yet, as Ager (2011) points out, when viewing the blueprints for the Overlook Hotel, the window in the manager's office should actually look out into one of the hallways, making the placement of the window impossible. Another example of impossible architecture in *The Shining* (1980) relates to the sizes of the apartment rooms where the doors of the separate rooms are places about three to five meters apart, but the insides of the rooms are much larger, so much so that the separate rooms should in reality overlapped with one another (Higgins, 2011). Also, the second level of the hotel features a series of doors along its front interior wall that according to the narrative leads to more apartment rooms. These rooms are spatially impossible as they are located above the lounge area shown early in the film with a remarkably high ceiling, making it impossible for these rooms to exist above the lounge area (Eddy, 2011). The bird's eye view of the Overlook Hotel is yet another example of impossible architecture as the hotel is built at odd angles, featuring an elongated design; however, the inside of the hotel features rectangular spaces that all fit together at ninety-degree angles to suggest a much shorter and more rectangular building shape.

These architectural anomalies are not accidents, they were planned: Kubrick's vision for the Overlook Hotel in *The Shining* was indeed to create maze-like spaces that disorient viewers, creating a sense of being trapped in a never-ending and impossible space (Higgins, 2011).

This idea of impossible spatial design is inspiring as it links with what I want to achieve in the creation of a non-linear storyworld. These impossible spaces will motivate people to explore the different spaces within the storyworld creating a more immersive experience. The bizarre and impossible spaces also link with the concept of the carnivalesque that acts as the general theme of my created storyworld (more of this later in the section on the carnivalesque).

2.1.4. Conclusion

This section explored the definition of space from different angles, focusing on spatiality as a theoretical concept within the field of narratology. Narrative space consists of various levels which together form the structure of a storyworld which can be interpreted by a reader. There are various aspects pertaining to space to consider when creating a storyworld. Furthermore, the different types of spaces as well as the difference between space and place when it comes to meaning making are noteworthy. When exploring space, it is impossible to ignore the influence of time as both space and time are used to create storyworlds that are filled with narrativity. Hence, the subsequent section presents an exploration of time in narrative contexts and how it impacts on the creation of a storyworld.

2.2 Time

The second concept that I explore pertains to time and its effect on space as the two main components that structure a world. This section starts off by exploring (1.) a brief history of time as an abstract and philosophical concept, (2.) narrative time (and the different types of narrative time as defined by Genette (2007)), and finally (3.) the chronotope as coined by Bakhtin (1937).

2.2.1 A brief history of time as abstract and philosophical concept

Historically, space and time have been researched with some of the earliest findings and theories dating back to Aristotle (350 BC) where he views time as fluid and volatile, being something that is dependent on change. Scheffel *et al.* (2013) highlight that time as the fourth dimension has the spatial parameters of width, depth, and height. As mentioned in the chapter on space, Einstein's general theory of relativity (1905) also suggests that time and space exist together within a four-dimensional plane, with concomitant gravitational effects.

The narrative theorist and philosopher Paul Ricoeur (1985) views time as objective, coining the term "clock time" which refers to the linear flow of time, and subjective time (I explore this later in the chapter). In a similar vein, Edmund Husserl (1900) founded the theory of phenomenology, leading to the theory of phenomenological (mind) time which is concerned with one's awareness of the flow of time as a series of everlasting events, viewed from a *first-person perspective* (my italics)²⁰ (Kelly, 2021). Ricoeur (1988) concurs, and points out that there is a conundrum between clock time and mind time, as human beings experience time both physically and mentally (more on this later)

Scheffel (2012:1) adds that time is culturally constructed, which means that concepts of time vary depending on the historical period of discovery, and one's own cultural understanding of time, making time a theory which evolves as time itself progresses (indeed, quite a mind-bending thought).

²⁰ A first-person perspective refers to events that are experienced and told by the person they happened to. This type of perspective is also described as the "I" and "we" experience.

Curry (2007) further explains that time, in its simplest form, is perceived as past, present, and future. Viewing time, in the context of a film or another viewable text, in this way allows humans to create a basic understanding of how time works in the particular text. In this regard, subjectivity regarding temporal apprehension is influenced by one's personal feelings, tastes, opinions, and beliefs. Subjective time is thus linked with how a viewer experiences the flow of time, and not the actual unfolding of time as a narrative proceeds (Ryzewski, 2009).

Therefore, humans experience time as subjective, ontological, and existential. Ontology is concerned with the concepts of existence, reality, and being (Crotty, 1998). Existentialism, in turn, is concerned with one's experience of a grounded existence within time and space (Mittal, 2017). In this regard, Curry (2007) notes the example of memories, where a person would reflect on past events from a first-person perspective (linking with Russel, (1913), who also views time in terms of a first-person perspective), recollecting events that have meaning for the individual. In this sense, a person may be experiencing a linear flow of time, but he or she is mentally experiencing a non-linear²¹ flow of time. This allows people to reflect on past events in rapid succession with no clear or pre-determined flow. It also allows people to take these past experiences and reflect them onto a fictional future timeline, creating a multitude of possible outcomes for various events, based on past experiences and longings or fears pertaining to the future.

Ross (2012:18) supports this notion when she notes that humans reflect their fears, desires, losses, and dreams onto time, creating unique temporal experiences in the form of memories, and our own hopes for the future. In this regard, one can refer to Lucas who muses that (1989:11), "It is a deep metaphysical fact that though in our bodies we are time-bound, in our thoughts we are not."

Nelson and Spence (2020) concur with Ricoeur's (1985) notion referred to as clock time and subjective time that time can be experienced in two ways. They distinguish, in line with Ricoeur, between "real" time (clock time or objective time), or experienced time (subjective time), as felt in memories and narratives. Furthermore, these authors

²¹ Non-linearity is discussed in greater detail below, in section 2.3.3 Non-linearity.

argue that experienced time is directly affected by memory and anticipation, so that humans draw on the experience of past events in order to make sense of and perceive new experiences (linking with the way Lucas (1989:11), Ross (2012:18), and Curry (2007) all view time as experiential). Through this notion of remembering and reflecting on past events, humans are able to communicate and adapt to a wide range of circumstances. Currie (2007:36) notes that memories have a dual relationship with time, since memories contain not only the recall of when a certain event happened, but also the time of remembrance. Deleuze (1994:81) concurs, proclaiming that through the act of remembering, humans transform the former present into a new present.

In conclusion, research on time can be traced back to ancient philosophers such as Aristotle and more recent and widely known researchers such as Einstein (1915) who viewed time and space as four-dimensional. Ricœur (1985) argues that time is objective and perceived as a series of linear events. Scheffel (2013) supports this claim, pointing out that time is the fourth dimension alongside width, height, and length. Moreover, time is culturally constructed depending on the time period that is in question. Curry (2007) argues that although time is a combination of past, present, and future, human beings tend to perceive time as an experience, reflecting back on their fears, desires, hopes, and dreams for the future in the form of memories. These temporal experiences allow human beings to communicate with one another and adapt to different situations (Lucas, 1989).

* * *

With regards to storyworlds, time and space are, of course, viewed as two sides of the same coin. Space gives a narrative a physical plane of existence, while time allows for the creation of events that have the potential to establish the basis of a narrative. Gabriel Zoran (1984) states in his study "Towards a theory of space in narrative" that time is often seen as the dominant factor in a narrative. Time's influence on a narrative is regarded as narrative time. Although this study focuses primarily on the use of space within narratives, narrative time as theory cannot be ignored. The following section explores the concept of narrative time, starting with the definition of time, followed by various interpretations and different 'types' of narrative time.

2.2.2 Narrative time

2.2.2.1 Defining narrative time

The Oxford Research Encyclopedia of Literature (2020) describes narrative time as “...the telling of a story, the act or process of a **narrative's** production, and so also the connection between the presumed “actual” **time** of the story and the story as it is presented in the discourse...”. There are various levels of time present in any narrative, such as the time needed to consume the narrative, temporal strata (achieved by, for example, flashbacks) suggested in the narrative as well as the era in which the narrative takes place.

Although there are ample studies that explore narrative space, narrative *time* and its various subcategories tends to be foregrounded in many narratological studies (Buchholz & Jahn 2005). Aristotle arguably laid the foundation for temporalities being foregrounded more often than spatialities; he emphasizes time as a primary component for the creation of a narrative, arguing that narratives are composed of various actions (events) and for an action to be completed, some measure of time is necessary (Nelson & Spence, 2020).

Ricœur ²² is often regarded as the father of the theoretical foundations of narrative time (Nankov, 2014), and is best known for his work on hermeneutic phenomenology²³. In this way, Ricœur established a link between the schools of phenomenology and post-structuralism, as he emphasised the relationship between literature text, and experience (Creely, 2016). This relationship between text and experience can also be seen as the relationship between humans and learning through experience. This notion is evident in Ricœur's (1988) thinking, since he states that the relationship between time and narrative is profound, pointing out that time enables humans to recreate experiences in the form of narratives. This ability to

²² Ricœur was deeply intrigued by the concept of time and published three extensive volumes on the relationship between time, experience, and narrative titled *Time and narrative* volumes 1, 2, and 3 (Ricœur, 1984, Scheffel, 2013).

²³ Ricœur was awarded the Kyoto Prize in arts and philosophy, in 2000, for his outstanding work in the field of hermeneutic phenomenology (Nankov, 2014).

recreate experiences also allows humans to communicate information at a much deeper level.

Ricoeur's three-volume *Time and narrative* (1984) highlight the idea that the relationship between narrative and experience is governed by a sequence of time-driven events, also referred to as narrative time, which has its own ontology (Ricoeur, 1988). Ricoeur (1980) describes narrative time as ... "a *subjective* [my italics] recounting of temporalities that are imbued with narrativity in order to contribute towards the experience of a narrative. In this sense, narrative time is existential and phenomenological rather than subjective."

2.2.2.2 Different types of narrative time

Gérard Genette (1990; 2007:36), arguably the most influential classical narratologist, argues that there are three temporalities within textual narratives. These temporalities are (1.) story-, (2.) discourse-, and (3.) narrating time.

2.2.2.2.1 Story Time

Story time refers to time's ability to frame a setting in a way that allows events, characters, and actions to unfold over a certain span of time (Scheffel *et al.* 2013). In the same breath, time itself is also shaped by these elements. Story time refers to the time within the storyworld itself (internal time), which operates independently from the external time (clock time as coined by Ricoeur, 1985). Genette (2007) argues that story time is the result of narration, and he links story time to the basic elements of a narrative, i.e., time, space, character, and event. In this sense, story time is constituted by its relationship with other elements in a storyworld (Scheffel *et al.*, 2013). Time's link with event is particularly important as an event requires some form of time to unfold in. If there is no time, the event cannot take place, which results in there being no narrative. That said, in extreme instances one may speak of something having narrativity, such as spatial narratives which do not make use of objective temporalities but that contain traces of a narrative and are thus narrativized (I expand on this notion below, under section 2.2.3.2 Space and the chronotope).

Events in a narrative lead to experiences that Hven (2021) describes as *diegetic* time. Much like diegetic sound²⁴, diegetic time is concerned with the time experienced by the characters of a storyworld, as opposed to the time experienced by the consumer (reader, player, or viewer, I would argue) of the storyworld. In this sense, story time becomes experienced time.

Tomaševskij (1965), in turn, views time in narrative as a combination of various evocation techniques which aim to recall feelings, memories, images, and emotions that enforce experiences. Tomaševskij (1965) lists three different ways to distinguish different uses of time in a narrative. The first is concerned with absolute and relative dating. Absolute dating gives a specific date within written texts (e.g. 6th April 1997), while relative dating gives an estimate (such as seven years earlier) (comp. Scheffel *et al.*, 2013). Secondly, Tomaševskij (1965) notes that the mention of a time period (for example the 19th century) aids in establishing a better framed mental image in the mind of the reader. Lastly, Tomaševskij (1965) argues that the mention of a duration (we drove for two hours before reaching our destination) further aids in establishing the movement of time in a narrative. These three ways of using time within a narrative can be described as temporal markers.

Hamburger (2011) propounds that if there were no temporal markers, story time would be missing in its entirety. Story time is thus created from the combined use of time, space, character, and event. In this way time itself becomes perceivable (Bakhtin, 1975). Story time can be seen as the combined use of evocative techniques, which lays the foundation for the creation of discourse time.

2.2.2.2.2 Discourse time

Discourse time refers to the amount of time it takes the events of the narrative to unfold and conclude, also referred to as “the time of telling which is fixed by the text” (Scheffel, 2013: 3). According to Scheffel (2013), discourse time acts as a spatial metaphor for

²⁴ Diegetic sound refers to sounds within a storyworld that belong to the world itself and are experienced by its inhabitants. Diegetic sound includes, dialogue, sound effects, and ambient sounds. In contrast, non-diegetic sounds are sounds that are a part of the story world but cannot be experienced by its inhabitants. Non-diegetic sounds include narration, voice over, additional music, and contrapuntal sounds (Crump, 2015).

the process of narrating, or reading of a text, performed by the narrator or reader. Each narrator of a story requires a certain amount of time to translate the story into real time. Müller (1948) points out that with regard to discourse time, there is no difference between the number of minutes it takes to narrate a story, and the number of pages it takes to write a story on paper; both contribute towards discourse time. In this regard, Genette (1980) uses the mathematical term *pseudo-time*²⁵ to describe the temporality of narrative discourse. He argues that narrative discourse becomes a false sense of time which one adjusts in order to perceive and understand a narrative and its flow of events, often referred to as discourse time (cf. Wittenberg, 2018).

Inspired by the works of Metz, Müller, and Lämmert, Genette (1980) identifies three aspects of discourse time, namely (1.) order, (2.) duration, and (3.) frequency.

(1.) **Order**, as Genette (1980) puts it, is an anachronism. Anachronisms are events which are told in a non-chronological order, disturbing the sequential flow of a narrative. Flash-forwards, and flashbacks are popular forms of anachronism. Scheffel (2013) notes that through mixing up the order of events in a narrative the resulting story might have a much greater dramatic impact on the viewer, as this creates a sense of tension and suspense. Anachronisms such as flashbacks and flash-forwards may vary based on their distance in time, the extent of their bearing on the story, and their relationship to the main narrative. (Genette, 1980).

(2.) Genette's (1980) second type of discourse time is known as **duration** which is seen as an anisochrony. Anisochrony is a term used to refer to events that are separated by variable amounts of time. Moreover, Genette (1980) identifies four types of story-discourse relations that affect the duration of time within a narrative. These four types are: pause, scene, summary, and ellipsis.

(3.) The third and final discourse time according to Genette (1980) is **frequency** which entails the number of incidences within the story, as well as the number

²⁵ "Pseudo-time is a mathematical time function that accounts for the variable total compressibility (ct) and viscosity (μg) of gas, as well as the variable porosity (ϕ) with respect to time and pressure. The equation for flow of gas in the reservoir is remarkably similar to that for liquid flow" (Reid, & Wernisch, 2016).

of occurrences during narration. Frequency is also concerned with the time between each sequence of events. Genette (1980) furthermore identifies three modes of frequency: singulative, repetitive, and iterative. Singulative refers to the single mention of an event that happened once. Repetitive refers to multiple mentions of what happened once, while iterative refers to the single mention of an event that happened multiple times (Scheffel, 2013).

2.2.2.2.3 Narrating time

Narrating time quite literally refers to the span of time it takes a narrator to tell a story, along with the spatiotemporal position of the narrator (Scheffel, 2013). Genette (1980) identifies four types of narrating time: subsequent (past tense), prior (future tense), simultaneous (present tense), and interpolated (a transitive verb).

Narrating time in literature is often concerned with the perspective of the characters, and that of the narrator (Martínez & Scheffel, 2012). Currie (2007) points out that fictional narration is, more often than not, based on the retrospective act of storytelling. Retrospection is a form of narration told from the perspective of a character who first-hand experienced a certain series or events and is busy reflecting back on them in either the first-, or third-person perspective. This type of narration creates a unique sense of anticipation where the reader is aware of the outcome of the narrative, but the series of events leading up to the conclusion are what drives the narrative in unexpected ways (Scheffel, 2013). One can use the tragic tale of the Titanic²⁶(Parsa, 2004) narrative as an example of retrospective narration. Most viewers are aware of the fact that the Titanic was a large passenger ship which sank after colliding with a large iceberg, and yet still find the film spell-binding in spite of knowing the outcome (as is the case, for example, from *Hamlet* to *The Diary of Anne Frank*).

Although the aspects of story, discourse, and narrating time were originally identified within literature texts, they can also be applied within the field of visual arts, such as films (as illustrated in 2.2.2.3 Narrating time). In some ways, narrative time can be

²⁶ Here I am referring to the film version of the Titanic tale which is a fictional recreation that incorporates a love story between the two main characters Jack and Rose.

perceived as “truer” in terms of human experience because it is existential, rather than what is seen as real or objective time, as perceived by Einstein (Nelson & Spence, 2020). It is safe to say that once an event has been intertwined with temporality, it will result in narrative time. Nelson and Spence (2020) argue that narrative time captures the experience of memory and anticipation, creating a representation of a sequence of events.

* * *

In conclusion, Ricœur (1994) notes that the relationship between narrative and experience is governed by a sequence of events that is later referred to as narrative time. Narrative time is thus known as the relationship between time, experience, and narrative. Ricœur (1994) further states that narrative time is a recounting of time that is filled with narrativity which contributes towards the experience of a narrative. Bal (2009) notes that time is one of the four cornerstones of any narrative. Furthermore, Nelson and Spence (2020) point out that events require some form of time in order to take place. Genette (2007) argues that there are three temporalities within textual narratives that further aid in understanding and structuring a narrative. These are story time, discourse time, and narrating time.

This study is focused on the use of space within narratives. A noteworthy study within the field of narrative time that incorporates the use of space, alongside time, as its main elements is “Forms of Time and of the Chronotope in the Novel. Notes Toward a Historical Poetics” by Russian scholar, Mikhail Bakhtin (1988), in which he identifies and elaborates on the concept of the chronotope.

2.2.3 The chronotope

Bakhtin (1937) is known for establishing various theories within the fields of language, philosophy, and literature. Among these theories, he is best known for his work on the chronotope, carnivalesque, heteroglossia, dialogism and polyphony. Each of these theories has sufficient depth and complexity to warrant entire studies; however, for the purposes of this study, and especially this chapter, the main focus is on Bakhtin’s formulation of the chronotope. Bakhtin explores space and time in the form of

temporal space, which he calls the chronotope (Perrino, 2007). He argues that the chronotope is a concept concerned with how different configurations of time and space are represented in a narrative. The theory of the chronotope was first introduced in 1937 within an essay titled, "Forms of time and of the chronotope in the novel" (Формы времени и хронотопа в романе). In this essay, Bakhtin elaborates on the chronotope as a way of representing different configurations of time and space within language and discourse (Bakhtin, 1937).

The notion of the chronotope influences the way that a certain setting looks and behaves, based on various combinations of time and space. In a nutshell, this means that the way certain spaces are structured and what they look like, is directly influenced, and based upon the historical time period in which it is found. Bakhtin (1984a: 108) refers to the progression of events during a carnival as "the living present". This living present renders the carnivalesque multi-layered with regards to its use of space and time.

2.2.3.1 Time and the chronotope

As mentioned above, time is one of the two main elements that make up the chronotope, the other being space. The essence of time within the chronotope is that it is made tangible and free-flowing, allowing time to be seen in a physical way. Time, in a sense, becomes physical, as it becomes intertwined with the spaces that it represents.

The concept of free-flowing time can be compared to the concept of free time in music theory. Free time is used to refer to a piece of music which has no noticeable beat, but rather has an intrinsic, free-flowing rhythm (Lavoie, 2020). This free-flowing rhythm is controlled and altered as the artist deems fit. A free-flowing time in this sense can be altered as the narrative deems fit, without being obstructive. Events can thus be portrayed in different time periods at the same time, or jump around between different time periods without warning, the only noticeable guide would be the needs of the narrative.

The combination of time and space inherent to a narrative may result in the chronotope being seen as a way of incorporating genre into a storyworld. I explain this notion with reference to a number of examples below.

In the science fiction film series *Back to the future* (1985, 1989, 1990), the chronotope can be said to be implemented in order to convey a change in time and space through the chronotope of the future, past, and present, all within the same storyworld. In the setting of the third *Back to the future* (1990) film, the setting changes from a classic 1955 post-World War II chronotope to that of an 1885 old Western cowboys and crooks chronotope. Viewers identify certain objects within the 1885 old Western genre setting that indicate a certain time period. For example, the use of large wooden barrels and crates along with wooden buildings built on opposite sides of a dirt road in the middle of what seems like a dusty wasteland all aid in creating the stereotypical old Western small town. The addition of horses standing next to some of the wooden buildings along with objects such as round cowboy hats further aids in establishing the Western genre setting. This can be perceived as a chronotope as a specific combination of time and space was used to create a setting that can be interpreted and understood based on the identification of elements that are linked to specific time periods and geographical locations. The chronotope thus forges a sense of historical consciousness, as we can interpret settings based on our knowledge of history.

The chronotope can also be used as a perspective for exploring genre-related moods and with a view to elicit certain emotions from consumers, by providing them with visual clues as to the time period and events that are taking place within a scene, all without the aid of a narrator or characters. As an example, one may imagine a cold, cloudy beach: on its own, it may not convey much narrative meaning, or indication of a time period. However, a particular genre may be suggested through the addition of elements such as barbed wire fences along the coastline, and perhaps burning boats and trenches dug into the coastline. In this context, the beach setting becomes narrativized, as it contains indications or clues as to events that took place on this beach. Based on the various objects and alterations within the terrain itself, the assumption can be made that some sort of battle recently took place on this beach. One may well associate it with events during the Second World War²⁷, establishing

²⁷Especially the battle of Dunkirk (1940)

the war drama genre. If there was a gun lying somewhere on the beach next to a helmet, this would become a further indication of events past. The unique form of this gun could also be a clear indication of a specific time period, as modern-day weapons differ in their design from historical weapons. Then again, if this gun were to have a very science fiction-like (Sci-Fi or futuristic) design, it would be an indication that this storyworld is based on an adaptation of the real world, whilst implementing futuristic elements in order to create a science fiction narrative.

2.2.3.2 Space and the chronotope

It is important, with regards to the chronotope, to highlight the notion of space as potentially malleable. This should be understood together with a free-flowing time as both time and space in certain situations are constituents of the chronotope. In this sense a chronotope consists of a time and a space which can be freely altered using a combination of objects and time periods in order to convey the needs of a narrative. I first unpack some relations between space and the chronotope.

The origin of the word malleable can be traced back to ancient Latin “malleabilis”, or “malleare” which translates as “to hammer”. The word malleable was first introduced in the English language during the 14th century and was primarily used by craftsmen when referring to the malleable properties of metals when hit with a hammer or other tools to create various objects and artefacts (Merriam-Webster, 2021). In this way, malleable refers to an object’s ability to be controlled and shaped by external parties in order to create something new. Malleability also refers to an object’s ability to adopt to changes, either in terms of its physical or mental shape (Collins, 2021). Synonyms for malleable include mouldable, shapable, and plastic. Much like plastic, a malleable object can be broken down into a base form (melted plastic) and be remoulded into something completely new.

In this sense, if one were to perceive space as malleable, it would refer to its ability to take on new spatial properties. An example of a malleable space can be seen in stage plays, where the stage is constantly changing as the stage play unfolds over time. Each new scene has its own spatial appearance, which gets altered as time progresses. This progression of time, in turn, can be perceived as free flowing as it

changes dynamically along with the space. The same is true for all types of chronotopes (Perrino, 2007).

2.2.4 Conclusion

The chronotope draws the viewer's attention to the narratively active spaces within a storyworld, thus strengthening the impact of the narrative itself (Ritella et al. 2020). The chronotope achieves this through the placement of various objects and characters within a scene that aid in expressing the time period in subtle or obvious ways that are not obstructive towards the flow of the narrative, but rather aids in strengthening its impact on the viewer through the addition of extra information.

The essence of the chronotope is thus that space makes time tangible, and that space therefore gains temporal attributes. Both aspects of time and space directly influence one another within the chronotope to convey narrative meaning and importance. Bakhtin hence manages to establish a theory which is concerned with the creation of temporal spaces that can be altered based upon the requirements of the narrative. With regards to the creation of a storyworld that features a non-linear narrative and that allows viewers to explore its narrative spaces in order to identify the narrativity found within each space, I use Bakhtin's concept of the carnivalesque. The carnivalesque features a non-linear flow along with the creation of a temporary space-time storyworld.

2.3 The carnivalesque

The third concept explored in this chapter is related to the carnivalesque and its influence on the structure of time-space narrative. The theory of the carnivalesque is a literary concept coined, as was the chronotope, by the Russian scholar Mikhail Bakhtin. The chronotope and the carnivalesque are deeply entwined, as I outline in the discussion that follows.

This section starts off by exploring the history of the carnivalesque as defined by Bakhtin, followed by an exploration of its three main characteristics (1.) reversal of hierarchy, (2) eccentric behaviour, and (3) non-linearity.

The concept of the carnivalesque was first introduced in a book titled *Problems of Dostoevsky's poetics*, published in 1929 (cf. Haynes, 2009). The carnivalesque is inspired by medieval carnivals and by observing social behaviour (Wood, 2018:1). Bakhtin was profoundly inspired by Francois Rabelais' book *Gargantua and Pantagruel* which was written during the 16th century. This is an absurd fantasy comic novel revolving around the lives of a giant called Gargantua and his son Pantagruel. The novel contains violence, bad language, exaggeration, and satire, among others, which according to Gardiner (1992: 247) contributed towards inspiring Bakhtin for the creation of carnivalesque. These narrative elements all form part of what is known as absurdism.

Absurdism can thus be seen as one of the cornerstones of the carnivalesque. The philosophy of absurdism describes it as being concerned with the conflict between the human search for meaning and the inanity of life itself (King, 2019). Pereira (2019) points out that people often create their own sense of meaning to try and justify their ridiculous actions and behaviours. That said, something does not have to be completely ridiculous to be regarded as absurd, as a simple clash of ideals will result in one person viewing the actions or ideals of another as absurd. This is often echoed in triviality in terms of discourse, behaviour and the like. In this regard, absurdity remains, to an extent, a matter of perspective.

Absurdity is often related to a search for freedom and to a sense of difference from the norm. In the same breath, the concept of freedom is also associated with following one's own path, and breaking away from the universal norm (Pereira, 2019). In this sense, if a person is aware of the absurdities surrounding them, they may very well stumble upon a unique plane of freedom. The French novelist Albert Camus (1942) stated that humans avoid the acknowledgement of the absurd through the incorporation of various belief systems such as fate and religion to justify that which they do not understand. In this sense, the philosophy of absurdism thus concludes that meaning is either obtained from a higher / abstract power, or that there is no meaning in life as we all live in an irrational universe which itself has no higher meaning (Pereira, 2019).

The word 'absurd' is often used in conjunction with other words such as juxtaposition, laughable, ludicrous, preposterous, and grotesque. It is important to note that there is a distinct difference between absurd and grotesque. The absurd is concerned with the bizarre and contradiction, whilst the grotesque is concerned with the depiction of unnatural and distorted objects or creatures who are abnormal and hideous or monstrous in appearance and behaviour (Juntunen, 2015). Depictions of the carnivalesque may well contain a combination of absurd and grotesque imagery, mainly being governed by the needs of the storyworld, as seen in the storyworld of "Gargantua and Pantagruel" (1694). Within the storyworld of "Gargantua and Pantagruel" (1694) the two main characters are hideously shaped, monstrously grotesque giants who find themselves out of place and in random situations that end up in some form of chaos (Wood, 2018). The story of "Gargantua and Pantagruel" (1694) often makes the reader question who the text is making fun of, as many of the references that are made within its storyworld reflect our own reality (Bakhtin, 1984). In this way, *Gargantua and Pantagruel* (1694) pokes fun at ourselves in subtle ways.

* * *

In the present study, it is salient that spatiality structures the carnivalesque experience and visa-versa, making them mutually dependant on each other. Robert Wood (2018:1) notes that the carnivalesque functions according to three different levels. The first of these entails creating narrative spaces that inspire new ideas and concepts for

intriguing storyworlds, such as floating islands and reversed gravity. The second level entails a structure of cause, effect, and motivation, which in turn allows authors the ability to imbue fictional settings with a degree of believability (Ryan, 2012). This means that carnivalesque storyworlds do not necessarily have to be completely absurd and can draw inspiration from the real world. This idea of borrowing inspiration from the real world in order to create a fictional world links with what was previously stated in the chapter on space, where Ryan (1980) makes the argument for the principle of minimal departure²⁸. The final level, according to Wood (2018:1), involves the relationship between the author and the viewer. This entails controlling the expectations of one's viewers through driving the narrative into a certain direction.

Furthermore, Lachmann (1987) adds that the carnivalesque is structured based on three main characteristics, namely (1.) reversal of hierarchies, (2.) eccentric behaviour, and a (3.) non-linear narrative.

2.3.1 Reversal of hierarchies

People tend to function in contexts of social hierarchies that force them to operate based on the desires, needs, and demands of those above them in a social structure (Haynes, 2009). Cohen (2011) uses the example of a little girl in a stage play, dressed as a mother who explains to her make belief children that they are not allowed to eat cookies before dinner. In this example the little girl is roleplaying the image of a mother figure as seen in the eyes of a society to whom the girl belongs. This portrayal of a mother is based on what is classified as a mother according to the social hierarchy, and not what the girl deems as being a mother figure. In this way the girl is forced to conform to the rules and social standards of the social hierarchy. Bakhtin (1984: 10) elaborates on the nature of the carnivalesque as a revolution led by those who serve under the hierarchy.

The carnivalesque characteristic of a reversal of hierarchies thus involves a shift in social power and can give rise to unusual character relationships (Wood, 2018: 2). An

²⁸ The principle of minimal departure is a worldbuilding concept coined by Marie-Laure Ryan, who propounds that the creator of a storyworld often uses the primary world (real world) as inspiration for the creation of a fictional world where aspects of the real world are altered in order to establish new settings (Ryan, 2012).

example of a carnivalesque type reversal in hierarchy can be seen in Disney's *Aladdin* (1992). In the Disney tale, a thief called Aladdin finds a magic lamp containing a genie²⁹. As a reward for finding the magical lamp, the genie grants Aladdin three wishes. Aladdin's first wish is to make himself a prince, resulting in a large parade down the streets of the kingdom of Agrabah. Much as the concept of carnivalesque describes, a thief has just become a prince. Someone of little to no importance has suddenly become one of the most powerful people in the land. This concept of a reversed hierarchy allows for the creation of an intriguing narrative, placing unlikely characters in positions of great power.

Bakhtin (1984:124) points out that the carnivalesque does not celebrate a *specific* shift in power, but rather the fact that change and renewal are made possible through a shift in power in general. He uses the example of coronation, which in itself is only a temporary status of being before the inevitable loss of the crown. It is important to take note of this aspect, because it relates the attribute of a reversal of hierarchies with that of the temporary nature of the carnivalesque itself. During a carnival, the jester would become king. However, this coronation (or whatever his carnivalesque state of being), much like the carnival itself, is only temporary and will eventually come to an end, and all will return to their positions in the social hierarchy. Disney's *Aladdin* (1992) is another example of this temporary shift in power and hierarchy. In this sense, the carnivalesque itself becomes a reminder that not all change is, indeed, permanent.

Wood (2018) further elaborates on this, noting that viewers choose to engage with carnivalesque visuals as they know that, just like any real-world festival, the carnivalesque is only temporary, and that a sense of normality will eventually return. Cohen (2011: 178) supports this statement where he claims that: "Through free and familiar interaction, carnivalesque offers a temporary way of experiencing the fullness of life."

During a Medieval carnival, individuals would often wear masks, assuming a new identity. According to Cohen (2011: 53), these masks would allow people to experience a sense of newfound safety and power. Also, these masks, according to

²⁹ A genie, is a magical being that is trapped within a magical lamp. Once the genie is released, it is believed to grant its savior three wishes.

Bakhtin (1981:163), function like a ticket to freedom, allowing individuals to temporarily forgo their former life under the social hierarchy and take on a new identity within the carnival. The idea of taking on a new identity during a carnival leads to a suspension of rules, values, and norms, linking with the second characteristic of the carnivalesque referred to as eccentric behaviour. The carnivalesque characteristic of eccentric behaviour (referred to by Cohen (2011) as laughter) enforces a sense of chaos, grotesque acts, and even obscenities that mock fear and celebrates renewal and rebirth.

2.3.2 Eccentric behaviour

Eccentric behaviour is the second characteristic of the carnivalesque and quite literally refers to unconventional behaviour which is usually deemed irreverent (Wood 2018). However, during the carnivalesque, it is normal for people to behave as they feel. Social constructs such as good and bad manners are deemed irrelevant. People can do as they please without it being seen as abnormal, allowing for the creation of characters that, according to *normal* standards, are weird, or absurd. The characteristic of eccentric behaviour allows designers to populate an entire story world with characters that are unpredictable. Eccentric behaviour also translates into eccentric spaces that for example do not function according to the laws of gravity such as floating islands or miniature story worlds containing impossible spaces.

Eccentric behaviour further results in the development of unexpected events, which in turn allows for the creation of a plot that is intriguing and never before seen. These types of narratives manipulate viewers' predicted and anticipated narrative outcomes, and this experience could give rise to a sense of narrative immersion. The film *The Purge* (2013) is an example of a carnivalesque narrative in action. The film revolves around the idea that there is no crime in America due to a set of rules set up by the government. Each year, on a specific date, all criminal activities in America, including theft and murder, become legal for 12 hours (IMDb, 2021). During the purge, unlikely characters start to reveal unexpected behaviour. The peaceful housewife would start killing her neighbours with a machine gun, police officers would raid shopping malls, stealing anything their hearts desire. In the storyworld of *The Purge* (2013) there are characters who embrace the purge as festive holiday, basking in the glory of death

and anarchy. That said, there are also those characters who remain true to their values as decent human beings, who hide in their homes, and choose not to participate in the purge. It is quite interesting when observing *The Purge* (2013), one can start to identify the people who do not participate in anarchy as those who are behaving in an abnormal way, especially when compared to the majority of characters who discard their values and rules, embracing anarchy. The idea links the carnivalesque characteristic of eccentric behaviour with that of a reversal of hierarchy.

Cohen (2011) notes that there is an interesting link between children's plays and the mockery of hierarchical power in carnivalesque festivals where both exhibit properties of exploring identity and negotiating one's relationship with the adult world. Sutton-Smith (1978) compares the notion of (role) play to that of the carnivalesque, viewing play as imaginative, spontaneous, unpredictable, flexible, and powerful. The aforementioned characteristics are similar to how Bakhtin describes carnival as chaotic, eventful, and eccentric. Bakhtin (1984) viewed Medieval carnivals as acts of rebellion, satire, humor, and playfulness. Medieval carnivals allowed people to live two very distinct lives. The first was a life restricted by the rule of a social and economic hierarchy. In contrast, the second life was the one lived during the carnival which is temporary in its nature and free from any and all forms of social and economic hierarchy (Bakhtin, 1984).

Bakhtin's description of carnivalesque laughter is illustrated within an example given by Cohen (2010: 64). Within this example children take on the role of submissive animals which is deemed appropriate within the realm of the carnival. This type of behaviour would normally be seen as absurd or even grotesque within the realm of the "actual", or "normal" world. Bakhtin (1984: 23) further points out that laughter has the ability to emphasize certain objects, or actions while making them appear familiar. This notion of familiarity further encourages people to interact with said objects and accept certain actions as appropriate, such as seeing a child running on all fours like an animal with a leash around their neck.

During a carnival, abusive language, and profanity, may become a new form of communication (Wood, 2018). Speech and gestures could be used freely no matter who used it, or how. Children could, for example, curse and talk down to their superiors

(Cohen, 2012: 67), and the idea of gender roles, and even the difference between humans and animals, became obscured.

2.3.3 Non-linearity

The final characteristic of the carnivalesque is that it tends to manifest in a non-linear narrative. This non-linearity refers to the lack of order during a carnivalesque festival (Wood 2018). Non-linearity in this sense refers to the fact that there is not one main narrative, but rather a combination of various different stories all happening at the same time, and within the same space. Moreover, these different stories are explained in a non-chronological order, making it difficult to track from a single perspective, resulting in a non-linear spatial experience. This characteristic of a non-linear narrative can lead to a viewer's exploration of a carnivalesque story world in an attempt to understand the various narrative spaces and their relevance towards a larger narrative. A viewer's exploration of a space helps to establish a more immersive viewer experience, so that one can begin to feel like a part of the storyworld and its narrativised spaces.

Conventionally speaking, a narrative is a series of events, performed / experienced by a character(s), happening within a specific space, and spanning over a certain amount of time (Porter, 2002). More often than not, a narrative is structured in a linear sense. For example, one may narratively relate how John wakes up, brushes his teeth, realises that he is late for work and starts running down the street. In this example, the events of the storyworld are presented in a linear and chronological fashion, in other words, in the order of their occurrence. Conversely, then, in a non-linear structure, the events of a storyworld would be represented in a non-chronological order. And thus, if the narrative of John running to work were to be portrayed in a non-linear manner, the story may start by depicting John hastily running to his workplace. The narrative can then, by way of a flashback, reflect in time to when John woke up and realised that he is late for work, perhaps standing still at events he suffered before running down the street. In this way, John's narrative of John becomes more intriguing and generates a more engaging viewer experience.

Non-linearity manifests in many forms and can generally be identified by means of flashbacks, flashforwards, dreams, and foreshadowing (Rushdie, 2020). These literary techniques all look back, or forward, or into human memory. Non-linearity is an effective tool when structuring a narrative as it can amplify the storytelling aspect of a narrative resulting in a much deeper viewer impact (Darwin, 2017). In contemporary cinema, it is often difficult to identify a narrative as strictly linear, or non-linear as contemporary film narratives are more often than not a combination of the two.

Video games are, however, rather unique in their approach to narrativity, because as open-world genres they create narratively active spaces and temporal structures that have the ability to relate multiple narratives, all at the same time, as opposed to one singular narrative (Panabella, 2015). Open-world video games refer to storyworlds that allow players the freedom to go where they choose, when they choose, resulting in the experience of various non-linear narratives all within the same storyworld (McIntosh *et al.*, 2010). Similarly, the carnivalesque contains not one, but a series of different events and narratives all happening at the same time and space. All these narratives depicted at the same time generate a sense of confusion in a viewer. Moreover, all these narratives could create a sense of mystery, enticing viewers to spend more time exploring the carnivalesque storyworld, or re-visit it multiple times.

In conclusion, by representing narrative material in a non-linear fashion, the conventional linear narrative path gives way and different outcomes for the same storyworld can be imagined. Furthermore, through the addition of interactivity, these diverse narrative possibilities result in each viewer's experience of a specific spatial storyworld to be unique and different, because experiences are based on their extent of observation and exploration of the storyworld and its narrativised spaces. The exploration of space and time thus establishes a sense of immersion as well as disruption, allowing endless possibilities, resulting in an open-ended narrative (non-linear) that shares similarities with the carnivalesque.

The concept of carnivalesque provides the present study with a theoretical underpinning and support of the thematic leitmotif of JOOL and allows for the creation of various narrativised spaces that are intriguing and unconventional. Bakhtin (1984:

10) indeed notes that the carnival brings people together in a feast of time, becoming, change, and renewal. He elaborates that the carnival is not something that is meant to be observed but is meant to be interacted with as an experience (Cohen, 2011: 53). Significantly the carnival operates in the public square, being universal and open for all people to participate in (Bakhtin, 1984:7). All these aspects result in the possibility of creating fascinating narrative spaces which can be explored by a user in order to understand its narrative.

2.4 Chapter Summary

Chapter two was concerned with the discussion of the core theoretical underpinnings of the study, namely space, time, the chronotope, carnivalesque, and non-linear narrativity.

Ryan (1980) establishes the principle of minimal departure which states that storyworld creators often use the real world as inspiration for the creation of fictional worlds. Ryan (2012) distinguished seven features that act as design principles for the creation of a narrative, that works in conjunction with Bal's (2009) four elements of a narrative, namely space, time, character, and event.

These seven features are:

- **Plot:** The various ways of telling a story using a combination of events that are laid out over a certain span of time that ultimately creates narrative tension.
- **Atmosphere & Theme:** Established the mood or tone of voice of a narrative.
- **Characterisation:** Aids in the creation of spaces that reflect the inhabitants of the spaces in symbolic or literal ways.
- **Point of view & Scene design:** Aids in creating scenes that evoke emotion from the viewer resulting in an immersive experience.
- **Setting:** Concerned with the creation of a space in which narrative events can unfold, otherwise known as narrative space.

Furthermore, Ryan (2012) suggests that narrative space consists of 5 different levels:

1. **Spatial frames**, which constitutes the immediate surrounding of characters, objects, and places (Ronen, 1986: 421)
2. **Setting**, a combination of places which together forms the geographical setting of a narrative, perceived as a sequence of descriptive objects and places relating information about the characters and events that make up a storyworld (Pavel, 1986).
3. **Story space**, spaces that are created in the mind of characters (such as dreams) that are relevant towards the narrative but don't become the immediate surrounding of events (Ryan, 2012).
4. **Narrative (story) world**, spaces created by the reader's imagination that have not been described or shown by the text but are rather created by a reader's cultural knowledge and experiences of the real world (Ryan, 2012).
5. **Narrative universe**, concerned with possible worlds that are either hinted at or made reality within the bounds of the narrative.

The above-mentioned levels can be used to create a storyworld with narrative spaces that have the ability to convey narrativity. Wolf (2016) focusses on setting in three basic forms:

- 1) **The natural world**, influenced by its encompassing natural landscapes and the events that shaped these landscapes.
- 2) **Cultural and historical background**, which similarly revolves around how the historical events and actions of the storyworld inhabitants have altered the setting and influenced the way characters perceive and interact with these spaces.
- 3) **Public or private space**, is concerned with the residential spaces inhabited by the characters of a storyworld.

Wolf (2016) further states that when creating a storyworld, the following aspects should be considered:

- **Size**: The various means of data transfer used to describe the storyworld (Books, T.V., video games).

- **Scope:** Refers to the actual size of the storyworld itself.
- **Shape & Boundaries:** Together are concerned with the limitations of the storyworld governed by the narrative at hand. Areas that are left unexplored leaves space for the reader's imagination and further expansion.

Lastly Wolf (2016) argues that a storyworld can be evaluated based on its degree of:

- **Invention:** What makes a storyworld unique and interesting.
- **Completeness:** The amount of information that a world contains making it believable. (Various mediums such as books and movies aid in this, linking with the size of a storyworld).
- **Consistency:** The degree to which elements in a storyworld agree with each other without contradiction.

Genette (1990; 2007: 36) argues that there are three temporalities within textual narratives.

1. **Story time:** The internal time of a storyworld, framing the setting to allow events, characters, and actions to unfold.
2. **Discourse time:** The amount of time it takes the events of a narrative to unfold that is fixed by the text. Discourse time is grounded by three additional aspects: order, duration, and frequency.
3. **Narrating time:** Quite literally refers to the amount of time it takes a narrator to tell a story.

As mentioned above, time and space are the two main elements that make up a narrative, similarly the chronotope is a combination of time and space that is made tangible, allowing time to become physical. The chronotope has a way of drawing the attention of the viewer towards the narratively active spaces in a storyworld,

strengthened by the impact of the narrative itself (Ritella *et al.* 2020). This is achieved through the placement of object and characters in a scene that expresses forms of temporality.

Lastly, the carnivalesque establishes a non-linear narrative which results in various different narrative outcomes for the same storyworld. These various outcomes result in each viewer having a unique experience. The exploration of a space thus allows for endless possibilities, resulting in an open-ended narrative.

CHAPTER THREE:

METHODOLOGY

As stated in section 1.7, this study uses a practice-led research framework. This approach entails gaining vast amounts of knowledge through both research and practical execution (Cowan, 2021). This chapter presents an investigation into practice-led research as a paradigm, followed by the framework that was developed and used in the present study. The chapter also presents insights gleaned from the process, such as the advantages and disadvantages of the selected methodological framework. Finally, the aim of this chapter is to develop the basis of a repeatable methodology for the creation of narrativised digital storyworld spaces that convey narrative content through user interaction and exploration, resulting in the experience of a non-linear narrative.

3.1 Practice-led research

In brief, practice-led research refers to a paradigm and a set of methodologies that allow researchers in the creative fields to apply their creative practice in order to contribute to the process of gaining academic knowledge or building upon existing knowledge. This research paradigm is commonly found in various creative fields such as the arts, design, music, and literature (Cowen, 2021). Practice-led research is also known as action research (Nasrollahi, 2015), and is concerned with using practice (practical components / artefacts) to obtain results that contribute to new knowledge and have significance for that specific practice.

There are differences in opinion regarding whether a practice-led research project should, apart from the artifact (in the widest sense of the word), also include a written or textual component. The written component, can entail, for example, a catalogue raisonné, a reflective process document, or a scholarly dissertation, according to Smith and Dean (2009) who believe the textual component to be an essential part of the practice-led process. However, scholars concur that studies conducted using a practice-led research methodology can only be fully understood when one has access to the practical component (Candy, 2006). Haseman (2006) advocates strongly that

the textual component should not be a central feature of practice-led research; the artifact bears sufficient testimony to the research process, in his opinion. In short, there seems to be a continuum regarding the artefact only as the product of research, versus the inclusion of a textual component that presents scholarly investigation, reflections on the process as well as engaging with how the researcher's practice is shaped by theory and vice versa. The position presented in the present study is that while the artefact is salient as a product of practice-led research, the textual component provides theoretical insights that guides the development of practice, and theory may be augmented by reflecting on practice and refining theoretical concerns. The output of the practice-led process is often therefore twofold, although it is believed that the artefact should be able to stand on its own while being illuminated by scholarly concerns. However, the textual component is believed to present both scholarly depth and reflections, which present researchers and practitioners in similar fields with likely repeatable methodological perspectives, which is a salient aim of research as an academic endeavor.

Early manifestations of practice-led research can be found as early as the late 1990s when research and practical undertakings (especially by students) emerged as being practice-led (as a preferred approach) (Nasrollahi, 2015). This "new research trend" gave rise to various debates on how far practice (or practical components) can be regarded as research, with particular reference being given to researchers such as Scrivener (2000), who applies a practice-led approach towards completing Doctoral studies in the late 1970's and 1980's (Rust et al., 2007). Even earlier manifestations of practice-led research can be observed, for example, in 1984 when the University of Wollongong, Australia, along with the University of Technology, Sydney, granted students the opportunity to obtain their Doctorates in creative writing (Candy, 2006). This allowed students the opportunity to gain academic merit for the inclusion of a practical piece of work that could be submitted in conjunction with their written theses. The Council for National Academic Awards (CNAA) indicates that a written thesis may be accompanied by supportive material that is not in a written or textual format.

The practice-led research framework followed in the present study entails two main parts: a dissertation detailing theoretical insights, discoveries, and reflections in the form of a written mini-dissertation, and a creative component that entails a practical

body of work wherein the theoretical insights are put to the test and applied in a practical format, also with a view to refining theoretical insights to suit the requirements of the present study. This study, therefore, apart from producing the artifact and the theoretical framework under investigation, sets out to present a methodology for the creation of storyworld spaces that convey a non-linear narrative through user interaction or exploration. A practice-led research study also ties in with the required outcomes of the Master's course in Graphic Design, as offered by the North-West University.

3.2 Proposed methodology

3.2.1 Structure

The approach followed in this study foregrounds the practical component (*CARNIVALESQUE CONVIVIALITY: FOLLIES, FUN AND FORNICATION AT JOOL*) as the starting point of this project. Thus, the first phase in my methodology is concerned with **practice** and an interest in creating 3D storyworld spaces that contain a degree of interactivity, allowing the user of the digital environment to freely explore the storyworld space in order to experience a non-linear narrative. From the desire to create, as an artifact, a narrativized space with open-ended narrative suggestion, emanated the need to explore further possibilities in a theoretical context which gave rise to the second phase of my methodology namely, scholarly research into useful theoretical stances that could guide the development of the practical body of work.

For the present study, then, the endeavour was to establish a theoretical framework in which open-ended narratives suggested by narrativized digital spaces can be explored in a practical manner. As noted in Chapter 2, the notion of the carnivalesque as conceptualised by Bakhtin (1968) and further developed by more recent work, was selected because the carnivalesque is predicated on the notion of unpredictability, instability, open-endedness and even disorientation (Wood, 2018).

The textual **research** phase therefore entails exploring and refining scholarly knowledge pertaining to salient key concepts in order to demonstrate how the selected

topics are interlinked. The scholarly section of research also sheds light on the various possibilities to explore in order to develop a practical body of work. Thus, in the case of this study, the exploration of the theoretical framework emerged after the conception of a practical component (the desire to develop a digital realm with specific features) and is guided by the needs and desired outcomes of the practical component. These needs include researching different ways to conceptualise and create story world spaces, as discussed in Chapter 2 – Theoretical foundation, where Ryan (2012) notes that story world spaces are structured based on different levels that allow them to become narrativized. Moreover, Wolf (2016) notes that there are various aspects to consider when creating a storyworld, such as size, scope, shape, boundaries, invention, completeness, and consistency. These were dealt with in Chapter 2. I apply these elements and storyworld aspects in the creation of my storyworld (the practical component and artefact) in order to create spaces that convey narrativity in the form of a non-linear narrative. Once the first round of the scholarly research had been concluded, the **pre-production** phase began.

Combrink and Marley's (2009) model for collaborative practice-led research projects inspired me to use a similar approach of pre-production, production, and post-production, in the development of my methodology. That said, this study uses an adapted version of Combrink and Marley's model that is iterative in its nature, where the three phases of production are repeated in the form of cycles³⁰. Mäkelä (2018) created a model demonstrating the iterative relationship between practice and theory where theory is guided by a desire to create a practical artefact that then further guides theory which in turn has an effect on the practice. This ongoing relationship between practice and theory aids in project development and thus guides the project until its completion.

Pre-production involves the planning, strategising, ideation³¹, and finally the identification of the production pipeline. Furthermore, pre-production is concerned with

³⁰ The process of cycles is discussed below with reference to the agile methodology.

³¹ Ideation involves brainstorming and finding visual inspiration for the final artefact (Dam, 2020).

creating a production strategy aimed at the creation of the final artefact, as well as approaches to its execution. This study, as noted, comprises a written dissertation, a practical component (artefact), and also a digital process document in which core ideas, brainstorming, reflections, and theoretical as well as practical concerns are noted to explore the interplay between theory and creative outcomes. Pre-production is followed by production.

Production involves the creation of the physical artefact and is guided by the iteration process of creation, reflection, and refinement. The production strategy used in this study entails sketching the basis of the story world on paper (or, in certain instances, digital) as a means of planning. Once a plausible layout has been sketched, the image was re-created in Blender as a basic 3D model and a basic model of the digital environment was mapped. Screenshots were taken of this model at different angles; the model was then further refined and reworked (often by hand). This was done with a view to make improvements on the layout, style, and other aspects. A great deal of brainstorming additional ideas informed the revised 3D model. These revisions were based, for a large part, on the theory discussed in Chapter 2 that aim to create spaces that contain narrativity and have the ability to translate this narrativity in the form of narrative clues. Once the storyworld model was fairly close to completion, it underwent a texturing phase where textures were added to the model to give it its final stylistic character. After each component in the model had been textured, they were added into the final composition which then formed the storyworld. The production phase thus involves the completion of all the necessary practical components necessary to produce the artefact, continuously guided by theoretical insights gleaned from the literature study. The production phase is thus finalised once the artefact is complete, and from here, the project entered the post-production phase.

Post-production involves a shift in focus from the production of new content to the refining of what has already been created (Lamminmäki, 2017). For example, in the present study, as the storyworld model neared its completion, it underwent a lighting stage, where different lights were added to the storyworld spaces. The lighting phase also enhanced certain narrative clues, and is of great significance in terms of conveying certain emotions. Post-production also involves improving the quality of the

flat 2D renders of the different storyworld spaces in programs such as Photoshop to again improve upon features such as lighting and texturing. There is no “clear-cut” end to the post-production phase, as one can always improve upon an existing work. That said, the storyworld is complete once each space has been modelled, textured, placed into its corresponding position in the storyworld, and been given some lighting effects to make it feel part of the rest of the storyworld spaces. Once the post-production phase is then concluded, the reflection phase can begin.

As the word suggests, the **reflection** phase involves reflecting on the project itself. It should be noted that reflection occurs continuously – first in terms of developing the practical idea and developing salient theoretical insights, and then reflecting throughout on ways in which the practice and theory have a bearing on each other – with reference to pertinent possibilities that emerge as they pertain to aspects of the study. The final reflection entails a comprehensive consideration of the project as a whole. This also entails reflecting on especially practical challenges that were encountered during production and identifying improvements that can be made for future projects. Reflection, interestingly, also includes *feature creep*³², overoptimistic schedules and the challenges of production itself (Antero, 2017). The reflection phase can be seen as a “behind the scenes” look at the project as well as insight into the researcher’s thought processes as well as creative breakthroughs.

These phases of production provide a detailed step-by-step process of creative and theoretical development to produce a dissertation and an artefact. The final methodological phases used in this project are thus (in sequence) practice (first intuitive ideas), research (finding scholarly perspectives to inform practice); these are iterated in the processes pre-production, production, post-production, and reflection.

Practice-led research can be applied to many creative fields, making it a quite flexible methodology that can incorporate various related methodological possibilities in order to create a unique approach that is tailored to the needs of the research project at

³² Feature creep refers to the continuous addition of new features that were not part of the initial planning phase (Batterbee, 2020).

hand (Smith and Dean, 2009). With this in mind, I take my methodology a step further through the addition of agile methodology, implementing the iterative relationship between practice and theory and the effect that they have on one another in the form of “sprints”, as outlined below.

3.2.2 Agile methodology

The notion of agile methodology originated in the early 2000’s after being conceptualised by a group of software developers who were looking for a method that could help them develop and publish software at a much faster pace. Some of the key creators of the agile methodology include Martin Fowler, Jim Highsmith, Jon Kern, Jeff Sutherland, Ken Schwaber, and Bob Martin, to name but a few (Fowler, 2005).

The agile methodology functions on the basis that a piece of work is taken from conception to completion at a fast pace in order to identify possible pitfalls that help to improve the work that follows. Similarly, this project made use of sprints in order to complete the artefact (sprints were incorporated as part of the production processes). For example, when creating the digital storyworld, I created a building which I then modelled up to a certain key point in order to identify shapes and gauge whether these would indeed be possible to create, as well as how long it would take me to model this structure. After doing so, I entered a reflection phase where I noted down the process along with ways of improving future storyworld assets. After this reflection phase was complete, I started modelling the next building, repeating the methodology, resulting in a second sprint. This process of planning, creating, and reflecting, then continued up until the completion of the final artefact. This demonstrates the iterative nature of practice-led research.

This means that each section, or different stage of the study, has a specific start and end, that is then each reflected upon in order to improve the subsequent stage. During the reflective stages I was accorded the opportunity to determine whether my practical work contributed towards bringing the theory to life. If it was felt that the practical and theoretical components did not fully complement one another, I worked on augmenting either component, or expanded upon one of them in order to develop an integrated

theoretical and creative outcome. During these different sprints, both theory and practice had to be adapted in order to complement one another in light of the outcomes that I wanted to achieve. To a large degree, I regard the practical body of work as the most salient product of the research process, although the theoretical aspects informed creative decisions to a large degree. As per the requirements stipulated by the North-West University's MA in Graphic Design, I thus produced a dissertation as well as a reflection document (digital) to demonstrate proof of scholarly rigour. The continuous repetition of these agile / sprint stages resulted in controlled and checkable project development, especially in terms of the production of the practical artefact.

During the development of the artefact, I was able to test various different ideas and approaches in terms of the creation of the envisioned storyworld without taking up too much time. For example, I could take one specific component of my storyworld through its own sprint as if it were its own little artefact, thus demonstrating small iterative processes followed during the course of the study. This led to a process of trial and error which aided in my gaining vast amounts of knowledge and hands-on experience with the various software and theories that were used during the creation of the final artefact. Moreover, I was able to save time as I had a clear idea of how difficult it would be to create a 3D asset, such as a building, and how long it would take. This allowed me to create a time frame that I could follow to create a certain number of assets each day in order to complete the story world on time. This iterative process allowed me to experiment on sections of the storyworld, testing different texturing and lighting methods that I then repeated onto the rest of the storyworld once a sound method / approach was found.

3.3 The present study as practice-led research: some reflections

This study started with a keen interest in the creation of 3D spaces for story worlds; spaces that can be freely explored by a viewer / player (as in the case of RPG video games) in order to explore narrative content that tell a story without the aid of text, or a narrated voice.

Notable conceptual inspirations that helped to spark the study to life were Tolkien's (1954) *Lord of the ring's* book and film series, and the ways in which Tolkien approached the creation of a storyworld, or more specifically a language that inspired the creation of a storyworld.

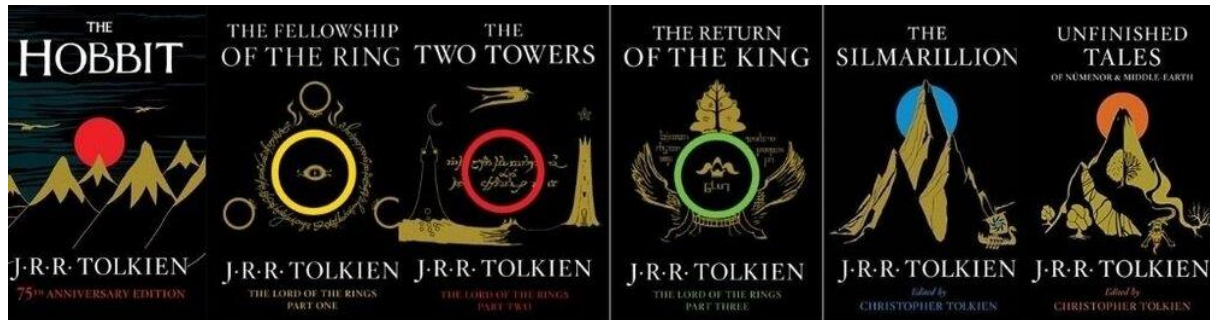


Figure 1: *Lord of the Rings* recommended reading order

Tolkien was a Professor of English Language and Literature at Oxford from 1945 – 1959 when he retired (Doughan, 2014). His love for language can be seen in his fantasy novels where he conceptualised his own fantasy languages that sparked the creation of cultures that are so unique and intriguing that they capture and hold the

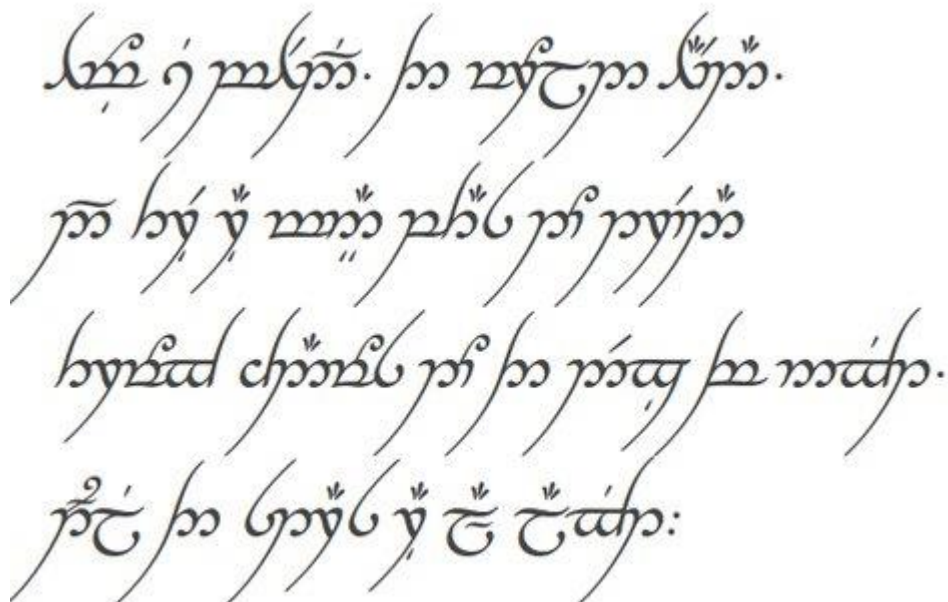


Figure 2: Example of the Sindarin language as seen in the storyworld of *Lord of the Rings* (1954)

attention of the reader, creating an immersive experience within his later created storyworld spaces. According to Mumford (2015), Tolkien created over 15 different

dialects which are spoken by the different creatures and characters in his novels and storyworlds. Tolkien's most notable languages are *Qenya* and *Sindarin* which are spoken by the Elves in his storyworld (See Figure: 2).

Another noteworthy inspiration for this study, in terms of the creation of a storyworld that prompts exploration in order to understand its narrative, is the medieval, dark-fantasy video game, *Dark Souls* (2011).

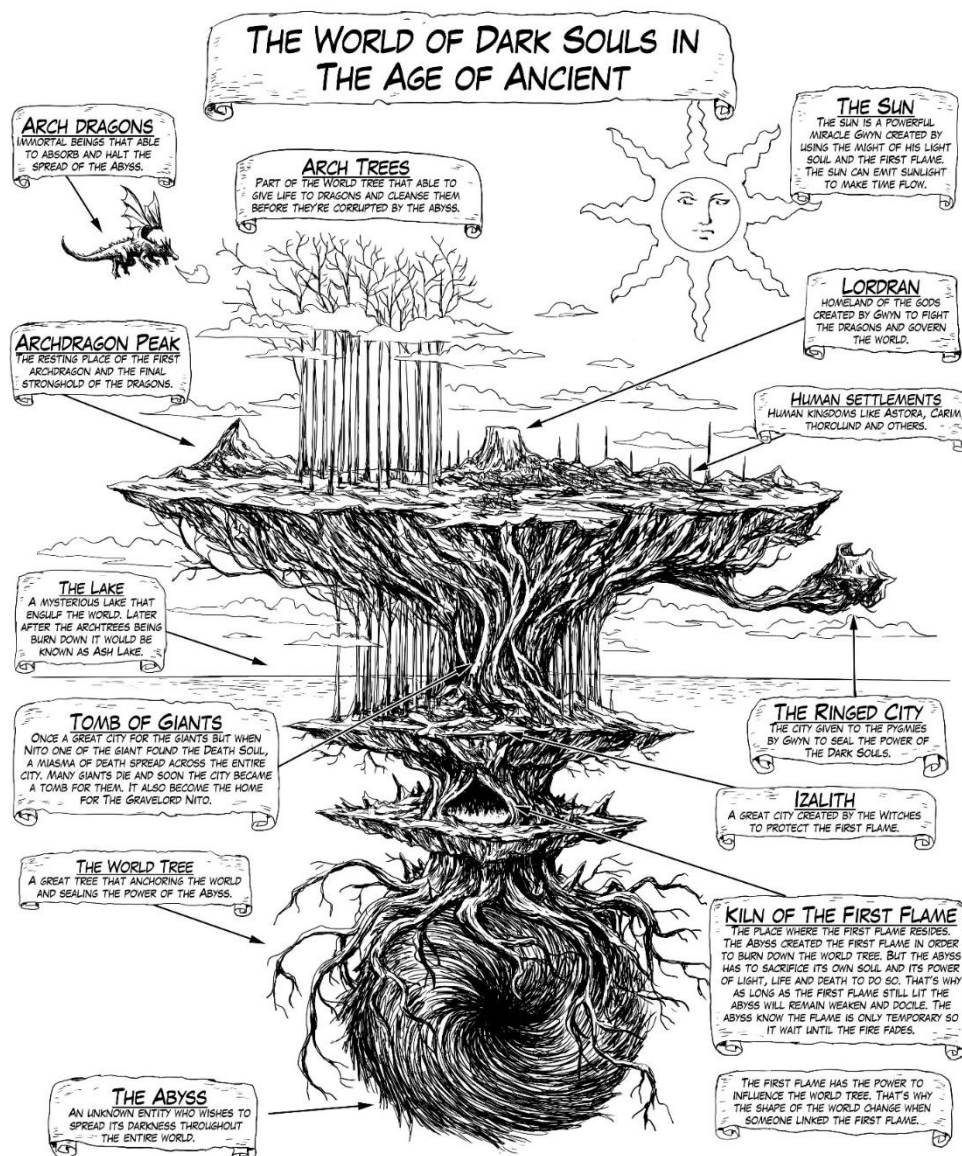


Figure 3: Conceptual drawing of the Dark Souls storyworld

This video game has a unique approach to its storyworld where each space is intertwined with the rest of the world in ways that are not immediately obvious to the player. The players' continuous exploration of the storyworld spaces results in a stronger grasp of the world and how/why it is structured as it is. Furthermore, the narrative content of *Dark Souls* (2011) is not laid bare to the player at the start of the game. Players need to interact with the various storyworld spaces, and the items found within, in order to start making sense of the world and their role within it.



Figure 4: Screenshots from the *Dark Souls* (2011) video game.

As there is no clear path for the player to follow, each player's experience of the storyworld and their level of understanding (based on interaction and exploration) is different, resulting in a unique non-linear experience. I found this approach to non-linear narrativity fascinating, especially when I discovered that the interactive experience of the user of the game makes sense (or tries to) in the context of narrativized digital spaces.

This concept of a non-linear narrative that initiated my primary desire to create a digital story space with narrativized spaces intrigued me and led towards the next facet of my methodology, namely the **research** phase, which entails a theoretical probing of

concepts that could inform the practice. During the research phase I explored a number of theoretical vantage points relevant to the creation of storyworld spaces, starting with research into narrative space and the different types of spaces that are commonly found within a narrative. This research trail led to further research into narrative time and the creation of non-linear storyworld spaces that have the ability to convey more than one narrative at the same time. These texts have helped me expand upon my knowledge bank concerning the creation of a narrative space and different ways that the spaces themselves can convey narrative meaning. This could include meanings conveyed in the form of objects, sounds, texture, light, and colour, or even the shape(s) of the spaces themselves. This processual and iterative approach to research led me to engaging with perspectives of authors such as *Game design as narrative architecture* by Henry Jenkins (2004), and *Communication and the semiotics of space* by Elliot Gaines (2006), who have both explored the possibility of conveying a narrative or narrative importance through the sole use of space itself.

I have referred to Gains (2006: 1) who states that space in a narrative usually supports meaning-making but is rarely given its own meaning. I agree with Gains' statement and believe that space should be regarded as equally important as character which usually conveys the narrative. This argument led me back to practice, where I decided to demonstrate space's ability to convey narrative content through the creation of an artefact where space is narrativized and central to meaning-making. In order to achieve this end, I developed a methodological strategy also informed by salient theoretical perspectives that allowed me to explore spatial narrativity.

In this regard, the work of Henry Jenkins was felt to be apposite. Jenkins (2004: 1) identifies four narrative strategies relating to the structuring of space that were felt to contribute to enhanced spatial narrativity, also providing a sense of spatial immersion. Zhang, Perkis, and Arndt (2017) define spatial immersion as the "subjective experience of being in one place or environment, even when one is physically situated in another". Jenkins' four narrative spatial strategies include *evocative spaces*, *enacting stories*, *embedded narratives*, and *emergent narratives* (Jenkins, 2004). All four of these elements do not need to be present at the same time; however, a

combination of these strategies does result in a more profound sense of narrative immersion.

Evoked narratives use spatial design to create adaptations of pre-existing storyworlds whilst evoking a sense of immersion (Panabella, 2015). In the third instalment of the *Back to the future* (1990) film series, the narrative space uses viewers' pre-existing knowledge of a classic cowboys and crook's genre to establish its narrative space without having to explain the physics and backstory of the storyworld. Evocative spaces are thus created based on viewers pre-existing knowledge of certain spaces and genres. This allows a world designer to create certain spaces that viewers are able to understand and relate to, through evoking a sense of familiarity. This familiarity then further evokes a sense of immersion when viewers observe spaces containing objects with which they can relate.

Enacted narratives deem spatial exploration and progression through obstacles as essential towards understanding the narrative. The medieval fantasy video game series, *Dark Souls* (2011) is an example of enacted spaces. Within this video game the player takes up the role of a cursed undead human residing in the storyworld of Lordran. The player's main goal is to begin a treacherous journey to discover the fate of the undead kind through what the game describes as the linking of the first flame (*Dark Souls* Wiki, 2011). However, the game does not outwardly explain this concept. Rather, it is discovered as the player progresses through the storyworld and interacts with the various narrative spaces and objects within these spaces.

Emergent narratives are open-ended narratives in which players construct their narratives based on the provided information and tools. Jenkins uses the example of "The Sims" (2000) video games to explain emergent narratives. Will Wright, the creator of "The Sims", states that he created a world within which players can write their own stories and shape their own experience (Jenkins, 2004).

Embedded narratives are filled with various clues that allow viewers to construct the narrative using their investigative skills. According to Jenkins (2004), the example of an investigative narrative is the best way to understand embedded narratives. Much like an investigator, the player has to uncover various clues within each narrative space ultimately aiding them in understanding what the larger story is about. Each space, although it can represent a single story, can contribute towards a larger

storyworld through a co-constructive process in the mind of the viewer. The video game “Life is Strange” (2015) is an example of embedded narratives. Within “Life is Strange” (2015), the player interacts with the story world using a character called Max. While exploring the story world the player ends up in various spaces that are all filled with different objects that the player can choose to interact with. Some notable spaces are Max’s room that is filled with objects related to her personal life, and the school hallway with various character’s lockers. These spaces contain objects that help players understand Max’s personality and her relationships with other characters in the storyworld. In this way players can get a better understanding of the story world, its inhabitants, and the larger narrative, through exploring different spaces and finding objects that contain meaning. Thus, the outcome of the video game “Life is Strange” (2015), is directly influenced by the player’s exploration of the various spaces and engaging with narrative clues.

Jenkins concludes that in each of his four terms, the design and structure of the game space will ultimately have different narratological consequences (Jenkins, 2004). In other words, the way a video game space is created directly influences the way viewers interpret and experience a certain narrative. Considering Jenkins’ theories, a designer can create a narrative space containing various objects that act as narrative clues, that are rich in narrative importance.

In this study, therefore, I argue that narrative spatial architecture³³, with reference to Jenkins’ conceptualization of narrativized spaces (2004), can be developed and used as a repeatable model for the creation of a non-linear carnivalesque storyworld. Furthermore, the addition of narrativized spatial signifiers aids in the experience of narrative space through the use of interactive digital space design. The identification of various narrative clues is a precursor for the storyworld formation that takes place in the mind of the user as co-constructor of open-ended spatial narrative possibilities. The study thus proposes the creation of narrative spatial architecture as a repeatable approach for the creation of non-linear digital spatial experiences by means of interactive engagement with space as narrativized experience.

³³ Spatial architectures are defined by Ryan (2012:13) as the design of narrative spaces which allow users the ability to participate actively in a storyworld while exploring a fictional world.

CHAPTER FOUR:

CREATING A CARNIVALESQUE STORYWORLD

4.1 Introduction

This chapter presents the unfolding of the creative application of theoretical ambits (storyworld spatialities and the carnivalesque as spatial possibility) to the creation of the practical body of work, referred to as the artefact (*CARNIVALESQUE CONVIVIALITY: FOLLIES, FUN AND FORNICATION AT JOOL*). The artefact I created is a navigable storyworld with a carnivalesque ambience, which I set out to achieve by means of spatial and thematic corollaries with the theory of the carnivalesque. In order to ground the theoretical points of departure in a storyworld with personal resonance, I decided to use the annual event of JOOL at the North-West University's Potchefstroom Campus as a storyworld space, imbuing it with the characteristics of the carnivalesque. I engage with this matter below under heading 2: Early stirrings.

This chapter unfolds in a fairly organic fashion, with the intention of explaining the processes that characterized the creative component of this study in narrative terms. In other words, while integrating theoretical and practical insights, this chapter demonstrates how the project came to life in the form of an artefact while engaging with salient theoretical perspectives. The iterative relationship between practice and theory is highlighted throughout, to demonstrate that the practical desire to create an artefact of a particular nature gave rise to a theoretical exploration, which impacted upon the way in which the creative thinking process unfolded. This, in turn, gave rise to refinements in theory, which were then applied to practice, in a number of iterative cycles.

The point of practice-led research is to engage with theory and practice while drawing on scholars whose work has had a salient impact upon my own practice and theory. In particular, Ryan (2012) and Bakhtin (1968) provided guidance in terms of storyworlds and the carnivalesque, respectively, which informed the possibilities and thematic framework that the practical drew on. In the present chapter, I therefore show how these insights have guided me to refine both practice and theoretical thinking,

and thus the entire chapter is narrated in the first person to communicate my own voice and opinions.

The following sections entails a reflective discussion of the methodology used in this study and how it has been applied in the creation of the practical component. The first major section entails the pre-production which entails the initial idea generation and research that went into creating the artefact. The second major section is concerned with the production of the artefact, with special attention given to the various sprints that were used in the creation of the artefact and the technical and theoretical struggles that accompanied it. Post-production is the final major phase and entails a reflection of the project and some thoughts on how the project could have been done differently given all the newfound knowledge, and suggestions for further research.

4.2 Pre-Production

During the pre-production phase I sketched out various layouts of the then envisioned storyworld in order to have a basis to work from. As noted in the introductory section of this chapter, the storyworld started out with a rather literal spatial approach where the storyworld had the same layout as the real world JOOL festival.

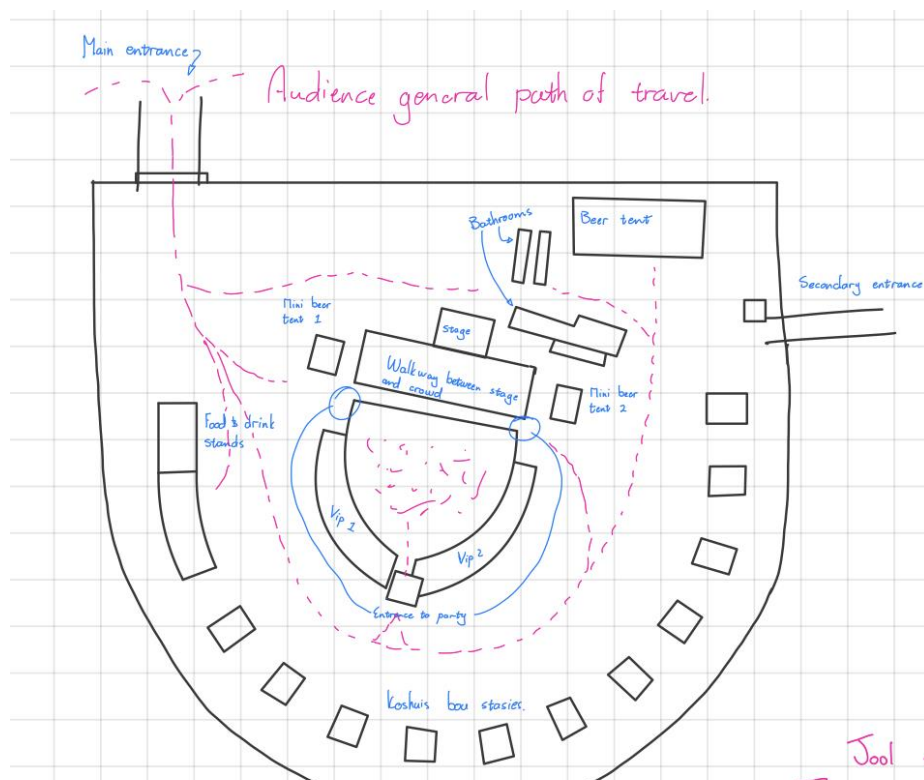


Figure 5: Initial story world layout sketch (own reference)

However, I decided to manipulate and augment existing “spaces” in order to accommodate the need to create a carnivalesque storyworld, where the elements of eccentric behaviour should ideally be represented through the architecture and layout of the storyworld. This led to the final layout of the storyworld which is in the shape of a giant broken beer bottle, floating in its own void, and inside this broken beer bottle is a city of sorts containing the festival itself along with a representation of its inhabitants and what the storyworld is all about.

My inspiration to start the journey of postgraduate studies began with the desire to create 3D storyworlds or storyworld spaces for platforms such as movies or video games once I have completed my studies. I have always been fascinated by the design and structure of video game spaces, especially those that allow a user (or player) to freely explore the digital space of the storyworld. Some noteworthy examples that come to mind in this regard are the *Dark Souls* (2009) video game series, along with *Grand Theft Auto: San Andreas* (2004). These video games are relevant to the study as they acted as initial inspiration as examples of large storyworld that are filled with various spaces that I could explore in whichever order I wanted to create a unique immersive experience where I could act as co-constructer of the narrative.

However, in order to conduct a master’s study, I had to abide by the requirements to explore theoretical ambits in order to fulfil the requirements of practice-led research. Extensive reading though scholarly material yielded a number of ideas relevant to the field of study in which I situate the present investigation and creation.

A noteworthy initial key theory was concerned with the creation of possible worlds and worlds within worlds. The desire to research possible worlds theories was sparked by the Japanese animation *Sword Art Online* (2012) which features a large floating storyworld shaped like an egg.



Figure 6: Floating storyworld of *Sword Art Online* (Kawahara, 2012)

Within this egg-like structure there are 100 different levels (floors) that each feature a whole storyworld with towns, mountains, lakes, deserts, various creatures, and inhabitants. Each level is connected through a large cylindrical tower that is referred to as a dungeon which the inhabitants of the storyworld can venture through in order to initiate progress to the different levels. The notion of different storyworlds that are built on top of one another and that collectively forms a more complex, integrated storyworld of its own inspired me to research possible worlds theories. As I researched this theory, it became abundantly clear that the types of storyworlds featured in publications on possible worlds are often bizarre and strange in nature, even ridiculous, such as the well-known tales of *Alice in Wonderland* (1865), *The Wizard of Oz* (1900), and *Narnia: The lion, the witch and the wardrobe* (1950) to name but few.

All these storyworlds suggest the aspect of possible worlds, which may entail that characters are transported from their original (story) worlds into new and often bizarre storyworlds that feature magical creatures and spaces where the laws of physics are transcended, resulting in floating islands and various other unnatural phenomena. Although my study does not focus on the concept of different possible worlds, it is concerned with the creation of a possible world that is bizarre in nature, which

eventually led to the discovery of the carnivalesque as theoretical ambit. This perspective inspired me to create my own bizarre storyworld with features of the carnivalesque.

Further theories that inspired me are concerned with impossible spaces, where structural elements such as scale are used to create large storyworlds in seemingly small spaces (*How Fictional Worlds Are Created: Creating Fictional Worlds* by Weisberg 2016; *Building Imaginary Worlds: The Theory and History of Subcreation* by Wolf, 2014; and *Worldbuilding in Science Fiction, Foresight and Design* by Zaidi, 2019). The Japanese animation *Arrietty* (2010) acts as an example of the use of scale in storyworlds, featuring a miniature family who lives below a normal sized house. This storyworld features seemingly normal spaces that become all together dangerous and adventurous due to the small scale of the characters. A noteworthy example is a scene where the main character, *Arrietty*, climbs the inside of a wall using a makeshift ladder built with nails, and various other small-scale elements that appear gigantic due to the small scale of the character. The way in which objects are portrayed and used in unconventional ways in this story world, such as a teapot becoming a boat, gave rise to unexpected and surprisingly “impossible” spaces such as a doll house becoming a mansion, which made the storyworld intriguing and spontaneous. *Arrietty* (2010) is a good example of how the “known” (everyday objects) are transformed into the “unknown” through the use of spatial constructs such as scale. The creators of *Arrietty* (2010) effectively created a fantasy world through the creation of a distorted version of the real world.



Figure 7: *Arrietty climbing the inside of a wall (Arrietty 2010)*

The storyworld of *Arrietty* (2010), in particular, sparked a measure of curiosity in me as to *how* the structuring of storyworld spaces could contribute towards telling a story, which led to further research into environmental storytelling. My research took me to the discovery of Jenkins's (2004) article on the design of video game spaces that utilise elements such as enacting spaces, where spatial exploration and the identification of narrative clues are essential towards understanding a narrative. This research gave rise to the following insights:

1. Video games tell stories, and I believe these can be enhanced through the effective use of spatial design that incorporates narrative elements into the structuring of spaces, to also have a bearing on the ways in which users interact with and explore these spaces.
2. Interactive spaces change the role of the viewer from passive to that of an active user. Instead of being guided by one authorial "voice" through a space,

the user can freely explore this storyworld as they deem fit. This results in a non-linear narrative with multiple outcomes, or (depending on the narrative at hand) to different routes to the same outcome. Each user experience is therefore unique.

3. Jenkins (2004) four methods of spatial design aided in the creation of my story world in the following ways. (1) **Evoked narratives** guided me in the creation of a story world that is based on an existing real world event which has been altered to create something new. The aspect of (2) **Enacted narratives** is prevalent where users are urged to explore the story world spaces in order to gain an understanding of the narrative. (3) **Embedded narratives**, in turn, aid in the process of meaning making through imbuing me created narrative spaces with narrative clues that allow viewers to construct the narrative using their investigative skills. Lastly, (4) **emergent narratives** aids in establishing a sense of open-endedness, where the narrative of the story world has no clear ending, and viewers are left to construct their own narratives.

With this newfound information, I decided to create a 3D storyworld containing spaces that users could explore in order to gain an understanding of the storyworld and the narrative that it represents through the identification of narrative clues that are scattered within the storyworld in different shapes and sizes.

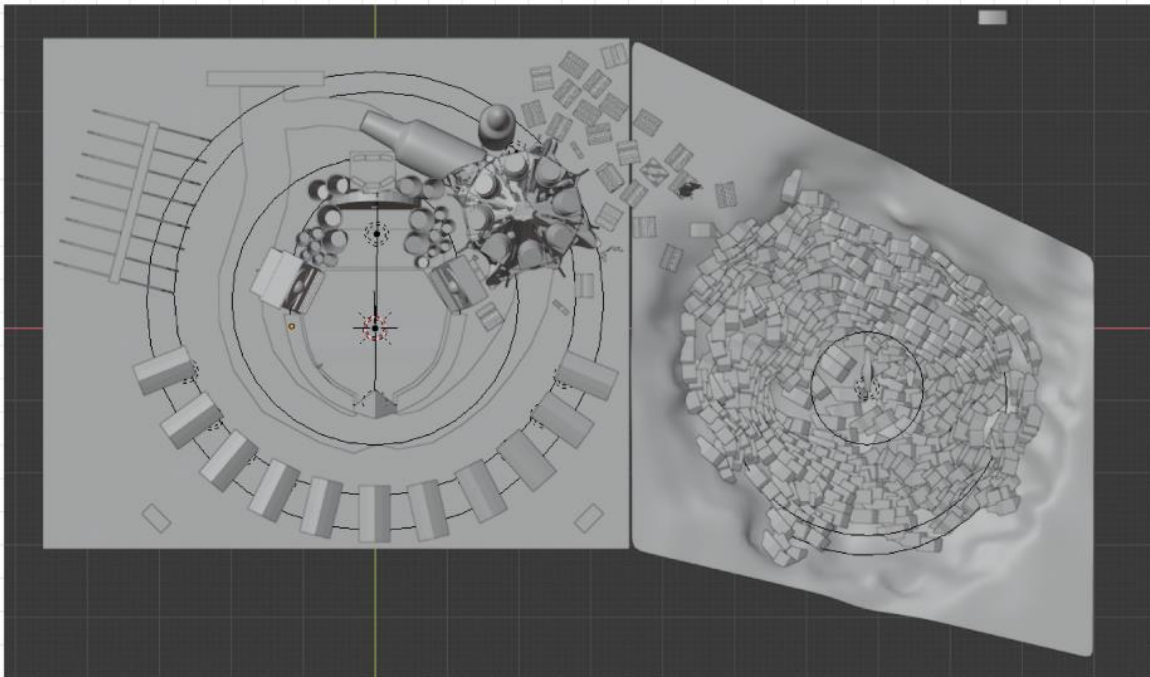
My aim, then, was to create a space for an interactive digital 3D context. In order to achieve this end, I had to find a way that allows users to explore my storyworld spaces in a way that allowed them a great deal of freedom, emulating what happens in a video game. I explored various options, finally deciding on using a “fly-through” camera, that allows the user to navigate through the storyworld using basic keyboard controls. In this way, the user can move through the storyworld and experience it as a “fly on the wall”; they can observe the various spaces and objects found within.

Once I had an idea of where I was going, I started creating my storyworld using Blender (the exact steps that were taken in the creation of my storyworld is detailed within my process document). As I noted in the introduction to this chapter as well as elsewhere, my storyworld is predicated on a subjective, and rather conceptual, re-imagining of the event of JOOL because I feel that this event lends itself to the notion of carnivalesque spaces (and, by implication, the suggestion of carnivalesque

narratives and identities, which could be taken up in future research as a corollary to carnivalesque spaces).

My first step towards the creation of my then envisioned storyworld was to have a look at the existing layout of the JOOL festival grounds as seen from Google Earth. The annual JOOL event, which is a charity event much better known as a time of sometimes wild partying among students, has a carnivalesque character (and was, as noted, at some point called *Karnaval*). While large numbers of students, especially first-years and house committee members busy themselves with building the floats (in themselves structures depending on the fantastic and imaginary) as well as large numbers of students simply enjoy the carnivalesque activities. These activities entail street music and fireworks, drunkenness and a good measure of debauchery that can be said to characterize many students' behaviour during this festival. In this way it is possible to hold to an image of the spaces of these festivities also assuming a carnivalesque nature to reflect the experience of the person.

Story world proof of concept as seen from above



This proof of concept demonstrates what the story world could possibly look like, as seen from above. The layout is inspired by, and based upon the existing JOOL festival layout, as seen from Google earth.



Figure 8: Screenshot from my process book (own reference)

The Google Earth image gave me an interesting insight into the types of spaces found within the festival grounds that I could focus on as key areas of interest with a view to develop narrative spaces that resonate with the festival. A key area that I identified was the beer tent, where students and festival-goers tend to indulge in as much alcohol as they can handle or afford. The beer tent also became the first space that I created in Blender. Initially, the storyworld was fairly realistically based on the actual layout of the existing JOOL festival, using its exact layout. This layout, however, restricted me creatively (activities must be structured to fit into the existing structures and make provision for exigencies, such as the inevitable summer rain showers) and clashed with what I was trying to achieve, namely a bizarre storyworld. I thus went back to theory and research to gain further inspiration and knowledge on bizarre

storyworlds and ways of enhancing my current storyworld. In the process, I learnt about possibilities of a carnivalesque nature that could best inform the spatial characteristics of my storyworld, especially the notion of the absurd.

Because absurdism is one of the cornerstones of the carnivalesque, I decided to explore existing storyworlds that utilize the concept of the absurd in the creation of its spaces and other storyworld elements. *Howl's moving castle* (2004) was one source of inspiration in this regard, with its impossible spaces that are all stacked on top of one another in a moving, almost living, mass of steel and smoke.



Figure 9: Mobile home from *Howl's Moving Castle* (2004)

I then proceeded to draw revised sketches (See figure: 12) of my storyworld with more attention to the creation of spaces that are unrealistic and unique in appearance. These spaces have a stronger focus on detail and reflect the desire to explore spaces that reflect the origin and geographical location of the JOOL festival.

The inclusion of Cape Dutch structures, for example, is a reference to Potchefstroom where the JOOL festival is held and where many houses from the late nineteenth to the mid-twentieth centuries around the University area are built in the Cape Dutch style, including some of the more prominent buildings on the campus itself.



Figure 10: Example of Cape Dutch architecture



Figure 11: Example of Cape Dutch architecture as seen on the Potchefstroom campus.

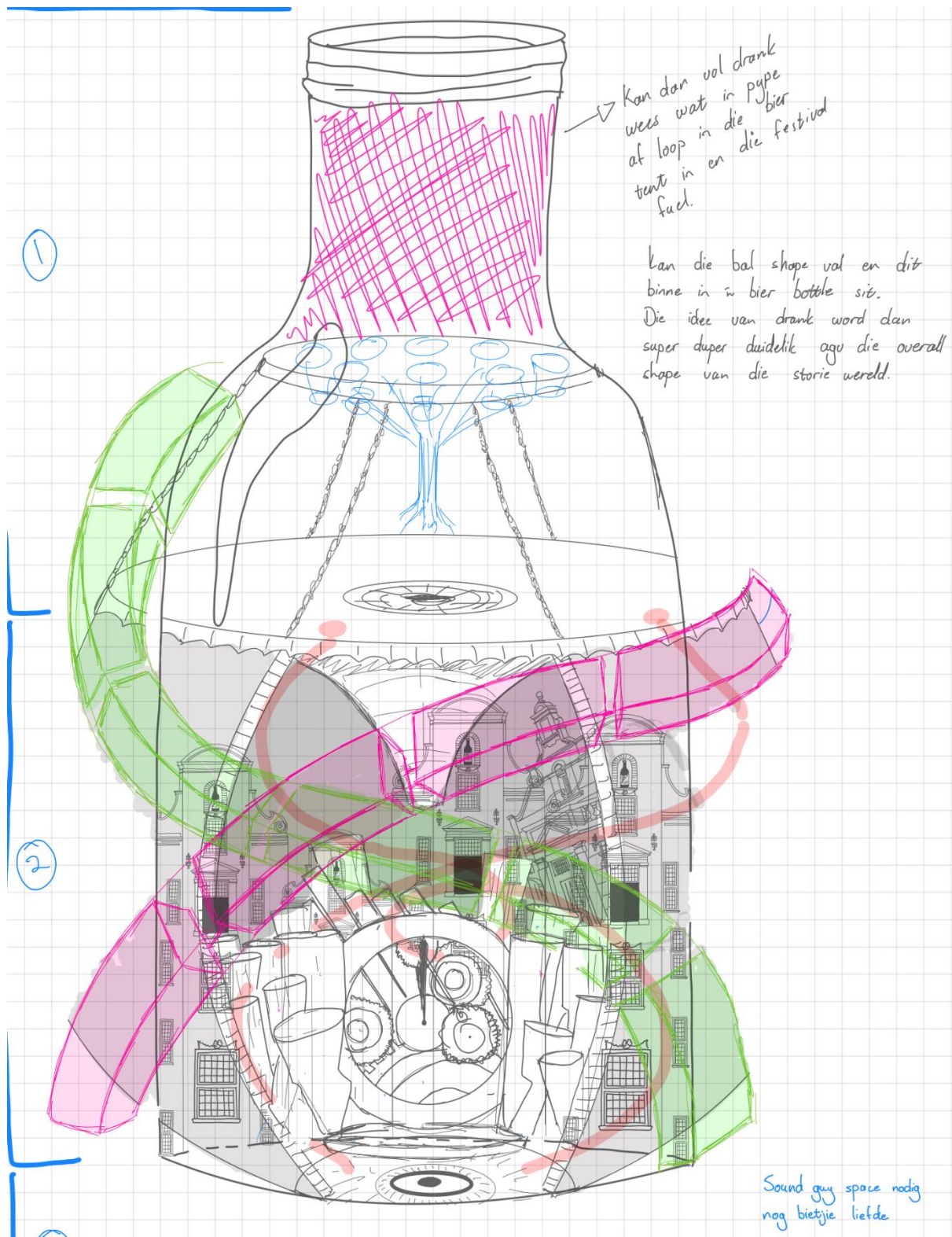


Figure 12: Screenshot from my process book (own reference)

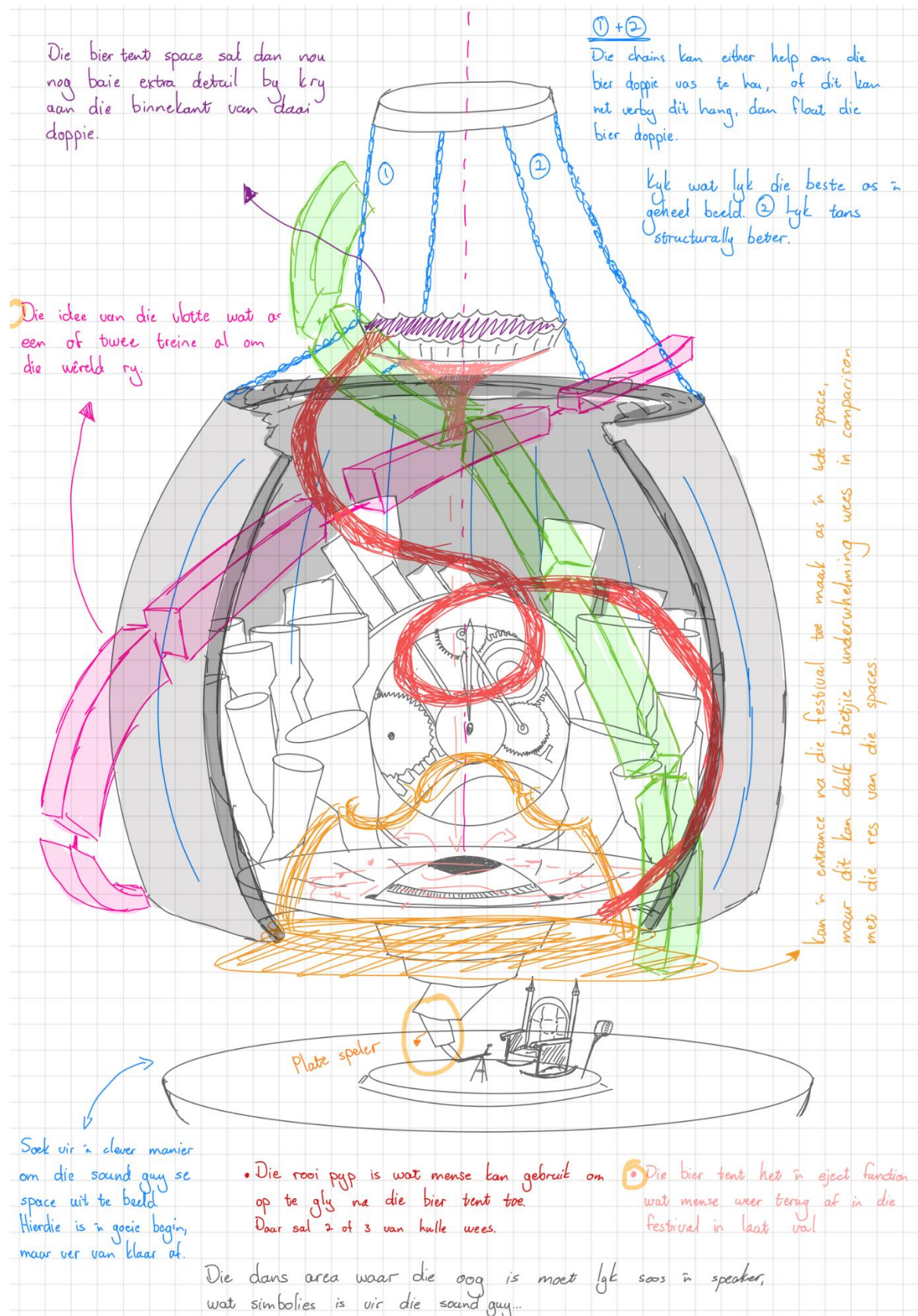


Figure 13: Abstract from process book (own reference)

4.3 Production

The production phase was, without a doubt, the longest phase of production where each major element of the storyworld had its own sprint (or cycle of production). While there were numerous sprints that led to the completion of the project, the following three sprints are examples of, and encapsulate the main phases of production and major turning points in the project.

4.3.1 Sprint 1: Modelling of the storyworld

The first major sprint was concerned with the modelling of the storyworld, done within the 3D modelling program, Blender. Blender is an open-source software, which means it is freely available for anyone to use and features a wide variety of tools that made me well equipped to produce my envisioned storyworld. As stated in the section on pre-production, I started by modelling a rough layout of the JOOL environment as seen on Google earth. This allowed me to identify key areas such as the beer tent, the central stage, entrance, bathrooms, medical tent, amphitheatre, a DJ box, and the designated spaces where each university hostel builds their own *JOOL* float.

With this in mind, I created the first version of the storyworld as its own mini sprint to see how long it would take to model the storyworld assets and assemble the various spaces. Modelling the first version of the storyworld entailed a learning curve with various obstacles and learning opportunities, of a technical, creative, and theoretical nature. It also gave rise to the opportunity to create a second version of the storyworld where I chose to emphasize the notion of the absurd more. This version of the storyworld, therefore, is increasingly bizarre due to the inclusion of a layered storyworld structure that floats within its own plane of existence. This newly created storyworld layout was built with three main sections all linked by a large green, upside down beer bottle – of course, to suggest the topsy-turvy nature of JOOL and the carnivalesque, as well as the associations these have with a state of inebriation.

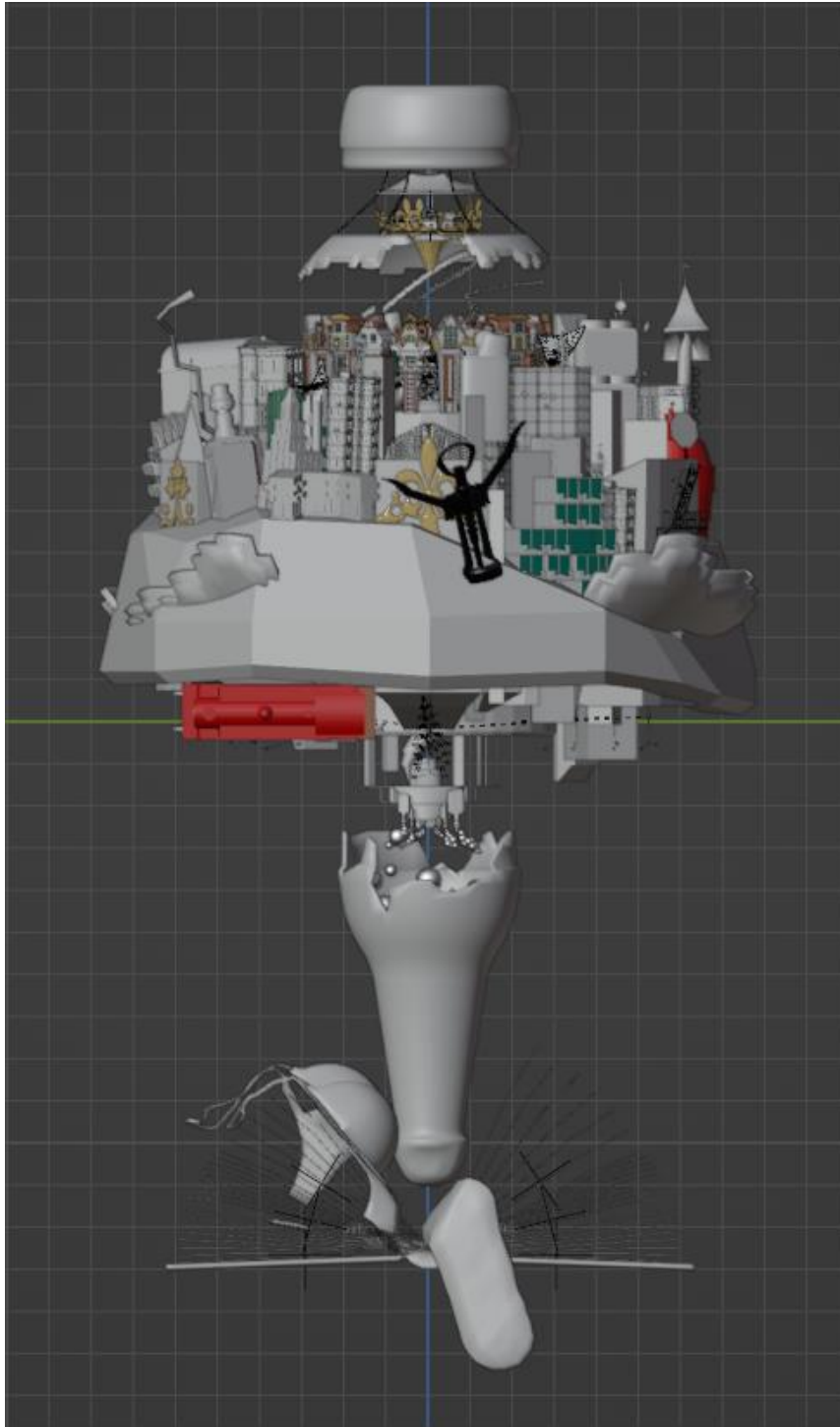


Figure 14: Abstract from process book (own reference)

The top section of the storyworld conceptually and spatially represents the beer tent, a key area of attraction at the *JOOL* festival, where most of the storyworld's inhabitants can be found, often in a state of alcohol-induced bliss, before continuing (and while

busy with) their *JOOL* activities such as building floats, attending to the first-year students who are doing most of the work, and the like.

The beer tent space in my storyworld contains a reservoir of golden alcoholic liquid (a play on beer and whisky) encapsulated by the bottom of the beer bottle located at the very top of the storyworld. The positioning of the reservoir at the top of the storyworld is symbolic of the importance students accord alcohol during *JOOL* and is a clue towards making sense of the storyworld's seemingly "drunken" spaces.

The reservoir is held in place by large chains connecting it to the rest of the storyworld. Underneath the reservoir is a large golden crown containing chairs, tables, alcoholic drinks, speakers, and other elements commonly found within a bar scene. The top of the crown is closed off by a tent-like structure that is held in place by a wooden circle. The centre of the crown features brightly coloured pipe-like structures that connect the crown to the reservoir. The pipes leading into the reservoir are ended off by wooden barrels that act as gathering nodes, pumping alcohol down into the beer tent. These pipes are brightly coloured in order to draw the attention of a mostly likely drunken student, much like the attraction of a moth to a flame. At the bottom of these pipes are various different coloured bottles of alcohol that can be plucked by students like apples from a tree, creating a symbolic reference to the tree of knowledge in the garden of Eden – a play on the debauchery and rule-breaking associated with the carnivalesque – and, of course, with *JOOL*. Also, much like Adam and Eve were punished for their sins, the centre of the beer tent is open, leading to a cone-like structure that causes students who were too eager to pluck more bottles to slip down, ejecting them into the storyworld space below. Too-eager students, in the case of storyworld navigation in the present project, are all those users who enter through this "rabbit hole" (another feature of the absurd and carnivalesque loosely borrowed from Lewis Carroll's *Alice in Wonderland*, 1965).

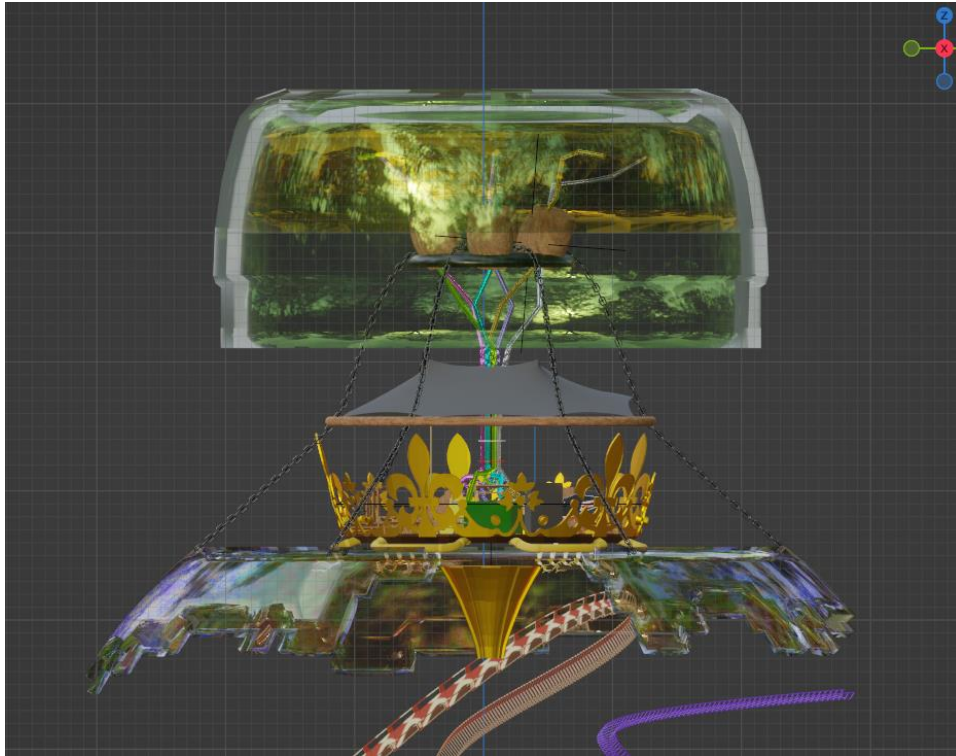


Figure 15: Abstract from process book - Beer tent outside view (own reference)

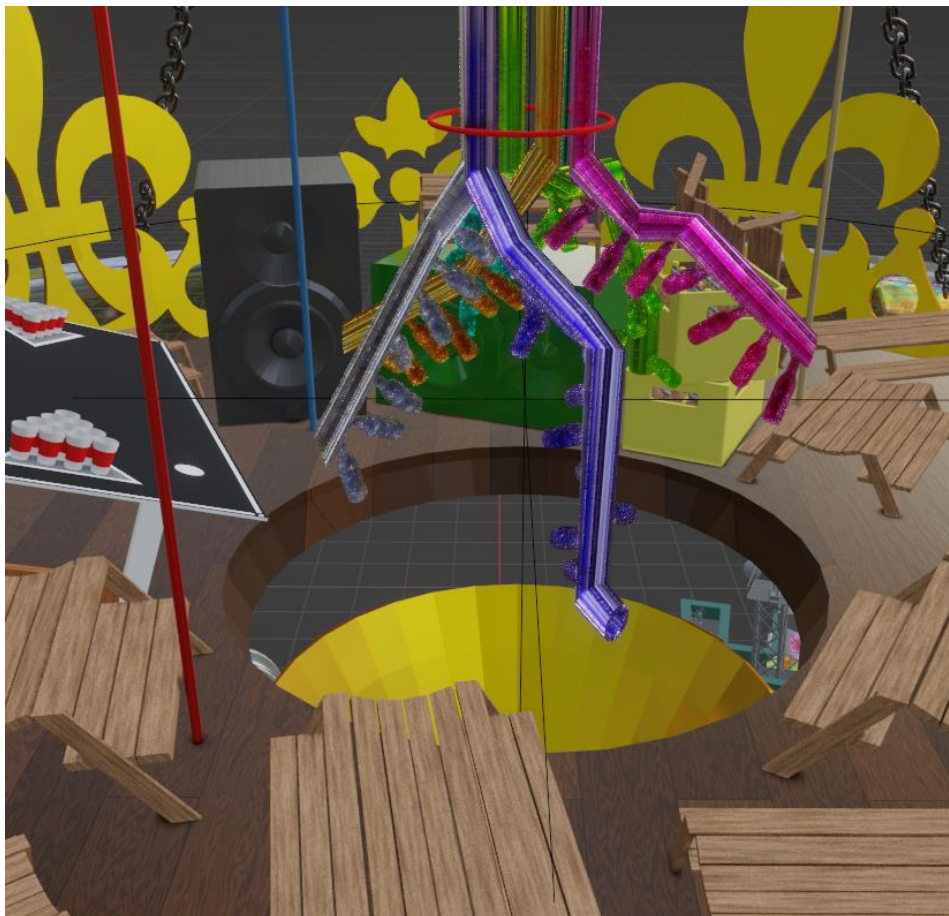


Figure 16: Abstract from process book - Beer tent inside view (own reference)

The middle of the storyworld contains the greatest amount of detail and is structured to represent a city built on multiple levels surrounding a centre stage area, representing the amphitheater and stage found at the JOOL festival.

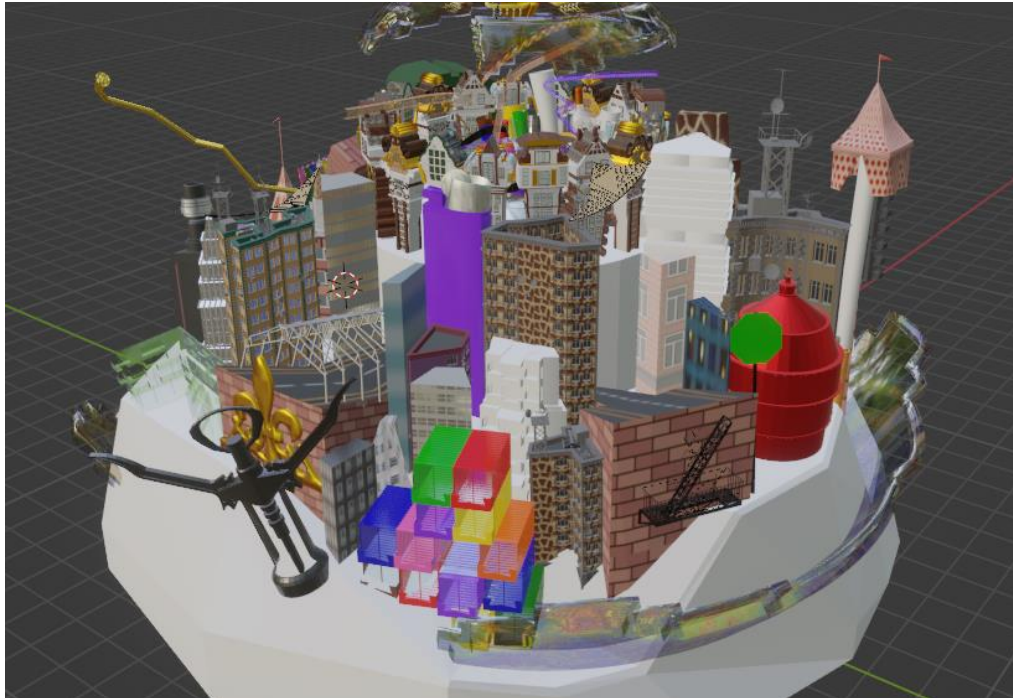


Figure 17: Abstract from process book - Story world outside view (own reference)

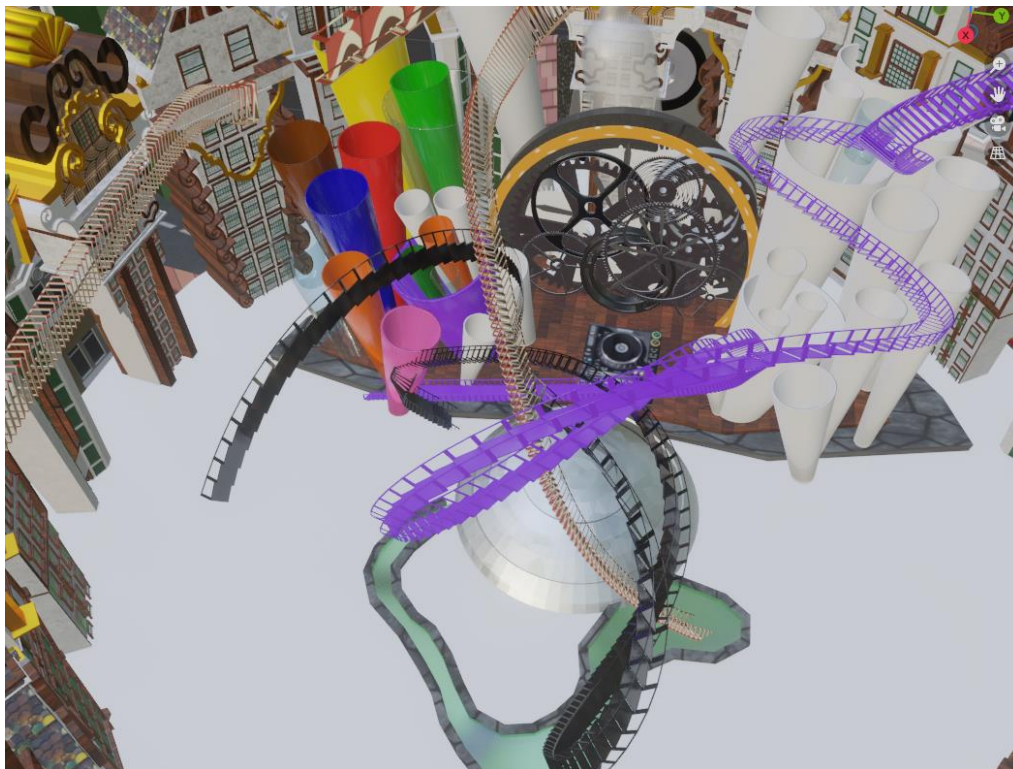


Figure 18: Abstract from process book - Storyworld inside view (own reference)

The buildings are placed in a circular fashion, expanding from the central stage outwards to the edges of the world. The various shapes and sizes of the buildings, along with the way that the buildings are intricately woven together bring about a feeling of distortion. This distortion is inspired by the need to create a sense of instability that is associated with the carnivalesque, conceptually also linked to the notion of non-linear storyworld spaces. Thus, the seemingly random spaces are grounded in theory in this manner.

The buildings at the centre of the storyworld are shaped to represent modified versions of Cape Dutch architecture – a style that is, as I noted, a reference to Potchefstroom where these buildings are commonly found. As the buildings in my storyworld expand outwards, the architectural style changes to a more modern and repetitive design that is a reference to the new student accommodation that can be seen throughout Potchefstroom. These structures are more generic in terms of their style to suggest the lack of individuality associated with much student housing. In this way the middle of the storyworld – the locus of the festival – becomes its own city structure that revolves around the *JOOL* festival.

Between and around the buildings of the storyworld are various objects such as large cigarettes, bottle openers, cans, vapes, and lighters that are all further symbolic of the types of activities that the storyworld's inhabitants indulge themselves in, and are deemed to be important. In this way, these large objects become sculptures in their own right as symbols of significance. One such structure is a building shaped like an open condom box. It is often said in jest – but also in seriousness – that students during *JOOL* tend to be less sexually inhibited than normal, often as a result of the sheer spirit of festivities and usually because of the inebriation that characterizes the festival. In retrospect this is quite ironic given that the *JOOL* festival is grounded upon charity and giving with love, but this love is then used as an excuse for debauchery. Yet *JOOL* remains a highlight on the social calendar of students and the university, and is often remembered with great nostalgia – a time associated with a type of freedom perhaps only students can have. Talking from my own experiences of *JOOL* and that of some of my friends who got hurt when the beer tent collapsed, they still tend to look back on the occasion with laughter.

Thus, increased permissiveness during *JOOL* is commonplace. As a reference to that, the storyworld contains various elements that are suggestive of sex and debauchery, such as the condom-shaped building where the storyworld inhabitants can go to engage in sexual activities. A further, more prominent reference to sexual activity during *JOOL* can be observed in the overall structure of the storyworld, where the large encapsulating green beer bottle is shaped like a penis at the bottom, situated above a bra hanging over an open book. The book also has a condom sticking out between the pages and a sock hanging off the open pages. These objects, placed “randomly”, are suggestive of unplanned (and thus open-ended) encounters of a sexual nature between students – thus the combination of intimate clothing items with books.

The central stage is situated in a mostly open space to suggest a gathering place inside the storyworld to party, celebrate, and enjoy the music concerts held during *JOOL*. This central space contains a series of spiral staircases leading upwards back to the beer tent.

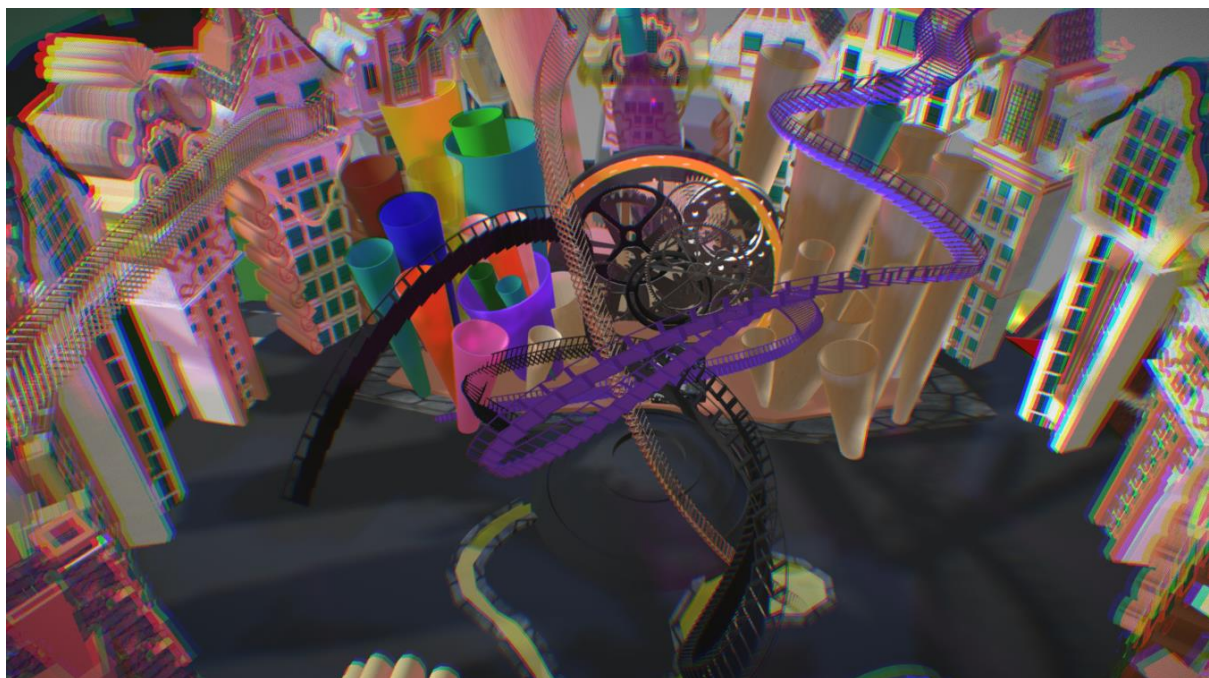


Figure 19: Abstract from process book - Stage (own reference)

However, these stairs do not all lead to the desired destination, much like a drunken person experiences when trying to walk back home after having a few drinks too many. The central stage contains a platform for the storyworld performers to act upon and features a large mechanical clock at its back. This clock is a symbolic reference to the

fact that the carnivalesque is temporary in nature and will eventually come to an end, all the while demonstrating how the theoretical considerations informed aspects of the creative component of this study. However, to remain true to my desire to create a sense of non-linearity, the clock features various clock arms that makes it impossible for one to associate a single flow of linear time to the storyworld.

Another reference to time in my storyworld is a train snaking around the storyworld. This train is made up of various compartments, much like a regular train. However, the train's compartments become more "modern" as the train snakes along. This is a symbolic reference to the fact that *JOOL* has been around for many years and has changed over the course of time, but it remains part of the larger *JOOL* narrative. What was initiated as a charity, extended into a competition between rival university residences, and has now become a paradise of drunken students looking for a fun time. The train, in this way, also represents the passing of time caught within a snapshot, which is the current *JOOL* storyworld.



Figure 20: Abstract from process book - Storyworld train (own reference)

As the process of modelling continued, I found different ways to create storyworld assets at a faster pace and with more detail. Initially, I created each building separately, modelling every aspect by hand.

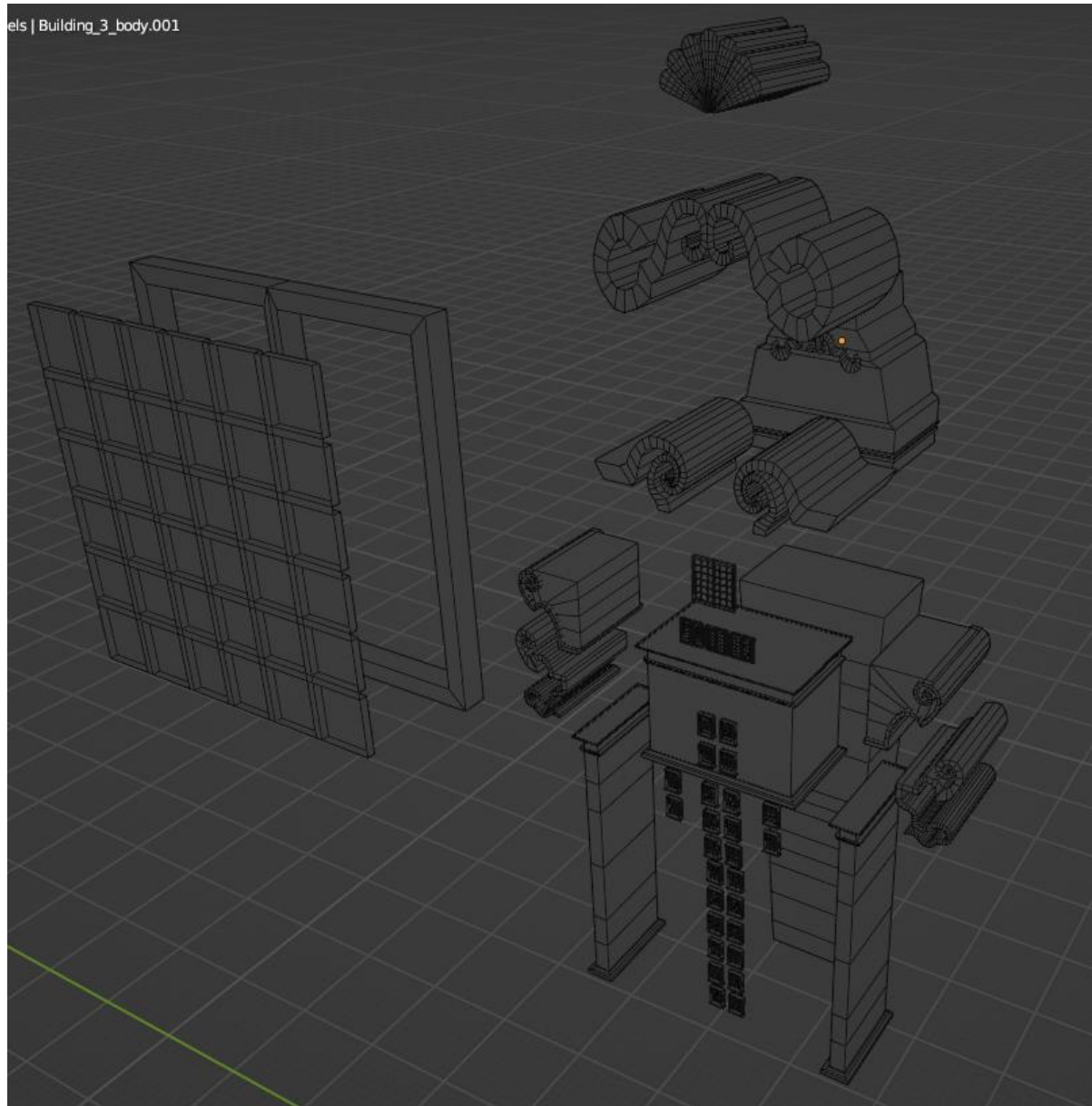


Figure 21: Abstract from process book - Cape Dutch building exploded view (own reference)

In other words, each window, door, roof, tent, and more was individually modeled, textured, and combined in order to create each separate building. While this is good practice, it is however a very time-consuming process, especially for only one person, and thus became a problem, as it would take too much time to produce the storyworld with my desired amount of detail. This meant that I had to start thinking smarter about my production process and find ways to model assets faster and more efficiently. This concluded the first mini sprint within my first major modelling sprint, urging me back to further research and theory.

After working through various online courses and tutorials on 3D modelling, and consulting a former NWU Master's student, Evan Reyneke, I had gained new insights into creating assets that are modular and can be replicated and edited in order to become unique whilst saving me a lot of time. One such example is seen in the centre buildings of the storyworld that were created using a Blender add-on called “Buildify” created by Pavel Oliva (2022).



Figure 22: Abstract from process book - Buildify base building (own reference)

This add-on was a breakthrough for me, because it opened my mind to the idea of generating detailed buildings in real time using a complex set of pre-created parameters and assets that I could edit, thus making each building fairly unique, especially in terms of texturing. This process helped me to populate the storyworld with ample buildings and other structures to make the storyworld spaces very detailed and intriguing.

4.3.2 Sprint 2: Texturing of the storyworld

The **second major sprint** is concerned with the texturing of the storyworld. This sprint entails adding colour, texture, and various other materials to the storyworld components, including the buildings, stage, props, and other modeled elements. The textures are meant to enhance a feeling of absurdity once they are encountered by the user to instill a sense of the carnivalesque. Noteworthy examples of absurd textures can be seen in the buildings themselves where one of the longer buildings in the upper part of the storyworld is textured to resemble the fur of a giraffe.



Figure 23: Abstract from process book - Giraffe building (own reference)

Further examples of absurd textures can be seen in the spiral staircases in the centre of the storyworld where one staircase is textured with a fabric-like material, thus rendering navigating the stairs physically impossible. These absurd textures can be seen throughout the storyworld in various places, all created with the intent to enhance a feeling of unreality associated with the carnivalesque and absurd.

A prominent texture in the storyworld is the colourful pipe structure at the top of the world that resembles the different types of alcohol that is harvested from the storyworld reservoir (the upper most part of the storyworld that contains a golden liquid – this is a suggestive narrative thread planted in the space for purposes of being explored by

the user) and is fed down into the beer tent. These pipes are bright and shiny in appearance with the intent of attracting the drunken inhabitants of the storyworld towards them, causing them to fall down into the central part of the storyworld, where they are trapped and become part of the *JOOL* festival.

A bright green liquid can be seen at the bottom of the storyworld. This resembles a fountain, where the space is structured to suggest the process of sobering up. This green liquid resembles the Cream Soda soft drink that is referred to by students as “the green ambulance” as it is believed to aid drunken students sober up and recover from their hangovers. The idea of the green ambulance is echoed in the visual inclusion of an actual green ambulance that is found lying, ironically, on its side next to the cream soda fountain. The idea of the ambulance on its side refers to the fact that, despite the “wonderous” aid of Cream Soda, students still tend to feel rather sick after consuming the copious amounts of alcohol that they usually do during the *JOOL* festival.

At the very bottom of the storyworld is a book with various items and objects sticking out between the pages. On the opened pages of the book is a photograph of a man that seems rather random in its inclusion, as this is the only direct indication of a person within the storyworld. This is, however, done purposefully with the intent of poking fun at the carnivalesque through including a photograph of none other than the founder of the carnivalesque concept himself, Mikhail Bakhtin.

4.3.3 Sprint 3: Execution of user flythrough

The third sprint is concerned with the execution of a user fly through that enables users the ability to freely explore the storyworld using an online application.

Initially the storyworld was meant to be its own application created using Unity or Unreal Engine. Both are programs that enable users to create applications and video game like environments that can be exported into their own smaller applications. Using Unity and Unreal Engine however, proved to come with a very large learning curve that would have required too much research and time learning the applications themselves. Moreover, creating the practical artefact using Unity or Unreal Engine would require creating an application that can be used between Windows, and Apple computers, otherwise the viewing capability of the storyworld would become restricted.

Additionally, the created application would have to be optimized so that it can be used on any computer without requiring powerful hardware. This would in turn have further restricted the viewing capabilities of my created storyworld. Luckily, the 3D community is a rather clever one, and I stumbled upon a website called SketchFab that solves these problems.

SketchFab allows users the ability to upload their 3D models onto a server that can be freely accessed by the community and acts like an online portfolio. This method of execution is fairly simple, but intuitive, and generates an online link that allows the user direct access to my storyworld. This generated link is attached to my script and can be accessed from anywhere in the world, and using almost any digital device such as computers, tablets, and smartphone devices. Once the 3D model (storyworld) has been loaded, the user can rotate around, and zoom into the model to start observing and exploring the storyworld spaces.

The SketchFab website allows for easy navigation and interaction with the storyworld model. A noteworthy viewing method includes a first-person camera option that can be selected from the settings panel. This viewing method results in a more “fly on the wall” type of experience that in itself becomes more immersive. I personally recommend this viewing method as it allows viewers to navigate into the storyworld with more ease, observing the finer details and narrative clues. The SketchFab website also allows viewers to view the storyworld using a Virtual Reality³⁴ (VR) headset. This viewing method results in the most immersive experience possible, as users are able to view the storyworld as if they were physically part of it. VR capabilities are however outside the scope of the project, as I do not have access to VR equipment to ensure that this feature works properly. That said, the potential of viewing the storyworld in VR is there for those individual users who do in fact have access to VR equipment and wish to test this viewing method.

With a clear means of observing and exploring my created storyworld, users can begin identifying the various narrative clues, and embark on their own non-linear narrative guided by their own unique sequence of exploration.

³⁴ Virtual Reality, or VR for short, is a technology that allows users to enter into a digital world through the use of a headset that changes what the environment around them looks like. VR is commonly used by larger gaming and architectural companies in order to immerse viewers into their products.

4.4 Post-production

The post-production phase entails reflecting on the insights, methodologies, successes, and issues that were encountered through the development and execution of the project. In order to structure this section, I am approaching it by the means of reflective and self-reflecting questions.

a) How would I do things differently?

In an ideal world, I would have liked to create a storyworld using the video game creation software, namely Unity or Unreal Engine that is able to push the boundaries of execution through its impressive graphical system that is able to create realistic looking environments. These environments could, in turn, have resulted in a much more immersive experience and would have also aided in expressing the narrative clues with more detail. Furthermore, I would have also liked to include sound in my storyworld as a deeper level of narrative consciousness (clues). After completing the story world's modelling phase I gained many new insights into how the modelling phase could have been done differently to create models that use less processing power, and result in more accurate textures.

Regarding texturing, I would also have liked to incorporate the artistic style of UV painting. This is a process of creating 3D models with clear texture maps that can be painted onto using any digital painting software such as Adobe Photoshop and Pro Create. In doing so I would have been able to create more stylized environments that are unique and intriguing in terms of appearance and narrative possibility. However, as my knowledge of 3D graphics increased, I stumbled upon the possibility of UV painting too late; this would have required me to re-model most of my then already created storyworld. I thus chose to abandon the process of UV painting and settled for a more straight-forward, traditional texturing process that uses image textures. That said, if I had the ability to turn back time, or re-do my project, the possibility of UV painting is something that I would have liked to incorporate.

Furthermore, and as mentioned above, I would like to incorporate the possibility of virtual reality (VR) as a means of navigating the storyworld. Along with VR I would also incorporate augmented reality (AR) which can be seen as the opposite of VR. Where VR allows a user to enter into a virtual world, AR brings the digital world into the real world through the use of a camera device that casts the 3D models onto real world

surfaces. In this way VR and AR would have allowed for a much more immersive experience of my created storyworld.

b) What obstacles and limitations did I encounter?

During the creation of this project, there were many obstacles that I encountered which either hindered or in some way prevented the development of my project. Noteworthy examples are funding that I had to secure to be able to conduct my study and pay for whatever resources that I require for its execution. The Covid-19 pandemic also hindered the development of my project, especially in the first year of my Master's journey where there was uncertainty about how consultations would work. This uncertainty resulted in delayed feedback which became rather frustrating. Furthermore, I had to establish an effective working routine and get used to working from home full time. The pandemic also restricted my access to Tanya van Deventer, who worked with me during the first half of my Master's journey. In short, Tanya was responsible for the creation of characters that would populate my created story world as an expansion of our combined body of work. This restricted access to Tanya also resulted in some uncertainty on both ends as we were planning on doing the project together but were split and restricted to online meetings which was not always ideal especially if we encountered connectivity issues.

In terms of technical obstacles there were plenty as 3D graphics turned out to be quite a bit more challenging than I had anticipated. That said I received access to various resources and people who helped me complete my study and leaned a lot on the way.

c) Possibilities for further exploration

During the development of my project, I encountered various topics of interest that I would like to expand upon or present as possibilities for fellow creatives. Some noteworthy topics includes the idea of "living" environments that physically changes with the movement of the user's camera. This technique can be seen in some video games, like *Hellblade Senua's Sacrifice* (2017) where in some instances the landscapes within the video game change, based on the perspective of the user. In the above-mentioned video game, the player character, Senua, suffers from a mental disorder which causes her to hear multiple voices in her head creating a disorientating user experience through the use of the game's audio. This disorienting effect is further enhanced through the manipulation of the environments that makes them feel like one-

way mirrors, leading to some interesting effects and ways of portraying a narrative. I would like to expand upon the phenomena, or idea of manipulating storyworld spaces based on the user's perspective whilst incorporating narrative clues in order to achieve a deeper level of narrative awareness.

Further topics of interest includes the creation of game-like environments that places users at levels where they have to overcome obstacles in order to progress through the narrative. However, I would like to see this done in a way that is not linear, meaning each obstacle should be unique and remain true to the idea of a non-linear narrative.

An initial concept that this study was concerned with was the reflection of character archetypes through the use of spatial design and the objects within these spaces. This concept was however put on hold as my main focus for this particular study was concerned with storyworld spaces and not characters. That said, further research into this concept could lead to some interesting discoveries that could in turn help shape storyworld spaces that are better suited to the characters and creatures that are found within those spaces. Another way of describing the above-mentioned objective is the creation of a possible world that utilizes the relationship between setting and character to ultimately change the unknown into the known, with the objective of sparking viewer relatability. Thus, giving viewers a better understanding of the storyworld and its inhabitants.

My hope is that some of these research topics could act as inspiration, or a guiding light, for other researchers who are interested in the field of spatial design.

CHAPTER FIVE:

FINAL CONCLUSIONS

This research project was concerned with the production of a project-related process document, a project-related Graphic Design project, and a project-related report in the form of a dissertation. The main aim of the present study was to explore the creation of a 3D digital storyworld (*CARNIVALESQUE CONVIVIALITY: FOLLIES, FUN AND FORNICATION AT JOOL*) that reflects salient spatial and temporal aspects of the carnivalesque. In order to achieve this end, I thus set out to create a carnivalesque storyworld that uses the concept of narrative spatial architecture as an approach towards creating a non-linear storyworld. I created an interactive digital 3D storyworld which can be explored by a user using a website, that can be accessed and navigated using a computer mouse or a tablet / smartphone device. Narrativizing the storyworld entails imbuing spaces, shapes, and textures, along with lighting with meaningful content. Interactivity guides the process of exploring the spaces.

According to Wolf (2018), size, scope, shape, boundaries, invention, completeness, and consistency all act as guidelines for the creation of a storyworld that is so densely detailed that users lose themselves within these worlds. In my project, the storyworld and its spaces are predicated on the notion of the carnivalesque in order to present a subjective take on a narrativized experience of *JOOL*. The narrative storyworld is made available for user exploration using the online website SketchFab.

Since each viewer's / user's choices and exploration of the created space are unique, the resulting narrative experience is individualised. This is the result of the non-linear nature of the narrativised spaces. Moreover, since one can re-experience the storyworld using a different exploration route, the same user can have a different experience every time he or she engages with the created storyworld, further resulting in a non-linear narrative experience. The resulting non-linear narrativized spaces are imbued with characteristics of the carnivalesque: unpredictable user navigation and spatial design. These features unfold through interactive engagement with the digital realm in which these spaces are presented. This aspect allows for a measure of co-

construction of narrative content by the user, thus allowing them to create their own interpretations of the narrativized storyworld spaces that are based on the salient narrative clues and guided by their non-linear exploration of these spaces.

5.1 Summary

In order to summarise and conclude the study, I revisit the problem statement, aim, research questions and objectives.

5.1.1 Problem statement & aim:

The problem statement is concerned with how the concept of the carnivalesque can act as guiding principle for the creation of narrative spatial architecture with non-linear spatial and temporal narrative structure. *The main aim of this study is thus to explore the creation of a 3D digital storyworld that contains spaces which are filled with various salient spatial and temporal aspects of the carnivalesque.*

From the problem statement, the following research questions emerged:

5.1.2 Research questions and objectives:

- How is the carnivalesque conceptualised in the literature? *This question is answered by establishing the achronological and hierarchy-inverting nature as well as related aspects of the carnivalesque as guiding principles as gleaned from the literature.*

The carnivalesque is associated with three main characteristics: reversal of hierarchies, eccentric behaviour, and a non-linear flow of events. During a carnivalesque event, everyday rules, inhibitions, restrictions, and regulations are inverted or discarded, placing emphasis on characteristics such as laughter and chaos. Wood (2018), as described in chapter 2.3 The carnivalesque, describes the carnivalesque as a decoration of chaos and order, focussing on celebrating aspects such as freedom, equality, and abundance.

The carnivalesque works in conjunction with the theory of the chronotope, which is a theory concerned with the way different configurations of time and space are

represented in language and discourse (Wood, 2018). In this sense, the chronotope can be regarded as a narrative genre, describing a setting based on the time period and geographical location of the narrative at hand.

With the above mentioned in mind the narrative of the created storyworld is structured around the narrative of the JOOL festival and the typical events that take place during this festival. These events are however exaggerated up to the point of it becoming absurd and unrealistic yet remains true to the narrative whilst adding humour to the chaos of the created storyworld spaces.

- How does the carnivalesque relate to non-linear spatial and temporal features in the context of narrative spatial architecture? *I demonstrate how the salient features of the carnivalesque relate to non-linear spatial and temporal structures within the context of narrative spatial architecture. With this theoretical consideration in mind, I aim to create a carnivalesque 3D storyworld, in which the notion of a non-linear narrativized space is foregrounded. These spaces have a carnivalesque nature because of their non-linear structure, which is strengthened by the interactivity of the digital realm in which these spaces are presented, thus also allowing for a measure of co-construction of narrative content by the user.*

The notion of narrative co-construction by the user allow users to experience a non-linear narrative unfolding as they explore these spaces. Experiences will therefore differ from one user to another. Furthermore, the interpretation of the embedded clues within these spaces are also different from one user to another.

In this study, I argue that narrative spatial architecture, with reference to Jenkins' conceptualisation of narrativized spaces (2004), can be developed and used as a repeatable model for the creation of a digital, non-linear carnivalesque storyworld. The created carnivalesque storyworld applied the concept of narrative spatial architecture to create different spaces that are filled with salient narrative clues that contain narrativity and aids in understanding a narrative. The addition of narrative clues facilitated the interpretation and understanding of narrative space by means of interactive digital space design. These narrative clues are typically identified and interpreted when a user spatially explores a storyworld through navigation. The

identification of various narrative clues, for example key buildings, patterns, textures, colours, and lights that structure specific spaces to communicate certain narrative key points are a precursor for storyworld formation that takes place in the mind of the viewer as co-constructor. By allowing the user to explore the storyworld spaces and interact with these narrative clues, users gain an understanding of the spaces and their narrative possibilities within the larger structure of the narrative storyworld.

The study thus sets out to create a storyworld in the context of digital narrative spatial architecture as a repeatable approach for the creation of non-linear digital spatial experiences by means of interactive engagement with space as narrativized experience. Through encouraging user exploration, the user's themselves become co-constructors of the narrative. This non-linear exploration resulted in a carnivalesque narrative as a connection can be drawn between carnivalesque and non-linearity since both concepts are known for achronological characteristics that utilise principles of a reversed hierarchy, along with the temporary suspension of reality, time, social norms, and rules. Together, these elements result in a unique non-linear narrative experience.

- How can these concepts be made manifest in the context of a digital 3D portrayal of a storyworld that relates to the experience of the JOOL festival? *The JOOL festival serves as a narrative and spatial leitmotif that guides the backstory of this project's practical component which presents a carnivalesque storyworld that can be explored in a random manner, resulting in a non-linear narrative experience.*

The created storyworld contains various spaces that are based on the real-world spaces found at the actual JOOL festival. The most prominent of the spaces are the beer tent, amphitheatre, and stage. These spaces contain the core narrative elements that, in my experience, encapsulates the essence of the JOOL festival, that is emphasized and exaggerated through the characteristics of the carnivalesque.

The first means of interaction with the created storyworld exists in the format of a website. This website contains a project title, along with a project description, detailing what the project is about. After the project description there are multiple detailed rendered images of the storyworld and its different spaces that showcase the various salient narrative clues. These renders are laid out in a grid showcasing all of them at

the same time as smaller images which aids in establishing a feeling of overwhelming stimulation as experienced during the *JOOL* festival itself. The viewer is then able to select any of the images, opening it up in a larger window allowing the viewer to observe the selected space in more detail. The viewer can then close this larger image and continue to select another rendered image. However, once the viewer closes their selected image and returns to the grid that showcases all the renders, the order of these renders will be different, and this order will change each time the viewer opens and closes a selected image. This is done on purpose to further exaggerate the characteristic of a non-linear narrative and to ensure that the viewer experiences a feeling of disorientation and to some degree confusion.

Below this image grid there lies a further level of interaction where the user can view an interactive 3D model of the storyworld itself using the SketchFab platform. This interactive 3D model can be explored using a computer or tablet device and can be navigated and observed in whatever order the user desires. This user exploration in turn results in a further non-linear narrative experience that is unique to each viewer.

5.2 Contribution of the study

This study set out to expand upon a body of knowledge (as well as practice) concerned with the design of spatial architectures (Ryan, 2012) and how the structure of a narrative is influenced by the spatial exploration of a user (Jenkins, 2004). Exploring narrative space theory in combining narrative clues enhances the development and experience of a non-linear narrative. This was achieved in the context of a carnivalesque themed storyworld using the narrative of *JOOL*, created for this practice-led study.

Furthermore, I aimed to develop a repeatable methodology for the creation of digital storyworld spaces that contain narrativity and can convey a narrative through user interaction, and exploration, resulting in the experience of a non-linear narrative. This methodology is referred to as narrative spatial architecture. The study thus set out to contribute to the body of knowledge on narrative spatial design for digital contexts.

5.3 Limitations

During the development of this project there were various setbacks and limitations that I had to work through. Some noteworthy examples were the Covid-19 pandemic that limited my access to the university and its staff. Although I could still contact my lecturer's telephonically or via an online video call, struggling with a poor internet connection at times hindered my work and the quality of my feedback sessions. Furthermore, there were various technical difficulties that arose as the project progressed, such as the steep learning curve that accompanied the creation of my 3D storyworld. Had I been able to invest more time and resources into understanding and grasping the various 3D applications available for the creation of a storyworld, I would have been able to further push the boundaries of the interactivity of my created storyworld resulting in a more immersive experience.

5.4 Further research

Topics for further research, with reference also to possibilities outlined in the previous chapter, entail manipulating storyworld spaces based on the user's perspective whilst incorporating narrative clues in order to achieve a deeper level of narrative consciousness.

Another noteworthy topic of investigation is the creation of a possible world that utilises the relationship between setting and character to ultimately change the unknown into the know, with the objective of sparking viewer relatability. This may provide users with a better understanding of the storyworld and its inhabitants through the use of character archetypes.

BIBLIOGRAPHY

- Abbott, H.P. 2007. Story, plot, and narration. In Herman, D Ed. The Cambridge companion to narrative. Cambridge: Cambridge University Press. pp. 39-51 Date accessed: 15 November 2022.
- Ager, R. 2011. Response to screenwriter John August. <https://www.collativelearning.com/john%20august%20response.html>. Date accessed: 25 September 2022.
- Anderson, J. 2019. Environmental storytelling in storyworlds. https://projekter.aau.dk/projekter/files/306255849/Masters_Thesis_Environmental_Storytelling_In_Story_worlds.pdf. Date accessed: 2 June 2021.
- Anon. 2021. Space. https://www.oxfordlearnersdictionaries.com/definition/american_english/space_1. Date accessed: 19 May 2021.
- Austen, J. 1815. Emma. London; New York: Penguin Books, 2003.
- Back to the Future* Part III (see Zemeckis, R. 1990).
- Bakhtin, M.M. 1984. The dialogic imagination. 1st ed. Austin, Texas. University of Texas press.
- Bakhtin, M.M. 1984. Problems of Dostoevsky's poetics. Theory and history of literature. Volume 8. https://monoskop.org/images/1/1d/Bakhtin_Mikhail_Problems_of_Dostoevskys_Poetics_1984.pdf. Date accessed: 22 September 2020.
- Bakhtin, M.M. 1984. Rabelais and his world. Indiana University Press.
- Bal, M. 1978. De theorie van vertellen en verhalen. Muidenberg: Cuitino.
- Bal, M. 2009. Narratology introduction to the theory of narrative. Edited by C. van Boheemen and M. Bal. University of Toronto Press. <https://nwulib.nwu.ac.za/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edspub&AN=edp677792&site=pf-live>. Date accessed: 1 June 2021.
- Basabara, N. 2018. A communication model for non-fiction interactive digital narratives: A study of cultural heritage websites. <http://www.tara.tcd.ie/bitstream/handle/2262/85341/%5bFrontiers%20of%20Narrative%20Studies%5d%20A%20communication%20model%20for%20non-fiction%20interactive%20digital%20narratives%20A%20study%20of%20cultural%20heritage%20websit es%20%281%29.pdf?sequence=1&isAllowed=y>. Date of access: 28 November 2020.
- Batterbee, I. 2020. Feature creep, what is it and how it affects your customers. <https://uxdesign.cc/features-creepers-the-customer-experience-horror-story-124c8fa73edf>. Date accessed: 24 February 2021.
- Bingham, H. 2016. Writing fiction: how to write descriptions and create a sense of place. <https://jerichowriters.com/how-to-write-descriptions-and-create-a-sense-of-place/>. Date accessed: 16 July 2021.
- Bloomington. https://monoskop.org/images/7/70/Bakhtin_Mikhail_Rabelais_and_His_World_1984.pdf Date accessed: 22 September 2020.
- Buchholz, S, Jahn, M. 2005. "Space." D. Herman et al. (eds.). Routledge Encyclopaedia of Narrative Theory. London: Routledge, 551–54. Date accessed: 11 September 2020.
- Camus, A. 1942. The Stranger. Vintage International. https://www.goodreads.com/book/show/49552.The_Stranger. Date accessed: 2 July 2021.
- Candy, L. 2006. Practice based research: A guide. <http://www.creativityandcognition.com/practicebasedresearch:aguide>. Date accessed: 21 Feb 2022.
- Collins. 2021. Definition of malleable. <https://www.collinsdictionary.com/dictionary/english/malleable>. Date accessed: 30 June 2021.

- Combrink, L & Marley, I.R. 2009. Practice-based research: Tracking creative creatures in a research context. <https://journals.co.za/doi/abs/10.10520/EJC62060>. Date accessed: 11 June 2022.
- Cowan, E. 2021. Research methodologies for the creative arts & humanities: Practice-based & Practice-led research. <https://ecu.au.libguides.com/research-methodologies-creative-arts-humanities/practice-based-and-practice-led-research>. Date accessed: 24 February 2021.
- Creely, E. 2016. Paul Ricoeur and his core ideas. <https://www.youtube.com/watch?v=sAfSz7OWDWE>. Date accessed: 29 June 2021.
- Crotty, M. 1998. The foundations of social research. <https://seminariodemetodologiadelainvestigacion.files.wordpress.com/2012/03/the-foundations-of-social-research-meaning-and-perspective-in-the-research-process-michael-crotty.pdf>. Date accessed: 12 July 2021.
- Crump, M. 2015. Harry Potter and the Philosopher's stone – Categories and functions of sound. <https://michaelcrump98277.wordpress.com/>. Date accessed: 24 June 2021.
- Currie, M. 2007. About time. narrative, fiction, and the philosophy of time. Edinburgh: Edinburgh University Press.
- Dark Souls* (see Miyazaki, H. 2011.)
- Doughan, D. 2014. J.R.R. Tolkien: A biographical sketch. <https://www.tolkiensociety.org/author/biography/>. Date accessed: 9 June 2022.
- Dolezel, L. 1998. Reading the identity of dramatis personae through the semantics of possible worlds. <https://www.enl.auth.gr/gramma/gramma12/D.6.pdf>. Date accessed: 23 June 2020.
- Dr Zhivago* (see Lean, D. 1965).
- Du Plooy, H. 2014. Between past and future: Temporal thresholds in narrative texts. *Journal of literary studies*, 30(3):1-24.
- Duxbury, L et al. 2008. Thinking through practice: art as research in the academy. <https://ecu.on.worldcat.org/oclc/650349318?databaseList=3200,1461,2110,2229,2108,1931,2107,3838,3839,1697,3313,3036,638,1937,2507,1978,2109,3494,2481,3371,3404,3129,2513,2237,3369,2038,2236,1861,1982,2433,2795,2233,3967,2375,2210,2175,2570,3384,2051,3382,1953,1875,2007,2447,2006,2209,1834,3034,2462,3197,2261,2062,2260,1842,3227,2259,3502,2059,3909,2211>. Date accessed: 10 August 2021.
- Eddy, M. 2011. Spatial impossibilities made the Shining even creepier. <https://www.themarysue.com/impossible-shining/>. Date accessed: 20 July 2021.
- Gaines, E. 2006. Communication and the semiotics of space. <http://www.wright.edu/~elliott.gaines/space.pdf>. Date of access: 25 September 2020.
- Genette, G. 1990; 2007:36. Narrative discourse. https://www.academia.edu/78662276/Narrative_Discourse_An_Essay_in_Method. Date accessed: 18 July 2020.
- Genette, G. 1980. Narrative discourse: An essay in method. Cornell University Press, Ithaca, and New York.
- Gardiner, H. & Gere, C. 2010. Art practice in a digital culture. <https://ecu.on.worldcat.org/oclc/662258370?databaseList=3200,1461,2110,2229,2108,1931,2107,3838,3839,1697,3313,3036,638,1937,2507,1978,2109,3494,2481,3371,3404,3129,2513,2237,3369,2038,2236,1861,1982,2433,2795,2233,3967,2375,2210,2175,2570,3384,2051,3382,1953,1875,2007,2447,2006,2209,1834,3034,2462,3197,2261,2062,2260,1842,3227,2259,3502,2059,3909,2211>. Date accessed: 10 August 2021.
- Grove, B. 2011. Storyworld: an introduction. <http://www.novelmatters.com/2011/11/storyworld-introduction.html>. Date accessed: 1 June 2021.
- Hamburger, K. 2011. The logic of literature. Bloomington: Indiana UP. Date accessed: 28 June 2021.
- Haseman, B. 2006. A Manifesto for Performative Research. https://www.researchgate.net/publication/27465716_A_Manifesto_for_Performative_Research. Date accessed: 27 November 2021.

- Haynes, B.F. 2009. Elements of carnival and the carnivalesque in contemporary Australian children's literature. <https://opus.lib.uts.edu.au/bitstream/10453/36464/2/02Whole.pdf>. Date of access: 10 September 2020.
- Higgins, C. 2011. The set of *The Shining* is intentionally impossible. <https://www.mentalfloss.com/article/28337/set-shining-intentionally-impossible>. Date accessed: 20 July 2021.
- Howell, E. 2021. Space. <https://www.space.com/author/elizabeth-howell>. Date accessed: 20 May 2021.
- Husserl, E. 1900. Phenomenology. <https://www.springer.com/gp/book/9781402001215>. Date accessed 19 July 2021.
- IMDB. 2015. Life is strange. <https://www.imdb.com/title/tt4375662/>. Date accessed: 19 July 2019.
- IMDB. 2012. Sword art online. <https://www.imdb.com/title/tt2250192/>. Date accessed: 10 April 2020.
- Jackson, P. 2001. The Lord of the Rings (film). New Line Cinema.
- Jencks, C. 1977. The language of postmodern architecture. New York, NY: Rizzoli International.
- Jenkins, H. 2004. Game design as narrative architecture. In: Wardrip-Fruin, N. & Harrigan, P., eds. First Person: new media as story, performance, and game. Cambridge, MA: MIT Press. pp. 118-130.
- Juntunen, H. 2015. Emerging from the margin – absurd, grotesque, and meaningless meanings in waiting for Godot. <https://www.semanticscholar.org/paper/Emerging-from-the-Margin-%E2%80%93-Absurd%2C-Grotesque%2C-and-Juntunen/8dfd80dde5f03f7c604a3b7d974b5f3318664dee>. Date accessed: 2 July 2021.
- Kawahara, R. 2012. Sword art online (film). A-1 Pictures.
- Keith C. 2020. Agile game development with scrum: teams. https://www.gamasutra.com/view/feature/6040/agile_game_development_with_scrum_.php?print=1. Date accessed: 19 May 2020.
- Kelly, M.R. 2021. Phenomenology and time-consciousness. <https://iep.utm.edu/phe-time/>. Date accessed: 23 June 2021.
- King, P. 2019. Albert Camus and the problem of absurdity. <https://blog.oup.com/2019/05/albert-camus-problem-absurdity/>. Date accessed: 1 July 2021.
- Kubrick, S. 1980. *The Shining* (film). Peregrine Productions.
- Lamminmäki, E. 2017. Video game design process : Case study of Challengers of Khalea. <https://trepo.tuni.fi/handle/10024/101083>. Date accessed: 27 November 2021.
- Lean, D. 1965. *Dr Zhivago* (film). Metro Goldwyn Mayer.
- Lefebvre, H. 1991. The production of space. Translated from the French by Donald Nicholson-Smith. Cambridge, MA.: Blackwell.
- Lessa, R & Araujo, J. 2016. The Routledge companion to imaginary worlds: World consistency. <https://www.routledge.com/The-Routledge-Companion-to-Imaginary-Worlds/Wolf/p/book/978036787630>. Date accessed: 20 March 2021.
- Lewis, C. 1865. Alice's adventures in wonderland. London: Macmillan.
- Lonescu, A. 2019. Word and text - A journal of literary studies and linguistics, volume 9 (2019): 5-34. Date accessed: 20 November 2022.
- Lord of the Rings (see Jackson, P. 2001).
- Lorentz, H.A, Einstein, A, Minkowski, H, Weyl, H, Sommerfeld, A. The principle of relativity: a collection of original memoirs on the special and general theory of relativity. <https://www.worldcat.org/title/principle-of-relativity-a-collection-of-original-memoirs-on-the-special-and-general-theory-of-relativity/oclc/339949>. Date accessed: 2 June 2021.

- Lowne, C, Bauer, P. 2018. Alice's adventures in wonderland - novel by Lewis Carroll. <https://www.britannica.com/topic/Alices-Adventures-in-Wonderland>. Date of access: 25 September 2022.
- Lucas, John R. 1989. The Future: An essay on God, temporality, and truth. Oxford: Basil Blackwell.
- Lavoie, A. 2020. Music Glossary: 50 Obscure music terms to Know. <https://blog.landrr.com/music-terms/>. Date accessed: 30 June 2021.
- Mäkelä, M. 2018. Documentation as a practice-led research tool for reflection on experiential knowledge. <https://journals-stage.oslomet.no/index.php/formakademisk/article/view/1818>. Date accessed: 11 June 2021.
- Merriam-Webster. 2021. Malleable. <https://www.merriam-webster.com/dictionary/malleable#synonyms>. Date accessed: 30 June 2021.
- Minecraft Wiki. 2021. About Minecraft. https://minecraft.gamepedia.com/Minecraft_Wiki. Date accessed: 22 August 2020.
- Minkowski, H. 1908. Three-dimensional space-time gravitational metric. [https://www.scirp.org/\(S\(i43dyn45te-exjx455qlt3d2q\)\)/reference/referencespapers.aspx?referenceid=3059038](https://www.scirp.org/(S(i43dyn45te-exjx455qlt3d2q))/reference/referencespapers.aspx?referenceid=3059038). Date accessed: 10 February 2022.
- Mittal, T. 2017. To be is to be: Jean-Paul Sartre on existentialism and freedom. <https://yourstory.com/2017/06/jean-paul-sartre-philosophy-existentialism-freedom/amp>. Date accessed: 12 July 2021.
- Miyazaki, H. 2011. *Dark Souls*: Online video game. FromSoftware Inc.
- Mumford, T. 2015. Literary mysteries: Did Tolkien really create entire languages for his books? <https://www.mprnews.org/story/2015/03/31/books-bcst-question-tolkien-languages>. Date accessed: 11 June 2022.
- Nankov, N. 2014. The narrative of Ricoeur's time and narrative. https://www.researchgate.net/publication/280807483_The_Narrative_of_Ricoeur%27s_Time_and_Narrative. Date accessed: 17 May 2021.
- Nasrollahi, M. 2015. A closer look at using stringer's action research model in improving students' learning. https://www.researchgate.net/publication/284715683_A_CLOSER_LOOK_AT_USING_STRINGER%27S_ACTION_RESEARCH_MODEL_IN_IMPROVING_STUDENTS%27. Date accessed: 28 March 2022.
- Nelson, S. Spence, B. 2020. Narrative time. <https://oxfordre.com/literature/view/10.1093/acrefore/9780190201098.001.0001/acrefore-9780190201098-e-1076>. Date accessed: 7 June 2021.
- Oxford English Dictionary. Space. <https://www.oed.com/viewdictionaryentry/Entry/185414>. Date accessed: 6 May 2022.
- Panabella, M. 2015. Here and there: Notes on Henry Jenkins' Game design as narrative architecture. <https://invalidmemory.wordpress.com/2015/03/20/here-and-there-on-henry-jenkins-game-design-as-narrative-architecture/#comments>. Date of access: 29 September 2020.
- Parsa, A. 2004. A narrative analysis of the film, " Titanic ". https://www.researchgate.net/publication/308779226_A_Narrative_Analysis_Of_The_Film_Titanic. Date accessed: 20 July 2021.
- Pavel, T. G. 1986. Fictional worlds, Cambridge: Harvard University Press.
- Pereira, A. 2019. The philosophy of absurdism. <https://owlcation.com/humanities/The-Philosophy-of-Absurdism>. Date accessed: 1 July 2021.
- Perrino, S. 2007. Chronotopes: Time and space in oral narrative. https://books.google.co.za/books/about/The_Handbook_of_Narrative_Analysis.html?id=9KIKCAAQBAJ&printsec=frontcover&source=kp_read_button&redir_esc=y#v=onepage&q&f=false. Date accessed: 8 October 2020.

- Porter Abbott, H. 2014. Narrativity. <https://www.lhn.uni-hamburg.de/node/27.html>. Date accessed: 21 June 2020.
- Raluca. 2016. Agile game development – a quick overview. <https://marionettestudio.com/agile-gamedevelopment-quick-overview/>. Date accessed: 22 May 2020.
- Reid, J.E. & Wernisch, L. 2016. Pseudotime estimation: deconfounding single cell time series. <https://academic.oup.com/bioinformatics/article/32/19/2973/2196633>. Date accessed: 25 June 2021.
- Relph, E. 1977. Space vs Place. http://geography.ruhosting.nl/geography/index.php?title=Space_vs._place. Date accessed: 24 May 2021.
- Ricoeur, Paul. 1985. Time and narrative, vol. 2, translated from the French by Kathleen Blamey & David Pellauer. Chicago: University of Chicago Press.
- Ricoeur, Paul. 1988. Time and narrative, vol. 3. Transl. Kathleen Blamey & David Pellauer. Chicago: University of Chicago Press.
- Ritella, G. Rajala, A. Renshaw, P. 2020. Using chronotope to research the space-time relations of learning and education: Dimensions of the unit of analysis. <https://reader.elsevier.com/reader/sd/pii/S2210656118302265?token=F453CF3544364698E35C7A9F26CCA4E5CB01F296C8F24D80FB40973EEB793DBA6FBE9F32853FEF90393F1F204CBEA612&originRegion=eu-west-1&originCreation=20210527080848>. Date accessed: 27 May 2021.
- Rockstar games. 2004. Grand theft auto: San Andreas. <https://www.rockstargames.com/games/sanandreas>. Date accessed: 17 February 2020.
- Ross, C. 2012. The past is the present; It's the future too. The temporal turn in contemporary art. New York: Continuum International Publishing Group.
- Rotten tomatoes. 2010. The secret world of Arrietty. https://www.rottentomatoes.com/m/the_secret_world_of_arrietty. Date accessed: 27 October 2021.
- Rotten tomatoes. 2004. https://www.rottentomatoes.com/m/howls_moving_castle. Date accessed: 22 October 2021
- Rushdie, S. 2020. Non-linear storytelling: Non-linear writing tips and examples. <https://www.masterclass.com/articles/non-linear-writing-tips-and-examples#what-is-a-nonlinear-narrative>. Date accessed: 6 July 2021.
- Rust, et al. 2007. Review of practice-led research in art, design & architecture. <https://shura.shu.ac.uk/7596/1/Pactice-ledReviewNov07.pdf>. Date accessed: 23 April 2022.
- Ryan, M.L. 2012. The living handbook of narratology: space. <https://www.lhn.uni-hamburg.de/node/55.html>. Date accessed: 12 March 2020.
- Ryan, M.L. 1980. Fiction, non-factuals, and the principle of minimal departure. <https://www.sciencedirect.com/science/article/abs/pii/0304422X80900303> Date accessed: 24 May 2020.
- Ryzewski, K. 2009. 13 Things: Archaeology, material culture, science studies and design. https://www.brown.edu/Departments/Joukowsky_Institute/courses/13things/5662.html. Date accessed: 12 July 2021.
- Scheffel, M, Weixler, A. & Werner, L. 2013. The living handbook of narratology – Time. <https://www.lhn.uni-hamburg.de/node/106.html>. Date accessed: 23 June 2021
- Scrivener, S. 2000. Reflection in and on action and practice in creative-production doctoral projects in art and design. https://www.researchgate.net/publication/26505678_Reflection_in_and_on_action_and_practice_in_creative-production_doctoral_projects_in_art_and_design. Date Accessed: 6 June 2021.
- Sean, B. 2021. How to read the Lord of the Rings. <https://www.dickwizardry.com/articles/how-to-read-the-lord-of-the-rings-series>. Date accessed: 11 June 2022.

- Sharma, M. 2020. Challenges to agile project management during COVID-19 pandemic: an emerging economy perspective. <https://link.springer.com/article/10.1007/s12063-021-00249-1>. Date accessed: 21 August 2022.
- Sharma A. 2020. Reasons why we trust Agile for mobile app development process. <https://appinventiv.com/blog/reasons-why-we-trust-agile-for-our-mobile-app-development-process/>. Date accessed: 28 May 2020.
- Shining, The* (see Kubrick, S. 1980).
- Shoshan, M. 2013. Narrativity and textuality in the study of stories. https://www.researchgate.net/publication/283630675_Narrativity_and_textuality_in_the_study_of_stories. Date accessed: 19 September 2021.
- Smith, H. & Dean, R.T. 2009. Practice-led research, research-led practice in the creative arts. <https://ecu.on.worldcat.org/oclc/643339144>. Date accessed: 23 April 2022.
- Steffen, H. 2022. The diegesis as environment: A new theory of film worlds. <https://academic.oup.com/book/41843/chapter-abstract/354636739?redirectedFrom=fulltext>. Date accessed: 29 September 2021.
- Spafford, E. 2004. An event-based digital forensic investigation framework. https://www.researchgate.net/publication/240788169_An_Event-Based_Digital_Forensic_Investigation_Framework. Date accessed: 21 June 2022.
- Stein, V. 2021. Einstein's theory of special relativity. <https://www.space.com/36273-theory-special-relativity.html>. Date accessed: 8 October 2022.
- Sullivan, G. 2010. Art practice as research: inquiry in visual arts. <https://ecu.on.worldcat.org/oclc/351322811?databaseList=3200,1461,2110,2229,2108,1931,2107,3838,3839,1697,3313,3036,638,1937,2507,1978,2109,3494,2481,3371,3404,3129,2513,2237,3369,2038,2236,1861,1982,2433,2795,2233,3967,2375,2210,2175,2570,3384,2051,3382,1953,1875,2007,2447,2006,2209,1834,3034,2462,3197,2261,2062,2260,1842,3227,2259,3502,2059,3909,2211>. Date accessed: 10 August 2021.
- The Oxford Research Encyclopedia of Literature. 2020. Narrative time. <https://oxfordre.com/literature>. Date accessed: 28 September 2020.
- Tolkien, J. R. R. 1991. *The lord of the rings*. HarperCollins.
- Tomaševskij, B. ([1925] 1965). "Thematics." P. A. Olson (ed.). *Russian formalist criticism. four essays*. Lincoln: U of Nebraska P, 59–95
- Tuan, Y & Relph, E. 1977. Space vs place. http://geography.ruhosting.nl/geography/index.php?title=Space_vs._place. Date accessed: 24 May 2021.
- Tuan, Y & Smith, H. & Dean, R.T. 2009. Practice-led research, research-led practice in the creative arts. <https://ecu.on.worldcat.org/oclc/643339144>. Date accessed: 23 April 2022.
- Weisberg, D. 2016. How fictional worlds are created: Creating fictional worlds. https://www.researchgate.net/publication/305714209_How_Fictional_Worlds_Are_Created_Creating_Fictional_Worlds. Date accessed: 27 April 2021.
- Whitney Museum of American Art. 2021. Positive and negative space explore and experiment with positive and negative space. <https://whitney.org/education/forteachers/activities/115>. Date accessed: 2 June 2021.
- Wittenberg, D. 2018. 8-Time. <https://www.cambridge.org/core/books/cambridge-companion-to-narrative-theory/time/C307F931AE30CAB6260BF7BB569A67F0>. Date accessed: 25 June 2021.
- Wood, R. 2018. What authors need to know about carnivalesque literature. <https://www.standoutbooks.com/carnivalesque-literature/>. Date of access: 5 October 2020.
- Wolf, M. 2014. Building imaginary worlds: The theory and History of Sub creation. https://www.researchgate.net/publication/344103150_Building_Imaginary_Worlds_The_Theory_and_History_of_Subcreation. Date accessed: 19 May 2020.

- Wolf M.J.P. 2018. The Routledge companion to imaginary worlds: World design. <https://www.routledge.com/The-Routledge-Companion-to-Imaginary-Worlds/Wolf/p/book/9780367876302>. Date accessed: 3 March 2021.
- Zaidi, L. 2019. Worldbuilding in science fiction, foresight, and design. <https://jfsdigital.org/articles-and-essays/vol-23-no-4-june-2019/worldbuilding-in-science-fiction-foresight-and-design/>. Date accessed: 10 November 2021.
- Zemeckis, R. 1990. *Back to the Future* Part III (film). Amblin Entertainment.
- Zhang, C. Perkis, A. Arndt, S. 2017. Spatial immersion versus emotional immersion, which is more immersive? https://www.researchgate.net/publication/317357598_Spatial_Immersion_versus_Emotional_Immersion_Which_is_More_Immersive. Date accessed: 11 June 2022.
- Zoran, G. 1984. Towards a theory of space in narrative. <https://www.jstor.org/stable/1771935>. Date Accessed: 20 April 2021.