Representing Imaginary Spaces

Fantasy, Fiction, and Virtuality

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Introduction

> It was . . . like a great barn-door; and they all felt that it was a door because of the ornate lintel, threshold, and jambs around it, though they could not decide whether it lay flat like a trap-door or slantwise like an outside cellar-door. As Wilcox would have said, the geometry of the place was all wrong. One could not be sure that the sea and the ground were horizontal, hence the relative position of everything else seemed phantasmally variable.
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> —H.P. Lovecraft[1]

What kind of space was presented in the previous paragraph? Its description is clearly not an incentive to think of it as the kind of space that could be intuitively grasped or easily navigated by human beings. The readers of the passage above are not supposed to believe that such a space exists: they are merely prompted to imagine its existence, appearance, and unfamiliar qualities. The space described here is thus an example of what we call an "imaginary space." In this chapter, we want to analyze and discuss how we experience such spaces.

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1. H.P. Lovecraft, *Cthulhu Tome Revised* (Ingersoll: Devoted Publishing, 2019), 233.

Imaginary spaces can manifest in many different ways. The space described above, for example, originally only existed in the fantasy of H.P. Lovecraft, who conceptualized it, gave it a certain shape and specific colors, imaginatively decorated it with objects, and rendered it in a textual description. In the original conceptualization of that space, Lovecraft was bound by the limits of his own creativity and was able to freely conceive and transform this space within his imagination. For whoever reads Lovecraft's work, on the other hand, this space is a represented space that is to be imagined based on the text of the above paragraph. The reader, in other words, cannot just freely imagine anything about this particular space but is constrained by the information given within Lovecraft's work of fiction. This space is thus what we will call a "fictional space": it is a space readers imaginatively encounter based on the information contained in the text.

Regardless of this space being freely conceived in fantasy or imagined based on its description, the way we experience this imaginary space differs from how we tend to experience real, physical spaces. After all, the described space cannot be entered, touched, interacted with, or explored any further. As it is an imaginary space, it is not a space that we can inhabit (that is, a space that we can be interior to): at most, we can imagine ourselves navigating it.[2] Imaginary spaces are fully interiorized: they are spaces that only exist within the mind, in the shape of mental images and/or imagined propositions.

Textual descriptions are not the only way to represent imaginary spaces, however. We can also be prompted and guided in our imagining of space by pictures, moving images, soundscapes, and even interactive, digital entities. The latter, which we call virtual representations of space, are of specific interest in this chapter. Computer-generated, interactive representations of spaces, especially those found in video games and virtual reality media, are not only designed to motivate their users to imagine the spaces they represent, but also to make these users imagine being interactively involved with these spaces. Virtual representations of space

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2. See Gordon Calleja, *In-Game: From Immersion to Incorporation* (Cambridge, MA: The MIT Press, 2011), 74.

evoke spatial experiences that are imaginative yet also characterized by an illusion or feeling of being present within the represented space. Virtually represented spaces are interiorized, in the sense that they only exist as spaces within our imagination, but we also can be interior to them, in the sense that they mandate us to imagine our own existence within them (i.e., they prescribe self-involved imaginings).

The title of this collection, *Virtual Interiorities,* is interpreted in this chapter through the dual perspective of users who not only interiorize virtual spaces through their imagination but are also imaginatively interior to them. To make this clear, we will situate the experience of virtual spaces within the larger context of our experiences of imaginary spaces, defining the latter as spaces that are imagined—but not believed—to exist.

Imagination and Space

It is hard to pin down the concept of space. Generally speaking, the notion can refer to abstract, mathematical space, understood as boundless, three-dimensional geometry. Yet, such an interpretation of space is a mere abstraction from "the intuitive three-dimensional totality of everyday experience," which Christian Norberg-Schulz calls "concrete space."[3] Rather than focusing on abstract, mathematical space or space as independent of any perceiving subject, this chapter deals with "experiences of space," and thus with the concrete, so-called "lived space" that we inhabit.[4]

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3. Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenology of Architecture* (New York: Rizzoli, 1980), 11.

4. It would perhaps be clearer to specify that here we are not talking about space as such, but of specific spaces and places. A space or place, then, is understood as "a specific, limited location," which can be analyzed based on "the objects it contains and the actions it allows." Daniel Vella, "There's No Place Like Home: Dwelling and Being at Home in Digital Games," in *Ludotopia: Spaces, Places and Territories in Computer Games*, ed. Espen Aarseth and Stephan Günzel (Bielefeld: Transcript-Verlag, 2019), 2.

This chapter more specifically focuses on imaginary spaces, or spaces that are not believed, but merely imagined to exist. We here define imagining as thinking about something without affirming its truth or existence.[5] When we imagine something, we do not have a direct, perceptual experience of it, but rather entertain it in thought as something that is nonexistent, or at least absent from our direct environment.[6] In light of such a definition of imagination, we propose to understand an imaginary space as a space that is posited as not actually existent, not physically present, and not immediately interactable with. As Kendall Walton writes, imagined spaces are separated from the world that actually surrounds us.[7] They have no physicality and offer no possibility for actually interacting with them. Based on these characteristics, it should not be surprising that the experiences of imaginary spaces that are discussed in this chapter significantly differ from experiences of real-life spaces and places.

Most noticeably, imaginary spaces do not allow for the same spatial practices that shape real-life, lived space. Many philosophers have pointed out that actual space only appears to us in a meaningful way because of how we interact with it, traverse it, perceive it, and in general, exist within it. In *The Production of Space*, Henri Lefebvre talks about space as being produced through a society's spatial practice.[8] Society's space is revealed in this practice, which "propounds and presupposes it, in a dialectical interaction." Similarly, Michel de Certeau writes how specific spatial orders only exist and emerge as they are enacted: "If it is true that a spatial order organizes an ensemble of possibilities (e.g., by a place in which one can move) and interdictions (e.g., by a wall that prevents one from going further), then the walker actualizes some of these possibilities. In that way, he makes them exist as well as emerge."[9] Edward Casey

5. See Nele Van de Mosselaer, "The Paradox of Interactive Fiction" (PhD diss., University of Antwerp, 2020), 25–26; and Elizabeth Picciuto and Peter Carruthers, "Imagination and Pretense," in *The Routledge Handbook of Philosophy of Imagination*, ed. Amy Kind (London: Routledge, 2016), 314.

6. Jean-Paul Sartre, *The Imaginary: A Phenomenological Psychology of the Imagination*, trans. Jonathan Webber (London and New York: Routledge, 2004), 12.

7. Kendall Walton, "How Remote are Fictional Worlds from the Real World?," *The Journal of Aesthetics and Art Criticism* 37, no. 1 (1978): 12.

8. Henri Lefebvre, *The Production of Space* (Hoboken, NY: Wiley-Blackwell, 1991), 38.

9. Michel De Certeau, *The Practice of Everyday Life* (Los Angeles: University of California Press, 1984), 98.

talks about the inherent "experimentalism" of place: abstract space only becomes meaningful when it is experienced by an active body as a "place of concerted action."[10] Shaun Gallagher and Dan Zahavi emphasize that it is our bodily possibilities that define experienced environments as "situations of meaning and circumstances for action."[11] From the perspective of existentialism, spaces gain meaning for one particular subject through the way they function within this subject's "existential project."[12] This existential project can be defined as "the aspiration to be in a particular way—to be a certain kind of subject."[13] It is through the lens of an individual's existential project that "things and events encountered in a world become meaningful for the individual: they can be recognized as obstacles to the fulfillment of the project, as tools and opportunities that can be leveraged towards the achievement of the project itself or parts of it, and so on."[14] In sum, the experience of (perceptual, actual, lived) space can be described and defined in terms of a rapport between space and an active body, with the meaning of specific places being produced through interactions, in practices such as traversal, exploration, and projectuality.

But what could such spatial practices entail when the space in question does not actually exist, but is only imagined or represented to exist? To analyze our experiences of imaginary spaces in more detail, this chapter will distinguish between different modes in which such spaces can be experienced. We will compare spaces that are freely evoked in personal fantasy with two kinds of fictional spaces: spaces that are represented in non-interactive works of fiction and spaces that are presented through interactive, digital media.

10. Edward Casey, *The Fate of Place* (Los Angeles: University of California Press, 2013), 29–30.
11. Shaun Gallagher and Dan Zahavi, *The Phenomenological Mind* (New York: Routledge, 2020), 156.
12. Jean-Paul Sartre, *Being and Nothingness*, trans. Hazel E. Barnes (New York: Washington Square Press, 1966), 717-722.
13. Stefano Gualeni and Daniel Vella. *Virtual Existentialism: Meaning and Subjectivity in Virtual Worlds* (Cham: Springer, 2020), 2.
14. Ibid.

Fantasy Space

Close your eyes and try to conjure up a space in your fantasy. Add whatever objects and details you want to it, let your imagination run free. Now keep this space in mind and ask yourself: What makes your imaginative experience of this space specifically "spatial"? Recall that Gallagher and Zahavi describe spaces as "situations of meaning and circumstances for action"[15] and that Lefebvre emphasizes that space is produced in a dialectical interaction or spatial practice.[16] Conversely, the space that you just conjured up in your personal fantasy does not allow for such a dialectical encounter. After all, your consciousness of this space already completely determines the space itself; you cannot explore this space, but merely build it. There can be no confrontation or interaction between you and your imagined space because the space is, per definition, not independent from you. For this reason, it can never surprise you. As Jean-Paul Sartre writes, you will never find anything there but what you put there yourself.[17] The space conceived in personal fantasy is not a lived space, but rather what Sartre calls a world of images where nothing ever happens.[18] This is because every movement in this space, every change of perspective or attempt to explore it further simply boils down to one thing: you conjure up an increasingly detailed and progressively more complete mental construct. Your experience of this space coincides, in other words, with your creation of it.

While real spaces emerge in our lived interactions with them, fantasy spaces are thus the product of private, creative imagination. This has two interesting consequences. First of all, your imagination of this so-called space is only restricted by the limits of your imagination. Fantasy space does not have to abide by physical laws, be persistent or stable (rather, it can morph incessantly and take on new and different shapes at the whims of the fantasizer), or be consistent with any knowledge we have about actual space. Secondly, the experience of a space entertained in fantasy

15. Gallagher and Zahavi, *The Phenomenological Mind*, 156.
16. Lefebvre, *The Production of Space*, 38.
17. Sartre, *The Imaginary*, 9.
18. Ibid., 11.

is not cognitively accessible to anyone but the fantasizer. Whenever this person tries to share what they conjured up in any way with other people, the mode in which these spaces are experienced changes. In this case, the fantasy space is crystallized into a represented, fictional space, the experience of which we describe in the next section.

To conclude this part, fantasy space is, in a way, a space without any of its usual characteristics: it has no physicality except for imagined physicality, it is never encountered, but merely conjured up mentally, it is not perceptually stable or behaviorally consistent, and it cannot be objectively experienced, nor can it be intersubjectively shared. Fantasy space is the semblance of space. It is a mental construct of space that can never give rise to, nor be discovered through, an experience that we would call spatial.

Fictional Space

The imaginary spaces discussed in the previous paragraph were those entertained in fantasy. It should now be clarified that, in this chapter, we identify a sharp distinction between the creative imaginings that happen when fantasizing and the imaginings that one engages in when appreciating a work of fiction.[19] Imagination is often thought of as "a free, unregulated activity, subject to no constraints save whim, happenstance, and the obscure demands of the unconscious."[20] Yet, such freedom only characterizes the whimsical imaginings of personal fantasies. As Walton clarifies, our imaginings can also be, and very often are, structured and constrained in ways that sets them apart from fantasy.[21] This is especially the case when appreciating works of fiction. For example, the book *Harry Potter and the Philosopher's Stone*[22] asks us to imagine that there is a castle named Hogwarts, which serves as a school for young wizards. In other

19. A more in-depth discussion of this distinction can be found in *Recreative Minds: Imagination in Philosophy and Psychology* (Oxford: Oxford University Press, 2002), in which Gregory Currie and Ian Ravenscroft mark both kinds of imagining as respectively creative and recreative imagination.

20. Kendall Walton, *Mimesis as Make-Believe: On the Foundations of the Representational Arts* (Cambridge, MA: Harvard University Press, 1990), 39.

21. Ibid. See also Roger Scruton, *Art and Imagination: A Study in the Philosophy of Mind* (Indiana: St. Augustine's Press, 1998), 99.

22. J. K. Rowling, *Harry Potter and the Philosopher's Stone* (London: Bloomsbury Publishing, 1997).

words, the Harry Potter book represents this castle. The imaginings we engage in when reading a Harry Potter book are structured by the text on the page we are reading. Actual features of the work—not our own whimsical fantasies—determine the content of our imaginings. This is why Walton calls works of fiction "props": they are artifacts that are designed to prompt and guide the imagining of a fictional world in a specific way.[23]

Having sketched the difference between fantasy and the imaginings that one engages in when appreciating representational works (such as a novel), we can now describe the difference between spaces that are entertained in fantasy and spaces that are represented within works of fiction. As mentioned before, a space someone conjures up in fantasy fully coincides with whatever this person imagines. It is never encountered, but merely created, and can thus never surprise the fantasizer. When imagining a space represented in a work of fiction, however, the fiction appreciator encounters this space and gets to know it in increasing detail through its various representations within the work in question. Even though, like fantasy spaces, fictional spaces can only be said to exist imaginatively, these imaginings are dictated by something outside of the imaginer's own consciousness: the objective prescriptions and limitations imposed by the work of fiction in which the space is represented. This work serves as a prop and mandates the spatial characteristics that need to be imagined. Any failure to comply with this mandate entails a failure to get to know the fictional space represented in the work. If a reader of the Harry Potter series, for example, imagines Hogwarts to be a spacecraft instead of a castle, their imagining is inappropriate, as it fails to correctly interpret the represented, fictional space.[24]

Contrary to how we freely imagine spaces in fantasy, the way in which we imagine fictional spaces entails a confrontation with a space in which the features are determined independently from our subjective, private imaginings. Fictional spaces can surprise us because we did not create them;

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23. Walton, *Mimesis as Make-Believe*, 51.
24. It is, of course, possible for a reader of *Harry Potter* to imagine Hogwarts being a spacecraft. But in that case, the reader is no longer interacting with the story of Harry Potter, nor with what is fictional in the book. Rather, they are fantasizing—making up their own version of Hogwarts in their creative imagination, instead of letting their imagination be guided by the contents of the book.

rather, we encounter them when engaging with a work of fiction. As a consequence, various appreciators engaging with the same work of fiction will be able to intersubjectively experience the spaces represented within this work.

The specific shape that such an encounter with fictional space takes is, however, dependent on the mode or medium through which this space is represented. To describe the experience of fictional space in more detail, we make a distinction between the non-interactive mode in which novels, paintings, plays, and movies typically represent fictional spaces[25] and the interactive ways in which those spaces are represented within interactive, digital media such as video games or training simulations.

Non-interactive Representations of Imaginary Spaces

Many works of fiction represent spaces through images, text, and/or sound in ways that are non-interactive. These works of fiction are props that have the function to mandate us to imagine certain fictional worlds, and these worlds—as we explained in the introduction section—only exist imaginarily. They are separated from the actual world, so that cross-world interaction is impossible.[26] We cannot interact with fictional spaces, but only with the medium through which they are represented: we can turn pages of a book and read them, get closer to the TV screen when a movie is playing, or point at objects depicted in a painting. And yet, none of these actions have any effect on the mediated contents or on the spaces represented within these books, movies, and paintings.

Moreover, although novels, movies, paintings, and plays all represent certain spaces, they do not usually invite their audiences to even imagine that they are present or involved in these spaces as active bodies. That is, these works of fiction do not typically invite so-called "de se" or self-

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25. We acknowledge that there are books, such as the *Choose-Your-Own-Adventure* book series, and various forms of improvisational theater performances that represent their stories in interactive ways. Yet, the spaces represented in these books cannot be interactively experienced like the spaces represented in video games can (see the section on "Virtually Represented Space" in this chapter).

26. See Walton, "How Remote are Fictional Worlds"; and Peter Lamarque, "How Can We Fear and Pity Fictions?," *The British Journal of Aesthetics* 21, no. 4 (1981): 292.

involving imaginative engagement.[27] The Lovecraft quote at the beginning of this chapter, for example, does not ask us, the readers, to imagine that we are physically present in the described space. When imagining that unfamiliar, mind-boggling space, it would be inappropriate for a reader of Lovecraft's work to imagine that this space does not only contain an incomprehensible door that defies our understanding of space but also contains the reader, as it simply does not. Instead, this text invites the reader to engage in an "impersonal imagining" of the described space without necessarily imagining any (perceptual or physical) relations between them and the space.[28]

Indeed, even though appreciators of non-interactive works of fiction can encounter fictional spaces in their engagements with these works, those fictional spaces are not experienced from within, nor through a spatial practice these appreciators undertake. Rather, these spaces are always encountered through "second-hand" spatial experiences, described in the voice of a character or narrator, or rendered through the eye of the visual artist. There is no way for the reader or viewer of the Harry Potter series to peek behind a corner in one of Hogwarts' hallways, just like there is no way to walk around the buildings in Escher's surrealistic works to find out how these impossible structures are held up. Fiction appreciators can in no way interact or explore these spaces but are rather dependent on descriptions or depictions of Harry Potter walking through the hallways or the specific perspective from which Escher chose to represent his buildings.

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27. See Peter Alward, "Leave Me Out of It: De Re, But Not De Se, Imaginative Engagement with Fiction." *Journal of Aesthetics and Art Criticism* 64, no. 4 (2006): 451; and Jon Robson and Aaron Meskin, "Video Games as Self-Involving Interactive Fictions," *Journal of Aesthetics and Art Criticism* 74, no. 2 (2016): 165.

28. See Gregory Currie, *Image and Mind: Film, Philosophy, and Cognitive Science* (Cambridge: Cambridge University Press, 1995), 179. Of course, the imagining of such fictional spaces might involve visualizing these spaces from a perspective that is internal to it. We are merely arguing that non-interactive works in no way offer their audience props to imagine inhabiting these spaces, unlike video games (see Calleja, "*In-Game,*" 167). Only exceptionally, when they break the fourth wall, do non-interactive fictional works invite their audiences to imagine existing in the same space as the fictional characters. See Derek Matravers, *Fiction and Narrative* (Oxford: Oxford University Press, 2014), 116.

This also means that there are many aspects and parts of fictional spaces that appreciators simply have no access to. Incompleteness is a foundational and defining aspect of our relationship with fiction, and it is inevitable that many spatial elements and details are left unresolved or open in a work of fiction, raising questions to which the work does not offer any definite answers.[29] Such incompleteness is inevitable when representing spaces, regardless of whether the representation is a fictional or a non-fictional one. Actual spatial experiences are, after all, infinitely rich: "there is, at every moment, always infinitely more than we can see; to exhaust the richness of my current perception would take an infinite time."[30] Novelist George Perec illustrated this boundlessness of actual spatial experiences in his *Attempt at Exhausting a Place in Paris*,[31] in which he tried to give a complete description of everything that he perceived to happen on Saint-Sulpice Square in Paris. Bertrand Westphal writes that, although Perec was "confined to one location at a specific time, the project was actually boundless" and would have remained incomplete even if Perec had "camped out in the heart of the Sahara."[32] Indeed, an experience of represented space, be it fictional or non-fictional, can never approach the perceptual richness of an actual spatial experience, even if it is described or depicted in the most meticulously detailed manner.

The inability to completely determine the characteristics of represented spaces and to exhaust the spatial experience also has evident benefits. Visual artist and architect Philipp Schaerrer stresses how the pictorial representation of spaces, although less perceptually rich, "creates many more possibilities than actually being present in space, because you can project more into an image."[33] The obvious limits and ellipses of represented spaces leave much more freedom to the imagination of its

29. See Nathan Wildman and Richard Woodward, "Interactivity, Fictionality, and Incompleteness," in *The Aesthetics of video games*, ed. Grant Tavinor and Jon Robson (New York: Routledge, 2018).

30. Sartre, *The Imaginary*, 9.

31. Georges Perec, *An Attempt at Exhausting a Place in Paris*, trans. Marc Lowenthal (Cambridge, MA: Wakefield Press, 2010).

32. Bertrand Westphal, *Geocriticism: Real and Fictional Spaces*, trans. Robert Tally (New York: Palgrave Macmillan, 2011), 250.

33. Philipp Schaerer, "Free your Imagination!," in *Architectonics of Game Spaces*, ed. Andri Gerber and Ulrich Götz (Bielefeld: Transcript-Verlag, 2019), 102.

observer. The inexhaustibility of actual space thus finds its counterpart in the incompleteness of represented space: whereas the former can never be fully known or described due to its infinite richness, the latter creates innumerable possibilities for curiosity and imagination due to the inevitable and deliberate poverty of its representation.

This incompleteness is hence not a shortcoming of spatial representations, but rather affords the creators of these spaces a degree of freedom and flexibility when designing them. An example of an architecture that creatively leverages the inherent incompleteness and the instability of fictional spaces can be recognized in the house of the protagonist of the Italian comic series *Dylan Dog: L'Indagatore dell'Incubo* ("Dylan Dog: Nightmare Detective"). Dylan Dog's house on Craven Road 7 of a fictional London is an unstable fictional space: Tiziano Sclavi, the author of the comic series, never conclusively defined an internal plan for the house, which shifted and got reimagined in its internal arrangement from one episode to the next. In an interview with Caterina Grimaldi, the author explicitly stated that by allowing his collaborators that creative freedom, the house became a flexible space that "can dilate and always accommodate new situations."[34] Scrooge McDuck's money bin and Dr. Who's TARDIS could also be mentioned as famous examples of flexible and unstable fictional architectures.

Designers of fictional spaces can "disregard gravity and objects can be morphed, blended, or scaled without any problem."[35] This creates the possibility of representing spaces that can only exist in imagination, as is famously illustrated by the above-mentioned pictures of impossible buildings by Escher and Dylan Dog's house. Any incoherence or contradiction that exists within such spaces need not be addressed or solved: it is not the purpose of the representation to justify the existence of the space that is represented, but merely to mandate the imagining of it.

34. Caterina Grimaldi, "La casa che non c'e' - Intervista a Tiziano Sclavi," *Abitare*, no. 501 (2010): 65.
35. Ibid., 99.

Lastly, the incompleteness of the spatial information described or depicted in works of fiction can even be said to be crucial for the represented fictional space to become meaningful. The goal of the fiction creator should not be to present the most accurate picture of a space, but rather to make sure the fiction appreciator is not rendered "lost in the space" due to an overabundance of indiscriminate details.[36]

Just like actual spaces, fictional spaces become meaningful, so-called "lived spaces" only when they are specific locations that are experienced through a guided, spatial practice. Such lived spaces are conceived as including "a subject who is affected by (and in turn affects) space, a subject who experiences and reacts to space in a bodily way, a subject who 'feels' space through existential living conditions, mood, and atmosphere."[37] In the case of non-interactive fictional spaces, it is not the reader or viewer who can take on this subject-role. The meaningfulness of the represented space is rather accomplished through engagements with this space that are themselves represented in the work: the predetermined spatial explorations of fictional characters, the incomplete descriptions by narrators, and the specific perspectives chosen by visual artists.

Virtually Represented Space

When imaginary or fictional spaces are represented through interactive, digital media, they afford very different kinds of experiences. Virtual spaces—defined here as spaces that are represented by computers and can be explored interactively—share characteristics with all of the above-mentioned kinds of spaces. They share with actual spaces the fact that they afford action possibilities: their users can take an internal perspective in these spaces and explore them from within. Virtual spaces are also

36. Robert Tally Jr., *Spatiality* (New York: Routledge, 2012), 54.
37. Sabine Buchholz and Jahn Manfred, "Space in Narrative," in *Routledge Encyclopedia of Narrative Theory*, ed. David Herman, Manfred Jahn, and Marie- Laure Ryan (London: Routledge, 2005), 553.

similar to fantasy spaces as they are the expression of the free, "externalized" fantasy of whomever designed them. Lastly, virtual spaces are a kind of fictional space as users are mandated to imagine these spaces to exist based on certain representations generated by computers.

Within academic research, various scholars have commented on virtual spaces as involving a combination of actual and imaginary elements. Daniel O'Shiel mentions how spaces represented in video games are "superreal" as they combine characteristics of imaginary and actual experiences, thereby being "neither just real nor just imaginary, but a forceful combination of the two."[38] Lambert Wiesing writes that, in virtual reality, the images on the screen no longer merely serve as representations of absent space, but become "a medium by means of which a particular kind of object is produced and presented—an object, that is, that is exclusively visible and yet, like a ghost, acts as if it had a substance and the properties of a substance."[39] Wiesing seems to hint that imaginary spaces are not represented by interactive, digital media but rather presented: they are given to the user to be interacted with and explored in ways that are very similar to how we experience actual spaces. Indeed, the very possibility of interacting with and exploring virtual spaces seems to give them a semblance of reality that contradicts their fictional or representational nature. This raises a paradox: If virtual spaces are merely represented, which means they do not really exist but are merely prescribed to be imagined to exist, then how can users interact with these spaces?[40]

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38. Daniel O'Shiel, "Computer Games, Image-Consciousness and Magic," *Proceedings of the 13th International Philosophy of Computer Games Conference,* 2019, 13.

39. Lambert Wiesing, *Artificial Presence: Philosophical Studies in Image Theory*, trans. Nils F. Schott (Stanford: Stanford University Press, 2010), 100.

40. This problem is related to a broader paradox of interactive fiction that does not only concern our interactions with virtual space. Rather, any player interaction with a fictional object or character raises this problem, as none of these fictional entities can be said to actually exist. See Nele Van de Mosselaer, "How Can We be Moved to Shoot Zombies? A Paradox of Fictional Emotions and Actions in Interactive Fiction," *Journal of Literary Theory* 12, no. 2 (2018): 279–299.

David Chalmers seems to think that the solution to this paradox lies in the fact that virtual spaces are not represented spaces at all, but spaces that are "part of the real world, in virtue of existing on real computers."[41] Interacting with them is unproblematic, because "virtual reality is a sort of genuine reality, virtual objects are real objects, and what goes on in virtual reality is truly real."[42] Chalmers' argument, however, seems to ignore the inevitable fictionality of virtual spaces: what we see on our computer screen is never an actually inhabitable space. In essence, the only thing we have in front of us when navigating virtual spaces are pixels and polygons that are flatly rendered on a screen (be it the screen of a TV connected to a console, a computer monitor, or a VR-headset). These pixels and polygons serve as props: they mandate us to imagine a space. As Aarseth writes, digital games offer us "a representation of space that is not in itself spatial, but symbolic and rule-based."[43] Thus, instead of treating virtual spaces as actual digital spaces that exist on computers, we believe it is crucial to acknowledge their representational character, consider the specific digital constitution of the props that represent these spaces, and investigate the rules by which users are invited to interact with these props.

The most salient difference between the representations of fictional spaces discussed in the previous section and virtual representations of space is that the latter make use of props that involve the user in the way the space is imagined. Whereas it is inappropriate—or at least unwarranted—for appreciators to imagine themselves inhabiting the space described by Lovecraft in this chapter's introductory paragraph, such self-involvement is clearly mandated to be imagined by virtual representations of space. Such imaginings are supported by the fact that even users themselves become part of the representation when engaging with virtual spaces: their actual actions of manipulating input devices (such as "pressing X"), become props that mandate them to imagine they are interact-

41. David Chalmers, "The Virtual and the Real," *Disputatio* 9, no. 46 (2017): 320.

42. Ibid., 309.

43. Espen Aarseth, "Allegories of Space: The Question of Spatiality in Computer Games," in *Cybertext Yearbook 2000*, ed. Markku Eskelinen and Raine Koskimaa (Jyväskylä: Research Centre for Contemporary Culture, 2001), 163.

ing with the represented space (and are, for example, "opening a door").[44] This is possible because there is an actual causal link between users' motor input and the sensory output or visual information on the screen.[45] The props involved in virtual space representations thus introduce experiences of fictional spaces that are characterized once again by a spatial practice, even though this practice is largely imaginary itself. Actual people cannot interact with merely represented spaces; the ontological gap between the two cannot be crossed.[46] But they can interact with real props—such as images on a screen which they can control through input devices—and use these interactions as a basis to imagine interacting with the space represented by those images.

As spaces that are to be imagined, virtual spaces are interior to the mind of their users: they only exist as spaces within imaginative consciousness. Yet, due to their interactivity, virtual space representations also mandate their users to imagine being interior to these spaces. Users are to imagine their own existence within these spaces based on the props they are presented with. Calleja describes this twofold process of interiorization as "incorporation": "the player incorporates (in the sense of internalizing or assimilating) the game environment into consciousness while *simultaneously* being incorporated through the avatar into that environment."[47] He adds that this description of incorporation "precludes its application to any non-ergodic media, such as movies or books."[48] The latter are not props that mandate their appreciators to imagine being involved within spaces they represent, as they do not acknowledge their appreciators' presence and agency within these spaces.

44. Nele Van de Mosselaer, "Fictionally Flipping Tetrominoes? Defining the Fictionality of a Videogame Player's Actions." *Journal of the Philosophy of Games* 1, no. 1 (2018). See also Stefano Gualeni and Nele Van de Mosselaer, *Doors (the game)*, digital game developed with Diego Zamprogno, Rebecca Portelli, Costantino Oliva, et al., available to play online at https://doors.gua-le-ni.com.

45. Geert Gooskens, "Varieties of Pictorial Experience," (PhD diss., University of Antwerp, 2012), 87.

46. Walton, *Mimesis as Make-Believe*, 195.

47. Calleja, *In-Game: From Immersion to Incorporation*, 169.

48. Ibid., 173.

Unlike non-interactive works of fiction, video games thus allow players to fictionally interact with the spaces they represent. These virtual spaces emerge and gain meaning throughout the player's exploration of the action possibilities these places afford by means of the body of the avatar or the perspective of an in-game proxy. Contrary to how we experience non-interactive fictional spaces, our imagining of virtual spaces is not limited nor determined by the represented explorations and perspectives of characters or creators, but rather, much like our experience of actual space, shaped by our own (albeit fictional) spatial practices. This makes for an experientially richer and more fictionally complete experience of fictional spaces. Take, for example, the post-apocalyptic environments represented in *The Last of Us Part II* (2020), a third-person survival-horror game in which the player traverses a fictional version of the United States where a fungus has turned most of humanity into cannibalistic zombies.[49] Although players are still limited by the boundaries of the designed game space and of the character they control, they have the freedom to explore these spaces within those limits. They are not bound to a predetermined fictional perspective on these environments. Rather, they can choose to look at the ruins of skyscrapers at their own pace, from a variety of angles, as well as visit the outer, hidden corners of the map just to see what is there, how it can be valuable to them, and how they can proceed. As players are situated within the game's environments as subjects, these environments can be experienced as an existential, meaningful situation: "as a world in which one can plan, act, and pursue a project."[50]

The spatial practice we can engage in when playing *The Last of Us Part II* is relatively realistic, as it adheres to very similar physical laws just as real-life spaces do. Digital media can, however, also present us with spaces that would be impossible to encounter in real life. While the non-interactive works of fiction described in the previous part could invite us to imagine the existence of such spaces, interactive, digital media such as video games can also invite us to imagine these spaces to be existentially meaningful to us. Recall Escher's prints, which depict paradox-

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49. Naughty Dog, *The Last of Us Part II*, Sony Interactive Entertainment, PlayStation 4, 2020.

50. Gualeni and Vella, *Virtual Existentialism*, 4.

ical buildings to be imagined from the specific perspective that Escher chose. It is hard, if not impossible, to imagine how these buildings can actually stand or what they would look like from the back based on the representations offered to us by Escher. Yet, virtual representations of similar perspective-defying buildings have succeeded in making players imagine what it could be like to move through and interact with such impossible spaces. *Monument Valley* (2014)[51] not only allows players to explore Escher-like landscapes but also quickly gets them to accept these paradoxical landscapes as spaces they can easily manipulate and explore. *Echochrome* (2008)[52] lets players navigate spaces based on five alternative laws of perspective that are directly inspired by Escher's works. *Manifold Garden* (2019)[53] equally allows players to traverse spaces that subvert known physical laws. Similarly, *Fez* (2012)[54] lets players experience what it is like to move through spaces that dynamically shift between being two and three-dimensional. Rather than just representing impossible, fictional spaces, as was already possible before, the virtual medium also allows its users to imaginatively experience these spaces as spatial by mandating them to imagine engaging in impossible spatial practices. If anything, these virtual spaces can introduce a new kind of spatiality to players by making them imagine interacting with space in a way that might have been unthinkable before.

With this interactivity, however, also comes a new kind of incompleteness.[55] Whereas actual spaces are, as mentioned before, inexhaustible, virtual spaces are limited by computational constraints of the media they are represented on.[56] They do not afford an infinity of actions to be performed, but our explorations of them are constricted by the specific affordances designed into the game. We cannot leave the predetermined paths in *Monument Valley,* and we are not able to swim to the locations that are

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51. Ustwo Games, *Monument Valley*, Ustwo Games, Android, 2014.

52. SCE Studios Japan, *Echochrome*, Sony Interactive Entertainment, PlayStation 3, 2008.

53. William Chyr, *Manifold Garden,* William Chyr Studio, PC, 2019.

54. Polytron, *Fez*, Trapdoor, PlayStation 4, 2012.

55. For a more detailed explanation of digital game incompleteness, see Nele Van de Mosselaer and Stefano Gualeni, "The Fictional Incompleteness of Digital Gameworlds," *Transactions of the Digital Games Research Association*, forthcoming.

56. See also O'Shiel, "Computer Games," 13.

off-screen in *Fez*. In fact, players of any game will very likely encounter the finitude of the virtual spaces that they are fictionally exploring, as well as their limited freedom in this act of exploration. Due to their being interactive but also having clear spatial and operational boundaries, virtual environments are more likely to elicit dissatisfaction and boredom in users than both non-interactive fictional spaces and actual spaces. Virtual spaces thus evoke what could be understood as a kind of "virtual world weariness."[57]

This inherently finite and exhaustible experience of virtual spaces is, for now at least, still far removed from the infinitely rich experience offered by actual spaces. In this regard, Aarseth argues that even the most "open"—in the sense of the most explorable and rich—computer-generated landscapes are characterized by a strict and limited topology that ultimately makes them quite different from real space.[58] With the concept of "virtual space representations," Aarseth refers to incomplete copies or mere images of the real world: "games can never depict space as it is perceived, completely, as it exists 'in real life.'"[59] Aarseth concludes his paper by calling the computer-generated spaces we encounter in games mere "allegories" of space as they afford imperfect approximations of actual space experiences, ultimately showing that it is impossible to represent real space.[60]

Two remarks require mention here. First of all, as said before, the value of virtual space representations should not necessarily be sought in the way they succeed in simulating actual space. It is true that within game development there is a growing tendency towards complete and realistic

57. Stefano Gualeni, "Virtual World-Weariness: On Delaying the Experiential Erosion of Digital Environments," in *Architectonics of Game Spaces*, ed. Andri Gerber and Ulrich Götz (Bielefeld: Transcript-Verlag, 2019), 157. In analogy with actual-world weariness, the dissatisfaction and the boredom with digital game environments emerges, according to Gualeni, from aspects of their finitude and banality. The most common among these "world-pains" are the players' direct encounters with the spatial boundaries of a virtual world (tall walls, invisible barriers, puffy clouds, cliffs, fences, etc.). Other frequent triggers of virtual Weltschmerz consist in the recognition of aesthetic repetitions of textures and assets (such as buildings, trees, statues, textures, characters).

58. Aarseth, "Allegories of Space," 169.

59. Stephan Günzel, "The Lived Space of Computer Games," in *Architectonics of Game Spaces*, ed. Andri Gerber and Ulrich Götz (Bielefeld: Transcript-Verlag, 2019), 170.

60. Aarseth, "Allegories of Space," 169.

representations of spaces.[61] Digital games, especially virtual reality ones, excel evermore in mimicking real-life spatial experiences to the point that users sometimes mistake their explorations of virtual space for experiences of actual space. Think, for example, of VR players who fall to the ground because they are trying to lean against virtual walls. Yet, as props that mandate spatial imaginings, the value of virtual representations might lie in how they deviate from actual spaces. As virtual space representations are not bound to being realistic depictions of space, they can be used for disclosing unfamiliar and extraordinary ways of experiencing space,[62] as was illustrated by the earlier discussed examples of *Echochrome*, *Fez, Manifold Garden,* and *Monument Valley*. As O'Shiel writes, most digital games are not ultimately interested in replacing reality, but rather are engaged in developing super realities that infuse the familiar spatial experience with fantastical and imaginary elements and capacities.[63] When judging the value of virtual space representations, one should not only ask to what degree they approximate actual space, but also focus on how they succeed in externalizing the imaginary space that originated in the fantasy of their creator and the kinds of imaginings they aspire and manage to inspire in their users.

Secondly, although the apparent artificiality and limits of virtual spaces can invoke boredom, they also give these spaces an appeal that real spaces do not have. Virtual spaces, by grace of being artificial spaces that afford predesigned action possibilities, possess not only simplicity, but also inherent meaningfulness. With regard to their simplicity, Aarseth himself remarks that computer game spaces "rely on their deviation from reality in order to make the illusion playable."[64] He posits that the fact that videogame spaces are always a reduction of whatever would be pos-

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61. See Van de Mosselaer and Gualeni, "The Fictional Incompleteness."
62. Gualeni, "Virtual World-Weariness," 154.
63. O'Shiel, "Computer Games," 13–14.
64. Aarseth, "Allegories of Space," 169. In another paper, Aarseth mentions the process of "ludoforming" in this regard, which denotes the action of turning a contemporary, historical, or fictional landscape into a game world. This often involves "a restriction, reduction or distillation of the source landscape, or simply a reshaping that meets the ludic demands." Espen Aarseth, "Ludoforming: Changing Actual, Historical or Fictional Topographies into Ludic Topologies," in *Ludotopia*, ed. Espen Aarseth and Stephan Günzel (Bielefeld: Transcript-Verlag, 2019), 139.

sible in real space is precisely what makes gameplay possible.[65] Nguyen argues that this simplicity of game environments is also what makes them so appealing: they are "realms of agency in which the functions of objects and the meaning of actions are entirely obvious" as they are "cleared of various ambiguities and complexities" that characterize real-life spaces.[66] This clarity or "crispness," as Nguyen calls it, of virtual spaces allows us to experience a spatial practice that is elegant in its simplicity, easily graspable, and often specifically designed to foster the feelings of meaningful interaction and progress.[67]

Regarding their inherent meaningfulness, we have suggested elsewhere that the overt artificiality of virtual game environments, and the player's accompanying realization that these environments have been designed with certain intentions, are crucial in the player's exploration of these spaces.[68] On the basis of their knowledge that even the most insignificant visual detail within these spaces, as well as every affordance they offer, was created deliberately by their designers, players can assume that these are spaces are interesting and valuable to explore. Just like real space, the meaning of virtual space emerges in the spatial practices their inhabitants engage in. Contrary to real space, however, the fact that virtual spaces have embedded functions and meanings is already guaranteed before any interaction even takes place. This is because the potential interactions users can have with a virtual space are already programmed into the representation of this space itself. Thus, although the artificiality, incompleteness, and limited possibilities offered by virtual spaces might make them easily exhaustible, they also tend to guarantee that there is meaning and purpose to them.

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65. Ibid., 163.
66. C. Thi Nguyen, *Games: Agency as Art* (New York: Oxford University Press, 2020), 68.
67. Stefano Gualeni, *Virtual Worlds as Philosophical Tools: How to Philosophize with a Digital Hammer* (Basingstoke, UK: Palgrave Macmillan, 2015), 128.
68. Nele Van de Mosselaer and Stefano Gualeni, "The Implied Designer and the Experience of Gameworlds," *Proceedings of the 2020 DiGRA international Conference.*

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