Spaces of Possibility—Spaces of Purpose

The Emergence of Narrative Space in Theater, Film, and Games

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Reading Space—Writing Space

The title of this collection, *Virtual Interiorities*, inherently acknowledges the constitution of "exteriorities." For it is only within a frame of reference that qualities of an inner life—and corresponding ramifications for the frame that contains it—can be described. The consideration of "interiorities" thus requires a model of "space" in which they are inserted. This concerns both virtual and real spaces, because "virtual interiorities" relate to the system of the virtual just as artificial, physical objects relate to the genius loci in reality. This chapter elaborates on how the mutual exchange between theater, film, and games informs spatial understanding and can be described as "narrative space."

Discussing the properties of real, physical space is already an extremely vague endeavor. Such attempts can only describe areas and qualities of spatial characteristics in part: they are valid only under certain conditions and remain blurry. Works addressing the cultural meaning of the spatial immediately admit the limitations of their assertions.[1]

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1. Stephan Schwingeler, *Die Raummaschine. Raum und Perspektive im Computerspiel* (Boizenburg: Verlag Werner Hülsbusch, 2008).

There are several reasons for the impossibility of formulating conclusive answers to the question of "space" and its properties. The first reason lies in the human experience of spatial surroundings. We instinctively move and orient ourselves in spatial scenarios; to a certain extent, this is a corporeal automatism. As spatially-acting beings equipped with highly developed sensory capacities (and today, technological sensory systems), we adapt to a wide variety of spatial situations. One can even improve "spatial abilities" through training, as exercised by fire departments or in architectural education.[2] At the same time, however, this instinct and implicitness renders distanced analysis difficult: space guarantees the ground beneath our feet and limits our view into the distance. Furthermore, another reason results from the aforementioned adaptiveness because it leads to contextually-dependent and specific understandings that correspond to differing terminologies, interpretations, and readings of space. Thus, historically, culturally, disciplinarily, and even regionally, there are strongly divergent perceptions of "space" and the substantive meanings the term encompasses. Our perception of space is therefore not universally valid and varies greatly. The following examples illustrate such different interpretations of the spatial.

In *A Thousand Plateaus*, Deleuze and Guattari outlined their influential distinction between "smooth" and "striated" space.[3] This model essentially divides space into two categories across all scales. Striated space has individual characteristics, reference points, and numbered units; in contrast, smooth space is boundless, is distributed without positionality, and is "directional rather than dimensional or metric."[4] This concept not only describes static states, but also refers to constant upheaval: "smooth space is constantly being translated, transversed into a striated space; striated space is constantly being reversed, returned to a smooth space."[5] The city and the sea can be considered an exemplary pair of opposites according to this concept, in which it seems "as if the sea were not only

2. Andri Gerber, *Training Spatial Abilities: A Workbook for Students of Architecture* (Basel: Birkhäuser Verlag, 2020).

3. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (London: Athlone, 1987).

4. Deleuze and Guattari, *A Thousand Plateaus*, 479.

5. Ibid., 474.

the archetype of all smooth spaces but the first to undergo a gradual striation gridding it in one place, then another, on this side and that."[6] Since the multitude of spatial phenomena cannot be described by one central concept, Deleuze and Guattari elaborate sub-models, showing how smooth and striated spaces behave in fields like technology, mathematics, music, and aesthetics.

The antithesis of new definitions is the rejection, modification, or distortion of existing forms of perception and spatial orders. The reasons for such changes can relate to the transformation of technological or cultural epochs, or contemporary trends. In Deleuze and Guattari, such processes can be seen as re-transformations of striated space into smooth space. The Situationist International,[7] including founding member Guy Debord, sought new and purposely vague spatial readings within the frame of their artistic practices, where previously ambiguity had been denounced. They described *dérive* as a method for fundamentally renewing the experience of urban space: if, for example, maps from completely different cities are used to conduct urban walks, "planned" surprises and new impressions can be provoked.[8] The "psychogeographical thinking"[9] of the Situationists starkly contrasts with the alleged objectivity of satellite imagery and mapping of even the most remote regions, which have completely revolutionized our understanding of spatial relationships in just a few years. Comparably far-reaching changes in spatial orders typically arise from hostile military takeovers or colonialist territorializations. In this context, the North American survey grid imposed by European colonizers is probably one of the most dramatic historical changes of spatial understanding, realigning an entire continent along arbitrary orthogonality and chartability.

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6. Ibid., 479–80.
7. The Situationist International (1957–1972) explored art, politics, architecture, and urban planning, among others. Their controversial actions and concepts still influence the academic discourse on spatial strategies today.
8. Guy Debord, "Theory of the Derive," in *Situationist International Anthology*, ed. and trans. Ken Knabb (Berkeley, CA: Bureau of Public Secrets, 1981 [1958]), 50–4.
9. Ibid.

A Changing Understanding of Space

The fabricated orders of the spatial are fluid and valid for a limited period of time. Even the personal, corporeal experience of space is only subjectively valid, its broad application limited. Globally, there are significant differences in the culturally-conditioned, individual perception of scales—from personal requirements to the interpretation of spatial situations and design of everyday objects. However, regarding the intellectual interpretation of the spatial, a subjectivizing restriction is even more urgent, since here the concept of space is constantly changing. As *A Thousand Plateaus* shows, it may be necessary to disperse definitions of the spatial into disciplines that purport different conceptualizations. Yet this text reveals that such definitions should be considered but momentary, subjective stances, especially when applied to other disciplines. For example, Deleuze and Guattari even propose a smooth and striated "model of physics," including aspects of labor and the state, yet do not reflect on fundamental twentieth-century insights into the reciprocal conditions of space and time.[10]

Even a precursory glimpse into the history of technology and art indicates evolving ideas about the perception of space, reflected in how it is conveyed. Methods of depicting space change across epochs: for instance, the *bedeutungsperspektive* of the Middle Ages was replaced by the geometric perspectives of the Renaissance.[11] This was later revolutionized by Joseph Nicéphore Niépce's (1765–1833) invention of photography. Today, we are accustomed to three-dimensional image-worlds from graphics, film, and games, generated by computer algorithms and compositing processes.

Not only technological and methodological innovations drive the change of spatial concepts and its representations, but there are also demands for a renewed perception of reality. To briefly mention paradigmatic examples from art, there were abrupt changes in style in French painting, spanning from Gustave Courbet's (1819–1877) realism to Claude Monet's

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10. Deleuze and Guattari, *A Thousand Plateaus*, 488–489.
11. "Bedeutungsperspektive" is a term for the representation of human figures, in which their social status determines their depicted size.

(1840–1926) impressionism and Georges Braque's (1882–1963) cubism, which resulted in changed spatial concepts. Insights from related disciplines often initiated these changes: "With pointillism, Georges Seurat reproduced the visual of the 'pitting' of the first daguerreotypes."[12] Schwingeler notes the "transformation of perceived space into mathematical space," followed by a change "from mathematical to digital space."[13] Existing perceptions only seem self-evident until subsequent methods or visual styles prevail.

What was once an avant-garde concept soon becomes the basis for a changed conceptualization of space. Architecture students train "spatial abilities" through the cognition of perspectives and sections in 3D models of architectural precedents.[14] The imagery required for this can be generated with comparative ease today. A few decades ago, it would have required immense effort to produce, and the corresponding questions of spatial imagination would hardly have arisen. Research at Zurich University of the Arts investigated practicable extensions of living through the use of virtual reality (VR).[15] Results reveal the means by which a home can be scanned three-dimensionally, imported into a game engine, and subjected to game mechanics. Familiar living environments are thus transformed into a fantastical multiplayer setting, which one occupies with one's own body. The resulting hybrid spatial construct combines the features of VR with augmented reality, such that the body itself becomes a part of the expanded virtual world. Such an individual, interactive form of agency could provide a solution to Virilio's criticism, who laments the "evaporation of visual subjectivity"[16] in a technicized environment.

12. Paul Virilio, *The Vision Machine* (Bloomington, IN: Indiana University Press, 1994), 15.
13. Schwingeler, *Die Raummaschine*, 48.
14. Gerber, *Training Spatial Abilities*.
15. Chris Elvis Leisi, "Virtual Real Rooms. Immersionsmechaniken in überlagerten VR-Räumen," Master's thesis, Zurich University of the Arts, 2021, https://gamedesign.zhdk.ch/diplom-2021/projekte/virtual-real-rooms-1/.
16. Virilio, *Die Sehmaschine*, 47.

This suggests how the advent of VR could signify the next evolution in spatial thinking: corporeal space overlapping with virtual space. Of course, this would require further development of VR interfaces which—with their clunky goggles, vertigo, and disorientation—provide merely an approximation of how real space might combine with artificial space. However, in contrast to previous eras, when the greatest challenges entailed creating real-spatial infrastructures and overcoming physical distances, today, they seem to comprise balancing digital dynamics with human (inter)action, which unfolds globally and simultaneously.

The New Stars of Narrative Methods

The spatial has gained significant importance as a topic in the performative and communicative disciplines over time. Eras long passed presented visual objects mainly in terms of action: comparatively unspecific backgrounds were contrasted with human figures and the activities they performed. Such constellations evolved into situational representations, corresponding with an increased importance of where and in what context action occurred. The meaning of space expanded to become an ever-present frame of reference, in which facts were more vividly portrayed through spatial contextualization. Today, therefore, we discuss a relatively nascent category of spatial constructs, namely "narrative space."

After a gradual, century-long paradigm shift, narrative now presupposes a plausible mediation of the spatial. Modern, media-based visual communication is inconceivable without the inclusion of spatial references. Even before a plot commences, the camera's "establishing shot" clarifies the frame in which action occurs. Modern news studios produce reports in green screen studios, where real film footage of the speakers is folded into the virtual space of recordings and infographics to create hybrid spaces. Such technologically elaborate combinations should not be understood as composed of interchangeable, and thus unimportant, virtual components; on the contrary, the situational contextualization between plot and surrounding space is the ultimate in modern storytelling. Narrative and spatial representation have become inseparable.

It is remarkable how advances in spatial representation have departed from the realm of tangible experience based on human perception. When hybrid spaces are not created from real and virtual images, real cameras present breathtaking panoramas that remain inaccessible to corporeal experience; therefore, they gain a virtual dimension themselves. For example, in coverage of sports or cultural events, spider cams race across playing fields on hoists and cameras pan over the audience on the jib of a crane. Until recently, helicopter cameras were exclusive to expensive film productions, yet aerial shots from drones are now a standard part of even local news reporting. Extremely fast-moving virtual camera shots in animated films are aimed at the youngest audiences but would have been considered unbearable to watch just a few decades ago. Spectacularly spatial images in motion are the new stars of narrative methods.

Narrative today is practically always accompanied by a spatial depiction. But is this combination really so self-evident, or should we remain astonished? At what point can we speak of the new meaning of the spatial as narrative space—what marks the threshold? The exact point of transition to the ubiquitous application of narrative spaces cannot be precisely dated. However, it is possible to distinguish eras: at first, spatial methods of narrative appeared sporadically, and later they were used continuously.

The Emergence of Narrative Space

For instance, the narrative practices of antiquity cannot be deemed narrative spaces. Greek and Roman theater established a clear architectonic structure to present plays to the audience and the components of the building supported the narrative. Entrances were dramatized as architectural elements, articulating the arrival or departure of the actors, while hoisting systems facilitated the deus ex machina of unexpected appearances. These spaces were designed for performing, but the spaces themselves did not yet have a performative character. A manifestation of this assertion is the strict separation of acting and audience prevailing at the time: the audience was not required to comprehend the spatial implications of the staging to follow the plot. In contrast, in the Baroque era, the spatial complexity of set design was very advanced: painted back-

drops staggered in rows created the illusion of depth and facilitated scene changes. In modern theater, performances contend with a stage confronting the audience with their own subjective points of view. Actors emerge from within the audience, the spaces of stage and audience are reversed, the abstracting proscenium stage thematizes the isolation of the stage itself, and actions extend deep into the audience who are no longer seated frontally, but instead follow the action from a variety of positions. This can even encourage the audience to view the same production multiple times, as visual projections and special effects connect it to the world beyond the stage.

In European painting, Joachim Patinir (c. 1480–1524) constructed the *weltlandschaft*, which marked a pinnacle of the representation of space in the visual arts. This mannerist trend in landscape painting created ideal landscapes intended to represent the entire world. The paintings are captivating not only for their spatial qualities—which create great depth through color gradients and a staggered composition of elements in the landscape—but also for their narrative richness, depicting detailed scenes in various parts of the background. European landscape painting continually developed the combination of spatial representation with narrative.[17] Yet, even if such trends should be acknowledged as spatially-based narratives in retrospect, does it imply the ubiquitous presence of narrative space in the visual arts of that time and a corresponding recognition thereof by the public? The extent to which critical reflections on space have been established as an autonomous and widely accepted field today can be observed among contemporary artists.[18] They question the methods and history of spatial representation, utilize manifold perspectives that are impossible in reality, and refer to the concept of "magical-technological portals" from fiction as a means of jumping in between places, worlds, and dimensions. Such topics reveal just how much the understanding of space has become inherent to artistic reflection.

17. Nils Büttner, *Geschichte der Landschaftsmalerei* (Munich: Hirmer Verlag, 2006).

18. Ulrich Götz, "Zugänge zu Zwischengängen - Konstruktion eines räumlichen Modells," in *Digitale Moderne - Die Modellwelten von Matthias Zimmermann*, ed. Natascha Adamovsky, (Munich: Hirmer Verlag, 2018), 230–249.

This makes a strong case for considering narrative spaces a cultural practice solidifying at the end of the 20th century. Prior to that, isolated cultural disciplines occasionally linked the design of space with narrative; these tendencies have only recently crystallized into a movement simultaneously encompassing all cultural disciplines. Thus, a previously unobserved concentration of spatial narrative methods, parallel to the rapid development of methods of representation, can be noted.

Three specific cultural disciplines have mutually constituted one another to form a triangle, which justifies, shapes, and advances the notion of narrative spaces today: theater, film, and gaming. Theater is steeped in the traditions of narrative and performative practices from cultural history. Mirroring rapid technological developments, the field is undergoing major changes in form and content: stage space is changing, and its order is being deconstructed and expanding into the virtual. Through technological innovation, theater now embraces film once again—the medium it originally generated—which itself increasingly utilizes theatrical elements. Many set designs for large film productions are now so complex that actors are only filmed on green screens, and the entire scenography is subsequently generated by computers. Concomitantly, film strives to leave the surface of the screen behind, creating the illusion of real—although fantastical—space through immersive experiences, 3D projections, and VR, as if the audience were physically present, like in theater. In doing so, theater and film utilize technologies and processes developed for the visualization of video games. Over five decades, games have laid the foundation for narrative spaces par excellence, from spatially-based narratives in the early text-based adventures of the 1970s to contemporary photorealistic and interactive real-time renderings. These methods influence theater and film, making use of the perspectives and strategies developed in these respective fields. The three cultural disciplines of theater, film, and gaming all adopt a decidedly spatial approach in their methods that is interpreted individually, but forms a powerful, culture-shaping alliance between them. Their connection and mutual exchange define the conceptualization of narrative spaces.

Diverging and Reconnecting

It is obvious that theater is the ancestor of film. However, film developed explosively, in directions the theater could not follow. A new approach to locations and sets, a shifting gaze and specific camera angles, special effects, and editing specialized its narrative methods, and initially distanced it from theater. Since developing high-tech visualizations for video games,[19] the bilateral relationship between theater and film has expanded into a triangular constellation in which not only evolutions but reconsiderations and mutual influences occur. One cannot assume games have emerged from film, merely as a further technological leap enriched through the dimension of interactivity. On the contrary, the text-based adventure stories of the 1970s—the first truly narrative games—are more comparable to scripts or stage directions in theater. Since no one could foresee the visualizations that would be possible in the future, narrative spaces in computing emerged in the terms of expression available at the time: written texts. Only much later, with the rapid increase of graphic rendering capacities, did the goal of emulating the visual-narrative model, shaped by film, emerge in gaming. This orientation towards cinematic points of view had consequences for the conception of many games, because even though "cinematic approaches would not necessarily be relevant to the narrative in games, they shape the conventions of how something can be presented in a continuous sequence of virtual spaces, and thus, what can even be told at all."[20]

In the triangle of theater, film, and games, some narrative conventions fade, while others establish themselves as transdisciplinary features. The illusion of spatial depth, for example, was created on the classical stage with staggered backdrops; a very similar spatial model is used in animated films by laterally shifting between slides of fore-, middle-, and

19. In order to meaningfully compare theater, film, and games, this chapter limits discussion to distinctly narrative games. Many analog and digital games do not have a narrative focus, instead concentrating on game mechanics (e.g., *Ludo, Uno, Tetris, Candy Crush Saga*, etc.). Such game genres are not elaborated upon.

20. Ulrich Götz, "On the Evolution of Narrative Mechanics in Open-World Games," in *Narrative Mechanics: Strategies and Meanings in Games and Real Life*, eds. Beat Suter, René Bauer, and Mela Kocher (Bielefeld: Transcript Verlag, 2021), 166.

background. In games, a similar concept originated the genre of side scroller and platform games, translating centuries-old techniques into a digital medium. When the curtain falls between the acts in theater, it marks an impressive caesura in the narrative, representing leaps in space and time. Through sophisticated processes, film editing distills the effect of the curtain to fractions of a second, cutting between settings, scenes, times, actions, and reactions seamlessly, either in continuity or with a deliberate break. Games still struggle to translate this long-perfected narrative style. The inflationary use of portals—gates that transport players to another place in the virtual world—attests to the structural conflicts of storytelling in games, because "in the vast majority of cases, progress in the plot of a digital game is equated with progress in spatial environments."[21] Where film has perfected the cut, the logic of narrative spaces in open-world games snowballs into enormous virtual environments.

Across all three disciplines, similarities in narrative methods lead to constant parallelism and exchange. Fluid transitions have long existed, particularly along the axes of theater-film and film-games, including in content, personnel, or production methods. Omnipresent digitalization is generating universal tools for multimedia productions, dissolving rigid disciplinary boundaries. This confluence results not only in theoretical comparisons, but practical exchanges. On one hand, this adjacency leads to the convergence of content and methodology; on the other, hybrid connections forge new formats. For example, institutions educating students in all three disciplines of theater, film, and game design—which were previously taught separately—have recently begun to combine content through joint laboratories and workshops.[22] Restrictions on performances during the COVID-19 pandemic starting in 2020 led web-based content and VR productions to blossom in theater productions for audiences at home. Thus, with the advent of VR, overlaps developed along the games-theater axis complete the triangle described above.

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21. Götz, *Narrative Mechanics*, 165.
22. At Zurich University of the Arts, the Immersive Arts Space was formed from competencies in theater, film, and games: https://blog.zhdk.ch/immersivearts/.

Where Recipients and Agents Meet

The construction of narrative spaces is determined by a triad of components. To discuss them, it helps to imagine three simultaneous shows, sessions, or performances all about the same topic, but distributed across theater, film, and gaming. In this kind of thought experiment, these basic elements of narrative space crystallize through comparing the disciplines that reveal their similarity, yet clearly demarcating them from one another. First, this involves the location of recipients; second, the narrating agents; and third, the places where action is performed. As it turns out, these components are not only represented in three dimensions, but produce an expanded conceptualization of space.

The play begins but long before the action commences on stage. To meet as an audience in the foyer, to experience the performance collectively, to see one another sitting in the shadows of the auditorium: this defines a social frame, adding a dimension to the narrative space embodied by the architecture of the theater. The curtain rises, as does the collective sense of anticipation. The audience remains in this state of suspension throughout the performance, participating intensively without engaging. Nevertheless, the actors sense feedback emanating from the audience—even if only in the moments of complete silence when the drama unfolds. In theater, this process is termed co-presence: the mutual presence of the actors and the audience bearing witness to the events of the performance. The course of these events is anticipated, but unpredictable.

The film begins similarly. The curtain also rises for the recipients in the cinema, but it is merely a sentimental reminder of theater. While the curtain in theater possesses a narrative function—it conceals the set and establishes separation between audience and actors—the curtain in front of the empty cinema screen conceals no narrative mystery. In the narrative space between events on the screen and the audience, there is no element of unpredictability. There is no co-presence with the actors, no substantive exchange among audience members, nor any particular spatial relationship between audience and movie theater. Consequently,

as Johannes Binotto observes, "The space in which films are screened appears, in fact, as a replaceable frame."[23] In an era where streaming is increasingly shifting the reception of films to the private sphere, the narrative dimension of a specific site of reception—the cinema—is beginning to disappear altogether. In its place is the purely personal, private experience, the kind of experience characteristic of gaming.

Walter Benjamin aptly observed when comparing spaces in theater with those in film that "It is indeed a different nature that speaks to the camera from the one which addresses the eye."[24] Accordingly, the human gaze perceives different spatial qualities than those captured by a camera in the same location. Thus, if significant differences can already be discerned between these types of narrative spaces in real space, the leap to virtual spaces appears even greater. Initially, Virilio appears to confirm Benjamin by asserting that "The space of sight is accordingly not Newton's space, absolute space."[25] However, it is thought-provoking to acknowledge that the recipient's gaze in games encounters computer-generated absolute space which tries to emulate real spatial conditions at all costs, achieving high narrative qualities.[26]

Despite the differences between the three disciplines, there are clear commonalities in their construction of narrative spaces. Johan Huizinga's seminal description remains valid: "The card-table, the magic circle, . . . the stage, the screen, . . . they are all playgrounds in form and function," that are "isolated, hedged round, hallowed; within them, special rules hold good."[27] It is sensational how Huizinga—long before the advent of computer-based games—highlights the spatial nature of the disciplinary similarities. He explains boundaries, constitutes "inside" and "outside." In theater and gaming, the demarcation of the "magic circle" is usually

23. Johannes Binotto, "Kino als Hütte: vom Potential des Vorführraum," *Filmbulletin* 47, no. 264 (2005): 51–9.

24. Walter Benjamin, *A Short History of Photography*, trans. Stanley Mitchell (London: Monogram, 1972), 7.

25. Virilio, *The Seeing Machine*, 62.

26. Ulrich Götz, "From Asteroids to Architectoids: Close Encounters between Architecture and Game Design," in *Architectonics of Game Spaces: The Spatial Logic of the Virtual and Its Meaning for the Real*, eds. Andri Gerber and Ulrich Götz (Bielefeld: Transcript Verlag, 2019), 201–214.

27. Johan Huizinga, *Homo Ludens: A Study of the Play Element in Culture* (London: Routledge & Kegan Paul, 1949).

obvious. It clarifies which rules prevail, where this validity ends, and what is allowed within this domain. In film—which can span many set locations—a comparable framing guarantees the "bracketing" of continuity and closure. The fundamental relatedness of spatial properties described by Huizinga manifests in the exchanges or combinations of discipline-specific narrative spaces, possible or imaginable, as seen in the theater to the film, the film to the game, or games as theater.

Narrating agents, whether actors or avatars, drive plot and form another disciplinary bridge. In the case of games, this requires closer consideration. One could find it surprising that human-like figures have typically been used for narrative, even though it is extremely elaborate in terms of design; moreover, completely different types of narrative agents would be conceivable in the virtual world. However, action in games only has narrative relevance when it can be attributed to human motives. The interactivity of games must be considered. Even if the only objects interacting in games have no anthropomorphic characteristics, narrative attaches itself to the question of who prompted this action and who profits from it. Furthermore, interactions are embedded into game mechanics to motivate players, so actions executed by avatars are inherently linked to game mechanics, as well as objectives corresponding to human motives, rendering them narratively relevant.[28] The co-presence between actors and audience members in theater thus corresponds to an avatar representing the player in gaming.

Avatars are hybrid entities. On one hand, they narrate their properties to recipients. On the other hand, the player's actions and intentions are projected onto their surfaces. This is particularly apparent in "customizing," when an avatar's appearance can be changed to reflect player preferences. In addition to this fusion of narrative agent and recipient into a single entity, there is a remarkable, even unexpected, continuation of the traditional audience model. The social frame of the audience even arises for gamers if they belong to a multiplayer community and experience their fellow players' actions along with their own avatar. This effect is further

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28. If a computer competes against itself in chess, can the resulting computational process be called a "game" at all?

amplified when millions of people watch gamers on live streams as they play and even respond to audience commentary. For many viewers, the only way to gain access to some games is within the reproduction of a classic audience model. This constellation also goes beyond theatrical co-presence: the "double avatar" emerges when game players themselves become narrative agents for spectators who in turn attempt to influence game players.[29] This leads to the continuation of a relationship between recipient and agent that is ultimately millennia old, typically used in sporting competitions in which the audience cheers on athletes who are supposed to perform the desired actions as proxies.

Spaces of Possibility—Spaces of Purpose

If one were to compare and categorize the expanded concepts of space in theater, film, and games, their narrative spaces do contain essential differences. In creating such models, the "framing" conditions—or "exteriorities"—emerge. Depending on these parameters, the fabric, materiality, orientation, and meaning of such spaces become apparent in their interior. Thus, this determines the nature of their "interiorities." The practical implementation of projects and productions determines how real or virtual spatial constructs generate spatial settings in the disciplines of theater, film, and games, corresponding to specific conceptualizations of action, use, and visualization.

How narrative spaces relate to the passage of time is crucial for spatial categorization. Theater is marked by action to be performed in the near future. The audience is attracted by experiencing—along with the actors—events that may soon be repeated in the next performance but are unique to one iteration. The narrative space of theater looks forward, according to narrative planning. This orientation is fundamentally different from film, which is inevitably oriented towards the past. Film is defined by action that has already happened and was previously recorded and produced. Therefore, in film production, particular skill lies in creating the illusion of action as if it were unfolding in the now, when in fact it

29. Götz, *Narrative Mechanics*, 167.

is already long completed.[30] The montage creates a sequence of momentary events by creating a new, coherent time structure from past scenes through the editing process as if it were a play. This inevitably leads to the question of whether a particular version of a film was, in fact, the only way to convey a particular story. Subjectivity of directing and editing in relation to narrative become apparent when a "director's cut" presents alternatives to the original storyline.

In observing the passage of time, it becomes apparent how the narrative space of the film is subject to predetermined objectives. Its reference to the past establishes a "space of purpose," in which individual elements—camera shots, scripts, acting, etc.—contribute to an overall sense of narrative. In this respect, film has realized the ideal of theater which strives to achieve the most perfect presentation possible: the prompter personifies the effort to be as close as possible to the ideal performance. Nevertheless, it is inherent to the performative nature of theater to (re)act in the moment. In its orientation towards the future, therefore, a theatrical space of purpose commingles with the "space of possibility" in which spontaneous aberrations can occur at any time. Narrative spaces in film are defined by action that has already happened, presented to the audience with certainty. Theater is defined by action that should happen. Games permit a third variant: action that could happen. This possibility is facilitated by the corresponding interaction model and game mechanics (or appears by mistake as a bug or a glitch). However, whether or not the possibility ever arises remains uncertain.

The relationship between games and time is complex and, depending on the gaming mode and genre, full of variations. Despite the vast expanses of some game worlds, however, there typically are no signs of aging nor any other irreversible processes. Instead, there are visual effects and mutable game states: the sun rises, the world turns to twilight, assets and scores increase. Single players can usually pause their games and restart later from the same place or even return to a previous game state. Single-player games with an irreversible passing of time, or those subject-

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30. Documentaries are an exception, as their depiction of the past serves another purpose.

ing players to "permadeath," are a rare exception.[31] Most games equate the passing of time with progress, which manifests in sequential progression and status changes. This repetitiveness reveals a neutral relationship between games and time. The resulting structure can, again, be described as a space of purpose. Unlike film or theater, however, the narrow focus of such narrative spaces unfolds through highly constrained interactions—within a game world, significant only in terms of the rules it follows—rather than from a single, ideal narrative. While the interactive nature of games promises myriad approaches to achieve a target, all of these paths are, in principle, conceived and contained within the "magic circle."[32] As such, the challenge is usually virtuosity, not originality of interaction. In many cases, a contradictory tension arises in maximizing the freedom of interactions within the framework of a predetermined environment.

However, some games address precisely this constraint. If an established space of purpose is paired with an unpredictable space of possibility, if game mechanics and narrative enter into unexpected connections, "epic" moments in gameplay of unique situations that could not have been anticipated arise. Elaborate game productions try to cultivate such deviations structurally by enabling players to intervene creatively in the game world or by facilitating the dynamics of unforeseeable processes in multiplayer environments. Games also have greater ramifications, becoming the subject of other disciplines. In *How to Disappear*, the contribution by artist collective Total Refusal to the Berlin International Film Festival, they deconstruct the logic of the shooter—one of the most constrained narrative spaces in game.[33] Total Refusal were able to hack the game mechanics of a multiplayer scenario to create the possibility of producing their film. This leads to the discussion of a topic diametrically opposed to the game's intent: whether one can desert a war game. The predetermin-

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31. The game mechanics of permadeath eliminate a player irrevocably from the game after a defeat.
32. Huizinga, *Homo Ludens*.
33. Lemonade Films, "How to Disappear by Total Refusal," posted 2021, Vimeo video, 21:06, https://vimeo.com/533455589.

ing character of the game mechanics is revealed because "Battlefield only consists of a battlefield,"[34] without space for critical social discourse. It is in this transition from spaces of purpose to spaces of possibility that art is created.

Considering their increasing interconnectedness, further innovative and inspiring combinations of narrative spaces from theater, film, and games are to be expected. Whether these new hybrids can be described as spaces of purpose or spaces of possibilities—or if they can assume forms we cannot yet discern today—remains to be seen.

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34. Lemonade Films, "How to Disappear," 1:40.

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