Paratext | Paraplay

Contextualizing the Concept of Paratextuality

GUNDOLF S. FREYERMUTH

The term paratextuality is a little over three decades old. French literary scholar Gérard Genette introduced the concept in the late 1980s as part of his exploration of phenomena that transcend single texts, i.e., varieties of transtextuality. "Architextuality," he called the relations of a text to cross-textual categories such as literary genres or linguistic styles (1979);[1] "palimpsestuality," the relations of a text to older texts that precede it (1982);[2] and "paratextuality," the relations of a text to other external texts that frame it, and thus prefigure and co-constitute its meaning (1987).[3] In addition, Genette differentiated between paratexts close to the text and paratexts further away from the text. The former—from the author's name to the preface to the blurb—he called peritexts. The latter—from advertising materials to author interviews and reviews to academic studies—he called epitexts.

Genette's concept of paratextuality gained influence not only in literary studies. In the past quarter-century, film studies, game studies, and media studies adopted and adapted it. In this introductory essay, I will investigate the causes and circumstances of Genettes' 'discovery' of the paratextual, i.e.,

---

1   Genette, Gérard: *The Architext: an Introduction*, Berkeley: University of California Press 1992 (*1979).

2   Genette, Gérard: *Palimpsests: Literature in the Second Degree*, Lincoln: University of Nebraska Press 1997 (*1982).

3   Genette, Gérard: *Paratexts: Thresholds of Interpretation*, Cambridge; New York, NY: Cambridge University Press 1997 (*1987).

the historical index of his theoretical concept, in order to explore whether and how it can be appropriated for digital media and games in particular.

At first glance, the sudden visibility of paratextual practices in the 1980s is reminiscent of the discovery of mediality, which occurred only three decades earlier.[4] Of course, media for cataloging possessions and outstanding debts, codifying religious and secular laws, expressing individual thoughts and feelings, and communicating and playing with one another mark the beginnings of human culture. However, while the growing number of media were put to practical use for millennia, their existence remained mainly invisible to theoretical reflection. Even the advanced philosophical-aesthetic theories of the 18th and 19th centuries were hardly aware that we are culturally not only dealing with artistic-playful practices and their aesthetic results—with literature, painting, music, theater, ball, board, and card games, and so on. What was missing was an understanding and, above all, a term for the fact that these practices were based on various means of mediation—media—which correlated in their form and performance with the changing state of technology. Only in the first half of the 20th century, especially in Walter Benjamin's examination of the new 'arts' of photography and film,[5] do we find the beginnings of a new perspective. It looks beyond the individual arts and recognizes the media available to society for both artistic and non-artistic forms of documentation, communication, expression, and play. The explicit discovery of the media and the first fundamental analyses of their qualities and functions then came to Marshall McLuhan in the 1950s and 1960s,[6]

---

4 Cf. Freyermuth, Gundolf S.: "Thesen zu einer Theorie der Transmedialität," in: *Intermedialität // Transmedialität. Figurationen 02/07* 2, no. 8 (2007), pp. 104-117, here pp. 105-106.

5 Benjamin, Walter: "Short History of Photography," in: *Artforum*, February, 1977 (*1931), https://www.artforum.com/print/197702/walter-benjamin-s-short-history-of-photography-36010; Benjamin, Walter: "The Work of Art in the Age of Mechanical Reproduction," in: *Illuminations. Essays and Reflections. Edited and With an Introduction by Hannah Arendt. Preface by Leon Wieseltier*, New York: Schocken Books 2007, pp. 217-252.

6 McLuhan, Marshall: *The Gutenberg Galaxy: The Making of Typographic Man*, Toronto: University of Toronto Press 1962; McLuhan, Marshall: *Understanding Media: The Extensions of Man*, Berkeley: Gingko Press (Kindle Edition) 2013 (*1964).

stimulated essentially by the experience of the 'new' electronic broadcasting technology of radio and television that, with all their conceptual demands, could no longer be subsumed under the arts.

Paratexts have an equally long history of invisibility. They, too, have existed since the beginnings of culture, precisely since there have been texts and images, and their function and effects have likewise remained largely unreflected. So why was it possible to recognize the function and effect of paratextuality—only—towards the end of the 20th century? And which preconditions made it possible to transfer the literary concept, with minor modifications, to other media and especially to the audiovisual media of film and games?

I will explore this question in three steps. In the first chapter, I outline the main path that led to the formation of the modern text culture—the so-called "Gutenberg Galaxy"[7]—and, in the 20th century, to the poststructuralist "pan-textualism which reads the entire fabric of nature and culture as a network of signs."[8] The chapter will trail this path from the pre-modern book religions, which constructed their authority around sacred scriptures, but were based on paratextuality in their everyday performance, to the establishment of secular literacy. It set in with the Renaissance and initiated a cultural turn from paratexts to the texts themselves through the new technology of printing. The implementation of this central element of the Gutenberg Galaxy—standardized textuality based on individual authorship—ultimately instigated the Enlightenment and industrialization that escalated literacy and the textualization of knowledge in all areas of life. Industrial mass media not only produced a variety of wholly new texts and paratexts but also undermined individual authorship and laid the technological foundation for the digital deconstruction of analog book culture. In this context—at the apex and tipping point of the Gutenberg Galaxy—the omnipresence of transtextuality and specifically paratextuality suddenly became visible (*I The Texts That Mean the World: Read!*).

---

7   M. McLuhan: *The Gutenberg Galaxy*.

8   Mitchell, W.J.T.: "'Critical Inquiry' and the Ideology of Pluralism," in: *Critical Inquiry*, Vol. 8, No. 4, Summer 1982, pp. 609-618, here p. 617. See also White, Hayden: "Historical Pluralism," in: *Critical Inquiry*, Vol. 12, No. 3, Spring 1986, pp. 480-493.

In the second chapter, I follow another—the other—path to modern textuality. As McLuhan explicated, painting, theater, photography, and film contributed essentially to the Gutenberg Galaxy via the homogenization of perspectival image space. My second historical review strives to demonstrate the development of modern audiovisuality between Renaissance and postmodernism and, in its context, the rise of the two main variants of playfulness—mimetic representation and sporting competition. In particular, the process of industrialization set in motion a medial audiovisualization that created not only a multitude of new paratextual forms of representation and expression. Further results were the implementation of collective authorship with divided responsibilities and a cultural reevaluation of the playful, which began in the early days of digital technology and work. Thus, parallel to the modern dominance and democratization of writing, visual and playful audiovisual 'textualities' emerged. Since the mid-20th century, they contributed to the demise of the analog book—text—culture and to the process of cultural ludification (*II The Audiovisions That Mean the World: Watch!*).

In the third and last chapter, the historical account leads, with a focus on digitalization and digital games, to the exposition of four significant changes in the production and reception of texts and paratexts as well as in their relations to each other: the emergence of a new digital textuality that is software-based, generative, transmedial, and open, i.e., transtextual; the democratization of audiovisual textual and paratextual production; the formation of distributed authorship, and, above all, the enablement of new ways of dealing with games that transcend regular playing and are to be understood as paraplay or paragaming (*III The Games That Mean the World: Play!*).[9]

---

9   Some of the ideas I present in this introductory essay on paratextuality I have already developed in previous publications and other contexts, notably on the evolution of the modern image space in Freyermuth, Gundolf S.: "From Analog to Digital Image Space: Towards a Historical Theory of Immersion," in: Dogramaci, Burcu/Liptay, Fabienne (eds.), *Immersion in the Arts and Media*, Amsterdam: Rodopi 2015, pp. 165-203. And on the construction and deconstruction of authorship in the modern era in: Freyermuth, Gundolf S.: "Wolfgang Menge: Authentizität und Autorschaft. Fragmente einer bundesdeutschen Medienbiographie," in: Freyermuth, Gundolf S./Gotto, Lisa (eds.), *Der Televisionär: Wolfgang Menges transmediales Werk: Kritische und dokumentarische Perspektiven*, Bielefeld: transcript 2016, pp. 19-214; Freyermuth, Gundolf S.: "Transmedia. Twelve

A summary concludes the historical survey, followed by an outlook on the contributions of this volume.

I THE TEXTS THAT MEAN THE WORLD: READ!

No paratexts without texts. But what is a text? The extended poststructuralist concept transcends the written word and includes all 'woven' units of immaterial or material signs that carry and convey meaning(s); thus, in addition to the written word, also the auditory, visual, and audiovisual media. In this sense, the origin of all texts lies in the cognitive revolution tens of thousands of years ago. 'Big History' or macrohistory, the investigation of developments over very long periods, teaches us that since our species acquired language, we have the unique "ability to transmit information about things that do not exist at all."[10] From an evolutionary perspective, the creation of collective fictions such as religions, currencies, or nations, and the weaving of texts around them, usually in the form of stories—experienced as well as invented—serves to organize individuals into cooperative units. "All large-scale human cooperation is ultimately based on our belief in imagined orders."[11] Yuval Noah Harari, therefore, refers to fiction as "the most powerful force on earth."[12] The social and individual functions of fictional narrative texts correspond to the evolutionary one. They shape images of the world and humanity. Epochal "grand narratives"[13]—like capitalism, democracy,

---

Postulates," in: Clash of Realities (eds.), *Clash of Realities 2015/16: On the Art, Technology and Theory of Digital Games. Proceedings of the 6th and 7th Conference*, Bielefeld: transcript, 2016, pp. 97-126.

10 Harari, Yuval N.: *Sapiens: A Brief History of Humankind*, New York: Harper 2015, p. 24.

11 Harari, Yuval N.: *Homo Deus: A Brief History of Tomorrow*, Kindle ed., New York, NY: Harper 2017, loc. 2601. See also Y. Harari: *Sapiens*, p. 25.: "Sapiens can cooperate in extremely flexible ways with countless numbers of strangers."

12 Y. Harari: *Homo Deus*, loc. 2742.

13 Lyotard, Jean-François: *The Postmodern Condition: A Report on Knowledge*, Minneapolis: University of Minnesota Press 1984 (*1979).

Enlightenment—and "consensus narratives"[14]—culturally accepted contexts of meaning that are effective in the present—create cohesion in collectives by communicating norms, values, orientation knowledge, and significance of life to individuals.[15]

A major increase in the ability to tell stories across time and space to an ever-greater number of people came about 5000 years ago with the invention of media systems for writing them down—the birth of text in the narrower sense. "In the beginning was the Word, and the Word was with God, and the Word was God," proclaims the Gospel of John. However, from Roman antiquity through the Christian Middle Ages to modern time, this "word" developed a large part of its power as scripture. In this, Christianity was no exception. Dozens of religions, from Judaism to Islam, codified their fictions in holy books.[16] Thus, textualization became established in advanced civilizations. The intersubjective perception of the world and accepted action in it as well as individual foundations of meaning were based on writings. The so-called "book religions" prefigured the modern "Gutenberg Galaxy," at least among the ruling and administrative elites, for they "increasingly saw reality through the medium of written texts."[17] The majority of contemporaries, however, were not literate. The broad impact of scripture-based religions up to the industrial era was primarily due to paratextual popularizations—oral sermons, song texts to be memorized, iconographic representations, vernacular interpretations and commentaries, and so on.

---

14 The term was coined by David Thorburn and popularized by Bruce Sterling. Cf. Thorburn, David: "Television as an Aesthetic Medium," in: *Critical Studies in Mass Communication* 4 (1987), pp. 161-173; http://web.mit.edu/thorburn/www/publications/Thorburn_TelevisionAsAestheticMedium.pdf; Sterling, Bruce: *Zeitgeist*, New York: Bantam Books 2000.

15 See for example Paul Ricoeur's theory of narrative identity: Ricoeur, Paul: "Life in the Quest of Narrative," in: Wood, David (ed.), *On Paul Ricoeur: Narrative and Interpretation*, London/New York: Routledge 1991, pp. 20-33; P. Ricoeur: "Narrative Identity," in: ibid., pp. 188-199.

16 Cf. Lang, Bernhard: "Buchreligion," in: Cancik, Hubert/Gladigow, Burkhard/Laubscher, Matthias Samuel (eds.), *Handbuch religionswissenschaftlicher Grundbegriffe*, Stuttgart: Kohlhammer 1990, pp. 143-165.

17 Y. Harari: *Homo Deus*, loc. 2892.

The beginning of a cultural turn from paratexts to the sacred texts themselves and to 'original' texts in general dates to the early modern period. Two innovations initiated it: the invention of letterpress printing and the translation of the Bible. The first book that Gutenberg reproduced in 1455 was the Bible, albeit still in Latin. The higher accessibility through the transition from single handwritten copies to multi-digit print runs laid the foundation for Martin Luther's effort 90 years later: After centuries of primarily paratextual Christianity, his translation of the Bible into the vernacular opened up the Holy Scriptures to direct reading.

Both innovations, however, did not—only—have the desired effects. On the one hand, the printed book became a central metaphor for understanding the world. The Christian Middle Ages had already looked at nature as a text written by God's hand, which humankind had to learn to read alongside the Bible.[18] With the increased distribution of printed volumes, people now also understood the social world as a book and began, for example, to read their counterparts in everyday life, ideally like an open book. On the other hand— and more importantly—the printing of books not only increased the distribution of Bibles and other religious and secular writings. As a medium, the texts of letterpress printing, standardized in typeface, created, as McLuhan stated in the subtitle of his classic study on the birth of the modern world, a new social character, the "typographic man."[19] The emerging modern consciousness characterized homogenization and secularity. The experience of visual standardization—in the printed typeface as well as in the more and more perspectival image spaces[20]—resulted in more 'realistic' views, ideas, and novel ways of thinking. Printing brought about new 'intersubjective fictions' and 'grand narratives.' To its formative power, McLuhan attributes, among other things, the rise and imposition of Protestantism, capitalism, nationalism, and rationalism. The latter led to the scientific revolution and the Enlightenment, with the book as its central medium.

The process of secularization combined the focus on printed texts (and paratexts) with that on their authors. This perspective, too, was new. In pre-

---

18 Konrad von Megenberg wrote his *Book of Nature* around 1350. It was first printed in 1475: Megenberg, Konrad von: *Buch der Natur*, Augsburg: Johann Bämler 1475.

19 M. McLuhan: *The Gutenberg Galaxy*.

20 See chapter II.

modern times, the manual production of media—texts, images, sounds—was by no means necessarily linked to individual persons and their talents. The term author,[21] like authority,[22] derives from the Latin 'augere,' meaning 'to make' and 'to increase.' In the Christian Middle Ages, however, only God was thought to be able to create. Human writers—in English they were called authors only since the late 14th century[23]—increased God's fame rarely by their own, original contributions. They concentrated on paratextual activities: copying, compiling, publishing, collecting. Moreover, as part of ecclesiastical and secular institutions, the writers of most texts worked in collectives and remained anonymous. The identifiable individual author as an aesthetic ideal is a cultural construct of the modern era.

Both as a social phenomenon and legal construction, authorship is closely linked to the individualization processes of the Renaissance and the new media technology of printing. "Print is the technology of individualism," McLuhan states.[24] The first foundations for the rationale of the economic value of medial creations were laid in the 17th century by John Locke's theory of individual property. Applying these ideas to intellectual and artistic work, the

---

21 See http://www.etymonline.com/index.php?term=author&allowed_in_frame=0: "mid-14c., *auctor*, *autour*, *autor* 'father, creator, one who brings about, one who makes or creates' someone or something, from Old French *auctor*, *acteor* 'author, originator, creator, instigator' (12c., Modern French *auteur*) and directly from Latin *auctor* 'promoter, producer, father, progenitor; builder, founder; trustworthy writer, authority; historian; performer, doer; responsible person, teacher,' literally 'one who causes to grow,' agent noun from *auctus*, past participle of *augere* 'to increase,' […] From late 14c. as 'a writer, one who sets forth written statements, original composer of a writing' (as distinguished from a *compiler*, *translator*, *copyist*, etc.)."

22 See https://www.etymonline.com/word/authority?ref=etymonline_crossreference: "c. 1200, *autorite*, *auctorite* 'authoritative passage or statement, book or quotation that settles an argument, passage from Scripture,' from Old French *autorité*, *auctorité* 'authority, prestige, right, permission, dignity, gravity; the Scriptures' (12c.; Modern French *autorité*), from Latin *auctoritatem* (nominative *auctoritas*) 'invention, advice, opinion, influence, command,' from *auctor* 'master, leader, author' (see author (n.))."

23 See footnote 21.

24 M. McLuhan: *The Gutenberg Galaxy*, p. 158.

British "Statute of Anne" (1710) codified the Anglo-Saxon—publisher-centered—copyright. Seventy-five years later, at the end of the 18th century, Immanuel Kant established the idea of originative authorship in his theory of individual creativity.[25] From it, property rights could be derived. Only a little later, the Constitution of the United States (1790) and legislation of the French Revolution (1791) institutionalized author's rights. After 1800, they became the standard in most countries. A cultural idolization of individual creativity that began with Romanticism's 'cult of the genius' accompanied this legal protection. In the art religions of the 19th century, authors assumed the position of God.

Parallel to these developments in high culture, however, industrialization gave rise to mass culture and mass education. The former largely eliminated the freedoms of individual authorship in favor of standardized production, a process that Max Horkheimer and Theodor W. Adorno later called the rise of the "culture industry."[26] Following the invention of the steam press at the beginning of the 19th century and the introduction of wood paper around the middle of the century, the mass press marked the beginning of industrial media production. With it, new paratextual genres emerged, such as the (short) review, the (author's) portrait, or the (author's) interview. Since newspapers and magazines were either tied to political parties or aimed at increasing circulation through entertainment and editors edited all contributions to make them suitable, the mass press offered little freedom to individual authorship. Moreover, since the early 20th century, the new industrial media of film, radio, and television's technological modes of production prevented individual authorship. The practical reality of mass media thus institutionalized collective authorship based on the division of labor, beyond the existing legal framework and contrary to the culturally prevailing values and prejudices. Mass education, in turn, successively replaced oral and mostly narrative instruction with more abstract written accounts. A growing number of social spheres previously based on personal communication, on master-apprentice relationships, on direct interaction between teachers and learners, became

---

25 Kant, Emanuel (sic!): "Of the Injustice of Reprinting Books," in: *Essays and Treatises on Moral, Political, and Various Philosophical Subjects*, ed. Emanuel (sic!) Kant, London: William Richardson 1798 (*1785), pp. 225-239.

26 Horkheimer, Max and Theodor W. Adorno: *Dialectic of Enlightenment: Philosophical Fragments*, Stanford, Calif.: Stanford University Press 2002.

textualized and thus part of the "Gutenberg Galaxy," the "visual homogenizing of experience of print culture, and the relegation of auditory and other sensuous complexity to the background."[27]

Theoretical reflection reacted to these (mass) cultural changes by, on the one hand, questioning the central role of individual authorship and, on the other, inferring from increasing textualization the text-like structuring of culture itself. Both insights have their origins in the Russian and Czech formalism of the 1920s and 1930s, especially in the works of Mikhail Bakhtin and Roman Jakobson. After a detour via the exile of Jakobson and Claude Levi-Strauss in the US, these ideas gained broad impact in French postwar structuralism and poststructuralism.[28] Also, Walter Benjamin, already during his pre-war exile in Paris, recognized "that we are in the midst of a mighty recasting of literary forms […]"[29] In 1934, in an address that he probably never gave, "The Author as Producer," he noted that the reader as an expert in his profession "gains access to authorship. Work itself has its turn to speak."[30] This change, Benjamin predicted, "revises even the distinction between author and reader."[31] For him, the empowerment of readers to become writers decisively included the reevaluation of paratextual activities:

"There were not always novels in the past, and there will not always have to be; there have not always been tragedies or great epics. Not always were the forms of commentary, translation, indeed even so-called plagiarism playthings in the margins of literature […]."[32]

Another insight, which was to reveal itself half a century later, was constitutive for the 'discovery' of paratextuality: Umberto Eco's theorem, published in 1962, of the closed (art) work's end and the ensuing end of the dominance

---

27 M. McLuhan: *The Gutenberg Galaxy*, p. 124.

28 Sylke Rene Meyer analyzes this process in her forthcoming doctoral thesis *The Unintentional Storyteller* at the University of Cologne.

29 Benjamin, Walter: "The Author as Producer," in: Jennings, Michael W./Eiland, Howard/ Smith, Gary (eds.), *Selected Writings*, Cambridge, Mass.: Belknap Press 1999, pp. 768-782, here p. 771.

30 Ibid.

31 Ibid., p. 772.

32 Ibid., p. 771.

of authorship over the form and reception of texts.[33] Eco's seminal work escalated the deconstruction of the culturally dominant notions of authorship and unity of artworks. At the same time, artistic experiments aimed at reducing the role of the author and opening up works to freer modes of reception. For example, writers Raymond Queneau and Francois Le Lionnais founded *Oulipo*, a "workshop for potential literature," in 1960.[34] Its central goal was to limit authorial freedom through formal constraints. And in 1961, Marc Saporta published his *Composition No. 1*, consisting of 150 unnumbered pages delivered in a box to be read in any order without direction from the author.[35] The cultural turning point then came at the end of the 1960s with the complete negation of individual authorship. Eight decades after Nietzsche's dictum that God was dead, killed by the Enlightenment, which had replaced God with the creating individual—the author—, Roland Barthes and Michel Foucault now proclaimed the "death of the author": Barthes in favor of the recipients,[36] Foucault in favor of cultural discourses.[37]

The abandonment of the concept of individual authorship, i.e., of subjective intentions, talents, and passions, resulted from a new understanding of textuality. Poststructuralism conceived works of all media—as well as culture itself—as text, and all texts as no longer autonomous, but as interfaces of discourses, as montages and collages of non-original elements. The exact process, of course, can also be looked at in reverse: The death of the author brought with it, in the second half of the 20th century, a gradual devaluation of the traditional structures and narratives that had organized knowledge in modern culture. The loss of authorship initiated a continuous loss of authority and authenticity. The transition to postmodernism and, with it, the end of modernity was then completed in 1979 when Jean-François Lyotard

---

33 Eco, Umberto: *The Open Work*, Cambridge, Mass.: Harvard University Press 1989 (*1962).

34 Oulipo is short for "Ouvroir de littérature potentielle," i.e., "workshop for potential literature."

35 Saporta, Marc: *Composition no. 1. A novel*, New York: Simon and Schuster 1963.

36 Barthes, Roland: "The Death of the Author," *Aspen Magazine*, Fall-Winter, 1967; http://www.ubu.com/aspen/aspen5and6/threeEssays.html#barthes

37 Foucault, Michel: "What Is an Author?," in: Faubion, James D. (ed.), *Aesthetics, Method, and Epistemology: Essential works of Foucault, 1954-1984*, New York: New Press 1998 (*1969), pp. 205-222.

proclaimed the end of the "grand narratives"[38]— calling into question those intersubjective and community-forming fictions that until then had meant the evolutionary advantage of our species.

Gérard Genette's concept of transtextuality and particularly paratextuality, which he conceived in the intellectual sphere of Barthes and Foucault and almost simultaneously with Lyotard's analysis of postmodernism, belongs to this historical and theoretical context. However, digital textuality developed in parallel to the theoretical reevaluation of analog textuality— and with at least as much consequence. Its origin came from Vannevar Bush's 1945 design of a transtextual knowledge machine for "memory extension," which he called Memex.[39] A central innovation of this possible apparatus was to be a personalization of cultural knowledge through "associative indexing" and the linking of text passages through traces of the reading process that Bush called "trails." Inspired by this concept, in the 1960s, Ted Nelson and Douglas Engelbart—first independently, then together—realized in the medium of software the 'hyperlink' for associating a text passage with any other, wherever they might be: elsewhere in the same document, in other documents, in the storage of the same computer, or on a server on the other side of the world.[40] For this linked reference, which can be realized interactively, it is, of course, irrelevant whether the associated passages originate from texts or paratexts.

During the 1960s and 1970s, Nelson and Engelbart's research on hyperlinking remained at the level of laboratory experiments. The first mass-scale implementations of digital transtextuality did not occur until the late 1980s. In 1987, the year in which Gérard Genette also published his analysis of paratextuality, Apple Computer launched the *Hypercard* program, the first

---

38 F. Lyotard: *The Postmodern Condition*.

39 Bush, Vannevar: "As We May Think," in: *The Atlantic Monthly*, July (1945); http://www.theatlantic.com/unbound/flashbks/computer/bushf.htm

40 Nelson supposedly coined the term in 1963. The first documented source is a short article describing a lecture Nelson gave in 1965 at Vassar College: Wedeles, Laurie: "Professor Nelson Talk Analyzes 'P.R.I.D.E.'," in: *Miscellany News (Vassar College)*, February 3, 1965; http://faculty.vassar.edu/mijoyce/Misc News_Feb65.html. See also Nelson, Theodor H.: *Computer Lib / Dream Machines*, Chicago: Nelson: Hugo's Book Service 1974.

hypermedia system for personal computers.[41] Simultaneously, Jay David Bolter, Michael Joyce, and John B. Smith introduced *Storyspace*, a program for creating hypertext literature.[42] Two years later, Timothy Berners-Lee conceived a hypertext mask for the internet, laying the foundation for today's World Wide Web. In sum, innovations and implementations of digital textuality deconstructed the same properties and characteristics of analog textuality that poststructuralism questioned: in addition to individual authorship, above all, the linear cohesiveness of works, which makes the distinction between texts and paratexts meaningful in the first place. Hypercard stacks, hypertext literature, Hypercard-based games like the legendary MYST (1993),[43] and of course, the WWW of the early 1990s, written in HyperText Markup Language (HTML), were no longer experienced in a linear reading process that focused on one text at a time. Instead, the habit of 'surfing' evolved—a playful, experimental clicking back and forth between different texts or text fragments.

From the perspective of the digital present, Genette's terms 'transtextuality' and 'paratextuality' conceptualize textuality in an industrial mass culture that is already in the process of disappearing in the last decades of the 20th century. At its core, Genette's theory of transtextuality harbors the parallelism of a postmodern omnipresence and growing powerlessness of analog texts and their individual or collective authors. In retrospect, then, despite or precisely because of the multiplication of analog textuality and the dissolution of its traditional boundaries, a devaluation is salient: a successive transition from the paradigm of the book and reading— the closed work and its interpretative comprehension—to the paradigm of games and playing—the open work and its participatory appropriation.

In the second chapter, I will explore how, since the Renaissance and parallel to the establishment of standardized textuality, the foundations were laid

---

41 Lasar, Matthew: "30-Plus Years of HyperCard, the Missing Link to the Web," in: *Ars Technica*, May 25, 2019; https://arstechnica.com/gadgets/2019/05/25-years-of-hypercard-the-missing-link-to-the-web/

42 Barnet, Belinda: "(Re)minding: The Development of Storyspace," in: *Digital Humanities* 6, no. 2 (2012); http://www.digitalhumanities.org/dhq/vol/6/2/000 128/000128.html

43 With more than four million copies, MYST was the most successful game of the 1990s.

for the 20th-century dual process of medial audiovisualization and cultural ludification.

II THE AUDIOVISIONS THAT MEAN THE WORLD: WATCH!

The invention of letterpress printing did not—alone—establish what McLuhan called the "Gutenberg Galaxy": the dominance of the visual over the oral in modern culture. The "uniformity and repeatability of typography"[44] merely intensified many times over the process of visual homogenization that painterly experiments with linear perspective had already begun in the early 15th century. In 1435, a decade before Gutenberg introduced movable type, Leon Battista Alberti, in *Della Pictura*,[45] codified the theory of perspective and thus the production of pictorial space on a mathematical basis. "The world of visual perspective is one of unified and homogeneous space."[46]

This unity was marked by the picture frame, which separated the stretched canvases of perspective paintings from the environment and within which realistic pictorial worlds opened up as in an open window; "una finestra aperta," as Alberti wrote.[47] The linear perspective painting established a new aesthetic standard for the visual and the audiovisual. Within a few decades, the first modern proscenium stages, also called picture-frame stages, were built. These stages, which meant the world in the pre-industrial era,[48] differed in their design and illusionary effect drastically not only from

---

44 M. McLuhan: *The Gutenberg Galaxy*, p. 128.

45 Alberti, Leon Battista: *On Painting.* Translated with Introduction and Notes by John R. Spencer, New Haven: Yale University Press 1970 (*1435, *1956); http://www.noteaccess.com/Texts/Alberti/

46 M. McLuhan: *The Gutenberg Galaxy*, p. 136.

47 "I inscribe a quadrangle of right angles, as large as I wish, which is considered to be an open window through which I see what I want to paint." L. Alberti: *On Painting*, http://www.noteaccess.com/Texts/Alberti/1a.htm

48 The English translation of the famous poem "To My Friends" (1803) by the German poet Friedrich Schiller renders some verses very freely. "Yet we see the great of every age / Pass before us on the world's wide stage / Thoughtfully and calmly in review" reads in the German original: "Sehn wir doch das Große aller Zeiten /

the ancient amphitheaters and medieval stages but also from the Shakespearean stage. The new proscenium stages took over the framing of the stage space from painting and imitated perspective through staggered backdrops, with the vanishing point often being a perspectival painting. A framed window view then continued to characterize the new industrial image media of photography, film, and television. In their duality of prospect and distance, all these window views, from Renaissance painting to the television screen, are characterized by the principle of a threefold separation of the image space: firstly, from the environment through framing; secondly, from the viewer or spectator, in particular through the spatial distance necessary for optimal perception of perspective, but also through material coverings such as curtains, doors, or panes of glass; thirdly, from the modern text space, which came into being at the same time through the invention of letterpress printing with movable type.

In the transition from painting to the stage, from the still image to moving actions, the separated image space evolved into a secluded playground. Thus, the illusion theater emerged from the combination of classical traditions and modern technology. With its separation from the everyday world—the auditorium—, modern theater can be located in the tradition of pre-modern rituals and games, as Johan Huizinga stated in his epochal study, *Homo Ludens*:

"The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart."[49]

At the same time, the theater of illusion continued the emancipation of drama from the rituals and games of the religious sphere. This process had begun in Greek and Roman antiquity but had been interrupted in the Christian Middle

---

Auf den Brettern, die die Welt bedeuten, / Sinnvoll still an uns vorübergehn." Literally, the theater is spoken of here as "the boards that mean the world."

49 Huizinga, Johan: *Homo Ludens: A Study of the Play Element in Culture*, Boston: Beacon Press (Kindle Edition) 1955 (*1938), loc. 221. Cf.: "In history, art and literature everything that we perceive as beautiful and noble play was once sacred play." (Ibid., loc. 1951.)

Ages when hardly any secular theater culture existed. Not least because the stage soon offered dramatic representations of contemporary life, it became the dominant medium of social introspection in the pre-industrial modern era, a mirror of the world. Huizinga refers to the pre-industrial centuries as the age of the "world theater":

"Drama, in a glittering succession of figures ranging from Shakespeare and Calderon to Racine, then dominated the literature of the West. It was the fashion to liken the world to a stage on which every man plays his part."[50]

In the 18th century, the bourgeois tragedy, in particular—tragic plays of George Lillo, Denis Diderot, Gotthold Ephraim Lessing, Friedrich Schiller—staged throughout Europe the escalating conflicts that the rising bourgeoisie had to fight out with the ruling aristocracy. By helping to forge collective and individual identities, the modern stage and the texts and paratexts that emerged around this new playground—modern dramas, theater critiques, theoretical manifestos, coffeehouse debates, and so on—proved to be no less constitutive for the formation and cohesion of societies and cultures than religious rites, both before and at the same time.

This guiding function of the stage as a medium—to re-enact everyday conflicts, make them visible, and present possible solutions—was taken over by cinema in the first half of the 20th century and by television in the second half. Feature films and TV series mirrored social life, however distortedly, and thus reshaped social self-perception and the world's perception. At the same time, industrialization led to the popularization and professionalization of sporting games. Around 1900, the new mass sport of soccer and the revival of the Olympic Games afforded the construction, for the first time since antiquity, of enormous venues separated from everyday life, stadiums that could hold many tens of thousands and soon more than 100,000 people. Consequently, in the 20th century, entirely new paratextual media and forms evolved, including popular magazines specializing in film and sports and reviews of movies and sporting events in daily newspapers, general interest weekly and monthly magazines, on radio and television.

---

50 Ibid., loc. 128.

The ascendancy of the two main variants of the playful,[51] mimetic representation—in the media of mass culture—and competition—in mass sports—initiated a fundamental cultural reassessment. Its beginning marked Johan Huizinga's *Homo Ludens*.[52] In his cultural history, he defined the playful as the central element of a good life: "What, then, is the right way of living? Life must be lived as play […]."[53] Indeed, in 1938, Huizinga was right to lament the decline of the playful in industrial societies. However, during and after the Second World War, the technological foundations were laid for the transition from industrial to digital civilization. In the process, a variety of linear, causal, and passive practices, values, and principles of cognition successively gave way to multilinear, contingent, and interactive ones. Early examples are the mathematical game theory developed by John von Neumann and Oskar Morgenstern in the 1940s,[54] and the beginnings of artificial intelligence, whose pioneers Alan Turing and Claude Elwood Shannon, as well as a host of other researchers, relied on the proceduralization of analog games, in particular chess, as 'proof of concept.'[55] In 1952, IBM introduced the first digital chess game. Soon, computers were winning against amateurs. In 1962, SPACEWAR!, the first computer game for pure entertainment purposes, was created.

Allucquere Rosanne Stone took this appropriation of expensive computing power to indicate the complementation and modification of the industrial work ethic by a new popularization of the playful.[56] This change has

---

51 "The two ever-recurrent forms in which civilization grows in and as play are the sacred performance and the festal contest." (Ibid., loc 918.)

52 Huizinga's study was published shortly before World War II. The book's international impact did not unfold until more than a decade later. The first English edition appeared in 1949, the first German in 1956.

53 J. Huizinga: *Homo Ludens*, loc. 3843.

54 Von Neumann, John and Oskar Morgenstern: *Theory of Games and Economic Behavior*, Princeton: Princeton University Press 1944.

55 See Donovan, Tristan: *Replay: The History of Video Games*, Lewes, East Sussex: Yellow Ant (Kindle Edition) 2010, loc. 112. Cf. Freyermuth, Gundolf S.: *Games | Game Design | Game Studies: An Introduction*, Bielefeld: transcript 2015, p. 62.

56 See Stone, Allucquere Rosanne: *The War of Desire and Technology at the Close of the Mechanical Age*, Cambridge, Mass.: MIT Press 1995, pp. 13-14.

generally been evident in Western culture since the 1960s:[57] From Eric Berne's bestseller *Games People Play: The Psychology of Human Relationships* (1964)[58] to Joe South's hit song *Games People Play* (1968), which it inspired, and Clark C. Abt's book *Serious Games* (1970)[59] to the *New Games* movement that Stewart Brand initiated in the atmosphere of San Francisco's hippie culture and which stayed popular from the late 1960s to the early 1980s.[60]

Technological as well as economic factors fueled this process of ludification. Marshall McLuhan emphasized the influence of the new electronic media: "Instead of tending towards a vast Alexandrian Library the world has become a computer, an electronic brain,"[61] Networked digital work and communication—in McLuhan's words: "electronic interdependence"[62]—was going to replace the individualistic culture of letterpress printing. At the same time, around 1960, Peter F. Drucker observed the emergence of new professions and forms of work. He subsumed them under the term 'knowledge work' and, in the following decades, traced its swift rise in the wake of the implementation of digital technology.[63] In contrast to industrial work, which is performed in the material world, digital knowledge work takes place in virtuality. It is characterized by self-determined, creative, explorative, and thus playful interaction with virtual symbols, i.e., software programs and files. As knowledge work grew to be a leading source of economic value generation, especially in the so-called 'creative industries,' changes in cultural behavior emerged. The contradiction between work ethics and play

---

57 The following passage is taken from Freyermuth: *Games | Game Design | Game Studies: An Introduction*, pp. 230-231.

58 Berne, Eric: *Games People Play: The Psychology of Human Relationships*, New York: Grove Press 1964.

59 Abt, Clark C.: *Serious Games*, New York: Viking Press 1970.

60 Foundation, New Games and Andrew Fluegelman: *The New Games Book*, Garden City, N.Y.: Dolphin Books 1976.

61 M. McLuhan: *The Gutenberg Galaxy*, p. 32.

62 Ibid., p. 31.

63 Drucker used the term *knowledge work* first in 1959, the term *knowledge worker* first in 1967. Cf. Drucker, Peter F.: *Landmarks of Tomorrow: A Report on the New 'Post-modern' World*, New Brunswick, N.J.: Transaction Publishers 1996 (*1959); Drucker, Peter F.: *The Effective Executive*, London: Heinemann 1967.

ethics, which industrial rationality presupposed and existed in factories and bureaucracies, started to dissolve at the end of the 20th century to the same extent as the Gutenberg Galaxy.

In his "Manifesto for a Ludic Century," Eric Zimmerman argued in 2013 that there is a structural affinity between the fundamental properties of digital technology and the fundamental properties of analog and digital games: "Games like Chess, Go, and Parcheesi are much like digital computers, machines for creating and storing numerical states."[64] In addition, digital networking promotes the establishment of increasingly complex information systems. For such a digital culture characterized by systems, games are the ideal medium because they are also systematic:

"[G]ames are dynamic systems […] While every poem or every song is certainly a system, games are dynamic systems in a much more literal sense. From Poker to PAC-MAN to WARCRAFT, games are machines of inputs and outputs that are inhabited, manipulated, and explored."[65]

Film and television, the defining media of the 20th century, Zimmerman claims, corresponded to the information and entertainment needs of industrial work and culture in the linearity of their audio visions, which could only be received passively. With digitalization, however, there has been a categorical transformation: "In the last few decades, information has taken a playful turn. […] When information is put at play, game-like experiences replace linear media."[66] Games are evolving into the most important medium of the 21st—ludic—century: "Increasingly, the ways that people spend their leisure time and consume art, design, and entertainment will be games—or experiences very much like games."[67] By now, ludification has permeated all areas of Western civilization, as Joost Raessens et al. have analyzed:

---

64 Zimmerman, Eric: "Manifesto for a Ludic Century," in: *Kotaku*, September 9, 2013; http://kotaku.com/manifesto-the-21st-century-will-be-defined-by-games-1275355204

65 Ibid.

66 Ibid.

67 Ibid.

"In our present experience economy, for example, playfulness not only characterizes leisure time (fun shopping, game shows on television, amusement parks, playful computer, Internet, and smartphone use), but also those domains that used to be serious, such as work (which should above all be fun nowadays), education (serious gaming), politics (ludic campaigning), and even warfare (computer games like war simulators and interfaces). According to Jeremy Rifkin, 'play is becoming as important in the cultural economy as work was in the industrial economy,' Postmodern culture has been described as 'a game without an overall aim, a play without a transcendent destination.' Sociologist Zygmunt Bauman maintains that human identity has even become a playful phenomenon. In ludic culture, he argues, playfulness is no longer restricted to childhood, but has become a lifelong attitude: 'The mark of postmodern adulthood is the willingness to embrace the game whole-heartedly, as children do.'"[68]

In retrospect, it becomes apparent that the decline of the Gutenberg Galaxy has already largely unfolded, as Marshall McLuhan predicted in the early 1960s. Slowly, "typographic man" is turning into a "homo ludens." The analog culture of the book—of linearity, interpretation, and causality—transformed into a digital culture of play—of multilinearity, interaction, and contingency. However, as McLuhan also realized, at the moment of its demise, in the late 20th century, the Gutenberg Galaxy and its book culture were becoming more recognizable than ever:

---

68 Frissen, Valerie et al.: "Homo Ludens 2.0: Play, Media, and Identity," in: Frissen, Valerie et al. (eds.), *Playful Identities*, Amsterdam: Amsterdam University Press 2015, pp. 9-50, here pp. 9-10. The Rifkin quote is taken from Rifkin, Jeremy: *The Age of Access: The New Culture of Hypercapitalism Where All of Life is a Paid-For Experience*, New York: J.P. Tarcher/Putnam 2000, p. 263. The Minnema quote is taken from Minnema, Lourens: "Play and (Post)Modern Culture. An Essay on Changes in the Scientific Interest in the Phenomenon of Play," in: *Cultural Dynamics* 10, 1 (1998), pp. 21-47, here p. 21. The Baumann quote is taken from Bauman, Zygmunt: *Life in Fragments: Essays in Postmodern Morality*, Oxford, Cambridge Mass.: Blackwell 1995, p. 99.—The above quoted passage was already published similarly in Raessens, Joost: "The Ludification of Culture," in: Fuchs, Mathias et al. (eds.), *Rethinking Gamification*, Lüneburg: Meson Press, 2014, pp. 91-114, here p. 95.

"[A]ny new technology gradually creates a new human environment. Environments are not passive wrappings but active processes. […] 'The medium is the message' means, in terms of the electronic age, that a totally new environment has been created. The 'content' of this new environment is the old mechanized environment of the industrial age.[69]

Framing by new media thus confers stronger visibility to older ones. McLuhan's insight may be taken as an explanation both for the findings of poststructuralism *in toto* and for Genette's theory of transtextuality and especially his 'discovery' of paratextuality in the early days of digitalization. As Genette formed his theory in confrontation with the fading analog text culture, the question arises what adaptation it requires to retain validity in the ludic 21st century.

To answer this question, I will now, in the last chapter, outline how the historical development of the modern text, image, and play culture continues into the present and how the relationship between texts and paratexts is reconfigured in the digital transmedium of software.

III THE GAMES THAT MEAN THE WORLD: PLAY!

In comparison to the modern culture between Renaissance and postmodernism, four transformative changes have become apparent since the 1990s. First, digital textuality in both the narrower and broader sense emerged; second, new forms of paratextuality; third, new practices of authorship. At the center of these three developments were aesthetic and technical advances in the production and distribution of digital games and their economic and cultural rise. Fourth, in consequence, entirely new practices of engaging with digital games evolved.

Insofar as digital games can be regarded as texts, a central characteristic of their textuality is the potential for generativity. Games do not present themselves as finished texts for reading or watching. Instead, they open up spaces for potential actions. Janet Murray recognized this potential for generativity already in the late 1990s when she, in her seminal study *Hamlet on the Holodeck*, determined procedurality as the technological basis of digital

---

69 Ibid., pp. 6-7.

games.[70] Since then, game engines have become the most important means—medium—of this procedurality.[71] Their real-time generated, increasingly photorealistic images and cinematically staged 3D action spaces can be 'entered' by players and navigated interactively by choosing between multiple procedural progressions. From a media-historical perspective, today's game engines realize in the medium of software what, under analog conditions, Vannevar Bush longed for when he proposed his theoretical machine Memex in 1945,[72] and what avantgarde authors such as the members of the Oulipo group literarily aspired to in the 1960s: a generative text production for which traditional authorship is no longer essential. Like the Memex or a 'book' such as Queneau's *Cent mille milliards de poèmes (Hundred Thousand Billion Poems)*,[73] digital games generally 'are' not one text. Rather, they hold the potential for the creation of many texts. Only the process of playing generates, through numerous interactions between the procedures set up in the game engine and the players' decisions, one of the game's potential texts—the structured web of ludic and narrative elements that individual players experience.

Moreover, like all software, games are fundamentally transmedial by technological principle, i.e., in games, on the one hand, auditory, visual, and textual elements come together, and on the other hand, games can contain any number of other works and media—virtual books and libraries, films and cinemas, radio or television stations, and, of course, other games.[74] Last but

---

70 Murray, Janet Horowitz: *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, New York: Free Press 1997, p. 181.

71 Of particular importance were and are the Unreal Engine (Epic Games, since 1998), the CryEngine (Crytek, since 2004), and the Unity Engine (Unity, since 2005).

72 V. Bush: "As We May Think."

73 Queneau, Raymond: *Cent mille milliards de poèmes*, Paris: Gallimard, 1961. An English interactive online version can be found here: http://www.bevrowe.info/ Internet/Queneau/Queneau.html

74 This affordance was probably first emphasized by Jesse Schell: "There is nothing that cannot be part of a game. You can put a painting, a radio broadcast, or a movie into a game, but you cannot put a game into these other things. [...] At their technological limit, games will subsume all other media." (Schell, Jesse: *The Art of Game Design: A Book of Lenses*, Amsterdam/Boston: Elsevier/Morgan Kauf-

not least, the aesthetic openness of digital games corresponds to the technological openness that is inherent in all software. In contrast to works of analog culture, books or movies,[75] games are in principle 'unfinished' and can be continuously and arbitrarily expanded and modified through updates, add-ons, and DLCs (downloadable content). Thus, digital textuality is characterized by the fact that it is potentially generative—i.e., texts can be generated by sets of rules—and that, as software, it is in principle transmedial and aesthetically and technologically open in the sense of Umberto Eco's *Open Work*.

Second, the paratexts changed no less radically than the texts themselves. When Genette developed his concept of paratextuality in the 1980s, he could still concentrate his attention on texts in the narrower sense. This focus was justified "by the fact that practically all the paratexts considered will be themselves of a textual, or at least verbal, order: titles, prefaces, interviews, so many utterances, of very differing extent, but which all share the linguistic status of the text."[76] As exceptions, Genette mentioned typography and illustrations. However, with digitalization—the transition from the Gutenberg Galaxy to the Turing Galaxy[77]—the means of production and conditions of distribution for linear as well as multilinear-interactive audiovisual content became democratized on a scale that seemed unimaginable in the 20th century. On the one hand, the continuous decline in price and simplification of use lowered the high barriers to entry that stood in the way of audiovisual production during the industrial age. In particular, the advent of smartphones

---

mann (Kindle Edition) 2008, loc. 1326-29. See also G. Freyermuth: *Games | Game Design | Game Studies*, p. 130.

75 As soon as books or films become digital, they are no less open in terms of technological principle. In artistic practice, however, this new affordance is hardly exploited.

76 G. Genette: *Paratexts*, p. 6.

77 The term was coined in 1993 by Wolfgang Coy in a talk entitled "Die Turing-Galaxis. Computer als Medien" ("The Turing Galaxy. Computers as Media") at the Interface II conference in Hamburg, Germany. Cf. Grassmuck, Volker: "A Hitchhiker's Guide to the Turing Galaxy: On Naming the Age of the Networked Digital Computer," in: *Researchgate* (2007), p. 2; https://www.researchgate.net/publication/26975803_A_Hitchhiker%27s_Guide_to_the_Turing_GalaxyOn_naming_the_age_of_the_networked_digital_computer

with high-resolution cameras in the 2010s meant that audiovisual expression no longer faces higher financial or technical hurdles than written expression. This democratization of production has been matched by the democratization of distribution. In recent years, online platforms such as YouTube, Vimeo, Instagram, TikTok, and Twitch have made everyone who wants to publish audiovisual content—whether pre-recorded or live—independent of the established distribution channels of film and television.

The democratization of audiovisual expression had consequences not only for the texts—films, television programs, and games—but also for the paratexts framing them and reacting to them. The primacy of the textual in the narrower sense gave way to audiovisualization and transmedialization. Not least, this made it possible for the authors of paratexts relating to cinematic or playful audiovisions to quote these works and to even appropriate them in mashups or remixes. Looking back at the dramatic rise of audiovisual paratexts, it seems that the democratization of the production and distribution of both linear and multilinear audiovisuals affected the paratexts even more than the texts themselves.

The formation of new practices of authorship contributed significantly to this qualitative and quantitative increase in paratextuality. The third change in the wake of digitalization originated in the development of digital games. Not unlike theater, film, or television productions, games require more than one author, the combination and integration of very different talents. However, since games are created in the medium of software, the individuals involved no longer have to work together collectively in the traditional way, i.e., organized hierarchically, at the same place, and at the same time. Virtualization and digital networking have enabled a historically new form of authorship: the collaboration of individuals who design, write, produce, modify, and update transmedia projects largely independently of one another and without spatial and temporal constraints. Moreover, in the development of digital games, this distributed authorship is not about creating a text in the narrower or broader sense but about the design of spaces and possibilities for action. Authors thus turn from writing to designing, for example, 'narrative corridors' that players can traverse and experience with a certain range of variation on their way from A to B. Yet, the distribution of creative work is not limited to professionals such as game designers, game artists, or game programmers. Another critical characteristic of distributed authorship is the

inclusion of amateurs and fans, of readers, viewers, players, users—precisely "the people formerly known as the audience."[78]

Fourth, this empowerment of users through virtualization and digital networking initiated new ways of engaging with digital games. Many of them can no longer be entirely subsumed under the terms of playing or gaming. These new practices for interacting with games autonomously include video game photography,[79] machinima—telling one's own stories through videos recorded in games[80]—, glitch hunting, glitch art, and databending—metagaming modes that derive their pleasure and success from discovering, exploiting, or even creating programming errors[81]—, griefing—disrupting the game experience of other players[82]—, and of course modding, the cooperative modification of games that can range from simple interventions to complete redesigns of game worlds or game texts.[83] In all these behaviors in and towards games, the actors are not concerned with experiencing games according to their rules. Instead, they strive for commentary and criticism, analysis in the sense of dissection, and also improvement of the games. Following the example of Genette's "paratext" concept, these alternative ways of

---

78 Rosen, Jay: "The People Formerly Known as the Audience," in: *press think*, June 27, 2006; http://archive.pressthink.org/2006/06/27/ppl_frmr.html

79 Cf. Möring, Sebastian/de Mutiis, Marco: "Camera Ludica: Reflections on Photography in Video Games," in: Fuchs, Michael/Thoss, Jeff (eds.), *Intermedia Games—Games Inter Media: Video Games and Intermediality*, New York: Bloomsbury Academic 2019, pp. 69-94.

80 Cf. Fassone, Riccardo: "Machinimas, Let's Plays, Streams, and the Linearization of Digital Play," in: Fuchs, Michael/Thoss, Jeff (eds.), *Intermedia Games— Games Inter Media: Video Games and Intermediality*, New York: Bloomsbury Academic 2019, pp. 135-152.

81 Cf. Nunes, Mark (ed.): *Error: Glitch, Noise, and Jam in New Media Cultures*, New York: Continuum 2011.

82 Rubin, Victoria L./Camm, Sarah C.: "Deception in Video Games: Examining Varieties of Griefing," in: *Online Information Review* 37 (3) (2012); pp. 369-387.

83 Curtis, Joanna/Oxburgh, Gavin/Briggs, Pam: "Heroes and Hooligans: The Heterogeneity of Video Game Modders," in: *Games and Culture* 0(0) (2021), pp. 1-25.

engaging with digital games seem to be aptly referred to as "paraplay"[84] or "paragaming."[85]

Prime and, at the same time, most recent examples of paraplay in the proposed meaning of the term provide the different media environments for

---

84 The term "paraplay" has existed for some time. For example, in 2006, there was a "ParaPlay" festival in Amsterdam "intended to be a playful awareness raising program about databodies, i.e. your digital identities." (Borra, Erik: "ParaPlay at Paradiso," *Institute of Network Cultures*, November 2, 2006; https://network cultures.org/events/paraplay-at-paradiso/). The term was then introduced academically in 2013, however, limited to denote "playful activities that take place within the context of an interactive game or other play activity, but outside the activity itself." (Downs, John/Vetere, Frank/Howard, Steve: "Paraplay: Exploring Playfulness Around Physical Console Gaming," in: Kotzé, Paula et al. (eds.), *Human-Computer Interaction—INTERACT 2013: 14th IFIP TC 13 International Conference, Cape Town, South Africa, September 2-6, 2013, Proceedings, Part I*, Berlin/Heidelberg: Springer, 2013, pp. 682-699, here p. 682). The paper makes no reference to paratextuality in any way.—Such a connection, however, exists explicitly in Riccardo Fassone's analysis of two variants of paratexts, let's plays and playthroughs, which he calls "para-ludic products": "It might be useful to divide, albeit in an inevitably arbitrary fashion, these para-ludic products in two general categories. On the one hand, there are let's plays, whose characteristics are synchronicity and currentness. […] The second category—that of longplays or playthroughs—is not concerned with currentness, but rather with thoroughness." (R. Fassone: "Machinimas, Let's Plays, Streams, and the Linearization of Digital Play," p. 141.)

85 The term "paragame" was introduced during a 2009 DiGRA panel on bad games. The term was derived from "paracinema" (bad movies) and denoted "Good Fun with Bad Games." (Juul, Jesper: "Paragaming: Good Fun with Bad Games," *The Ludologist*, September 24, 2009; https://www.jesperjuul.net/ludologist/2009/09/24/paragaming-good-fun-with-bad-games/.)—A different usage of the term was proposed in 2012: "the term paragame refers to that which is performed peripheral to, but alongside the orthogame." ("Orthogame" denoting "the 'right and correct game.'" See Carter, Marcus/Gibbs, Martin/Harrop, Mitchell Harrop: "Metagames, Paragames and Orthogames: A New Vocabulary," *Researchgate*, May 2012; https://www.researchgate.net/publication/254005976_Metagames_paragames_and_orthogames_A_new_vocabulary.)

live streaming, the so-called performance play in front of an audience. Amazon's Twitch,[86] YouTube Gaming,[87] and many smaller online platforms invite audiences numbering in the millions not only to the real-time production of commenting and critiquing paratexts. Increasingly, they also enable variants of playful participation, from voting—on the further course of the game, on the design of the game environment or the players' avatars, on their interactions—to betting with virtual currencies to software-driven attempts to grant the community of those watching the stream at least some control over the game itself. The origin of this variant of paraplaying may have been *Twitch Plays Pokémon*:

"On Feb 12, 2014, *Twitch Plays Pokémon* began with a strange but simple premise. The pitch: A Twitch bot would play and complete POKÉMON RED, controlled entirely by viewers who ordered the bot to press certain buttons by typing commands in the live chat."[88]

In the sixteen days it lasted, the experiment attracted 1.1 million fellow players, who tried to influence the game's progress with 122 million chat messages. In addition, the *Twitch Plays Pokémon* stream found nine million passive viewers.[89] Meanwhile, the growing popularity of paraplay or paragam-

---

86　The livestreaming platform Twitch was founded in 2011 as a spin-off of Justin.tv and acquired by Amazon in 2014 for $970 million. At the beginning of 2021, Twitch had an average of around 3 million simultaneous viewers. (Iqbal, Mansoor: "Twitch Revenue and Usage Statistics (2021)," in: *Business of Apps*, March 29, 2021; https://www.businessofapps.com/data/twitch-statistics/)

87　YouTube Gaming was founded in 2015 to counter the success of Twitch. At the beginning of 2021, the service had an average of around 640,000 concurrent viewers. Cf. Clement, J.: "Average Number of Concurrent Viewers on YouTube Gaming Live from 2nd quarter 2018 to 1st quarter 2021," in: *Statista*, May 25, 2021; https://www.statista.com/statistics/761100/average-number-streamers-on-youtube-gaming-live-and-twitch/

88　Frank, Allegra: "Five Years Ago, Twitch Plays Pokémon 'Changed Twitch Forever'," in: *Polygon*, February 12, 2019; https://www.polygon.com/2019/2/12/18221792/twitch-plays-pokemon-anniversary

89　Johnson, Eric: "A Million Gamers Cooperated to Win Twitch Plays Pokémon. Did They Just Invent Something New?," in: *Vox*, March 2, 2014; https://www.vo

ing is beginning to influence the design of digital games themselves. "Game developers have also woken up to this new paradigm [i.e., "spectator-participation"], and now design games with spectatorship and audience participation in mind."[90] Paraplay thus seems poised to become a constitutive component of digital culture.

<div align="center">***</div>

In summation, the concept of paratextuality proves to be an insight that Gérard Genette gained at the end of the 1980s by looking, as it were, with one eye into the analog past of modern book culture and with the other already into the digital future. The review of the fading Gutenberg galaxy I undertook in the first chapter suggested that its book culture emerged essentially as a secularization of book religions and their creation of meaning through narratives: as a mutation of the hypertrophy of sacred scriptures and their divine authors to the hypertrophy of secular texts and their human authors. The challenging and deconstruction of these two central elements of the Gutenberg Galaxy—the self-contained structure of texts and the dominant authorial function—set in during the early 20th century, both in the artistic practice of the avantgardes and in theoretical reflection. From the approaches of formalism to Walter Benjamin's version of critical theory to Umberto Eco's version of semiotics, the deconstruction of the closed work and individual authorship continued until it culminated, since the 1960s, in poststructuralism and its pan-textualism. In this context, Genette recognized that the fixation on closed works by individual authors had led to a disregard for the multiple transtextual relationships that always existed.

However, since the mid-20th century, a radically different digital textuality emerged, largely beyond the perceptual horizon of humanistic studies and artistic experiments. It was envisioned transtextually from the outset and technologically realized as transmedia software from the 1960s onward. The implied use characterized experimental-playful browsing and manipulation

---

x.com/2014/3/2/11624084/a-million-gamers-cooperated-to-win-twitch-plays-po kemon-did-they-just

90 Backmann, Anton: "How the Updated Gaming Stack Affects Game Design: Live Streaming,"in: *Medium*, March 9, 2020; https://medium.com/@backman/how-the-updated-gaming-stack-affects-game-design-live-streaming-dc06261e778b

of text datasets that were open by principle. In the 1980s, when Genette presented his theory of transtextuality, a cultural paradigm shift took shape: from the paradigm of the book and reading to the paradigm of play and thus of looking, surfing, and playing.

This paradigm shift was also significantly fostered by the other constitutive element of the modern Gutenberg Galaxy, which I discussed in the second chapter: the media of visual homogenization. The secularization of religious rituals and games in stage spectacles commenced in the Renaissance with the 'playground' of the illusionary stage separated from the everyday world and decorated in perspective. The industrial media of film and television, as well as the emergence of mass sports, then popularized, to an extent that no culture had known before, the two—according to Huizinga—main variants of play, i.e., performance and contest,[91] or—in Caillois' terminology—mimicry and agon.[92] The development and implementation of digital technology have reinforced since the 1950s this cultural ludification; on the one hand, through the early research focus on games, which eventually gave rise to the new audiovisual medium of digital games; on the other hand, through the inherently playful-experimental quality of virtual trial-and-error actions, as made possible for the first time by digital software and its affordance of 'unlimited undo.' In creative knowledge work, as it evolved in the process of digitalization, this playful, explorative activity advanced to become a central economic factor. The modern social character of the analog book culture, the "typographic man" (McLuhan), shaped by textual linearity, hermeneutical interpretation, and causality thinking, is thus gradually giving way to the "homo ludens" (Huizinga), characterized by transmedial multi-linearity, playful interaction, and contingency thinking.

The first mass impact of digital textuality in the narrower understanding of the term came with the hypertext-heavy WWW of the early 1990s and in the broader sense with games. Both variants are fundamentally transtextual, transmedial, and fluid, i.e., designed for continuous modification. Furthermore, digital textuality possesses the potential for generativity, which makes text production at least partially independent of human authorship in the traditional sense. Paratextuality is also affected by the increasing affordability

---

91 J. Huizinga: *Homo Ludens*, p. 48.

92 Cf. Caillois, Roger: *Man, Play and Games*, Urbana: University of Illinois Press 2001 (*1958).

and simplification of audiovisual production and distribution, which opens audio-visuals to paratextual purposes and forms of expression. The consequences resulting from both changes are drastic: In the production of transmedial artifacts, the practice of distributed authorship emerges—alongside individual authorship and collective authorship. In the case of digital games, the author function is no longer directed at the writing of linear-fixed texts but at the design of possibilities to generate different texts in the process of playing. The qualities of software textuality also allow amateurs such as users or players for the first time to participate in the professional production of digital works, texts or paratexts. This empowerment has ultimately resulted in entirely new ways of engaging with digital games. They are playful but operate beyond the modes of play envisioned in their design. Like the regular playing of digital games, these variants of paraplay or paragaming connect to the fascination and function that storytelling had since the dawn of human culture: organizing individuals into cooperative units, creating images of the world and people, conveying values and meaning in life.

***

The contributions to this volume fall into three categories: paratextualities related to historical topics, ludic performances, and the peripheries of play.

The first section, "Histories," opens with Benjamin Beil's exploration "'And You Didn't Even Look at It!' ASSASSIN'S CREED'S (Self-)DISCOVERY TOUR." Based on the observation of a ludonarrative dissonance between the detailed accuracy of the different historical environments in Ubisoft's series and the quite sameness of the game mechanics, Beil asserts the principle of the DISCOVERY TOUR in the dual process of a transformation from paratext to text and parallel musealization: "the DISCOVERY TOUR comes into its own as a schizophrenic and fascinating paratext."[93]

This paradigmatic analysis of a new type of paratext that is in a unique way almost identical to the respective historical games is followed by two examinations of paratextual elements that provide guidance to the players' actions from either outside or inside of games. In "The Cartography of Virtual Empires: Video Game Maps, Paratexts and Colonialism," Souvik Mukherjee focuses on the persistence of colonial practices of space division

---

93 In this volume, pp. 55-74, here p. 70.

and domination even in games that are not about the colonial past or take decidedly postcolonial perspectives. In analyzing, on the one hand, blanks and gaps in the maps, and on the other hand, the disregard of indigenous knowledge that could fill these gaps, he demonstrates "how map-interfaces may play a crucial part in the game's perpetuation of colonial ideas of power."[94]

In "Unboxing Age of Empires**.** Paratexts and the Experience of Historical Strategy Games," Richard Cole undertakes a close reading of the material paratexts that accompanied the 1997 release of AGE OF EMPIRES—map, manual, technology tree. Examining the function of these—in later editions virtualized—artifacts for the experience of the game itself, he finds: "the paratexts of AGE OF EMPIRES provide a historical experience that combines popular and lesser-known historiography with interactive, behind-the-scenes insight into historical components and the making of game-based historical representations."[95]

The historical part is concluded by René Glas' "Making Mario. Shaping Franchise History Through Paratextual Play." Glas observes how Nintendo, through its partly textual, partly paratextual SUPER MARIO MAKER game creation systems, attempts to rewrite its own history in the interest of streamlining present and future successes: "the SMM games have a dual function of being making-ofs of the old, and a way to present a new direction for the franchise as more user-creation driven."[96]

The second section, "Performances," starts with a thorough examination of emerging forms of play on streaming platforms like Twitch and YouTube Live. In their investigation of streamer types and the new asymmetrical mixture of watching, paratextual activities, and participatory playing, Rüdiger Brandis and Can Mert Bozkurt define the "newly developing affordances of interactivity […] such as straw polls, donation messages, and stream integrated games" as "audience gaming" ("Player Agency in *Audience Gaming*"[97]).

Pioneering paratextual forms of communication and play on streaming platforms and mainly Twitch are also addressed by Nicolle Lamerichs. In

---

94 In this volume, pp. 75-95, here p. 86.

95 In this volume, pp. 97-130, here p. 116.

96 In this volume, pp. 131-161, here p. 157.

97 In this volume, pp. 165-180, here p. 165.

"Material Culture on Twitch. Live-Streaming Cosplay, Gender, and Beauty,"[98] she concentrates on Twitch's tag "cosplay" and demonstrates how "cosplayers comment and build upon narrative and engage in what might be called *embodied paratextuality*."[99] Looking ahead, however, Lamerichs calls for a revision of existing theories of paratextuality: "To capture platform fandom, we need to look beyond individual texts and signs, and consider these texts as a system."[100]

That and how performative play—paratextual Let's Play videos—can contribute to a better understanding of digital games in scholarly research is considered by Katarzyna Marak's study "Benefits of Including Let's Play Recordings in Close Readings of Digital Game Texts. Discussing Multiple Player Competences in Selected Game Texts."[101] Via example analyses, she comes to the understanding that by using Let's Plays, "scholars can not only explore elements of the personal gameplay experience of other players but also learn about relevant cultural and linguistic limitations of the game."[102]

Let's Play videos are also the focus of Miłosz Markocki's contribution. However, his investigation is not concerned with their influence on research but the development of digital games. In two case studies, "Fame or Infamy: The Influence of Let's Plays on Independent Game Developers"[103] tracks whether creative individuals grow artistically as a result of paratextual criticism and encouragement, thereby establishing that "Let's Plays of independent games can be treated as a proper communication channel between players and game developers."[104]

The last contribution of this second section is concerned with the comparatively new paratextual form of the video essay. Starting from the fact that games are of growing interest to cultural critics and that video essays first became popular in film criticism, Rudolf Inderst's analyses of video channels prove the potential of audiovisual paratextuality for both popular and scholarly communication: "Certain systemic and technical processes

---

98 In this volume, pp. 181-211.

99 Ibid,. p. 190.

100 Ibid,. p. 207.

101 In this volume, pp. 213-236.

102 Ibid,. p. 233.

103 In this volume, pp. 237-255.

104 Ibid., p. 241.

which build the foundation of an audio-visual medium such as video games can be described and examined in a more nuanced way by a sui generis show-do-not-tell approach of video essays." ("Here Comes a New Challenger" Will Video Game Essays be the New Champion of Game Criticism?"[105])

The third section, "Peripheries," gathers five contributions to phenomena on the margins of gaming—from packaging to advertising trailers to game-books in the broadest sense. Eminent game scholar Mark J.P. Wolf launches the section with a personal tribute to the elaborate packaging that once distinguished video games and, in the "Golden Age of Video Game Packaging," was a great incentive to collect them: "Packaging attracted you in the store, enticed you into buying something (or at least consider buying it), and exuded an attitude about what game was contained, usually hyping it up and exaggerating the action and excitement [...]" ("The Impending Demise of Video Game Packaging: An Eulogy."[106])

The second contribution interrogates paratexts for their playfulness and thus for their specific relationship to the game texts they promote or on which they comment. In "The Ludic Nature of Paratexts. Playful Material In and Beyond Video Games," Regina Seiwald looks at games within games on the one hand and on the other hand playful marketing elements from trailers to real-world treasure hunts. In doing so, she emphasizes "how crucial a consideration of the concept of playfulness is in paratextual study and […] in Game Studies in general."[107]

Game trailers and their functioning in the macro-network surrounding games are the focus of Ed Vollans' paper "[Para]Textually Here: Paratexts and Presence in Games. How Paratexts Extend the Game's Network."[108] Drawing heavily on his own preliminary work, Vollans studies the relationship between narrative aesthetics and advertising function. In the process, he discovers a "tension between entertaining promotion (that stands in for an entertaining product) and the economic purpose of the promotion—to not be more entertaining than the product […]."[109]

---

105 In this volume, pp. 257-278, here p. 273.

106 In this volume, pp. 281-291, here p. 281.

107 In this volume, pp. 293-317, here pp. 312-313.

108 In this volume, pp. 319-339.

109 Ibid., p. 335.

Literary texts have played an essential role in the media environment of digital games since the 1970s. The last two contributions explore the persistence of this close relationship in contemporary culture. Giovanni Tagliamonte and Yaochong Yang review the popular sub-genre of Isekai novels—their typical elements, their production cycles, their game logic, and protocological character—as well as two game adaptations of this literary phenomenon. They argue that Isekai novels, by adapting elements of Japanese Role-Playing Games (JRPG), are critical paratextualizations of game systems while the adaptations of these novels back into games "end up undermining the essence of their original works—[Isekai novels] are critiques of systems but once adapted into systems they lose their respective critiques." ("Isekai: Tracing Interactive Control in Non-Interactive Media."[110])

Paratextualizing Games is concluded by Hanns Christian Schmidt's "The Paratext, the Palimpsest, and the Pandemic. Finding Meaning in THE DIVISON'S Diegetic Artifacts."[111] The study explores how the game's environmental storytelling expands—through Alex Irvine's tie-in novel *New York Collapse: A Survival Guide to Urban Catastrophe*—from the virtual game space where players can find some of the book's pages into a material object that they can buy in the real word. The paratextual novel, however, is not just a regular book; it's a hybrid of paratext and palimpsest containing puzzling handwritten annotations, a subway ticket, etc.: "*New York Collapse* creates a game of its own, staging many of the narrative functions of the diegetic artifacts of THE DIVISON'S environmental storytelling in a medium-specific way."[112] With this outstanding example of transmedial paratextuality Schmidt proves "the importance of paratexts: How to read a game is not dependent on its text alone but also on the many texts that surround it."[113]

---

110 In this volume, pp. pp. 341-372, here p. 369.

111 In this volume, pp. 373-397.

112 Ibid., p. 390.

113 Ibid., p. 395.

LITERATURE

Abt, Clark C.: *Serious Games,* New York: Viking Press 1970.

Alberti, Leon Battista: *On Painting. Translated with Introduction and Notes by John R. Spencer,* New Haven: Yale University Press 1970 (*1435, *1956); http://www.noteaccess.com/Texts/Alberti/

Backmann, Anton: "How the Updated Gaming Stack Affects Game Design: Live Streaming," in: *Medium*, March 9, 2020; https://medium.com/@backman/how-the-updated-gaming-stack-affects-game-design-live-streaming-dc06261e778b

Barnet, Belinda: "(Re)minding: The Development of Storyspace," in: *Digital Humanities* 6, no. 2 (2012); http://www.digitalhumanities.org/dhq/vol/6/2/000128/000128.html

Barthes, Roland: "The Death of the Author," in: *Aspen Magazine*, Fall-Winter, 1967; http://www.ubu.com/aspen/aspen5and6/threeEssays.html#barthes

Bauman, Zygmunt: *Life in Fragments: Essays in Postmodern Morality,* Oxford, Cambridge Mass.: Blackwell 1995.

Benjamin, Walter: "The Author as Producer," in: Jennings, Michael W./Eiland, Howard/Smith, Gary (eds.), *Selected Writings*, Cambridge, Mass.: Belknap Press 1999, pp. 768-782.

Benjamin, Walter: "Short History of Photography," in: *Artforum*, February, 1977 (*1931); https://www.artforum.com/print/197702/walter-benjamin-s-short-history-of-photography-36010

Benjamin, Walter: "The Work of Art in the Age of Mechanical Reproduction," in: *Illuminations. Essays and Reflections. Edited and With an Introduction by Hannah Arendt. Preface by Leon Wieseltier*, New York: Schocken Books 2007, pp. 217-252.

Berne, Eric: *Games People Play: The Psychology of Human Relationships,* New York: Grove Press 1964.

Borra, Erik. "ParaPlay at Paradiso," *Institute of Network Cultures*, November 2, 2006; https://networkcultures.org/events/paraplay-at-paradiso/

Bush, Vannevar: "As We May Think," in: *The Atlantic Monthly*, July (1945); http://www.theatlantic.com/unbound/flashbks/computer/bushf.htm

Caillois, Roger: *Man, Play and Games,* Urbana: University of Illinois Press 2001 (*1958).

Carter, Marcus, Martin Gibbs, and Mitchell Harrop: "Metagames, Paragames and Orthogames: A New Vocabulary," *Researchgate*, May, 2012; https://www.researchgate.net/publication/254005976_Metagames_para games_and_orthogames_A_new_vocabulary

Clement, J.: "Average Number of Concurrent Viewers on YouTube Gaming Live from 2nd quarter 2018 to 1st quarter 2021," in: *Statista*, May 25, 2021; https://www.statista.com/statistics/761100/average-number-strea mers-on-youtube-gaming-live-and-twitch/

Curtis, Joanna/Oxburgh, Gavin/Briggs, Pam: "Heroes and Hooligans: The Heterogeneity of Video Game Modders," in: *Games and Culture* 0(0) (2021), pp. 1-25.

Donovan, Tristan: *Replay: The History of Video Games,* Lewes, East Sussex: Yellow Ant (Kindle Edition) 2010.

Downs, John/Vetere, Frank/Howard, Steve: "Paraplay: Exploring Playful-ness Around Physical Console Gaming," in: Kotzé, Paula et al. (eds.), *Human-Computer Interaction—INTERACT 2013: 14th IFIP TC 13 International Conference, Cape Town, South Africa, September 2-6, 2013, Proceedings, Part I,* Berlin/Heidelberg: Springer, 2013, pp. 682-699.

Drucker, Peter F.: *The Effective Executive.* London: Heinemann 1967.

Drucker, Peter F.: *Landmarks of Tomorrow: A Report on the New 'Post-modern' World,* New Brunswick, N.J.: Transaction Publishers 1996 (*1959).

Eco, Umberto: *The Open Work.* Cambridge, Mass.: Harvard University Press 1989 (*1962).

Fassone, Riccardo: "Machinimas, Let's Plays, Streams, and the Linearization of Digital Play," in: Fuchs, Michael/Thoss, Jeff (eds.), *Intermedia Games—Games Inter Media: Video Games and Intermediality*, New York: Bloomsbury Academic 2019, pp. 135-152.

Foucault, Michel: "What Is an Author?," in: Faubion, James D. (ed.), *Aesthetics, Method, and Epistemology: Essential works of Foucault, 1954-1984*, New York: New Press 1998 (*1969), pp. 205-222.

Foundation, New Games, and Andrew Fluegelman: *The New Games Book,* Garden City, N.Y.: Dolphin Books 1976.

Frank, Allegra: "Five Years Ago, Twitch Plays Pokémon' Changed Twitch Forever'," in: *Polygon*, February 12, 2019; https://www.polygon.com/2019/2/12/18221792/twitch-plays-pokemon-anniversary

Freyermuth, Gundolf S.: "From Analog to Digital Image Space: Towards a Historical Theory of Immersion," in: Dogramaci, Burcu/Liptay, Fabienne (eds.), *Immersion in the Arts and Media*, Amsterdam: Rodopi 2015, pp. 165-203.

Freyermuth, Gundolf S.: *Games | Game Design | Game Studies: An Introduction,* Bielefeld: transcript 2015.

Freyermuth, Gundolf S.: "Thesen zu einer Theorie der Transmedialität," in: *Intermedialität // Transmedialität. Figurationen 02/07* 2, no. 8 (2007), pp. 104-117.

Freyermuth, Gundolf S.: "Transmedia. Twelve Postulates," in: Clash of Realities (eds.), *Clash of Realities 2015/16: On the Art, Technology and Theory of Digital Games. Proceedings of the 6th and 7th Conference*, Bielefeld: transcript 2016, pp. 97-126.

Freyermuth, Gundolf S.: "Wolfgang Menge: Authentizität und Autorschaft. Fragmente einer bundesdeutschen Medienbiographie," in: Freyermuth, Gundolf S./Gotto, Lisa (eds.), *Der Televisionär: Wolfgang Menges transmediales Werk: Kritische und dokumentarische Perspektiven*, Bielefeld: transcript 2016, pp. 19-214.

Frissen, Valerie et al.: "Homo Ludens 2.0: Play, Media, and Identity," in: Frissen, Valerie et al. (eds.), *Playful Identities*, Amsterdam: Amsterdam University Press 2015, pp. 9-50.

Genette, Gérard: *The Architext: an Introduction,* Berkeley: University of California Press 1992 (*1979).

Genette, Gérard: *Palimpsests: Literature in the Second Degree,* Lincoln: University of Nebraska Press 1997 (*1982).

Genette, Gérard: *Paratexts: Thresholds of Interpretation,* Cambridge; New York, NY: Cambridge University Press 1997 (*1987).

Grassmuck, Volker: "A Hitchhiker's Guide to the Turing Galaxy: On Naming the Age of the Networked Digital Computer," in: *Researchgate* (2007); https://www.researchgate.net/publication/26975803_A_Hitchhi ker%27s_Guide_to_the_Turing_GalaxyOn_naming_the_age_of_the_ne tworked_digital_computer

Harari, Yuval N.: *Homo Deus : A Brief History of Tomorrow,* Kindle ed. New York, NY: Harper 2017.

Harari, Yuval N.: *Sapiens: A Brief History of Humankind.* New York: Harper 2015.

Horkheimer, Max, and Theodor W. Adorno: *Dialectic of Enlightenment: Philosophical Fragments,* Stanford, Calif.: Stanford University Press 2002.

Huizinga, Johan: *Homo Ludens: A Study of the Play Element in Culture.* Boston: Beacon Press (Kindle Edition) 1955 (*1938).

Iqbal, Mansoor: "Twitch Revenue and Usage Statistics (2021)," in: *Business of Apps*, March 29, 2021; https://www.businessofapps.com/data/twitch-statistics/

Johnson, Eric: "A Million Gamers Cooperated to Win Twitch Plays Pokémon. Did They Just Invent Something New?," in: *Vox*, March 2, 2014; https://www.vox.com/2014/3/2/11624084/a-million-gamers-cooperated-to-win-twitch-plays-pokemon-did-they-just

Juul, Jesper. "Paragaming: Good Fun with Bad Games," in: *The Ludologist*, September 24, 2009; https://www.jesperjuul.net/ludologist/2009/09/24/paragaming-good-fun-with-bad-games/

Kant, Emanuel (sic!): "Of the Injustice of Reprinting Books," in: *Essays and Treatises on Moral, Political, and Various Philosophical Subjects*, edited by Emanuel (sic!) Kant, London: William Richardson 1798 (*1785), pp. 225-239.

Lang, Bernhard: "Buchreligion," in: Cancik, Hubert/Gladigow, Burkhard/ Laubscher, Matthias Samuel (eds.), *Handbuch religionswissenschaftlicher Grundbegriffe*, Stuttgart: Kohlhammer 1990, pp. 143-165.

Lasar, Matthew. "30-Plus Years of HyperCard, the Missing Link to the Web," in: *Ars Technica*, May 25, 2019; https://arstechnica.com/gadgets/2019/05/25-years-of-hypercard-the-missing-link-to-the-web/

Lyotard, Jean-François: *The Postmodern Condition: A Report on Knowledge,* Minneapolis: University of Minnesota Press 1984 (*1979).

McLuhan, Marshall: *The Gutenberg Galaxy: The Making of Typographic Man,* Toronto: University of Toronto Press 1962.

McLuhan, Marshall: *Understanding Media: The Extensions of Man,* Berkeley: Gingko Press (Kindle Edition) 2013 (*1964).

Megenberg, Konrad von: *Buch der Natur,* Augsburg: Johann Bämler 1475.

Meyer, Sylke Rene: *The Unintentional Storyteller*, forthcoming, Doctoral Thesis at University of Cologne.

Minnema, Lourens: "Play and (Post)Modern Culture. An Essay on Changes in the Scientific Interest in the Phenomenon of Play," in: *Cultural Dynamics* 10, 1 (1998), pp. 21-47.

Mitchell, W.J.T.: "Critical Inquiry and the Ideology of Pluralism," in: *Critical Inquiry*, Vol. 8, No. 4, Summer 1982, pp. 609-618.

Möring, Sebastian/de Mutiis, Marco: "Camera Ludica: Reflections on Photography in Video Games," in: Fuchs, Michael/Thoss, Jeff (eds.), *Intermedia Games—Games Inter Media : Video Games and Intermediality*, New York: Bloomsbury Academic, 2019, pp. 69-94.

Murray, Janet Horowitz: *Hamlet on the Holodeck: The Future of Narrative in Cyberspace,* New York: Free Press 1997.

Nelson, Theodor H: *Computer Lib / Dream Machines,* Chicago: Nelson: Hugo's Book Service 1974.

Nunes, Mark (ed.): *Error: Glitch, Noise, and Jam in New Media Cultures,* New York: Continuum 2011.

Queneau, Raymond: *Cent mille milliards de poèmes,* Paris: Gallimard 1961.

Raessens, Joost: "The Ludification of Culture," in: Fuchs Mathias et al. (eds.), *Rethinking Gamification*, Lüneburg: Meson Press 2014, pp. 91-114.

Ricoeur, Paul: "Life in the Quest of Narrative," in: Wood, David (ed.): *On Paul Ricoeur: Narrative and Interpretation*, pp. 20-33. London/New York: Routledge 1991.

Ricoeur, Paul: "Narrative Identity," in: Wood, David (ed.), *On Paul Ricoeur: Narrative and Interpretation*, London/New York: Routledge 1991, pp. 188-199.

Rifkin, Jeremy: *The Age of Access: The New Culture of Hypercapitalism Where All of Life is a Paid-For Experience,* New York: J.P. Tarcher/Putnam 2000.

Rosen, Jay: "The People Formerly Known as the Audience," in: *press think*, June 27, 2006; http://archive.pressthink.org/2006/06/27/ppl_frmr.html

Rubin, Victoria L./Camm, Sarah C.: "Deception in Video Games: Examining Varieties of Griefing," in: *Online Information Review* 37 (3) (2012), pp. 369-387.

Saporta, Marc: *Composition no. 1. A novel,* New York: Simon and Schuster 1963.

Schell, Jesse: *The Art of Game Design: A Book of Lenses,* Amsterdam, Boston: Elsevier/Morgan Kaufmann (Kindle Edition) 2008.

Sterling, Bruce: *Zeitgeis,*. New York: Bantam Books 2000.

Stone, Allucquere Rosanne: *The War of Desire and Technology at the Close of the Mechanical Age,* Cambridge, Mass.: MIT Press 1995.

Thorburn, David: "Television as an Aesthetic Medium," in: *Critical Studies in Mass Communication* 4 (1987), pp. 161-173; http://web.mit.edu/thorburn/www/publications/Thorburn_TelevisionAsAestheticMedium.pdf

Von Neumann, John/Morgenstern, Oskar: *Theory of Games and Economic Behavior,* Princeton: Princeton University Press 1944.

Wedeles, Laurie. "Professor Nelson Talk Analyzes 'P.R.I.D.E.'," in: *Miscellany News (Vassar College)*, February 3, 1965; http://faculty.vassar.edu/mijoyce/MiscNews_Feb65.html.

White, Hayden: "Historical Pluralism," in: *Critical Inquiry*, Vol. 12, No. 3, Spring 1986, pp. 480-493.

Zimmerman, Eric: "Manifesto for a Ludic Century," in: *Kotaku*, September 9, 2013; http://kotaku.com/manifesto-the-21st-century-will-be-defined-by-games-1275355204

GAMOGRAPHY

MYST (Brøderbund 1993, O: Cyan)

PAC-MAN (Namco 1980, O: Namco)

POKÉMON RED (Nintendo 1996, O: Game Freak)

SPACEWAR! (Steve Russell 1962)

WARCRAFT: ORCS & HUMANS (Blizzard Entertainment 1994, O: Blizzard Entertainment)