Transmedia Storytelling

Twelve Postulates

GUNDOLF S. FREYERMUTH

> "Only he who perceives the indices and signatures of the archaic in the most modern and recent can be contemporary."
> GIORGIO AGAMBEN[1]

Transmedia storytelling happens in a wide range of cultural production environments: from commercial endeavors that gross billions of dollars to avant-gardist experiments depending on grants and other subsidies. At the popular end of the spectrum are globally distributed story worlds like JAMES BOND,[2] LORD OF THE RINGS,[3] STAR TREK,[4] STAR WARS,[5] HARRY POTTER,[6] RESIDENT EVIL,[7] or ASSAS-

1 Agamben, Giorgio: *"What is an Apparatus?" and Other Essays*, Stanford, Calif.: Stanford University Press 2009.

2 Novels since 1953, TV adaptations since 1954, feature films since 1962, digital games since 1983.

3 Novels since 1954, radio adaptations since 1955, animated films since 1978, digital games since 1982, feature films since 2001.

4 TV series since 1966, board games since 1967, novels since 1968, digital games since 1971, animated TV series since 1973, feature films since 1979, theme park attractions since 1998.

5 Novels since 1976, feature films and comics since 1977, games since 1978/79, theme park attractions since 1987, animated films since 2003.

6 Novels since 1997, feature films and games since 2001.

7 Digital games since 1996, novels and comics since 1997, animated movies since 2000, feature films since 2002.

Transmedia storytelling, and its successful use in popular entertainment in particular, became possible only in the last few decades—obviously as a result of the digitalization of culture, i.e., the implementation of digital media production and digital networking as the technological foundation for global on-demand distribution and consumption. The desire for transmedia experiences, however, as well as—mostly futile—attempts to create them with analog means reach back to the very beginning of modern times. Thus, to understand the importance and specificity of today's digital transmedia, we need to position it in the context of modern media history.[15]

With my first six postulates, I will try to reconstruct the development of transmedia storytelling, from early utopian visions that more anticipated than created transmedia experiences, to the technological and cultural origins of the digital transmedium in the second half of the 20th century, to the shaping of two distinct variants of transmedia storytelling around the turn of the 21st century. Postulates seven through twelve will then deal with the most important procedures and effects of transmedia storytelling as we know it today.

I. THE MODERN DESIRE FOR TRANSMEDIA

The aesthetic concept of a fusion of different media has its historical roots in the experience of its opposite: the separation of media which was the result of mechanization in early modernity. Particularly, the new modern image space created through the implementation of linear perspective was based on the principle of

14 DEFIANCE (USA 2013-2015, P: Scott Stewart); in addition to the series' episodes: website, massively multiplayer online game for consoles and PC, apps for various mobile devices.

15 Different versions of parts of this paper have already been published; in English: Freyermuth, Gundolf S.: *Games | Game Design | Game Studies: An Introduction*, Bielefeld: transcript 2015; Freyermuth, Gundolf S.: "From Analog to Digital Image Space: Towards a Historical Theory of Immersion," in: Burcu Dogramaci/Liptay Fabienne (eds.), *Immersion in the Arts and Media*, Amsterdam: Rodopi 2015, pp. 165-203.; in German: Freyermuth, Gundolf S.: "Der Big Bang digitaler Bildlichkeit: Zwölf Thesen und zwei Fragen," in: Gundolf S Freyermuth/Lisa Gotto (eds.), *Bildwerte: Visualität in der digitalen Medienkultur*, Bielefeld: transcript 2013, pp. 287-333; Freyermuth, Gundolf S.: "Intermedialität Transmedialität," in: *figurationen. gender literatur kultur* 2 (2007), pp. 104-177.

separation: first, the separation of the image from the new textual space that came into existence at the same time through the invention of printing with moveable letters; second, the separation of images from either the environment or reality in the shift from fresco to panel painting and particularly in the new habit of imitating the window view through the use of hardware framing; third, the separation from the audience through means of distancing, through spatial distance as well as physical concealment through the use of curtains, wooden doors, and glass panels. Similar separation characterized modern audiovisuality; the theater with its picture frame stage and analog film with its screen as, for example, Sergej Eisenstein argues in his essay "On Stereocinema."[16]

This first mechanical and later industrial separation of media—or rather, from the perspective of the contemporaries, the separation of the arts based mainly on the different materials used to store, distribute, and receive their content—awoke compensatory longings and desires. Consequently, with the popularization of mechanical media, compensatory desires, visions, and experiments with more immersive media evolved. In the 17th and 18th centuries, endeavors as diverse as the utopian conception of the total work of art, Curiosities Cabinets, trompe l'oeil frescoes, and the Panorama tried to overcome the limitations of representation within the analog image space.[17] At the latest in the 18th century the concept of the 'total work of art' advanced to become an epochal utopian idea striving for a fusion of all the arts that were separated under mechanical conditions—a merger of "architecture, perspective, painting, mechanics, the art of dancing, actio oratoria, moral, history, poetry, and above all music," as Johann Mattheson proposed in 1744.[18] This long-time desire found its first partial realization with Richard Wagner's opera spectacles though still with mostly pre-industrial means, and it found a second and technologically more advanced

16 Eisenstein, Sergei: "On Stereocinema" (*1947), in: Dan Adler/Janine Marchessault/Sanjaz Obradovic (eds.), *3D Cinema and Beyond*, Bristol, UK: Intellect Ltd 2014, pp. 20-59.

17 See Stafford, Barbara Maria/Terpak, Frances/Poggi, Isotta/J. Paul Getty Museum: *Devices of Wonder: From the World in a Box to Images on a Screen*, Los Angeles: Getty Research Institute 2001; Oettermann, Stephan: *The Panorama: History of a Mass Medium*, New York: Zone Books 1997.

18 Johann Mattheson, *Neueste Untersuchung der Singspiele* (1744), cited after: Neumann, Alfred Robert: *The Evolution of the Concept Gesamtkunstwerk in German Romanticism*: Microfilm. Ann Arbor, Mich, University Microfilms, 1951. 1 reel 1951, p. 12.

realization in the first half of the 20th century with the color (and sound) film. However, even this new industrial medium did not offer the level of immersion that the theoreticians of the utopian idea of the 'total work of art' envisioned.

A variety of aesthetic and technological concepts that became popular during the second half of the 20th century bear witness to the persistence of the perceived lack of transmedia experiences: from Andre Bazin's early hope for a "total cinema"[19] to Alan Kays clear-sighted definition of software as a "meta-medium"[20] to Gene Roddenberry's popular vision of an interactive and even tactile "holodeck"[21] to Roy Ascott's avant-gardist demand—alluding to the Wagnerian term "Gesamtkunstwerk"—for a "Gesamtdatenwerk":

"Increasingly, as artists we are impatient with single modes of operation in dataspace. We search for synthesis of image, sound, text. We wish to incorporate human and artificial movements, environmental dynamics, ambient transformations, altogether into a more seamless whole. We search, in short, for the Gesamtdatenwerk."[22]

---

19 Bazin, André/Gray, Hugh: *What Is Cinema?*, Berkeley: University of California Press 1967.

20 Kay, Alan/Goldberg, Adele: "Personal Dynamic Media," in: Noah Wardrip-Fruin/Nick Montfort (eds.), *The New Media Reader*, Cambridge, Mass.: MIT Press 2003, pp. 393-404, http://www.newmediareader.com/book_samples/nmr-26-kay.pdf

21 Introduced in STAR TREK: THE ANIMATED SERIES (USA 1974, O: Gene Roddenberry) and popularized in ENCOUNTER AT FARPOINT (USA 1987, D: Corey Allen), the pilot episode of the science-fiction TV-series STAR TREK: THE NEXT GENERATION (USA 1987-1994, P: Gene Roddenberry). Roddenberry's holodeck was an immersive holographic and interactive entertainment environment, the users of which physically stepped into interactive fiction and influenced their progression by playing. Within a short time, the concept of a holodeck became the model for the digital future of art and entertainment—not only for millions of Star Trek fans but also for academics, scientists, and artists, and especially for filmmakers and game designers. See G. S. Freyermuth: *Games | Game Design | Game Studies*, pp. 102-103.

22 Ascott, Roy: "Gesamtdatenwerk. Connectivity, Transformation and Transcendence (*1989)," in: Timothey Druckey (ed.), *Ars Electronica: Facing the Future*, Boston: MIT Press 1999; online: http://epc.buffalo.edu/584/docs/ascott.html, pp. 86-89, p. 89. See also: "We are a long way from the Gesamtdatenwerk. The computer industry is slow in releasing those technologies which will facilitate a seamless interface ..."

My first postulate, therefore, is: *The desire for transmedia and transmedia storytelling is centuries-old and stems first from the mechanical, and then industrial, separation of media.*

II. TECHNOLOGICAL ORIGIN OF TRANSMEDIA

Despite their differences, both mechanical and industrial media are tied to specific tools and materials. This diversity started to end with digitization.[23] In principle, transmedialization stems from the core innovation of digital technology: the adequate transfer of analog qualities and functions into numerical values, resulting in the separation of hard- and software as conceived for tools/programs by John von Neumann in 1945 and for materials/files by Claude Elwood Shannon in 1948.[24] Until then, the arts had found their aesthetic realization with different apparatuses in incompatible analog media—texts on paper (or celluloid/microfiche), sound on vinyl or magnetic tape, painting on canvas (or celluloid/microfiche), stills and moving photographic images on celluloid or magnetic tape. Now their content could be produced virtually and stored within the universal transmedium of software—at least, in principle. It should take decades to realize the theoretically conceived virtualization technologically.

This successive migration of production and reception into data space had profound consequences. For the first time, virtualization put different media on the same level:

"United within the common software environment, the languages of cinematography, animation, computer animation, special effects, graphic design, and typography have come to form a new metalanguage. A work produced in this new metalanguage can use all

23 The usage of digitalization vs. digitization is contested. In this paper, digitization denotes the technical process of digitizing and digitalization the broader adoption of digital practices in business and in culture in general.

24 See Neumann, John von: "First Draft of a Report on the EDVAC" (1945). http://www.virtualtravelog.net/wp/wp-content/media/2003-08-TheFirstDraft.pdf; Shannon, Claude Elwood: "A Mathematical Theory of Communication," in: *The Bell System Technical Journal* 27 (1948). Online reprinted with corrections from The Bell System Technical Journal http://cm.bell-labs.com/cm/ms/what/shannonday/paper.html

the techniques, or any subset of these techniques, that were previously unique to the different media."[25]

Thus, in the transition to a digital media culture, the principle of separation, which characterized the analog media cultures of the past, was replaced by its opposite, the principle of connection or fusion, i.e., transmediality. The separation of (audio-) visual media from the environment, i.e., hardware framing, gave way to a connection or fusion with the environment, through software framing, resulting in the potential not just to decorate but augment reality. The separation from the audience through distance and physical barriers gave way to an intimate connection or fusion with the user, i.e., hands-on interaction and even physical immersion.

Thus, my second postulate is: *Transmedia is the technological result of digitization. This new affordance of software—the option to merge different media or fuse media with the environment or media with its users—now calls for its aesthetic design.*

III. CULTURAL ORIGIN OF TRANSMEDIA

Every era constructs its own knowledge space, including unique narrative spaces. The civilizational status quo expresses itself, on the one hand, in the correct procedures for the collection, validation, sorting, passing on and teaching of information, and, on the other hand, in the ability to turn this knowledge and the experiences of the era into meaningful narratives. In pre-industrial modern times, both knowledge transfer and storytelling fluctuated between speech and writing, literacy and orality. In the process of industrialization, mass literacy and mass print successively replaced oral and mostly narrative instructions with abstracted textualizations that became more and more impersonal and non-narrative—even in the realm of literature. This process must be understood as an academization of a growing number of social areas that before relied on oral communication, on master-apprentice-relations, personal interaction between teachers and students; those in the know and those who needed or wanted to learn.

At least since the late 19th century— in the second and third phases of industrialization—this process of textualization was countered by numerous efforts to enhance the text-based tradition and transfer of knowledge by employing new

25 Manovich, Lev: *Software Takes Command*, Boston: MIT Press 2012, p. 110.

industrial media. Great educational hopes were attached to photography, telephone and sound recording, movies and microfiche, radio, television and video. In the end, none of these aspirations came true. The reasons were manifold in nature: cultural and social, but primarily technological and economical. The analog procedures of sound and image recording, distribution, and reception were too technically complicated and economically expensive. In the industrial era, the hope for a multimedialization of the storage and transfer of knowledge—i.e., efforts to replace the reading of textual descriptions through audiovisual or even multimedia experiences—remained a pipe dream.

Starting in the middle of the 20th century, the dissatisfaction with the industrial order of things could be seen in a new series of utopian designs aiming at a fundamental reorganization of knowledge and its transfer through innovative techniques and technologies. Two of these designs were especially influential: Vannevar Bush's conception of *Memex*, a hypothetical machine to amend the fixed indexing and static management of the cultural memory,[26] and Ted Nelson's concept of *hypertext*, a novel software linking-technique able to arbitrarily interconnect passages of text and any other media.[27] Nelson's and later Douglas Engelbart's programming efforts to realize the hyperlinking of huge knowledge bases[28] were a continuation of Bush's analog ideas of associative indexing by digital means and thus transmedial avant la lettre.

At the same time, in the 1960s and 1970s, a creeping destruction of the traditional structures and narratives that had organized knowledge in mechanical and industrial culture became evident, or at least their deconstruction, their

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

27 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/MiscNews_Feb65.html. See also Nelson, Theodor H.: *Computer Lib / Dream Machines*, Chicago: Nelson: available from Hugo's Book Service 1974.

28 See Engelbart, D. C.: "Augmenting Human Intellect: A Conceptual Framework" (1962), http://sloan.stanford.edu/mousesite/EngelbartPapers/B5_F18_ConceptFramework Ind.html and http://www.liquidinformation.org/ohs/62_paper_full.pdf. Without yet using the terms hypertext or hypermedia, Engelbart conceptualizes a hypermedia information retrieval system that in the following years should become the famous NLS, or "oN-Line System." See https://en.wikipedia.org/wiki/NLS_(computer_system)

continuous loss of authority and authenticity. Roland Barthes and Michel Foucault pronounced, in 1967 and 1969 respectively, the "death of the author," i.e., of the traditional subject of knowledge and its transfer.[29] Ten years later, Jean-Francois Lyotard proclaimed the end of the "grand narratives" themselves.[30] In the last two decades of the century, however, the progressive digitalization of communication and culture—the virtualization of knowledge discovery and knowledge transfer—created new hopes for a reconstruction of non-written procedures and practices, particularly for overcoming textuality in favor of transmediality and abstraction in favor of new forms of expression, including narration as well as play.

My third postulate, therefore, is that *the cultural concept of transmedia responds to a perceived lack of effective ways to discover and transfer knowledge: It promises to provide better (trans-) medial means for both.*

IV. FROM INTERMEDIALITY TO MULTIMEDIALITY TO TRANSMEDIALITY

Transmediality can be best understood in comparison to what preceded it. In the mechanical age, the separation of media created the need to establish some sort of intermedial relations. Since the Renaissance, two methods resulting in two forms of intermediality came to mediate between the arts: transfer and adaptation. Music, for example, could not be stored directly and was transferred as precisely as possible into the textual medium of notation (and back into the performance of music). In the same way, theater plays were stored in textual form and reenacted again and again. Adaptation, on the other hand, changed the content and form of a work of art in order to recreate it in a different medium. Paintings, for example, were turned into literary narrations or dramatically reenacted; works of literature were set to music, staged, or condensed into painted scenes. The structure of these intermedial relationships can be compared to international

29 Barthes, Roland: "The Death of the Author," in: *Aspen Magazine*, Fall-Winter, 1967, http://www.ubu.com/aspen/aspen5and6/threeEssays.html#barthes; Foucault, Michel: "What Is an Author?," in: James D. Faubion (ed.), *Aesthetics, Method, and Epistemology: Essential works of Foucault, 1954-1984*, New York: New Press, Distributed by W.W. Norton 1998, pp. 205-222.

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

relations between nation states: the existing exchange leaves the sovereignty and independence of each party untouched.

In addition to these intermedia relations of transfer and adaptation, the new media developed with industrial technology since the 19th century offered advanced possibilities to overcome, at least partially, the mechanical separation of media, mainly through integration and montage. Photography could reproduce and thus contain works of paintings or architecture. Film could document stage plays as well as sporting and political events. Television could broadcast movies and televise stage plays or any other local event live nationally, and soon thereafter, internationally. This integration of older mechanical media into the new industrial media and then of the older industrial media into newer industrial media was to a large extent due to methods of semi-automatic storage and montage of media. The broadest cultural impact took place, starting in the 1920s, through the combination of textual and visual discourses in the illustrated press and, starting in the early 1930s, through the montage and synchronization of picture and sound track in sound film and, since the 1950s, in television. The structure of these multimedia relationships can be compared to the relation of nation states in multinational organizations like the UN or NATO: The close cooperation and even interdependence in certain areas do not question the sovereignty or independence of each participating nation.

In contradistinction to these intermedial and multimedial relations, which leave the different analog media more or less intact, the process of virtualization merges them. In software, the material differences between analog media are replaced technologically by a common signal code, and aesthetically, as Lev Manovich states, by a common metalanguage. Thus, digital transmedia can rather be compared to transnational NGOs like Amnesty International or Greenpeace which operate beyond the intellectual horizon and political constraints of nation states. The progressive digital fusion of media occurring during the second half of the 20th century necessarily started to draw attention away from the differences and dissimilarities of individual media and toward their similarities and commonalities. Accordingly, over the last quarter century, the various established academic disciplines concerning themselves with fine arts, literature, music, theater, and film as well as the newer media and game studies came to the realization—bit by bit, so to say—that they were in need of transdisciplinary concepts helping them to overcome their strict and restricting subject boundaries.

My fourth postulate is *that the term transmediality refers to a radically new relationship between different media and their art forms and content: In addition to transfer and adaptation, which were already possible in pre-industrial media, and in addition to integration and montage, which became possible in industrial*

media, the digital transmedium software has the affordance to merge different media technologically as well as aesthetically.

V. MEDIA CONVERGENCE AND COMPLEMENTARITY

For quite some time, digitalization has been forecast to cause profound changes in the interrelations of old as well as new media. Already in 2003, Henry Jenkins observed that we were entering an "era of media convergence."[31] Regarding media technology, we can clearly observe that a convergence in the modes of production as well as in the habits of reception is indeed taking place. "[T]he media-specific distinctions between cinematic, televisual and computer media," Anne Friedberg stated, for example, "have been eroded beyond recognition by the digital technologies that have transformed them."[32] Just as clearly, however, we can see that neither the modes of expression in different media nor their modes of storytelling are assimilating. Technological convergence does not necessarily correspond with aesthetic convergence.

Quite to the contrary, transmedia productions rely on and benefit from the different aesthetic qualities of the media involved. Their storytelling seeks to exploit the specific affordances of, say, movies or games. Though there are obviously aesthetic qualities that both audiovisual media can share—stories and characters, elements of visual design, mise-en-scène, choreography—, the aesthetic experiences they are able to convey are radically different. While linear audiovisions tell of realized actions in fictitious worlds, games open up fictitious, rule-controlled stories and story worlds for potential action. Thus, movies cannot offer playful participation and interaction with their characters and plots, while games cannot deliver the carefully enacted narrative and emotional coherence of cinematic storytelling.

As a consequence, transmedia should not and cannot aim for aesthetic convergence. It must try to preserve the aesthetic autonomy of the different media contained or employed. The strength of transmedia productions lies not in dupli-

---

31 Jenkins, Henry: "Transmedia Storytelling: Moving Characters From Books to Films to Video Games Can Make Them Stronger and More Compelling," *Technology Review*, January 15, 2003, http://www.technologyreview.com/news/401760/transmedia-storytelling/

32 Friedberg, Anne: *The Virtual Window: From Alberti to Microsoft*, Cambridge, Mass.: MIT Press 2006, p. 3.

cation and adaptation, but in supplementation and complementation. Different media add new aspects to any transmedia content, vertically as well as horizontally: extensions and sequels, background and prequels, expansions and excursions, digressions and consolidations, branching lines, enhancements, and even revisionist versions. On the one hand, in transmedia productions, all media works must exist for themselves. On the other hand, they must form a mosaic whole and ensure a unified experience—which, at the same time, must remain open for further additions as well as modification and personalization by users.

My fifth postulate: *Transmedia is characterized by the simultaneity of technological convergence and aesthetic complementarity.*

VI. TRANSMEDIA STORYTELLING

My last historical postulate concerns itself with the specific qualities of transmedia storytelling. In general, narratives respond to a basic human need for interpretation and meaning. That which is conveyed narratively we grasp and memorize more quickly and easily. Storytelling thereby serves the management and transfer of knowledge, norms, and values: how we behave and act. Narrative helps us understand the world by endowing it with rational and emotional meaning. Thereby it appears to follow some basic patterns, at least in Western culture: the custom of beginning, middle, and end;[33] the stages of the hero's journey, which begins with a challenge, forces its hero to make a choice and ends with a resolution of the conflict.[34] This fulfills the central wish that stories have conse-

33 Though not necessarily in that order, as Jean-Luc Godard once remarked.—The origin of this remark is hard to determine. However, the quote is widely attributed to Godard. See for example: N, N.: "Godard only knows... For decades, he was regarded as a genius and a revolutionary, but Jean-Luc Godard—70 years old next week—has spent the last 20 years alienating everyone. Has he finally succeeded in biting off the hand that feeds him?," *The Guardian*, November 25, 2000, https://www.theguardian.com/film/2000/nov/26/features.—In his biography of Primo Levi, Berel Lang quotes the following dialogue: "Interlocutor: But surely, M. Godard, you would agree that every film should have a beginning, a middle and an end. / M. Godard: Yes, of course—but not necessarily in that order." (Lang, Berel: *Primo Levi: The Matter of a Life*, New Haven: Yale University Press 2013; quoted as motto, before content page).

34 See Campbell, Joseph: *The Hero With a Thousand Faces*, 3rd ed, Novato, Calif.: New World Library 2008 (*1949).

quences, that at the story's end the world might be a different place than it was at the story's beginning.

Literary and audiovisual storytelling, however, differ fundamentally in their ability to manipulate space and time. While contemporary imagination alone sets the limits to oral and written storytelling, the theater and its major art form, the drama, were constrained by the curtain as their only means to change time and place. From the perspective of today's audiovisual media this seems to be rather limited, but for those of that time, the unity and sequentiality of the action effectively expressed the pre-industrial way of life—that "all the world's a stage"[35], the rising bourgeoisie's new perception of space and time, its fight for economic, political, and cultural emancipation, its understanding of what it meant to be human, its conception of the world.

In the 20th century, first cinema and later television became defining media. Their fictional artifacts were not played out live anymore, but prerecorded in a Tayloristic manner, edited together, into a final assembly—the so-called final cut—and then distributed either in identical copies by physical transport or immaterially by broadcast. Specifically, the new ways in which movies, television plays and series manipulated space and time expressed the industrial way of life like no other media, the mentality of blue and white collar workers, their conception of what it means—or rather, meant—to be human.[36]

Now digital games and transmedia are assuming that role by enabling users to interactively explore, experience and co-create narratives in a non-linear or at least multi-linear fashion. In games especially the aesthetic effect is two-fold: a virtualization of space and time and a spatialization and temporalization of virtuality. It is in this new virtual space-time continuum that the unique aesthetic experience of multilinear storytelling emerges—through a fusion of the qualities of malleable story worlds and their inherent narrative potential with the many individual choices, reactions, and interactions of its users.

---

35 "All the world's a stage, / And all the men and women merely players: / They have their exits and their entrances; / And one man in his time plays many parts ..." (Shakespeare, William: *As You Like It*, ed. Shakespeare, William, First Folio, 1623, http://shakespeare.mit.edu/asyoulikeit/full.html)

36 Cf. Benjamin, Walter/Jennings, Michael William/Doherty, Brigid/Levin, Thomas Y./Jephcott, E. F. N.: *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*, Cambridge, Mass.: Belknap Press of Harvard University Press 2008.

My sixth postulate, therefore, is: *Transmedia storytelling reflects the experiences of digital culture as genuinely as theater once did for mechanical culture and film and television did for industrial culture. Transmedia now is, as the older media once were, the basis for the social construction of reality and its aesthetic perception.*

VII. INTENSIVE AND EXTENSIVE TRANSMEDIALITY

Over the last quarter century, two variants of transmedia formed in artistic and professional practice. First, there is the design of fictional or non-fictional artifacts that contain many different media and thus—within their interior structure—transcend traditional media boundaries. The most popular form of such artifacts are games and, in particular, Massively Multiplayer Online Role Playing Games (MMORPGS). Already a decade ago, Jesse Schell wrote: "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."[37] Obviously, these digital transmedia artifacts more closely resemble containers like magazines than they do closed works. In fact, they usually remain open for endless modifications by their designers as well as by their users. For this first variant of transmedia artifacts and processes I have proposed the term "intensive transmedia."[38]

Equally popular and important is a second variant of transmedia: the effort to tell the same story, or parts of it, distributed over several media. Henry Jenkins described this in 2007 as "a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story."[39] In the same vein, Drew Davidson characterizes this practice as resulting in "integrated, interactive experiences that occur across multiple media, with

37 Schell, Jesse: *The Art of Game Design: A Book of Lenses*, Amsterdam und Boston: Elsevier/Morgan Kaufmann (Kindle Edition) 2008, loc. 1326-29.

38 See G. S. Freyermuth: *Games | Game Design | Game Studies: An Introduction*, p. 222.

39 Jenkins, Henry: "Transmedia Storytelling 101," *henryjenkins.org*, March 22, 2007, http://henryjenkins.org/2007/03/transmedia_storytelling_101.html

authorial authority (X); third, simulative worldbuilding, i.e., the construction of consistent and navigable domains for spatial and layered narrative experiences (XI).

Which leads, in conclusion, to my twelfth and final postulate: *From these multiple perspectives, (at least) one vanishing point ascends in the distance where the discrete and diverse developments of transmedia converge: the playful multi-layered hyperrealistic simulative worlds of Virtual Reality.*

BIBLIOGRAPHY

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

Agamben, Giorgio: *"What is an Apparatus?" and Other Essays*, Stanford, Calif.: Stanford University Press 2009.

Ascott, Roy: "Gesamtdatenwerk. Connectivity, Transformation and Transcendence (*1989)," in: Timothy Druckrey (ed.), *Ars Electronica: Facing the Future*, Boston: MIT Press 1999; reprint, Online: http://epc.buffalo.edu/584/docs/ascott.html, pp. 86-89.

Barthes, Roland: "The Death of the Author," *Aspen Magazine*, Fall-Winter, 1967, http://www.ubu.com/aspen/aspen5and6/threeEssays.html; Bazin, André/Hugh Gray: *What Is Cinema?*, Berkeley: University of California Press 1967.

Benjamin, Walter, et al.: *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*. Cambridge, Mass.: Belknap Press of Harvard University Press 2008.

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

Bogost, Ian: *Persuasive Games: The Expressive Power of Videogames*, Cambridge, Mass.: MIT Press 2007.

Brinkemper, Peter V.:"Paradoxien der Enträumlichung. Zur Philosophie des 3-D-Films," in: *Glanz und Elend. Literatur und Zeitkritik* (2012). Published electronically without release date: http://www.glanzundelend.de/Artikel-abc/s/starwars.htm

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

Campbell, Joseph: *The Hero With a Thousand Faces*. 3rd ed. Novato, Calif.: New World Library 2008 (*1949).

Chase, Linda: *Hyperrealism*. London: Academy Editions 1975.

Chatfield, Tom: *Fun Inc.: Why Games are the Twenty-First Century's Most Serious Business*. London: Virgin (Kindle Edition) 2010.

———: "Bridging the Gap." *Prospect*, 2011, http://www.prospectmagazine.co.uk/arts-and-books/bridging-the-gap

Davidson, Drew: Cross-Media Communications: An Introduction to the Art of Creating Integrated Media Experiences, 1.0th ed. Pittsburgh, PA: ETC Press (Kindle Edition) 2010.

Drucker, Peter F: *Post-Capitalist Society*, New York NY: HarperBusiness 1993.

Eisenstein, Sergei: "On Stereocinema (*1947)," in: Dan Adler et al. (eds.), *3D Cinema and Beyond*, Bristol, UK: Intellect Ltd 2014, pp. 20-59.

Elsaesser, Thomas: "Die 'Rückkehr' der 3D-Bilder. Zur Logik und Genealogie des Bildes im 21. Jahrhundert," in: Gundolf S. Freyermuth/Lisa Gotto (Ed.), *Bildwerte: Visualität in der digitalen Medienkultur*, Bielefeld: transcript 2013, pp. 25-67.

Engelbart, D. C.: "Augmenting Human Intellect: A Conceptual Framework" (1962); http://sloan.stanford.edu/mousesite/EngelbartPapers/B5_F18_ConceptFrameworkInd.html and http://www.liquidinformation.org/ohs/62_paper_full.pdf

Evans, Elizabeth: "Layering Engagement: The Temporal Dynamics of Transmedia Television," in: *Storyworlds: A Journal of Narrative Studies* (2015), pp. 111-28, http://eprints.nottingham.ac.uk/30924/1/Evans-Layering Engagement (Storyworlds).pdf.

Foucault, Michel: "What Is an Author?," in: James D. Faubion (ed.), *Aesthetics, Method, and Epistemology: Essential Works of Foucault, 1954-1984*, New York: New Press, Distributed by W.W. Norton 1998, p. 205-222.

Freyermuth, Gundolf S.: "Cinema Revisited. Vor und nach dem Kino: Audiovisualität in der Neuzeit," in: Daniela Kloock (ed.), *Zukunft Kino*, Marburg: Schüren 2007, pp. 15-40.

———: "Der Big Bang digitaler Bildlichkeit: Zwölf Thesen und zwei Fragen," in: Gundolf S. Freyermuth/Lisa Gotto (eds.), *Bildwerte: Visualität in der digitalen Medienkultur*, Bielefeld: transcript 2013, pp. 287-333.

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

———: *Games | Game Design | Game Studies: An Introduction*, Bielefeld: transcript 2015.

———: "Intermedialität Transmedialität," in: *figurationen. gender literatur kultur 8* (2007), p. 104-177.

Friedberg, Anne: *The Virtual Window: From Alberti to Microsoft*, Cambridge, Mass.: MIT Press 2006.

Fullerton, Tracy, et al.: *Game Design Workshop: Designing, Prototyping and Playtesting Games*. San Francisco, Calif.: CMP 2004.

Hart, Hugh: "Virtual Sets Move Hollywood Closer to Holodeck." *Wired*, March 27, 2009, http://www.wired.com/underwire/2009/03/filmmakers-use/

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

Jenkins, Hen: "Transmedia Storytelling: Moving Characters From Books to Films to Video Games Can Make Them Stronger and More Compelling." *Technology Review*, 15. Januar, 2003, http://www.technologyreview.com/news/401760/transmedia-storytelling/

———: "Game Design as Narrative Architecture," in: Noah Wardrip-Fruin/ Pat Harrigan (Hg.), *First Person: New Media as Story, Performance, and Game*, Cambridge, Mass.: MIT Press 2004, pp. 119-129.

———: *Fans, Bloggers, and Gamers: Exploring Participatory Culture*. New York: New York University Press 2006.

———: "Transmedia Storytelling 101." *henryjenkins.org*, March 22, 2007, http://henryjenkins.org/2007/03/transmedia_storytelling_101.html

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

Kay, Alan/Adele Goldberg: "Personal Dynamic Media," in: Noah Wardrip-Fruin/Nick Montfort (eds.), *The New Media Reader*, Cambridge, Mass.: MIT Press 2003, pp. 393-404, http://www.newmediareader.com/book_samples/nmr-26-kay.pdf

Kelly, Kevin: "Window on the World (In: N.N., '13 of the Brightest Tech Minds Sound Off on the Rise of the Tablet')," in: *Wired*, August 29, 2010, http://www.wired.com/magazine/2010/03/ff_tablet_essays/all/1

Lang, Berel: *Primo Levi: The Matter of a Life*, New Haven: Yale University Press 2013.

Locke, John: *Two Treatises of Government: in the former, the false principles and foundation of Sir Robert Filmer, and his followers, are detected and overthrown. The latter is an essay concerning the true original, extent, and the end of civil government*, London: A. Churchill 1690.

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

Manovich, Lev: *Software Takes Command*. Boston: MIT Press 2012.

McGonigal, Jane: *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*, New York: Penguin Press (Kindle Edition) 2011.

Murray, Janet H.: "Transcending Transmedia Part 2." *inventingthemedium.com*, November 20, 2011, https://inventingthemedium.com/2011/11/20/transcending-transmedia-part-2/

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

N. N.: "Godard only knows... For decades, he was regarded as a genius and a revolutionary, but Jean-Luc Godard, 70 years old next week, has spent the last 20 years alienating everyone. Has he finally succeeded in biting off the hand that feeds him?" *The Guardian*, November 25, 2000, https://www.theguardian.com/film/2000/nov/26/features

N. N.: "PGA Board of Directors Approves Addition of Transmedia Producer to Guild's Producers Code of Credits." *producersguild.org*, April 6, 2010, http://www.producersguild.org/news/39637/PGA-Board-of-Directors-Approves-Addition-of-Transmedia-Producer-to-Guilds-Producers-Code-of-Credits.htm

Nelson, Theodor H.: *Computer Lib / Dream Machines*, Chicago: Nelson 1974.

Neumann, Alfred Robert: *The Evolution of the Concept Gesamtkunstwerk in German Romanticism*. Microfilm. Ann Arbor, Mich., University Microfilms, 1951. 1 reel 1951.

Neumann, John von: "First Draft of a Report on the EDVAC." (1945). http://www.virtualtravelog.net/wp/wp-content/media/2003-08-TheFirstDraft.pdf

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

Oettermann, Stephan: *The Panorama: History of a Mass Medium*, New York: Zone Books 1997.

Reich, Robert B: *The Work of Nations: Preparing Ourselves for 21st-century Capitalism*, New York: A.A. Knopf 1991.

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

Salen, Katie/Eric Zimmerman: *Rules of Play: Game Design Fundamentals*. Cambridge, Mass.: MIT Press (Kindle Edition) 2003.

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

Shakespeare, William: *As You Like It*. First Folio. Edited by William Shakespeare 1623. http://shakespeare.mit.edu/asyoulikeit/full.html

Shannon, Claude Elwood: "A Mathematical Theory of Communication," in: *The Bell System Technical Journal* 27 (1948), pp. 379-423, pp. 623-656. Online

reprinted with corrections from The Bell System Technical Journal. http://cm.bell-labs.com/cm/ms/what/shannonday/paper.html

Stafford, Barbara Maria, et al.: *Devices of Wonder: From the World in a Box to Images on a Screen*. Los Angeles: Getty Research Institute 2001.

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

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

Zichermann, Gabe/Christopher Cunningham: *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*, Sebastopol, Calif.: O'Reilly Media 2011.

FILMOGRAPHY

DEFIANCE (USA 2013-2015, P: Scott Stewart)
ENCOUNTER AT FARPOINT (USA 1987, D: Corey Allen)
HEAD TRAUMA (USA 2006, D: Lance Weiler)
HIGHRISE (CA since 2009, D: Katerina Cizek)
IRON SKY (FIN et al 2012, D: Timo Vuorensola)
LOST (USA 2004-2010, O: J.J. Abrams) (USA 1974, O: Gene Roddenberry)
STAR TREK: THE NEXT GENERATION (USA 1987-1994, P: Gene Roddenberry)
THE TRUTH ABOUT MARIKA (SV 2007, P: SVT)

LUDOGRAPHY

ASSASSIN'S CREED (Ubisoft since 2008, O: Ubisoft Montreal)
DEFIANCE (Trion Worlds / Human Head Studios 2013, O: Trion Worlds)
RESIDENT EVIL (Capcom since 1996, O: Capcom)
SPACEWAR! (1961, O: Steve Russell)