

The aim of the monograph is to present application and practical development of the concept of remediation. Two decades after its original proposal by J.D Bolter and R. Grusin remediation remains one of the major tools of understanding new media. Authors of this book examine its subject from the perspective of Central and Eastern Europe. Examples are drawn from artistic and literary practices in Croatia, Czech Republic, Poland, Russia, Slovakia and Slovenia. Theoretical frameworks solidify and extend the concept of remediation to new phenomena and areas of critical discourse, from biomedicine and genetic transcoding to the remediation of textual media in Catholic Liturgy. As a result the notion of medium, the nature of mediation and the essence of storytelling are redefined.

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Editors **Bogumiła Suwara, Mariusz Pisarski**
Remediation: Crossing Discursive Boundaries



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Central European Perspective

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Remediation: Introducing voices and discourses from Central Europe

In the 1990s hopes appeared that the Internet will provide a completely new form of existence for Russian literature, that books will look like this: you click a link, a new webpage opens, you write a chapter and submit it. Everybody will rejoice as well as write their contribution. I did it. It was interesting for me to see what was going to come out of it. Nothing came out of it.

Roman Leibov

The concept of remediation coined by Jay David Bolter and Richard Grusin almost two decades ago seems to endure the test of time fairly well as it keeps reverberating on many levels of contemporary critical thought and artistic practice. Two theses, in particular, remain highly attractive: new media do not replace old media – as Bolter and Grusin proved – but draw from them in evolutionary process where certain elements are being transformed but other remain stable or are transformed later in a constant exchange of poetic and narrative strategies between the mediations of old and new. The second thesis highlights a double logic that governs the process of remediation. On one hand it is immediation, a tendency towards an unmediated communication, which obscures its media dependent status and technical aspects in order to achieve the transparency of immediate experience of the represented reality. On the other hand it is hypermediation – a tendency towards hybrid, auto reflective mediality of the representation in order to make it somehow closer to the represented phenomena by multiplication of forms and interfaces it is reflected in.

What this book aims to achieve is to examine the notion of remediation and concepts associated with it from the perspective of Central and Eastern Europe with broad and varied examples drawn from literary and artistic practices of last decades: from Slovenia and Czech Republic to Russia, from video art, happening and (analog) art installation to hypertext, cyberpoetry and works made for gesture and body sensitive platforms like Kinect or mobile phones.

The voices comprised in this monograph come from parts of the world which – understandably – were not even mentioned in the original works on remediation. At the time when the first edition of *The Writing Space* (Bolter, 1990) was published, followed by *Remediation* (Bolter, Grusin, 2000) Central Europe was undergoing historical transformations, and the benefits of technological changes that were apparent in the U.S and the West were not clearly visible. Yet the emergence of new media and the Internet did accelerate changes in the region, first and foremost in the field of artistic production and distribution. It was the Internet that made Russian avant-garde artists turn into net artists and connect with the global network of new media art to play a prominent role in it. The technological changes allowed also for rediscovery of local traditions and art movements marginalized or even banned by communist regimes, like Russian Silver Age, Czech avant-garde from before World War II, Croatian *Quorum* generation from nineteen eighties etc. – new writing spaces were a natural ally to those marginalized movements and today their ideas and techniques could be remediated in new digital platforms and cultural contexts. In countries where censorship institutions were not able to totally control the *samizdat* literature and alternative distribution, Internet allowed for altogether different kind of alliances that brought together artists of digital age with representatives of avant-garde and neo-avant garde movements of the 1960s and 1970s, marginalized – in this case – by anti-communist and politically oriented players in the dominant cultural field (Poland).

Similarly to Bolter and Grusin, who supported their pioneering findings by plethora of examples – from medieval cathedrals through Baroque architecture to instances of VR technologies for storytelling – authors of this volume apply concepts of remediation to processes taking place beyond the most often discussed transition from print to digital and frameworks of analogue and digital media. The medium in question is sometimes understood as technologically indeterminate: sound, movement, body, and space. The remediation, in this context, is not always synchronic, evolving from old to new (Husárová, Flašar, Lacko); at times, it is diachronic, formal, and intersemiotic (Piorecká, Marecki, Sabolová-Princic), and at other times remediation processes take place beyond new media altogether and relate to biomedica: hybrids of living organisms and machines, DNA and computer code, which launches the theory of remediation into a totally new field (Sýkora, Tomašovičová) or traces seminal accelerations of remediation processes during the last decade: the decade of selfie, Guitar Hero, increasingly successful implementations of Virtual Reality (VR) for mass audience, and Big Data (Rankov). The varied perspectives are fur-

ther emphasized by several different theoretical frameworks that remediation can be examined: from structuralism (Szczęsna, Pawlicka, Pisarski) to postmodernism, from deconstruction (Strehovec) to post-colonialism in its post-soviet rendition (Kostincová) and a whole spectrum of disciplines that serve as their context, that is, from literary theory and film studies to philosophy and bio ethics.

The volume is divided into three parts: Contexts, Histories, and Poetics. It starts with a sobering look at evolution of technology and its impact on society, cultural heritage, and human condition as presented by Pavel Rankov. His reflection on dematerialization of cultural and technological tools – and “massification” of technology in the process – introduces an ethical perspective remediation in a world where the real and the virtual merge into a single convergent environment, where simulacra overflows reality in a “remediation of everything” with the self in the middle, creating its mirror image via Big Data with enormous mass of information about itself but with perhaps not so much knowledge, and even less wisdom.

Further in the first part Janez Strehovec situates new literary forms of e-literature and the process of remediations that they employ in a broader horizon of film history and theory. It is a text put in motion and interfaces of interaction that engage user’s body, which Slovenian scholar scrutinizes in order to devise a phenomenology of perception founded on Bolter’s theory of immediacy and hypermediacy.

By examining developments in the user interface construction and function of the reader, Strehovec prepares a future-proof theoretical framework, where *mimesis* is replaced by *poiesis*, representation of the world by construction of virtual worlds with user and its need for multi-sensory motor stimuli at its center. This “post-remediation” model, which focuses on movement, feelings and affection, body, and biopolitics, is even more apparent in ever evolving interfaces of recent years, including newest instances of VR and voice recognition interfaces for conversational bots.

Taking, as a starting point, the two concepts of bio media, as convergence (Hyesook Jeon) and as transcoding (Eugene Thacker), Peter Sýkora moves the reflection on remediation in the direction where computer and genetic codes intersect, and the DNA is treated as a programmable digital code. Remediation and transcoding that take place through the manipulation of DNA can result in fascinating and mind-boggling experiments in bioart (*GENESIS* by Eduardo Kac) where biomedias cease to be passive “wet media” and “become autonomous agents in some kind of reverse remediation – from biomedias to old media”, and where the remediated works can take a form of a living poem that in turn can be transcoded into a 3D

sculpture (*Xenotext* by Christian Bök). The author concludes that the state-of-the-art technology of DNA sequencing and synthesis takes us closer to a future where DNA is the most important medium, as equally important will be this medium's remediations.

Treating digital technologies as Foucauldian heterotopias, which secretly undermine the "syntax" of language and the ways words and things are "held together" (Foucault 2002, xix), Jana Tomašovičová analyses the disruption that a database paradigm inflicts on science and culture. It changes pre-fixed forms of order and preference: images, sounds, and words are loosened from their original indexicality and are converted into numerical code, which enables the modification and combination of the obtained data. Database thus represents a new type of space which subverts the standard organization of signs. As such the database paradigm can be treated as a sort of meta-remediation, a breeding ground of all subsequent transformations where one medium is reshaped and extended by another, while the borders of all involved media are gradually wiped out. The associated transcoding processes that take place within digital heterotopias result in new representations of scientific objects unattainable before the digital disruption. Tomašovičová presents telling examples from the field of bio-medicine, where the algorithmically enhanced art of mapping of the human body reveals visual representations so novel and unseen that the molecular system of the human body can be considered itself a unique form of heterotopia, ready to transform other areas of science and culture.

Apart from delivering a framework for understanding general rules of perpetual transformations at the crossing of culture and technology, Bolter's remediation was also tasked with projecting a change in academic discourse and knowledge sharing. The projected underlying structure of alternative, digitally enhanced academic argumentation was a multi-modal hypertext, represented in the 1990s as by media rich CD-ROM. Looking at the current developments in progressive scholarly publications one could conclude that the future as seen by Bolter and Grusin surpassed most expectations. Cutting edge academic publications draw their arguments and conclusions from vast big data resources and present them in a much more procedural, generative and scalable way informative for skilled professionals as much as appealing to a larger audience (thanks to their visual attractiveness big data exhibitions are often shown in popular gallery spaces). Yet the distribution of skill, practices, and availability of digital infrastructure that could accommodate the novel ways of knowledge sharing is spread unevenly. Bogumiła Suwara demonstrates that scholars in Central and Eastern Europe display a much more conservative approach

towards the new “interfaces of science”. Although visuality as an aspect of structuring and designing information is an increasingly important aspect of academic production, the institutional environment in Slovakia, Czech Republic, or Poland steers scholars towards more “analog” expressions. A survey among researchers carried out by Suwara invites for some sober conclusions: a natural “zealous curiosity” of an academic research is toned down by formality and rigidity of peer review obsessed academic guidelines which do not encourage experimenting with academic video or procedural “infovis” (L. Manovich). Paired with the concluded failure of academic hypertext essay, and the lack of digital infrastructure, which would encourage big data research and text mining, scholarly Central and Eastern Europe may at times seem to reside in a perpetual pre-remediated state where born-digital publications are few and far between and a classical pen on paper research is still the main platform of valuation.

Agnieszka Jelewska and Michał Krawczak reflect on the impact of video and video art from the 1960s, when the format was remediating the reality of TV and film production and initiating a democratization of the medium, till the 1990s and further, when video itself got remediated into digital media platforms of YouTube and its clones. Video, they argue, started a revolution that emancipated digital devices after which they themselves became a part of a digital world in which we live in. From then on remediations happen not only within the media, but – as Jelewska and Krawczak suggest – on a deeper, interconnected levels of digital reality. If one cannot talk about mediations without remediations, then every mediation is always already remediating the mediated world.

The concept of remediation might have had its big initial impact in theorizing the future and delivering a key for understanding the plethora of cultural changes accelerated by digital technology, with its promises of ultimate immediation in form of VR, but its lasting impact is more universal thanks to foregrounding processes that are taking place for centuries. The double logic of hypermediation and immediation is one of the constant forces shaping the flow of cultural paradigms and art movements.

The articles from the first part of the book propose insights that can be applied in various ways by media theory everywhere in the world, regardless of geographical or cultural dependencies. A different but equally crucial contribution is made by the authors of the second part, in which remediation is reflected through a local, historical prism of art and literary movements from Central and Eastern Europe, specifically Russia, Czech Republic, Slovakia, and Hungary. Jana Kostincová, Karel Piorecký, Kateřina Piorecká, and Katarina Peović Vuković are making use of reme-

diation as a tool for re-examining and re-evaluating the literary and artistic tradition of the respective countries. Theoretical potential of remediation in this case is directed not towards the future but towards the past. Poetics of Russian avant-garde movements pre-dating the 1917 revolution and its rediscovery by Internet artists of the 1990s; popular serialized novels published in Czech newspapers before the Second World War and their pioneering, proto-hypertextual and collaborative potential; collaborative and intermedial “picture poems” created by artists from the avant-garde Devětsil group; old opposition of high and low art as reflected by tendencies towards immediation or hypermediation in Croatian literature from 1960 to 1990 – all of these are analyzed in the following chapter. What’s interesting is the journey to the past with remediation as a comparative tool prompts our authors to distance themselves from some of the claims made by proponents of new digital-born literary forms. Peović Vuković finds some ideological dependencies in the very definition of electronic literature (N. Katherine Hayles), which explicitly mentions utilization of new media as its goal and implicitly suggests that e-literature might be “better” than traditional literature just by the virtue of employing the computer code. In a similarly distancing manner, Zoltán Szűts reflects on under representation of e-literature in contemporary critical discourse and tries to find reasons for a perceived failure of hypertext as a storytelling device.

The impact of new digital formats on established “media” environment is discussed from a unique and unusual point of view (at least to English, French, or German speaking countries) by Andrzej Adamski who reflects on prospects of remediation of liturgical books within Catholic Church. The Bible has been adapted to plethora of new writing spaces since the very beginning of computer use in education and elsewhere: from diskettes and CD-ROMs of the eighties and the nighties to today’s smartphones or Twitter. Wherever there is a new way of delivering the scripture, the Church, as a general rule, welcomes it. But this is mostly the case with private or educational use. When it comes to liturgy, so central in Catholic Church, where in a series of established ritualistic steps during a Church service the elements of faith and theological dogma are combined with a shared sensory experience – any remediation seems completely out of place and chances are really thin that Church authorities would ever allow for it. Adamski gives a striking example: one moment during the Catholic eucharistic celebration when the priest or deacon rises a book with excerpts from New Testament and kisses it before reading aloud. Due to the historical, linguistical, and symbolical connotations between the artifactual aspects of the book format and the word of God, it is virtually impossible (at least

at this stage) to replace the elaborate liturgical printed version of the New Testament with a mass produced tablet or smartphone, even if the same content might be accessed in a perhaps more convenient way. The priest cannot kiss the tablet!

While new perspectives on remediation and its historical applications are the main focus of previous chapters of our monographs, a more hands-on and practical approaches are presented in the third part – “Poetics”. It begins with an outline of semantic and semiotic transformations crucial to interpretation and comparative studies of “born-digital” works of art and literature. Ewa Szcześna, Piotr Kubiński, and Mariusz Pisarski introduce three categories for describing processes of transitioning from page to screen: atomization, kinetization, and modulation. All of them greatly influence the ontology of text starting from the smallest units of meaning, both in the text and within its paratextual navigational frame. The processes in question are exemplified on Polish e-poetry and categorized further into secondary analytical entities applied to computer games. This way a semantically oriented bridge is built between Lev Manovich’s enumeration of major characteristics of the language of new media and Bolter and Grusin’s theory of remediation.

Some fascinating examples of new forms of remediations, in which digital and analogue spheres are bound by multidirectional connections, far from the obvious, historically imposed order. Piotr Marecki examines how the concept of space and spatial reading of a chose-your-own-path model of works can be refashioned and greatly amplified in his sticker biography *Stobierskiade*: a geo-locational, distributive type of writing with elements of augmented reality but incorporated back from digital to analogue domain. *Stobierskiade* (2013) takes Bolter’s idea of writing space and notion of collaborative writing back from computer screens to urban and natural landscape, where the work is distributed in form of stickers with textual and visual segments of its narrative and QR links to additional content online. Recontextualising Dadaist experiments in distribution of artistic content and Situationist psychogeographic strategies of inscribing artistic message into urban landscape, Marecki’s project sets stage for an inter-medial play between different semiotic orders, physical and virtual space, analogue, and digital media.

Similar approach is taken by Martin Flašar, who analyzes complex transcoding relations represented by Le Corbusier’s seminal *Poème électronique* (1952) in the later day being itself remediated in contemporary digital environments (Second Life) and within their affordances. Once again it becomes obvious that remediation processes do not follow

some one directional flow from old media to new media, but quite often go across or back, making a digital artifact not necessarily better version of the analog, or new media a better representation of old. New and digital can sometimes deliver only a faint, distant copy of its old original.

In the last part of the book, remediation is met by adaptation and appropriation. Dagmar Sabolová-Princic presents theoretical and practical conclusions from an intersemiotic translation of Umberto Eco's *Baudolino* (2000) into a spoken word and audio production of a radio drama co-directed by her and performed by the Slovak Radio Symphony Orchestra and the Slovak Philharmonic Choir. The main challenge has been to preserve the possible world structure of Eco's narrative in a much more linear and time-based medium. Sabolová-Princic gives examples of what could and what could not be rendered in a different semiotic order and concludes that remediation is in fact an umbrella term for recoding as a practice essential to the genre of radio adaptation.

Zuzana Husárová and Lubomír Panák have had a more comfortable starting point with their innovative adaptation of Baroque pattern poem *Omnia Gaude* by the Slovak author Matej Gažúr (1649), even to an extent that this comfort and creative freedom were made the project's artistic *credo*, which invited them to move "beyond" remediation (from printed page to touch interfaces) into a new territory of creative anthropophagy and cultural cannibalism – terms borrowed from Brazilian concrete poetry manifestos and denoting a creative use or subversion of the technology for the user's own needs and goals. In a fascinating return with a difference Husárová and Panák recreate the self-publishing act of Matej Gažúr from 450 years ago and publish their two mobile apps on Google Play for Android platform.

Once again electronic literature is seen in search of its affiliates in a long tradition of experimentation with materiality of the medium and – as proved by many – Baroque concrete poetry turns out to be its natural ally. Regardless of how we will call it, and remediation is but one of the processes involved, the end result is a playful, digital artifact that users interact with in a highly open, customizable, and intimate way on their private writing spaces in the form of a mobile phone or tablet – a pattern that digital humanities will need to follow in the years to come if the link between the past and the future is to be preserved.

Although remediation, according to its most simple definition, is a representation of one medium within another, authors of this book demonstrate time and again how flexible this notion can be and how it can provide viable tools to examine numerous phenomena across various se-

miotic orders and plethora of genres. Much of it depends on how medium or representation is understood. Ivan Lacko, while examining intermedial and intratextual referencing mechanisms in David Lynch's cinema and TV productions, points to telephone, tape recorder, paintings, typography, and electricity – representations of other media in Lynch's films, which function as seminal narrative and symbolic devices. At the same time, however, Lacko invites us to regard both a single work, in this case *Twin Peaks: Return*, and character creations across several works (for example Agent Cooper) as media and thus as objects of authorial remediations. The whole Lynchian world can be seen as a copy and a remediation of its older self that is engaged in an infinite "Möbius strip" of motifs and events – all of which allows the audience to experience chaos, confusion, bewilderment, and eventually perhaps even a sort of unconscious catharsis.

The voices from Central and Eastern Europe comprised in this monograph expand the notion of remediation in several directions, bringing new points of view and new examples. In several cases authors explicitly want to go beyond the remediation, both in its subject and object, which is accommodated by the ever evolving definition of medium or media as such. Nevertheless, we hope that the core understanding of the very concept of remediation and the double logic of immediation and hypermediation remains constant throughout the book.

Bogumiła Suwara, Mariusz Pisarski

I. CONTEXTS

1. Dematerialization and Datafication: Toward a Remediation of Everything

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Abstract: Transfer of content from one medium to another medium is a typical trait of human culture. Remediation acts as the perpetuum mobile which allows dissemination of contents in time. At present a digital computer is a universal post-medium for all previous media because it absorbs and manipulates all contents. But the digital computer is also the universal pre-medium containing the binary coded content ready for future remediation. Digital remediation has given rise to mass dematerialization of information and content. This trend concerns all social processes and systems. Currently the premise „all mediations are remediations“ (Bolter – Grusin 1996, Grusin 2004) implies that human beings, institutions and societies are progressively remediated into digital representations. Datafication (big data) is a process of remediation of reality resulting in the emergence of a complete digital twin of reality. Like an image in a mirror this twin responds to every change at the speed of light. Big data shows how things work and how things are linked together; but the big data does not explain why. The data does not remediate into knowledge and human wisdom.

Introduction

In his well-known short story *Tlön, Uqbar, Orbis Tertius*, the famous writer Jorge Luis Borges warns against the obscenity of multiplying reality by creating images thereof: “Then Bioy Casares recalled that one of the heresiarchs of Uqbar had declared that mirrors and copulation are abominable, because they increase the number of men” (Borges 3). The story’s narrator, maybe identical (and maybe not) with Borges the writer, asks Bioy Casares where he came across the idea. And Bioy Casares, maybe identical (and maybe not) with Adolfo Bioy Casares the writer, “answered that it was reproduced in *The Anglo-American Cyclopaedia*, in its article on Uqbar. The house (which we had rented furnished) had a set of this work. On the last pages of Volume XLVI we found an article on Upsala; on the first pages of Volume XLVII, one on Ural-Altai Languages, but not a word about Uqbar” (Ibid.). And so it is unclear whether the iconoclastic idea was first uttered by the Uqbar heresiarch and was only then remediated by Bioy Casares in his interview with Borges, who later remediated it into his short story. Nonetheless, it is an indisputable fact that we now live in a time when, owing to media mirrors and infinite remediations thereof, humanity is producing considerably more images, pictures, signs, and pieces of information than ever before.

Media Development and the Continuity of Culture

Every electronic, audio, visual, print, and written medium has its predecessors and is connected with them through the use of the same technical means, sign systems, storage of identical content, and performing analogue communication functions. A medium rises from its predecessors, who have their predecessors, and that is why the trace is lost somewhere in the tradition of oral cultures. But the words used in a language can also be reminders of older, pre-verbal auditory signals and gestures, as the onomatopoeic forms of some words would suggest: “[a]ll words, in every language, are metaphors” (McLuhan 120).

Half a century ago, Marshall McLuhan introduced the seemingly obvious thesis “that the content of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph” (McLuhan 1994: 8). If the content of a medium is always the previous medium, then culture always uses the dynamics of remediation to move smoothly through time. The transfer of ideas and works from old to new media allows for a continuity of culture even despite some discontinuity of the used communication technology.

A hundred years ago, Walter Benjamin noticed that “the medium through which works of art continue to influence later ages is always different from the one in which they affect their own age” (Benjamin 235). Moving images from one medium to another is typical for human culture; it is a prerequisite for the preservation of the best ideas from the past in the collective memory of humanity or a nation, even despite the fact that the content always changes during the transition. Anyhow, the content is changed in every transformation of the communication context as well as in every new situation when it is perceived. Charlie Chaplin’s old slapstick comedies left the movie theater full of people and entered TV sets in living rooms; from there it moved to the screen of a laptop or tablet. The changed communication situation makes the viewers perceive, react, and experience the product differently. In the cinema, the collective audience laughs out loud, while the viewers sitting in front of a television in a family atmosphere, make loud comments, and they are distracted by other activities. When watching the same film on a laptop (and alone), the viewers might not laugh but they make comments on the comedy on social networks or search for information about Chaplin and other artists online while they are watching the movie. Remediation brought the work of art to a new situation and new environment, thus changing its meaning.

Cultural content needs a medium to be manifested, but – fortunately for us and our culture – it is also transferrable, which makes it a relatively media-independent structure. Even though remediation is only a reconstruction of content, it does not at all detract from its cultural meaning. Using remediations of Anne Frank’s Diary, David Wertheim posits that remediation can also be construed as a moral duty. Recollections or traces in the collective cultural memory live on only thanks to remediation. Remediation may even become the only information about an event or person that should be present in the collective memory (Wertheim 167 and the following). In this respect, remediation is a *perpetuum mobile*, which transports a cultural set from the past to the future, thus creating communities in time.

From what has been presented in this chapter so far, it clearly transpires that the processes of remediation determine not only what portion of past works, content, and values will exist in the future, but also what will go extinct. “If stories about the past are no longer performed in talking, reading, viewing, or commemorative ritual, they ultimately die out in cultural terms, becoming obsolete” (Erll, Rigney 2). This mechanism of selecting and casting away media content, which appears less important or even unsuitable at a given historical point, has been applied for millennia. Cultural traditions do not accept their content layer after layer, as a kind of snowball effect, but by careful modelling like when a snowman is made.

The dynamic process of remediation also includes the dynamics of the social life of individual media. When looking at particular media in more detail, it is evident that their features are not stable. Media have their own communication economy and efficiency by means of which they constantly react to other media, look for their optimal location, and adjust to the situation in the media system. The relationships among media are not just competitive but also co-existential, i.e., co-evolutionary. Media develop in contact with each other. David Thornburn and Henry Jenkins highlight the term “media convergence”: “If we understand media convergence as a process instead of a static termination, then we can recognize that such convergences occur regularly in the history of communications. (...) Convergence can be understood as a way to bridge or join old and new technologies, formats and audiences” (Thornburn, Jenkins 3). Though remediation usually does not bring about a fast extinction of the old medium, it is essentially an irreversible process. Once the old medium is affected by the coming new medium, it will never become what it originally used to be.

If words of a language, as well as their pre-verbal predecessors, are on one axis of media development, the digital computer is on the opposite side (“computer” here refers equally to a personal computer, smartphone, or tablet). The computer is the terminal station where the entire media development so far is completed. All previous media intersect in the computer and are rewritten into a universal code where all previous media content meets. “The computer as a ‘medium’ is able to simulate other media” (Lister et al. 50).

Lev Manovich considers the computer to be “a meta-medium” (Manovich 33). The smartphone, for example, is not just a remediation of the stationary telephone; it is rather a meta-medium because other media and technologies have been remediated into it: a television, video recorder, camera, video camera, radio, tape recorder, watch with alarm, stopwatch, compass, diary, photo album, and of course printed periodicals and books. However, this statement is not completely exact, because the smartphone is simultaneously a remediation of both the book and the library.

To previous media, the computer is a universal post-medium; it receives and manipulates the content of the old media. The computer is also a universal proto-medium whose digitalized content is potentially open for all future remediations in computers. Such digital remediations will only involve changes of software platforms and rewrites of one binary code into another. In connection with the content stored in digital formats, however, there are new risks for the continuity of culture and the storage of its content. Innovations of digital formats advance very fast. Although the digital format is potentially prepared for future remediations, remediation need not always take place. The fact that the digital medium is becoming obsolete strongly affects the survival of its content, even though the content itself is not necessarily obsolete.

Nonetheless, it is not precise to talk about new and old media when discussing remediation. This is because remediation often takes place inversely; the content flows from technologically newer media to technologically older media. It is very common for tie-in books to be published based on popular television series, or for films to be made based on successful videogames. In other cases, remediation remains within the framework of the same medium. Musicians record cover versions of old songs and filmmakers shoot remakes of movies that were successful in the past. Fans of the original works, however, are often not satisfied with the new versions precisely because they are different. Remediation never means copying.

Media History Is the History of Media Dematerialization

The walls of the Cave of Altamira are not only an example of the oldest media but also the largest and most robust medium. If we were to start exploring the history of media with the images in the Cave of Altamira, we would find out that the subsequent carriers of information needed less and less volume and amount of material to fulfil their function. Texts on papyrus or parchment required more “mass” of material than the same texts remediated into printed books, until finally the printed books lost their materiality in “small” electronic books.

An even better example of dematerialization related to the onset of digital technologies is the computer development line. The transition from vacuum tubes to semiconductor transistors, then to integrated circuits and ultimately to microchips, has always resulted in the lower consumption of materials, lower weight, and dimensions of the new and more efficient computer in comparison with older generation computers. The first functional computer, Eniac, was a colossus weighing thirty tons and filling an area of 167 square meters. Fifty years later, a device with an incomparably better performance fits into a trouser pocket.

Let me add that weight remains an important marketing parameter in electronic technologies; however, its significance has also an inverse effect: the lighter a device, the higher its price. In other words, it is generally applicable to this type of product that small dimensions and low weight are attributes of quality and innovativeness.

In computers, previous media and technologies change to become their virtual signs (icons). We click on these icons if we want to use a function that is analogous to the older medium. We can use the icons of a loudspeaker, photo camera, painting palette, and pen. If we want to save a file to the computer’s memory, we use an icon evoking a floppy disk – something that most of the young computer users never held in their hand. The whole history of text carriers occurred in the spirit of dematerialization, which peaked with the dissolution of the medium in computer technology.

Today, people no longer purchase material media – they buy content in the form of binary code. They do not even buy content anymore, but rather “only” a licence to access this content. Media collections have undergone an analogous change from product to service. Forty years ago, a music fan would build his record collection with purchased material goods. For his grandson, music is much more accessible, even though he does not own any collection and listens to music using the Spotify service or the social

medium of YouTube. Instead of several dozens of “precious” paper photographs ordered in a physical album, everybody now has hundreds if not thousands of digital images stored in a cloud and made accessible owing to an Internet service.

The reverse materialization of immaterial items is extraordinary, even curious. From the beginnings of rock ‘n’ roll, the fans of this kind of music imitated the movement of the guitar player’s hands at concerts and in dance halls. This led to the coining of the term “air guitar”, denoting a fictitious guitar played by a fan. Later on, air guitar contests would be organized, having their own rules created by a subculture. Only later, curious rematerializations of the air guitar appeared. In 2004, an air guitar was sold on eBay for USD 5.50: “This one was used once at a Bon Jovi Concert in 89 for about 3 hours” (Air). Since then, such non-existent guitars are frequently offered on the Internet. In the following years, several digital applications appeared that would pick up the movement of an air guitar player’s fingers and generate sounds based on that. One such application is Air Guitar Move for iPhone and iPod. An immaterial, illusionary object (an air guitar), which imitates the functions of a material object (a guitar), has its virtual remediation (an iPhone application).

However, there is a digital technology that may work against the paradigm of dematerialization; it is the 3D printer, which rematerializes digital data into physical objects. The near future will show whether the 3D printer will become an instrument of post-digital neomateriality, or whether it will be predominantly a technology capable of producing material objects and simultaneously of economizing the use of raw materials, by which it will become a part of the dematerialization process.

The Weight of Technology: From Dematerialization to Massification

In the following part of this chapter, I would like to consider the relationship between dematerialization and remediation in a broader context, because the process is not related just to communication media; it is a trend which is relevant for all of society. This was predicted already by Yoneji Masuda, who in the mid-1980s considered the coming information Comptopia and emphasized its “non-material” aspect: “The civilization to be built as we approach the 21st century will not be a material civilization

symbolized by huge constructions, but will be virtually an invisible civilization” (Masuda 633–4). Masuda assumed that the most important thing to be brought by the civilization of the new millennium would be content “hidden” in its media and computers.

When – twenty years ago – Diane Coyle talked about the advancing dematerialization of our civilization, she used the term “weightless world”: “Weightlessness is the key to understanding the new industrial revolution” (Coyle 1). Similarly, Manuel Castells used statistics of the development of labor force structures to comment on an interesting social-economic shift; there are fewer farmers but more gardeners (Castells 238). I posit that this shift is almost a symbol of the dematerialization trend. A farmer’s corn is material goods, but taking care of roses is a service. The basic indicator of a farmer’s performance is “matter”: kilograms of harvest. On the other hand, a gardener’s output is measured in terms of the beauty of a place: “aesthetic information” that is weightless.

Vaclav Smil points out the lowering of the weight (i.e., materiality) of products using a variety of examples. He compares, for instance, how the weight of engines would decrease while their output constantly increased. In 1750 the ratio between the steam engine’s weight (measured in grams) and its output (measured in watts) was around 640 g/W, by 1890 the most efficient engines reached a ratio of 30 g/W, and today’s car engines have a ratio of 1 g/W (Smil 125–6). An identical development is documented above when discussing the comparison of the weight and performance of computers.

From the point of view of an individual user, this process of technology weight reduction is balanced by the massification of the technology throughout society. For instance, there has been a dramatic increase in the number of computers, cameras, and telephones. Half a century ago, a household would usually have one or two photo cameras, while today each member of a family, including the children, has their own camera in their mobile device (tablet, smartphone, or laptop) in addition to the family digital camera. Earlier, a household would own one stationary telephone; today each family member, including the children, has their own cell phone. In connection with telephones, I would like to go back to Smil’s example that bears evidence of the relationship between weight reduction and the massification of technology. In 1990 the average weight of a cell phone was 600 grams, with 11 million phones being used on the entire planet. In 2011, the average phone weight went down to 118 grams, a fifth of the 1990 value, and 6 billion telephones were being used worldwide; thus, the total weight of all used cell phones increased one hundredfold from 7000 tons to 700,000 tons (Smil 131).

The direct proportionality between the dematerialization of individual products and their (global) massification proves that we should not be speaking of a society-wide (or worldwide) weight reduction of produced and used technologies in absolute numbers but rather about the weight and size reduction of technologies used by individuals. After all, the above cited Vaclav Smil is also aware of the complexity of the dematerialization processes in another one of his examples. In 1965, the construction drafts of a Boeing 747 aircraft required the completion of around 75,000 drawings, so the total weight of the used paper reached as much as 8 tons. This is why the Boeing Corporation switched to a mainframe-based CAD system as early as in the 1970s. This computer system integrates all processes from spare parts modelling, through construction design and drafts of technical documentation, all the way to the operative management of production. However, Smil stresses that there are other material products behind the digitalization of such processes (the constructors' computers, the computers used to create software, monitors, communication infrastructure, and electricity): "Even in a case that appears to be the perfect example of dematerialization, the reality is nothing but a complex form of material substitution" (Smil 122).

Medium and Reality: Immediacy or Hypermediacy

Jay David Bolter and Richard Grusin describe two different styles of representation, or two different strategies of remediation. One strategy is transparent immediacy – virtual reality being an example thereof: "Virtual reality is immersive, which means that it is a medium whose purpose is to disappear" (Bolter, Grusin 2000: 21). A medium attempts to make the user have the impression of its absence, so that the user does not notice the technology and can remain in direct contact with the media content. The other style of representation, or the second remediation strategy, is hypermediacy. In this situation, the medium urges the user to notice its presence and possibilities using an approach that privileges fragmentation of content. The goal of technology is "to remind the viewer of the medium" (Bolter, Grusin 2000: 272). An example of hypermediacy is the technology of augmented reality.

It is interesting to observe how the immediacy and hypermediacy strategies are used in situations when the medium and its content are directly

confronted by reality. Masuda's vision of the invisible civilization evokes the notion of disappearance, the implosion of the world, so crucial social events take place "outside of reality" and inside computers and their networks. People work and spend their free time in cyberspace or virtual reality. Current trends reflect this: teleworking and home office on the one hand and virtual videogames on the other.

But at present, there are also counter trends expressed by an explosion of the digital world into reality, as if information would no longer fit in its media. Many technologies add digital information to real objects, forcing their possibilities not only onto the user but also onto reality itself. The simple plot-based electronic game *Zombies Everywhere* inserts animations of attacking zombies, which have to be fought against into an image of a real environment, as recorded by an iPhone or iPad camera. The display of the player's mobile device shows a realistic picture of his or her surroundings, including the virtual enemies. A similar principle was used to interconnect the real world and the virtual game environment in the worldwide popular mobile application *Pokémon GO*, which also used the player's location in reality based on GPS data. From the perspective of the relationship between a sign and an object, it is interesting to see that media images (signs) coming from this type of games are colonizing the real world.

Information projected onto the surface of a mechanic's glasses allow him to see simultaneously a real machine near to which he is standing and the technical charts of the machine with all the descriptions and maintenance manuals. Such an application, similarly to navigation software that is projected directly onto a car's windshield, place medial signs to be seen by the user directly on the real object. This type of navigation requires perceptive multitasking because the user is in reality and in its media representation at the same time. The user moves in a hybrid space, where the countryside has blended with a map thereof: "[t]he very definition of the real becomes: that of which it is possible to give an equivalent reproduction. The real is not only what can be reproduced but that which is always already reproduced. The hyperreal" (Baudrillard 1983: 146).

At this stage of technology development, the media sign really "describes" reality, just like captions to museum exhibits or labels to hypermarket goods have done so far. Information from a database supply real objects with "a legend", thus making these objects become part of the world of information. In such augmented reality technologies, the sign defines reality and endows it with meaning; reality becomes one of the layers of the media environment. Or we can explain it differently: reality has ac-

cepted the role of an interface in which information from a digital medium is presented.

Some videogames (a good example may be the widespread PlayStation Move) integrate real physical space and the virtual space displayed on the screen into one environment or interface, thus, allowing for the immersion of a player, as well as the room he is in, into the virtual world. The player controls his activities (the activities of his avatar, to be more precise) in a game using the PlayStation Move motion controller, while the PlayStation Eye camera exactly monitors his movements in real space and, using the console, transfers them into the 3D space. The movements the player makes in real space are displayed in the virtual environment in real time, which is also where the action of the game takes place. The player has a full sensomotoric experience because he makes real movements (bow shooting, boxing, and playing golf) and sees the consequences of these movements in the screen (on a target, in the ring, or on the golf green). The room where the player is standing is a secondary and additional environment, while all that is on the screen is reality where the action “really” occurs.

In this case, the real and the medial have exchanged their position (and superiority). The medium has integrated the real world inside it and changed it onto a holodeck, where virtual life takes place. Reality and virtuality merged into a convergent environment by means of simulacra overflowing reality. Jean Baudrillard used the term “simulacrum” to denote such a representation, which “bears no relation to any reality whatsoever” (Baudrillard 1994: 6). I use the term “simulacrum” to denote such media signs that aggressively colonize reality so that it becomes one layer of medial hyperreality.

Remediation and the Dematerialization of Institutions

At present, the digital remediation of individual older media brings about deeper and broader consequences that transcend the field of media and transform the way in which we perceive our civilization. Half a century ago, banking operations made use of typewriters, calculators, faxes, telephones, photocopiers, and other devices, which were remediated not only individually but also all together into the system of electronic banking. Clients access financial services through their smartphones or computers, so that what they see on the monitor is their bank providing com-

prehensive services. In the sporadic case when a client has to enter the physical building of the bank, he comes into contact with a teller who also works with the electronic banking system. The teller is a medium that can only do what the system allows. The teller is not “real” in the sense that he would be performing a financial operation himself or handing over money to whoever the client is sending it to. That will be done by the electronic system, because this system is the actual bank. For the client, the teller is only an interface. If the client were to enter another bank building, he would use another interface (i.e., another teller) to communicate with the bank, that is, with the electronic system, which would execute a financial transaction. However, the client goes to the bank only sporadically, only if there is a problem. Then, instead of a “normal” bank, displayed on the client’s screen, with which he has had regular empirical experience, the client walks into a substitute representation (the bricks and mortar bank building). In this case, the physical object and the media sign have again exchanged their positions; the digital sign is primary and reality is only derived from it.

Today, it is not just individual technologies that are remediated but – in cyberspace – also systems and institutions as wholes. The Internet is a universal metastystem into which all social subsystems migrate: from e-government through e-business all the way to e-learning. The digitalization and virtualization of all aspects of social life are taking place. Culture becomes an electronic database that is being constantly updated. Marshall McLuhan understood this fifty years ago: “The new media are not bridges between man and nature – they are nature” (McLuhan 1969: 14). I will also apply such a broad understanding of media reality as actual reality in the following section of this chapter. That is why I will relate the term “remediation” to the broadly construed term “medium”. This is how the term “medium” was used by McLuhan, for whom media included not only writing, typewriters, print, and film but also the wheel, bicycle, and automobile, because they are – just like communication media – extensions of man (McLuhan 1994).

Datafication as the Remediation of Reality

Already in 2010, Andy Greenham stated that “user-generated content makes up 70 percent of the digital universe (more than 880 gigabytes)”

(Greenham). This means that the information explosion is currently (also) relevant for the production of non-professional communication actors who create, copy, and distribute information owing to cheap smartphones with cameras and accessible photo and video editing applications thanks to the easy sharing of files through social media and web 2.0. Everything around us has become an object suitable to be potentially recorded onto a medium; reality is an endless source for its mediations. People increasingly perceive their everyday lives either as a constant possibility to be behind the camera as voyeurs or in front of it as exhibitionists. The wearable lifelogging apparatus (a wearable computer plus camera plus viewfinder with a wireless Internet connection) even allows one to be a voyeur and exhibitionist at the same time.

Global citizens exhibit their data on social networks or use special services to store them. This publication omnipotence is slowly causing a rift between the perceptive abilities of individuals and humanity in general: "People produce digital files and data on such a large scale that they are limited in their ability to manage their digital data" (Gulotta et al. 1814). But behind the folding screen of social networks, an incomparably more massive information explosion is taking place, which is known as "big data".

Big data are "sets so large and complex that they become awkward to work with using standard statistical software" (Snijders, Matzat, Reips 1). The term itself denotes large sets of digital data or software tools /* please delete inside brackets: used to process them / as well as the relevant processes such as capturing, curating, managing, and processing these data. Big data do not originate as a result of systematic research but as "a by-product" of various activities; they include data on the use of credit cards, data on health care, analyses of keywords entered into Internet browsers, and analyses of the movement of cars on roads based on information from their navigation devices. Big data can originate in the information provided by satellites continually monitoring the entire surface of the Earth or in the millions of statuses on social networks: "[p]latforms such as Facebook and Twitter are much more than sites of networked sociality: they are the world's biggest focus groups, generating more data than any market researcher could ever hope to read and analyze" (Andrejevic 42).

A good example that can help us understand the possibilities, meaning, and functionality of big data was provided by Google in 2009. In that year, the USA experienced the spread of the H1N1 flu virus, and American authorities were unable to create a sufficiently current map of how the contagion was spreading across the country. It was known that the majority of people who got infected did not seek to be examined by a doctor when

the first symptoms of the illness were apparent, so doctors' reports lagged behind the actual spreading of the infection. Google decided to analyze 50 million queries entered by people into its search engine during the flu epidemics in previous years and managed to identify the most frequently used key words, such as "headache", "fever", and so on. Then, an analysis was conducted studying the entry of these words into the search engine, which made it possible to create an exact map of how the flu was spreading in real time; this was subsequently confirmed by doctors' reports (Ginsberg et al., Lazer et al.). Big data are not just static sets; on the contrary, technologies allow for an analysis and comparison of any set of data with any other set. It is also important to note that there is "a shift in focus from data collection to data processing" (Mai 192).

Each piece of data can find itself in context with another piece of data. If a computer makes such an evaluation, anything can be related to anything. This brings a wholly new view of statistics and research. There is no need to work with a representative sample, because there are data about the whole thing. This paradigm shift in understanding humans and the world can be referred to as a shift from causation to correlation: "This represents a move away from always trying to understand the deeper reasons behind how the world works to simply learning about an association among phenomena and using that to get things done" (Cukier, Mayer-Schoenberger 28). Big data tell us how things work and how they are correlated, but they do not give us an answer about why it is so. Such an answer can be only provided by a human; however, it is questionable whether it is possible in a particular situation. A data scientist with access to big data output (for example, in the form of a predictive analysis of the customers' sentiment) will assess which of the collected correlations could be important for a particular purpose; hence, the procedure is reversed in comparison with standard scientific research or a marketing survey: not from a hypothesis to data but from data to conditions for measures to be taken.

"Big data is also characterized by the ability to render into data many aspects of the world that have never been quantified before; call it datafication" (Cukier, Mayer-Schoenberger 29). At any rate, big data paint a picture about a person (customer or citizen), a society, or the planet. Big data are mediations of reality. In terms of mediations of itself and the world, humanity has got into a situation when it is acquiring an ability to record, store, and process all information about what anyone has done anywhere and at any time (provided it was digitally recorded). Of course, owing to datafication, the path from big data to a Big Brother world is short. It even

seems that Big Brother is a computer, but that is not the topic of this contribution.

In their first essay on remediation, Bolter and Grusin pointed out that, “[A]t our present historical and cultural moment, all mediation is remediation [...] because each act of mediation depends upon other acts of mediation” (Bolter, Grusin 1996: 346). The importance of this idea was confirmed several years later by Richard Grusin when he returned to this concept: “The logic of remediation insists that there was never a past prior to mediation; all mediations are remediations, in that mediation of the real is always a mediation of another mediation” (Grusin 19). The concept of remediation thus deals not only with the relationship between the newer media sign and the older media sign but also concerns the relationship between (every) media sign to mediated reality. Datafication means that the necessary technologies have become cheap enough and the mediation of reality is a thing of mass proportions.

Datafication shifted our whole society in a state in which people are constantly monitored and are permanently building up their digital image, which is updated in real time. Just like a web camera shows a constantly changing image, big data always change as well. It is not a database like a frozen image of a static object but rather live and online information about the dynamic changes of an object's condition. Parallel to a visible physical world, its more visible meta-image exists, as shown by big data technologies. The world has its double, its counterpart, in the mirror of datafication. This double, like the reflection in a mirror, reacts with the speed of light to every change of the object. Simultaneously, this non-material sign affects reality in an increasingly more complex and sophisticated way. Based on big data about our shopping habits, producers and retailers of goods change their offers; based on our communication about politics on social networks, election campaigns of political parties are adjusted. The sign affects reality and dictates its logic to it. Datafication is the meta-remediation of the previous mediations of reality, and our civilization is both an invisible and an obscenely revealed civilization.

Anyone can have their nickname and false profile on a social network, or live an alternative life with their avatar in a massively multiplayer online game, but everybody also has their data double or data ego hidden and visible through the technologies of datafication. Man might be a non-quantifiable being, but all data about man can be quantified. Traditionally, psychoanalysts, teachers, and priests would get to know the human personality based on interviews or observations, but these methods provided only a blurred picture of some aspects of the personality. Big data provide

a mirror image, just like Bioy Casares in Borges's short story said: "Mirrors are abominable, because they increase the number of men."

The essence of datafication may appear as abominable. Computers will create virtual mirror images of people and, based on such mirror images, they will give real people pragmatic advice on what to do to improve their business or health. Computers will know precise details and the exact context; they will quantify what so far has seemed non-quantifiable but will never be interested in the causes of anything. Traditionally, people believed that information originates from data, with knowledge arising from information, and then wisdom from knowledge (Ackoff; Bawden; Buckland; Gurteen; Zeleny). But this chain is no longer necessary. Big data bring economic as well as other benefits, even though the computer has not discovered their meaning and only produced knowing without understanding. Owing to big data, we know how things are, but we do not know why. The computer generates knowledge immediately from data, but no wisdom ensues from such knowledge. "The question of what it might mean to know something without comprehending it is, perhaps, one of the defining questions of the big data era" (Andrejevic 26). In the end, even people may not know the causes but will only trust their remediations.

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2. Moving Images, Moving Words

(On Refashioning Film in Electronic Literature)

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Abstract: The twentieth century was in every way a cinematic one; even the Fordist assembly line presupposes cuts, montage and sequencing of movements as though it were a film whose moving images had become an example for a number of basic cultural contents (from avantgardist procedures on stage to the introduction of the copy and paste command in a number of computer tasks) and even for a way of thinking. This article focuses on issues regarding electronic literature and its relationship to (new) media art and film. It deploys Bolter and Grusin's concept of remediation in order to demonstrate that e-literary text, first and foremost in the genre of animated electronic poetry, refashions some features taken from film, and that the e-literary kinetic pieces could be understood by applying cinema theory.

Introduction

Film as the key cultural paradigm of the twentieth century represents its cultural logic in terms of Jameson's postmodernism essay (1984: 57). Film corresponds to particular way of thinking (e.g. Burnett's questions raised in *How Images Think*, 2004) and implies a number of parallels between the industrial organization of labour on the assembly line (Taylorist rationalization in the sense of training the worker's movement, which is adjusted to the pace of the machine) and the way of organizing moving images. Jonathan Beller argued that "early cinematic montage extended the logic of the assembly line (...) to the sensorium and brought the industrial revolution to the eye" (9).

According to Beller, film is not only the art form that fundamentally defined the century in the sense of Jameson's cultural logic, but also the dominant mode of production; it concerns the industrial revolution and the industrial organization of labour on the assembly line as well as capitalism itself, which is increasingly structured like film. So we can even observe a continuation of the industrial mode in film production:

Not all production passes through cinema in the institutional sense, but global production is *organized* as cinema is. Consciousness is dominated by the organization of movement – the organization of materials produces affect (...). Cinema provides the architectonics of the logistics of perception for capital. Indeed, it represents their fusion. Hence, the cinematic has been machining the postmodern for nearly a century. In this sense, we can say that during the twentieth century, much of the world is literally in cin-

ema, much in the way that the futurists intended to put the spectator inside the painting. (109)

The world shaped by the cinematic mode includes the literature as well. When we are talking about montage as a key filmic procedure one should mention the “literary montage” in terms of Tristan Tzara’s suggestion on how to make a Dadaist poem:

Take a newspaper.
 Take some scissors.
 Choose from this paper an article the length you want to make your poem.
 Cut out the article.
 Next carefully cut out each of the words that make up this article and put them all in a bag.
 Shake gently.
 Next take out each cutting one after the other.
 Copy conscientiously in the order in which they left the bag.
 The poem will resemble you.
 And there you are—an infinitely original author of charming sensibility, even though unappreciated by the vulgar herd. (Tzara 1920)

When we draw upon the film, we need to emphasize that the significant achievements of the humanities in the twentieth century were also defined by seeing films and reading about cinematic procedures, from Benjamin to Deleuze, Kracauer, and Manovich. Rather than just relating to a very particular art form, the cinematic paradigm is crucial for understanding various cultural fields and cultural contents. Walter Benjamin addressed the montage procedure in his article on Döblin’s *Berlin Alexanderplatz* in the modern novel by arguing that

The stylistic principle of this book is montage. Petit bourgeois leaflets, scandalous stories, misfortune, sensation from 28, popular songs, and advertisements sprinkle this text. The principle of montage explodes the *novel* its form and its style, and it opens up new, very epic possibilities, mostly with regard to form. (Benjamin 232)

This short excursion to film and the cinematic principle (e.g. montage) introduces us to the basic topic of this research paper: cinematic aspects of digital literature. E-literary text shaped by the (new) media is a part of algorithmic and software culture (Strehovec 2012); however, the mention of film is not such a great departure from e-literature. Electronic textual

practice is by no means placed in an area alien to film and the cinematic mode of organization of textual units.

Where can we find e-literature projects? Because these are electronic pieces, the Internet is an excellent place for saving and distributing this type of practice. In this regard, one should mention both electronic literature and online literary databases published by the Electronic Literature Organization. (ELO) – the *E-Literature Collection 1* (2006), 2 (2011), and 3 (2016) – and the ELMCIP Anthology of European Electronic Literature. A series of basic information on electronic literature is also available in the ELMCIP Knowledge Base. Along with the ELO's collections that privileged the American authors, we can mention that many significant works in this field are created in Brazil, Central and Eastern Europe as well.

The present author spent some time following hypertext fiction, i.e. the genre that was the most distinct and media-covered part of literary writing in an e-media, at least in the USA in the late 1980s and 1990s. However, in the effects of hyperlink and maze, which are at play in a hypertext with literary features, he discovered merely one of the possibilities of writing using the new media tools. He found a bigger challenge for the recent reader/user in those new media textual practices that focus on movement, which results in a film of words. The latter is composed of units, which over a decade ago the author of this chapter had already named word-image-movement, i.e. the verbal and visual signifier-in-motion. What is crucial here is that in the very moment when text starts moving, it begins to behave like a film, i.e. a film of verbal contents, presenting a challenge to theory, which in turn abandons the field of literary specificity (literariness as we know it) and begins to direct itself towards effects concerning the cinematic organization of textual contents. With the concepts like the form, value, atmosphere, literariness, style, lyrical, poetics, the author gives way to the theoretical devices deployed in the cinema theory (e.g. stain) and the new media theory (remixes, mash-ups).

When observing the text-film, one soon discovers that it appears as content-in-motion, which is based on the play of fast or slow cuts, close-ups, speed-ups, dissolves and montages; other procedures that are also relevant to it extend from the field of film to digital video, digital music, computer games, digital architecture, forming in locative media, i.e. in addition to montage and (fast) cuts also sampling, mixing, remixing and mash-ups. This situation concerns both the creativity of authors in this field, who apply procedures that are typical of the DJ and VJ culture, and the feedback and behaviour of the audience, which is recruited for the field of e-litera-

ture also among fans of club culture, software culture, new media art and artistic activism.

This article explores e-literary text in terms of a textual film; however, the issues connected with this are by no means the only constituent. We consider such a text to be a part of the expanded concept of textuality, which includes both verbal and non-verbal signifiers accompanied by new media paratexts (e.g. metadata, statements, reviews, instructions, menus and documentation). E-literary text challenges readers to complex experiencing, which is by no means exhausted in the reading-as-we-know-it in the sense of decoding meaning and comprehending language (Hoover and Gouch, 1990), but rather in integral corporeal experiencing, which also deploys kinesthetic and motor arrangements in one's navigation of such a textscape.

Towards the Immediacy of an e-Literary Text-Event

New media, including e-literature, are about the experience and the perceptual hypermediacy (Bolter and Grusin, 1999); they relate to Baudrillard's "being more real than real" (Kellner 1989: 83) in terms that they generate artificial and hyperreal worlds that enable striking and persuasive multi-sensory experiences. Just take a look at the advances of virtual reality with its promises of full immersion in virtual worlds and navigation inside them. It is all about the efforts to convince the user as much as possible about the persuasive immediacy, and making the cultural content stimulate all the senses in a way which diminishes the presence of the interface. The electronic text does not relate to something remote, to long distance things; it aims to strike the reader/user with its very closeness and immediacy.

In the present augmented reality, the remote world of imagination and would-be-reality of artificial worlds is brought nearer and nearer; the user is allowed to enter this world in a very persuasive fashion by deploying the mouse, scrollbar, data glove, webcam, stylus, touch screen and other interfaces. The e-literature authors/programmers seek to put the reader/user in the same place with letters and words. "If immediacy is promoted by removing the programmer/creator from the image, it can also be promoted by involving the viewer more intimately in the image" (Bolter and Grusin 1999: 31). In *Language of New Media* Manovich writes in a very similar fashion:

The new media image is something the user actively goes into, zooming in or clicking on individual parts with the assumption that they contain hyperlinks (for instance, image-maps in Web sites). Moreover, new media turn most images into image-interfaces and image-instruments. The image becomes interactive, that is, it now functions as an interface between a user and a computer or other devices. (Manovich, 2001: 183)

Such a situation is not alien to digital text. On the contrary, it is extremely familiar with it; in fact, in the digital textscape the reader/user is identified with the cursor as a kind of nervous, flickering and distant presentation of herself. One of the key efforts in e-literature is directed towards an immediacy, which is as persuasive as possible, presupposing the textual event, which addresses all the senses and accelerates the text to the performative mode. Not just writes down a text, but organizes it as a textual event (as a kind of *Gesamtextwerk*, which stimulates various senses, including proprioceptive sense and touch) – this is the proper task of e-literature authors. One of the historical examples of such an endeavour is Jeffrey Shaw's *The Legible City* (1988–1991), a text-based interactive installation, which deploys the bicycle as an intimate and ubiquitous interface.

This piece is shaped as a responsive environment, which put the user in the role of cyclist/reader. She rides a stationary bicycle through a simulated representation of a city (plans of actual cities – Manhattan in New York, Amsterdam and Karlsruhe) that is constituted by computer-generated three-dimensional letters, forming words and sentences along the sides of the streets. The existing architecture of real cities is completely replaced by textual formations written and compiled by Dirk Groeneveld. Daring and curious (even nervous) cycling/riding along the streets of words represents a journey (or even a ride) of reading. The choice of the path one takes is a choice of texts as well as the spontaneous juxtapositions and conjunctions of meaning that are constituted by computer-generated three-dimensional letters, forming words and sentences (as artificial buildings) along the sides of the streets. The handlebar and pedals of the interface bicycle provide the cyclist with interactive control over the direction and speed of the ride. The physical effort of cycling in the real world is transposed into the virtual environment, affirming the cyclist's activity within the mixed reality (composed of the given reality and the world of virtual architecture).

The immediacy effect works first and foremost at pieces that are interactive and algorithmic, for instance e-literary derivatives (mods, patches) of video and computer games. We can mention here Jason Nelson's *Game, Game, Game and Again Game*. This piece addresses its users in a striking

way, refashions various other media (literature, film, architecture, video games, etc.), and places it in the state of immediacy. Within the new media condition, this state is also enabled by high-tech stimulation of various senses, including the lower ones (e.g. touch). Kinesthetic activity deploying touch is crucial for the simulation of immediacy, which brings tactile arrangements to the foreground. Touch as a proximal sense is to a significant extent addressed in the process of reading and experiencing the e-literary text, which is embedded in a very specific technological platform that (over) determines its accessibility, manipulability and ways of reading. The crossing over from the textual physical presence to its digital expanse on the screen challenges theorists of reading to discuss this issue:

“The reading process and experience of a digital text are greatly affected by the fact that we click and scroll, in contrast to tactilely richer experience when flipping through the pages of a print book. When reading digital texts, our haptic interaction with the text is experienced as taking place at an indeterminate distance from the actual text, whereas when reading print text we are physically and phenomenologically (and literally) in touch with the material substrate of the text itself.” (Mangen, 2008: 405)

It is certainly true that in the process of reading we are not in direct physical relation with the e-literary text (we neither touch the pages of printed text, nor turn them), yet this is by no means a drawback. On the contrary, e-text is there in a very subtle interface-shaped *dispositif*, so that we are in a certain sense closer to it than we are on the printed textual platform, which presupposes merely a sort of rudimentary turning of the pages. Let us note here that turning the pages, touching the paper, and even sensing its scent undoubtedly signals the presence of a text in the reader’s physical proximity. However, these activities are accompanied by the reader’s powerlessness to simply reach into the text and manipulate it. Within an e-text we encounter the subtle, interface-based presence of the reader/user in the text itself in terms of her identification with the cursor as a flickering avatar, which marks the reader’s position in the textscape. Such a constellation addresses the reader/user’s hand as a key organ deployed in bridging the individual with the world she enters:

Certain parts of the body are particularly important in acting as bridges to the world and here I concentrate on one of the most important of these / the hand. The sensory system of the hand is complex and capable of exquisite fine-tuning. It is not just an ‘external’ organ: it is so vital to human evolution that it seems quite likely that parts of the brain have developed in order to cope with its complexities rather than vice versa. (Thrift, 2004: 597)

In the text shaped by new media, the reader is in fact where the cursor is, while the latter is in close proximity to the word itself and to its atomic units – letters. Furthermore, the cursor is not there as a coincidental ornament tool but is an active factor that can erase a letter, add a new one, or insert a punctuation mark, that is to say, alter the text from the inside in such a way that its operations can be concealed (it is impossible to do this with a printed text). Rather than being a simple opposition, the digital and the tangible are linked by new media technologies that enable subtle forms of, shall we say, the digital tangible. Such a tangible is not something concrete and profane: we are not dealing with visible operations, but with very subtle ones; the touch (sense) at work with the digital tangible is a “sense theoretician”, since it is a sense that does not grab in a rough physical relation but functions precisely through its avatar in the textscape. The term “sense theoretician” was coined by Karl Marx in the following context:

The *forming* of the five senses is a labour of the entire history of the world down to the present. The *sense* caught up in crude practical need has only a *restricted* sense. For the starving man, it is not the human form of food that exists, but only its abstract existence as food. (...) The careburdened, poverty-stricken man has no *sense* for the finest play; the dealer in minerals sees only the commercial value but not the beauty and the specific character of the mineral: he has no mineralogical sense. (...) The eye has become a *human* eye, just as its *object* has become a social, human object – an object made by man for man. The *senses* have, therefore, become directly in their practice *theoreticians*. They relate themselves to the thing for the sake of the thing, but the thing itself is an *objective human* relation to itself and to man.” (Marx, 1844)

What is crucial in Marx’s notion of human senses is the very historical (changeable) attitude to them. They are mutated across history, and this point is also of significance in the moment, when we draw upon the senses engaged within the present interface culture, and their deployment in the experiencing and reading of electronic literature.

The touch theoretician as discussed in the afore-mentioned Marxian theory of senses is the self-learning touch, which is deployed in the electronic literature as well. One of the works in this field, which stages the material/immaterial problem as well as the issue of touching within the interface culture is Serge Bouchardon’s *Toucher* (2009). Touching means exploring; there is a certain curiosity, which generates the touch as a sense of proximity and movement (the touching hand gets more information, when it moves around the object than static grasp it). The *Toucher* (as a piece caught in technological determinism!) demonstrates the shift from an im-

mediate touch to an interface-mediated touch that requires interface mediation by the mouse, microphone and webcam. Such a touching experience, including the interface reading (e.g. the mouse reading, term coined by the author of this essay), reveals a lot about the way we access a multimedia content on screen.

This piece demonstrates that the reading of e-literary texts is first and foremost of the interface-shaped sophisticated experience, which stimulates various senses and put the reader-user into the riding adventure (Strehovec, 2016) as an event that stimulates several senses and provokes a corporeal and kinesthetic participation. New generations of digital devices most assuredly provoke new forms of perception and action. With a stylus or a touch pad we enter into very direct, although virtual contact with the word, contact that is much more immediate than in using a typewriter, which means that these devices once again establish an immediate relation between the body (in fact, the hand) and the word.

Text on the Move

When addressing one of the key topics of this research paper, we need to draw upon one significant example of the text-film, which challenges theory to redefine its concepts and find novel ones. As such an example we can mention Claire Dinzmore's *The Dazzle as Question* based both on the author's very intimate and account of interpersonal communication and on technical solutions, which disrupt our expectations about the way the poetic text behaves. *The Dazzle* is a lyrical one, which heeds the romance and history echoing throughout poetic creation, yet plumbing this new media for the singular sonority, which the encounter affords. Its locational marks and varied rhythmic emphases are indicative of the particular tones and dialectical nature of the question and confusion underlying this untoward relationship. The noted tendencies of the digital, of both pleasure and menace, are then marked by the distinct use of text within the piece – it is not easily read, being rather ghostlike and obscured, thereby signifying the effect of the media in erasing/displacing the narrator's words/identity, undermining his/her marks and his/her history – the history of poetic form itself with obliquity. The effect is thus abstracted, culminating in an aura, shall we say, which is more "...impressionistic/textural than textual". Digital media seek to inscribe within and around the text layers of sub and supra-

text, which work upon myriads unexpected levels beyond the page, hence underscoring the desired incision implied by the surface meaning of “mere words”. Such a rich play of unstable meanings and their controversy is accompanied by the dynamic unmappability of textual articulation, which places the reader in a very unsafe position. She is faced with the dynamic textual bar that disrupts the normal way of reading and perceiving the textual units.

Dazzle's text is a nervous one. It consists of several tapes of moving letters and words shaped in various fonts and formats. The temporal and spatial grammar of this textscape and timescape impact the very plot of this piece, which is very short as if it were a textual music video. The turning point in this piece occurs at a moment when after the line with “His identity uncertainly shifting”, running from the left to the right, another line suddenly appears with “About [Yes of course] Yes of course The Dazzle-Touch-In-Space-Border-less-Larger than Sometimes...”, which runs in the opposite direction from right to left. Such a turning point strikes the reader and gives her an intensive experience of the textual film (as a play of nervous signifiers) and a film of thoughts.

How can we explain that turning point? Instead of traditional literary theory, we will apply Pascal Bonitzer's cinema theory and one of its theoretical devices the “stain”. The concept of stain is described in Bonitzer's essay on Hitchcockian suspense in passage referring to the movie *Foreign Correspondent* (1940), in which the highlights include an assassination on a rainy day with the killer escaping into a sea of umbrellas and a group of spies signalling to their Dutch contacts by turning a windmill against the wind. The stain as “an object which goes against nature”, is found in such visual effects as the field of windmills in which the sails of one windmill are mysteriously turning the wrong way. Such a special effect strikes the gaze and the viewer's expectations about the ordinary way things behave, and she is getting more and more curious about that uncanny condition. Can we find an equivalent of the windmill turning against the wind in *The Dazzle* piece?

Just as the sails of one windmill turn in the opposite direction, we are facing the *Dazzle*'s moving textbar, which at a certain moment begins to enter the visible/readable field from the right (after the line with “His identity uncertainly shifting”). The ordinary stream of a textual bar running smoothly from left to right is interrupted. The reader's stable reading point has been made strange, she finds herself unsafe within the textscape, and her normal way of perception is changed in a kind of high-adrenaline adventure. The disrupted order of running text fits well to the very nature of

Dazzle. The stain relates to the semiotic and semantic level; it disrupts the way of reading as well as the way of imagining the distant artificial worlds.

Electronic animated (kinetic) poetry refashions moving images of film, video, TV and social media. Here the question arises: what is the common denominator of moving images and moving text, based on moving words-images-virtual bodies (the concept coined by the author of this chapter in order to bridge the gap between the verbal and the visual in the present digital culture). The answer is not very difficult. This is the movement and acceleration associated therewith.

We declare that the splendor of the world has been enriched by a new beauty: the beauty of speed. A racing automobile with its bonnet adorned with great tubes like serpents with explosive breath ... a roaring motor car which seems to run on machine-gun fire, is more beautiful than the Victory of Samothrace. (The Futurist Manifesto, 1909)

When we are talking about the speed we refer to a special constellation, defined by a greater or smaller speed, acceleration, riding and racing. Without being familiar with the hardware and software that generates digital textuality, William S. Burroughs wrote in *The Invisible Generation*:

Take any text speed it up slow it down run it backwards inch it and you will hear words that were not in the original recording new words made by the machine different people will scan out different words of course but some of the words are quite clearly there and anyone can hear them words which were not in the original tape but which are in many cases relevant to the original text as if the words themselves had been interrogated and forced to reveal their hidden meanings. (218)

Burroughs was fascinated with the capabilities of the tape recorder, whose functions he applied to textual material. The essay, from which this quote was taken, dates from 1962 (when he made experiments with type recorder) and everything in it focuses on the technical manipulability of text, which experienced an actual bloom only with the new generation of technologies, namely those that are based on computers and digitization. In any case Burroughs's reference to speed and acceleration as the generators of a new mode in which modern textuality operates is important even with regard to the animated e-literature.

Speed is what brings things to clarity, to an experimental and accelerated state, which resembles to riding experience (in the popular culture; e. g. in theme park attractions). Such mobility implies the condition of being endangered, which the German expression *Erfahrung* used by Walter Benjamin etymologically alludes to; the expression contains both *Fahrt* (ride) and *Gefahr* (danger). In a certain way, both of these components are

also involved in the English term “experience”, since, when one experiences something, one moves around it and if one goes (too) far, one gets in danger. Speed is also experienced in e-literary texts (e.g. in electronic animated poetry and poetry generators), when one “rides” the tapes of words-images-in-motion (e.g. in *Dazzle*). Yet at the same time with regard to text/film one tries to capture and perceive that which has not yet been included in the ride. Although these components are outside the field of vision, they are important for the understanding of the text displayed on the screen.

The Dazzle project demonstrates how the new medium of digital textuality remediates film by applying some of its crucial features. The recent (new) media art generates also the pieces that are based on opposite strategy, including the remediation of a new medium by traditional one. Such is Robert Ochshorn’s *Chewing* (2013) related to John Smith’s short film *The Girl Chewing Gum* (1976), which transforms a video from time into space. Each row of the video represents one minute of time, which is mapped from left-to-right and top-to-bottom as it were a line of the book. The entirety of Smith’s film is played from top left to bottom right. This piece challenges the reader/user to jumpy reading in terms that she is urged to smoothly move from the entire spatialized film to its short played components placed in the rows.

On Experiencing and Reading the e-Literary Text

New media art and e-literature challenge present researchers with the complexity of their works-processes-performances-events that demand a multi-disciplinary approach and the deployment of various methods. In the previous section, we have explored Claire Dinzmoré piece *The Dazzle as question* based on the moving textual bars and their dialectic in entering the visual/reading field from various directions. Rather than refashioning, only the cinematic moving images, the tapes of words in this e-poem relate also to Marinetti’s concept of words in liberty (*Italian: parole in liberta*), which is deployed in “structuring specific poetic texts according to visual conventions for the representation of space” (Drucker, 1994: 107).

The reader, faced with this piece, is expected to execute various steps in order to experience it in terms of the textual event. At the very beginning of her cognition, perception and reading of this piece, the reader needs to:

- collect the basic sources and paratexts relating to this piece, including

- author's statement, various references, metadata, reviews and information related to software applied and to other projects this piece relates to;
- bracket the traditional way of approaching the text (horizon of expectations) in terms that her attitude should also address non-verbal signifiers and the software specificity;
 - write down the introductory observations of this piece relating to a) the number of moving textual tapes, b) the spatial structure of words that often enter the moving tapes and c) other similar pieces of e-literature that need to be compared with *Dazzle* in order to clarify its basic particularities shaped by the new media;
 - read and view all the moving tapes of text at once in their radical difference, and take into account also the speed of the textual tapes entering from the right. It is significant that she must insist in reading-viewing the textual 'sculpture' at once, because only such an attitude to the entire textscape in the discontinuous variety of its moving tapes enables the reader's rich experience and her participation in the textual event/performance;
 - restart and reread this piece several times to come closer to the meaning as well as the decoding of visual and temporal grammar;
 - turn away for a while, push the reading behind and think about the ideas that a text provokes.

Such a multi-phase process begins at the moment, when the reader is struck by a very unfamiliar quality in the visual appearance of the text that focuses her attention span and transports her in a state of excitement. Such a quality of this piece occurs in the process of the reader/user's encounters with the stain, caused by the conflict between directions in which the textual bars run.

What is crucial here is also the spatialization of text in terms of a sophisticated multi-layered structure (like in afore-mentioned *Chewing* project), which presupposes the insertion of novel spaces (opened up with the lines entering from the right) that might be considered to be an interval, or a gap. And such an insertion is also about the meaning and the very particular intellectual atmosphere, generated by *Dazzle*, which is spread around the text. As an arrival of the unfamiliar, strange and unsafe, the spatialization implies also the possibility of conceptualization in terms of arranging the meaning as an enigma, and in a non-identical and non-mediated (e.g., uncanny) form. "More" can also be read from this text by those familiar with programming, who can read what is above or below (in terms of the code) and which programming operations generate precisely this textual output.

The perception of e-literature does not include just reading (and not just reading in terms of the user's more intensive bodily activity based on textual arrangements that tactually strike her), but also the basic understanding of the software applied and the procedures that enable such a textual practice. The significance of software for e-literary writing demonstrates the use of programming languages for naming the genres of electronic poetry such as Perl Poetry, Java Poetry and Flash Poetry. Understanding of the new media-shaped e-literary text, therefore, demands new media literacy in terms of one's ability to navigate and control the new media contents.

One of the key features of novel generation of e-literature (after the hypertext fiction of the 1980s and 1990s) is that the reader-user's interest becomes focused on a new series of (rich multi-sensory) experiences by which she expects to be addressed as directly as possible. The reader-user demands from the e-literary text that it strikes her with visual and tactile effects, and that it arouses her motor stimuli. The reader-user, who is more and more the rider (Strehovec, 2016), expects even literary and artistic content to be organized in the form that she encounters in attractive products of the entertainment industry, that is to say, she expects that they also strike and intoxicate her as if they were a roller-coaster ride or a SF movies.

Conclusions

Electronic literature as an emerging practice of writing in new media is not about the depicted objects, events and people, its very nature is not in the mimesis, but rather in the poiesis, e. g. in constructing artificial textual worlds that address our experiencing of digital words-images-virtual bodies and even the letters in the new media condition. Rather than telling stories or depicting events, e-literature arranges the experience of the words and letters by making them behave in a way which shifts from the mode in which they are deployed in storytelling-as-we-know-it. Moving images and moving words deployed in the new media relate to the movement and its basic features like speed and acceleration. They are technical images (Flusser's term) and their reference is conceptual.

In this research paper, we have addressed the concepts like immediacy and refashioning that originate from Bolter and Grusin's book on remedi-

ation, which has thoroughly addressed the fact that the new media refashion the old ones and vice versa, which means that at present the autonomy of (single) medium is being endangered. Talking about a pure medium is getting more and more obsolete; it even contrasts with, the very nature of digital code. However, at present the theoretical devices² taken from Bolter and Grusin's book (hypermediacy, refashioning, remediation, etc.) are just the ones that are useful in exploring the specificity of new media contents. It makes sense to deploy them along with other concepts generated within other theoretical accounts of new media (e. g. in contemporary technoculture studies, new media studies, communication theory, software studies, philosophy of technology or cinema theory).

Here we should mention the following theoretical concepts and devices that need to be taken into account along with the basic "remediation concepts": database, algorithm, protocol, remixing, mash-up, hacktivism, lived abstraction, cognitive mapping, metadata, art platforms, art service and the new media paratexts. It seems that the remediation in its historical form has given way to the investigations of the media specificity, which increasingly deploy the concepts originated from software studies, and on the other hand, to the investigations of what specific behaviour of the user is elicited by the particular medium. The user, a hybrid viewer-listener-reader becomes the key agent in the new media that behave in response to her actions, which means that stress is shifting towards one's experience of new media contents. "Experience always invents. Every perception is a creative activity culminating in the production of an event of change" (Massumi, 2011: 27).

Another significant movement in, shall we say, "post-remediation theory" is directed towards the materiality of new media and their (social) contextualization. New media (and e-literary) contents are becoming increasingly contextualized, performative and embodied. This suggests that matters of significant importance are taking place in a field that is abandoning the classic cyberpunk and posthuman perspective, founded on cartesianism and cyberplatonism that can be found (in the case of literary cyberpunk) in novels such as Gibson's *Neuromancer*, and (in the case of several theories of the posthuman) in the view that the posthuman condition blurs the border between embodiment and the cybernetic, between the biological and simulation. Such notions that are beyond the findings of the contemporary humanities and social sciences as well as the practice of today's performance art have been based on classical information theory (Shannon and Weaver, 1948) in that the specificity of information is determined by message length, complexity and signal integrity. By contrast, is-

sues concerning the material and bodily contexts in which the information is embedded have been pushed aside as unimportant.

Today the most significant movements in contemporary philosophy and cultural studies concern the cultural shift in which the linguistic, discursive and textual give way to the material, biological, life, event-driven and biopolitical (Negri, 2011; Agamben, 1998; Virno, 2004; Thacker, 2011). By shifting the focus towards life, biopolitics and the body, the political issues that concern movement, feelings, affects and broader perception issues are also highlighted, particularly with regard to art and (new) media (Hansen, 2003; Massumi, 2011). Rather than foregrounding smooth hypermediacy in terms of seamless transitions between different media, new media art deals with glitches, noises and general malfunctioning of new media technologies. Here we can mention the Jodi pair who were among the first net artists to investigate and subvert the conventions of Internet, computer programs and video and computer games. By disrupting the language of these systems, including interfaces and code, these artists have destabilized the relationship between computer technology and its users as well as the ideology of progress, which accompanies the development of new media and their promises.

Bolter and Grusin's concept of remediation is deeply embedded in the world of technical advances and mainly pushes aside the basic links of new media to the social. In doing so the remediation authors remain tied to the positivistic approach to new media and the fascination with the digital. Such an approach might be explained as a consequence of technodeterminism as the prevailing strategy in the americanized culture. However, the media are not the neutral tools, and their social implications need to be addressed in terms of critical theory.

E-literature is likewise at least indirectly influenced by the current corporative capitalism. One encounters the will for abstractness (discussed in Kracauer's *Mass Ornament*) which in the practice of e-literature is expressed as a pure play with form, fascination with software and special effects, abandonment of the taking of sides in social reality, in which exploitation, precariousness, segregation, the terror of a privileged minority over the majority, racism and machism often triumph. When comparing e-literature with new media art, it can be seen that the first has a noticeable deficit when it comes to activism, hacktivism and feminism. Rather than expressing more critical attitude towards the social roots of language deployed in on-line communication, several movements in e-literature demonstrate fascination with software advances and digital literacy, remaining 20 and more years behind the net art of 1990s.

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Notes

1 Technodeterminism (Wyatt 2008) is based on the premise of technology's autonomy, meaning that e-literature's technical advances determine the changes in the literature itself or that literariness (the term introduced by Russian formalism) is the function of technological innovations.

2 Key concepts of the Remediation book are also the subject of thoroughly executed critique. Saskia Korsten discussed reversed remediation as a counter-mechanism of remediation as explained by Bolter and Grusin. Following McLuhan's fear of the narcotic state, which the user of a medium can enter when becoming a closed system with the medium, reversed remediation offers a chance to wake up the viewer. It creates a state of critical awareness about how the media shape one's perception of the world. Reversed remediation works counter to remediation mechanisms in the sense that it makes the media visible instead of transparent. It makes critical awareness possible because it lays bare the workings of media instead of obfuscating them.

3. Defining Biomedia: On the Importance of Transcoding and Remediation

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Abstract: Biomedica are considered to be the most recent form of new media. They are an interlacement of two different domains, traditionally perceived as contradictory – the domain of the living and that of the technological, the inanimate. As such biomedica are understood as a complex biotechnological system that fuses two seemingly incompatible domains – the domain of life and the domain of technology – thanks to the fact that there is a fundamental equivalence between the biological/genetic code and the cybernetic code. Within the last 10 years, this interlacement became even more prominent in the nascent biotechnological discipline of synthetic biology. The question is to what extent this interlacement demarcates.

Introduction

Biomedica constitute an ontological paradox which, at first, was not referenced to discourse related to media, especially digital media. In the beginning, the biotechnological interlacement of the domain of the living/organic with the inanimate/machine-like/technological took place, so to say, on the surface. Microorganisms or their parts (enzymes) gradually became technological “components” in complex biotechnological production processes, mostly in the food industry, agriculture, and pharmaceutical industry. However, the progress in molecular biology, especially in connection with *in vitro* methods of the recombination, sequencing, and synthesis of DNA, which started to connect with the progress in cybernetics in a variety of ways, and the creation of the common, borderline discipline of bioinformatics have led to an interlacement of the biological and the technological on a much more intimate, information-molecular level. According to Thacker, the paradigmatic example of this interlacement is the biochip (Thacker 2004). Thacker understands biomedica as a complex biotechnological system that fuses two seemingly incompatible domains – the domain of life and the domain of technology – thanks to the fact that there is a fundamental equivalence between the biological/genetic code and the cybernetic code. Within the last ten years, this interlacement has become even more prominent in the nascent biotechnological discipline of synthetic biology. The question is to what extent this interlacement demarcates biomedica in the discourse about new media. We can use the classic definition of new media based on characteristic traits such as “digitality”, “interactivity”, “hypertextuality”, “dispersal”, and “virtuality” (Lister et al.

2009). Since not every form considered to be a new medium includes all of these together, there was a need for a sortal and essential property common to all new media. According to Manovich (2001), this property is transcoding, which is the transfer of certain encoded information from one new medium to another new medium. This is possible thanks to the fact that new media, in all their variety, have the same digital character on the level of source code – practically, they are all based on universal digital code. In new media, transcoding allows for the unprecedented permutation and recombination of elements not only from new media but also from traditional media, precisely because of the possibility to digitize any material object in the real world. This universal encoding also enables unprecedented remediation, whereby new media adapt the social and cultural ways of communication of older media for themselves (Bolter and Grusin 1996), or simply, as in the case of encoding information in the form of text, sound, and image into a DNA molecule, convert from one kind of digital code (computer) to another (biological).

The advent of bioart in the beginning of the twenty-first century,¹ a specific artistic reaction to the rapidly intensifying interconnectedness of biomedicine and modern technology (tissue engineering, stem cell research, gene therapy, and IVF), finding its way into ordinary life (direct-to-consumer gene tests), highlighted the problem of how to view the biological in the works of bioart, be it the living biological material itself or various biotechnological procedures. Is it a radically new form of emergent media or a continuation of the trend of new (digital) media? The term “bioart” (Bio-Art, BioArt, or bioart) itself, coined by Eduardo Kac in 1997, remains vague, and similar art forms are being called “Biotech Art”, “Genetic Art”, “Life Science Art”, “Moist-Media Art”, “Transgenic Art”, or “Genetic Poetry”.

The best known and universally accepted answer to this question is Thacker’s conception of biomediality, which are defined as another form of new/digital media (Thacker 2003, 2004). However, the usage of the term “biomediality” in bioart has demonstrated that Thacker’s definition is too narrow to encompass all aspects of the biological in the works of bioartists. The biomediality question remains a challenge, recently responded to by Hyesook Jeon, who thinks that it is incorrect to see biomediality as a branch of new media, since when seen from the perspective of media, “biomediality is not an extension of existing media but the introduction of a totally new field” (Jeon 2014, 64). Further she claims that the defining characteristic of biomediality in bioart is media convergence, connecting biological, cybernetic, and artistic media without digital code as a common denominator.

In our study, we will argue that biomedia are an extension of new media and that their characteristic property is transcoding based on DNA, which enables new forms of remediation in living organisms.

Biomedia in Bioart Are Not an Extension of New Media

Jeon (2014) asks: What is the meaning of biomedia used in bioart? She believes that an adequate understanding of what biomedia are is hampered by a too narrow definition of biomedia based on digitation or digitization, which is standardly used to define new media as well. Consequently, biomedia are mistakenly seen as a branch of new media. She claims that biomedia in the artworks of bioartists are a phenomenon of much greater complexity, their common characteristic being a convergence of biology, digital technology, and art media in the physical, code-logical, and content layer. Her goal is to redefine the media of bioart based on the principle of media convergence:

The convergence of biology, digital technology, and art media, which are at the level of physical and hardware layer (wetware), code-logical and software layer (dryware), and cultural contents layer (meaningware), is actually occurring within the work of bioart. The convergence of three layers implies that all of the significations that are connoted in each layer are combined together in bioart. The phenomenon of media convergence used in bioart reveals how bioartist's works, which combine living media with various technologies, critically reveal the issues and the ideologies surrounding bio-engineering. (Jeon 2014, 63)

Supporting her thesis, Jeon refers to the *Nature?* project by Marta de Menezes, realized in 1997 in a laboratory at the University of Leiden, targeting the development of butterfly wings. The artist intervened in the process of natural development, and the result was butterflies with asymmetric wing patterns that do not occur in nature. Her aim was to survey the borders between the natural and the artificial, between art and science, and between life and death. Transcoding played no role. Jeon mentions other works of bioart, which further stress the non-digital character of biomedia. In a bioart work named *Semi-Living Worry Doll* (2000), its authors, Oron Catt and Ionat Zurr, created a semi-living object, the first tissue-engineered sculpture, using stem cell technologies in the same way

as they are used in tissue engineering procedures. The artists' intention was to use semi-living objects to point out different perspectives of our understanding of life and technology, especially our fears connected with the use of biotechnology. These semi-living dolls were hand-crafted using degradable polymers (PGA and P4HB) and surgical sutures, and they were then seeded with living stem cells that were gradually replacing the polymers during the time of display. The most important aspect is the cultural connotation of these bioart sculptures. They were inspired by Guatemalan "worry dolls" traditionally given to children, who then confide their worries in these inanimate objects. The principle of digitization does not appear here at all.

Another example provided by Jeon is the installation of the American bioartist Paul Vanouse named *The Relative Velocity Inscription Device* (2002), which she considers to be a good example of biomedicine that remain biological while containing the social meaning of transmission and communication. According to Jeon, the works of bioart are supposed "to make us think about the meaning of life, to reveal technology that manipulates living beings, and to make us be aware of the hidden capital and ideology behind life technology. That is, although bioartists use bio-technology actually, they emphasize the *natural* law of *death*" (Jeon 2014, 64–65).

Jeon suggests that we leave the explanatory framework of new media as basically digital media and attempt to explain biomedicine as entities within the post-media condition of transcending media specificity, where idiosyncratic media exhibit aspects of converging. Referring to Henry Jenkins's book entitled *Convergence Culture: Where Old and New Media Collide*, she points out that it is more than a mere technological shift. In this context, the term "convergence" describes phenomena that include the flow of content across multimedia platforms, socioeconomic interaction related to production and consumption in the multimedia industry, and the transformation of media consumers' behaviour patterns as a result, describing technological, industrial, cultural, and social change.

Since Jeon rejects a digital, transcoding definition of new media, she sees the demarcation of biomedicine as they are present in the works of bioart in her analysis in the premodern tradition of the importance of biological media since the nineteenth century – in the fluids needed for the survival of cells and tissues *in vitro*.

The aspect of the living is the fundamental crux in studying biomedicine, but they have to be studied from the perspective of the principle of media convergence and not from the point of view of digitization and transcoding:

[W]hat bioart tried to emphasize through biomedia, that is, the importance of DNA and genetic information that genetic engineering has brought, the insight into both the bright future of the new world accompanying it and the negative and apocalyptic latent scenario, and discussion about what attitude humans should have towards other people as the other and the ecosystem in general. (Jeon 2014, 74)

Biomedia as a Specific Form of New Digital Media

Thacker does not attempt to define biomedia in the context of their significance in bioart but rather within the discourse of media or new media. He is not concerned with bioart at all. Trying to define bioart, he draws on Lev Manovich's respected conception of new media in *The Language of New Media*, where he presents a series of characteristics of new media, which distinguish them from earlier media such as film or television. These include principles of numerical representation, modularity, automation, variability, and transcoding. Most importantly, it is "the concept of transcoding that elaborates the most on the ways in which new media may transform certain visual, haptic, auditory, and corporeal habits specified by earlier media such as film" (Thacker 2003, 54).

Examples of simple transcoding include, for example, various kinds of file conversion procedures that translate between any two media objects (such as between GIF images and movie files). This means that there is a certain universality among heterogeneous media objects, with a universal code underpinning different media and thus making a horizontally multimediated space possible.

Thacker fully agrees with Manovich that "the biological and the digital domains are no longer rendered ontologically distinct, but instead are seen to inhere in each other; the biological 'informs' the digital, just as the digital 'corporealizes' the biological" (Thacker 2003, 54).

The second important source Thacker uses in his conception of biomedia is the concept of remediation, which, according to Jay Bolter and David Grusin, defines new media: "Again, we call the representation of one medium in another *remediation*, and we will argue that remediation is a defining characteristic of the new digital media" (Bolter and Grusin 1999, 45).

In the process of remediation, there are three subsequent processes: encoding, recoding, and decoding. According to Thacker, the best illustra-

tion of this in biomedica is the DNA chip, a paradigmatic example of his conception of biomedica. In the case of the DNA chip, encoding means using a computer to create a pattern of relationships based on knowing which sequences of DNA samples interact with the defined parts of DNA in the DNA chip. Encoding is basically moving from the biological domain to the computer domain. The information can be then processed in the computer using bioinformatic methods (level of recoding). The entire process of recoding takes place within the computer domain. The result of recoding can be a theoretical proposal of a new active substance interacting with the biological domain, for example, the design of a new drug. The actual creation of this substance constitutes the third level of biomedica processuality – decoding. Decoding is then a rematerialization of the body, the incarnation of biocybernetic information (Thacker 2003, 71).

It is important to be aware that Thacker's conception of biomedica fundamentally breaks the tradition of understanding life in digital media based on the dualistic Cartesian schema of mind and body. In the cybernetic space, life had the form of "evolution in silico", "biomorphs", or "artificial intelligence". The discourse about new media shows life in relation to the body – its connection to computers (cyborgs) or the simulation of sensory input in the virtual digital world of computers and their networks. The body, as it is approached in bioart and biomedica discourse, is missing. The relationship between the biological and the technological appears only within the cyborg discourse; the contact is only superficial.²

On the other hand, for Thacker the biological and the technological meet on a deep level, thus creating biomedica: "Biomedica are novel configurations of biologies and technologies that take us beyond the familiar tropes of technology-as-tool, the cyborg, or the human-computer interface" (Thacker 2003, 52).

For Thacker, there is no dualism formed by living matter and computers, by the biological and the digital: "It is not just that the medium is the message, but that biology is the new medium: the medium is a message, and that message is a molecule. This is the crux of the concept of 'biomedica'" (Ibid., 48).

These two premises – computational biology and biological computing – are informed by a single assumption: that there exists some fundamental equivalency between genetic 'codes' and computer 'codes', or between the biological and informatic domains, such that they can be rendered interchangeable in terms of materials and functions. (Ibid., 52)

This intersection between genetic and computer “codes” enables an intimate connection between the two disciplines – computer science and molecular biology – which had to wait for synthetic biology in order to be fully exploited.

The apparent paradox of biomedica is that “it proceeds via a dual investment in biological materiality, as well as the informatic capacity to enhance biological materiality” (Ibid., 53). Biomedica, according to Thacker, is not simply about the use of computer technology in the service of biology but rather about the intersection between genetic and computer “codes”, which results in a qualitatively different notion of the biological body – one that is technically articulated and yet still fully “biological”. Both domains, the biological and the digital, are no longer ontologically distinct; they merge together in a way that the biological “informs” the digital and at the same time the digital “corporealizes” the biological (Ibid., 54).

Finally, we can summarize Thacker’s conception of biomedica based on transcoding using his own words:

For Bolter and Grusin, a level of transcoding is implied in the very act of remediating; thus, remediating print or film in a new digital medium such as the Web suggests a transcoding, such that both a print object and a film object can be re-presented in a digital medium. Likewise, one of the things that Manovich’s characteristics of new media make possible is an unprecedented ability to remediate, permutate, and recombine media elements due to the technical code-conversion properties of digitization generally. In other words, the concept of “remediation” provides us with one meaning in the “cultural layer” of transcoding. For both Bolter and Grusin, as well as Manovich, the characteristic common to new media is this technical capacity to encode, digitize, and transcode various “things” from the real world (including other media objects). (Thacker 2003, 55)

We have a tendency to understand life as an analogue phenomenon, to consider living organisms to be exclusively analogue entities in contrast with inanimate entities, be they mechanical or digital. That might be the reason why we still do not fully realize that the genetic information stored in DNA molecules is digital in the proper sense of the term. The code used by nucleic acids is not binary (0,1) like computer source code and basically all human-crafted digital code, but quaternary (A, T, C, G), which, thanks to the trivial conversion between these digital systems (for example A, T = 1; C, G = 0, but there are many more possible ways), is an insignificant difference. However, the consequences of this fact are not trivial. Just as we are

able to use binary code to store any information – text, visual, or sound – on one single medium (e.g., HD, DVD, and flash memory), we are able to use quaternary code to store it in a DNA molecule.

Remediation and Transcoding in Bioart

Even though bioart is not subject to Thacker's analysis aiming to arrive at a definition of biomedial art, it is without doubt that several classic works of bioart fulfil his definition of biomedial art based on transcoding and remediation.

Back in the 1980s, Davis managed to get the molecular biologists at the University of California, Berkeley, and Harvard Medical School to teach him to synthesize DNA sequences and insert them into a bacterium. For his "message in a bottle" intended for aliens, he chose the graphical symbol known as the Microvenus,³ an ancient German rune that symbolizes life, schematically depicting female external genitalia. Firstly, he digitized the picture of the rune, then he translated the digital code into a DNA sequence twenty-eight nucleotides long, which he successfully inserted into the *Escherichia coli* bacterium in 1990 (Gibbs 2001). The *Escherichia coli* bacterium multiplies every twenty minutes, so in a couple of hours, one cell multiplies to several billion cells. In a couple of hours, billions of copies of the "info-gene" were created, to use the name Davis used to refer to the DNA sequence that contained information about this ancient German symbol of life. At that point in time, this was probably a record number of copies of a symbol. At the Ars Electronica 2000, Davis exhibited cultivation containers with bacteria carrying this "info-gene" together with posters showing the Microvenus symbol and a proper explanation of the work.

Probably the first poetry stored in DNA was the first verse of *Tomten*, a poem by Viktor Rydberg. It contained fifty words, which were translated into a sequence 800 nucleotide bases long and inserted into an *Escherichia coli* bacterium in 2005 by DNA2.0 in California. The verse was first translated into a sequence of amino acids (using single-letter amino acid code) and then reverse-translated into a DNA sequence from the resulting protein. The gene and its protein translation are stored in the GenBank international gene bank as EU600200 (Gustafsson 2009, 703).

Scientists from the Pacific Northwest National Laboratory in Washington, led by Pak Wong, translated the lyrics of the Disney song "It's a Small World After All"⁴ into nucleic acid code, used this to synthesize sequenc-

es of DNA 150 nucleotide bases long, and inserted them into the DNA of a *Deinococcus radiodurans* bacterium. This is an extremely resistant kind of bacteria, capable of surviving extreme conditions such as high temperature, drought, or radiation thousands of times stronger than the lethal dose for human beings. The purpose of this experiment was to find out whether it is possible to store human-crafted information in a medium that is capable of surviving many of the apocalypses that could threaten human civilization.

A much better example of transcoding as a characteristic feature of bioart can be found in *Genesis*, a well-known project by Eduardo Kac. According to the author of the term “bioart”, it is a “transgenic artwork” (Kac 1999). It is based on translating an abbreviated text of the Bible (Genesis 1:26, used in Kac 1999, 310) – “Let man have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moves upon the earth” – into DNA, so that an entirely new gene can be created and inserted into a living bacterium. It is a multimedia artwork that consists of the author’s commentary, the video projection of the bacteria that carry the *Genesis* gene, and music created by transforming the *Genesis* gene into notes and rhythms. Kac did not write the biblical text directly into genetic code, he did it through Morse code, pointing out that it was the first long-distance human communication system. He then translated the Morse code into genetic code using a simple rule: a dash = T, a dot = C, a space between letters = G, and a space between words = A.

For example, the first five words of the biblical text, “Let man have dominion over”, corresponded to this in Morse code:

..- - - - . - . - - - . - . - - - . - - - - . - - - - .⁵

And to this after translation into DNA:

CTCCGCGTATTG⁶

This is how Kac acquired the DNA sequence, which he termed the *Genesis* gene and inserted into bacteria. At the exhibition, the bacteria carrying this sequence were presented and participants had the opportunity to turn on ultraviolet light, causing the bacteria to mutate. This mutation also occurred in the *Genesis* gene, meaning that the biblical text in the bacteria changed. The mutations were identified and published on the Internet. The whole project symbolizes the possibility that inherited information does not stay the same; it can change and create new meanings.⁷

In this context, it is interesting to see how Kac's bioartwork, obviously using transcoding and remediation, can be interpreted as an example that contradicts the conception of biomedicine as transcoding in favour of the alternative conception of biomedicine as convergence:

In fact, we may see the various aspects of convergence generally occurring in bioart through Eduardo Kac's first transgenic artwork, *Genesis*. This work is an example of biomedicine convergence in which the layer of biological experiment based on molecular biology and living media, the layer of DNA data that can be translated into language and text by computer technology, and the sociocultural content generated through such media all converge into one. (Jeon 2014, 72)

Jeon goes on to stress that the way in which Kac's *Genesis* communicates with its spectators can be explained by the convergence principle. We can agree to a certain extent, but at a much deeper layer of interpretation, consciously used by the author himself, it is about evoking all the scientific-ethical-cultural connotations related to transcoding a text about the divine order that man is to rule the other living beings (the climax of this rule is genetic engineering, where man assumes reign over the essence of life). The transcoding of biblical texts into Morse code, the paradigmatic language of mechanical communication technology, makes it technical. The subsequent transcoding of the original biblical text from Morse code into the code of a DNA molecule, which becomes a part of a living organism, is a remediation of the biblical text into the form of biomedicine. The process of spontaneous mutation of the biblical text in the biomedium of microorganisms and its decoding into an altered version of the biblical text creates new connotations and interpretive frameworks for a novel understanding of creation, evolution, nature, technology, and biotechnology.

Thacker grounds his conception of biomedicine in the information potential of life on the molecular level, allowing for a new type of remediation: encoding the DNA information into online databases, enabling data mining in search of novel genes, then recoding, and finally decoding via synthesis of novel drug compounds: "Anytime we encounter this technical recontextualization of biological processes, we have an instance of biomedicine" (Thacker 2004, 40).

We believe that Kac's project of artistic remediation advances the borders of what biomedicine are – the mutating microorganism, whose genetic information contains biblical text, randomly modifies this text into a message that can be decoded. Biomedicine cease to be passive "wet media" and

become autonomous agents in some kind of reverse remediation – from biomedica to old media (for example, including the mutated text in the printed catalogue from the presentation of the Genesis project).

In his project named Xenotext, the Canadian poet Christian Bök takes bioremediation to the next level thanks to state-of-the-art biotechnology. He wrote a poem that could be transcribed into a DNA sequence and inserted into one of the most resistant bacteria known (*Deinococcus radiodurans*, also chosen by Pak Wong). The point was to write the poem in such a way that the rules of the genetic code are respected, so that transcribing it into an order of nucleotides will not produce stop codons, which stop the synthesis of the protein as a biological embodiment of the poem.

Christian Bök prophesizes: “In the future, genetics might lend a possible, literary dimension to biology, granting every geneticist the power to become a poet in the medium of life” (Bök 2013, 229). There is an additional metaphorical dimension: “Poets have always tried to produce ‘viable’ work – but I am trying to write a poem that literally lives” (Zala 2009, 35).

The last stage of the Xenotext project is transforming this new gene, a remediation of a poem, into an abstract sculpture – a 3D model of the protein produced in the cell based on the poem gene. Decoding in the process of remediation culminates in the creation of an actual protein in the bacterium based on the text of the poem, which can be understood as the bacterium’s interpretation, and at the same time the creation of a 3D model of the protein, a sculpture embodying the poem, enabling human subjects to interpret the poem visually and haptically.

Bök’s words clearly speak of his understanding of biomedica as artistic media: “Not simply a ‘code’ that governs both the development of an organism and the maintenance of its function, the genome can now become a ‘vector’ for heretofore unimagined modes of artistic innovation and cultural expression” (Bök 2013, 228–229).

The state-of-the-art technology of DNA sequencing and synthesis take us closer to a future where DNA is the most important medium providing reliable storage of gigantic amounts of information, such as the entire contents of the Internet. Thanks to the fact that the essence of DNA code is just as digital as the source code of computers and all other digital devices, any information that is encodable into cybernetic code – text, image, or sound – can be encoded into DNA molecules. The technological feasibility of this was demonstrated by Nick Goldman and Ewan Birney from the European Bioinformatics Institute in Hinxton near Cambridge in 2013. They encoded the complete collection of Shakespeare’s 154 sonnets, a part of Martin Luther King’s 1963 “I Have a Dream” speech, and Watson and Crick’s 1953

publication describing the discovery of the double helix structure of DNA (Sample 2013).

For the conversion of information, they created simple code that assigned every combination of eight zeros and ones in binary machine code to a combination of five DNA bases. For example, the eight-digit binary code of the letter “T” corresponded to the DNA sequence “TAGAT”. This way, “Thou”, the first word of Shakespeare’s Sonnet 18 (“Thou art more lovely and more temperate”), was converted into the following sequence of twenty bases: “TAGATGTGTACAGACTACGC”. This information fits into one molecule of DNA (with an unimaginably small weight, three hundred million times less than one milligram) and if stored in a cool and dark place, it could store the information for a very long time (at least hundreds of years).

Conclusion

Jeon asks the question of what biomedias are within bioart and comes to the conclusion that a definition of biomedias based on transcoding and remediation is too narrow to encompass all ways of using the biological in bioart. She claims that biomedias are the result of the convergence of three media or layers: the technological (dryware), the biological (wetware), and the cultural (meaningware). We tried to demonstrate that Jeon’s argumentation is mistaken in trying to use all known applications of the biological in bioart as a basis for defining biomedias. New digital media include materials capable of carrying the information in a digital form. These materials include the “information macromolecules” of living entities such as DNA, RNA, and proteins. According to Thacker, biomedias are supposed to utilize this capacity of biomacromolecules to carry information. Jeon correctly points out that several well-known bioartworks do not use the living material as an information-carrying medium, but rather as a representation of life and the possibility of biotechnological manipulation of life. These works are not about transcoding and the recoding of information from one medium to another, but rather about the immediate interlacement of the living and the inanimate in the bioartistic object in order to stress the contrast between life and death. With her conception of biomedias, broader but rather vague, we could give the name “biomedium” to any biological component in bioartworks, but we would have to give up the generic definition of the medium as a carrier of information. The question of “What

are biomedica?” would disappear, but the question “What are new, digital media?”, to which we currently have a relatively satisfying answer, would return. What is more, there would be catastrophic consequences for the entire discourse about media, because the question “What is a medium?” would require a new answer. And that is too big a price for a redefinition of biomedica separated from transcoding and remediation.

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Notes

1 http://www.viewingspace.com/genetics_culture/pages_genetics_culture/gc_w03/davis_microvenus.htm

2 <http://www.youtube.com/watch?v=nxvIKp-76io>, http://en.wikipedia.org/wiki/It's_a_Small_World

3 <http://www.ekac.org/biblemorse.html>,

4 <http://www.ekac.org/kacode.html>

5 <http://www.ekac.org/bom.html>

Pozor! V texte je vyznačených 7 poznámok.

4. Data Transformation in Heterotopic Space

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Abstract: Michel Foucault characterized heterotopias as specific spaces, which disrupt and overturn our existing systems, the hitherto valid order of things, and our ways of thinking. They are significantly important, particularly from the point of view of culture, since they affect cultural dynamic transformations. This study points out that we presently discover such specific spaces mainly by means of modern technologies. In digital media, the database – a collection of digital data – has a heterotopic character; it neutralizes the present forms of orders and preferences. Images, sounds, and words are loosened from their indexicality and are converted into numerical code, which enables the modification and combination of the obtained data. The database thus represents a new type of space, which subverts the standard organization of signs. Modern technologies also unveil other unconventional spaces of our micro- and macro-worlds. The newest medical technologies, such as ultrasound, computed tomography, and magnetic resonance imaging, penetrate through the surface of the human body into the depths of biological structures in order to obtain their image, and they even make the molecular system of the human body visible. This molecular system can be characterized by high complexity, multifunctionality, and highly variable interactions, and the medical technologies in a certain way contribute to the fact that our forms of knowledge are constantly enhanced, extended, and sometimes even refuted. This current expansion of heterotopia corresponds with Foucault's opinion that every epoch creates its own spaces, which strive to gain their legitimacy. It is interesting that in both cases of the above-mentioned examples of heterotopia, the data transformation can be seen as a significant form of their element arrangement, and thus the borders between semiotic systems as well as between scientific and artistic discourses are gradually wiped out.

Introduction¹

In the background of every culture, there are certain basic codes which regulate and form the way in which we perceive, think, act, and judge. According to Michel Foucault, they function as identification criteria, or grids, by means of which we search for similarities and dissimilarities, analogies, and differences between individual elements of our culture. They help us to establish the order in which all objects appear in a well-arranged and organized way. On the one hand, in every culture there can be found something that we might call the “arranging of cultural codes”, but on the other hand scientific and philosophical reflections

which try to provide an explanation of the nature and principles of this given order are present there as well (Foucault 2002, xxii). Between these two areas, Foucault found a third one which can be called “the middle” area. In spite of the fact that the middle area is not easily analysable, it is of paramount importance for culture. It is the area in which culture gradually diverges from the established order and loosens its bonds to it. By shifting the established point of view, it neutralizes the existing perceptual, linguistic, and practical grids, and thus subjects them to criticism. A thorough analysis of this third area leads us to the conclusion that every order is culturally and historically conditioned and thus only temporarily valid. Any change of our cultural point of view, or employment of a new grid, disrupts the existing arrangements and forces us to think differently.

The peculiar classification of animals which Foucault found in a passage in Borges, and by which he introduces his book *The Order of Things: An Archaeology of the Human Sciences* (1966), has this disruptive power. The division that he presents evokes both smiles and admiration for the author’s creativity and imaginative ability, while at the same time also sharpening the attention of the thoughtful reader.² Having become familiar with Chinese taxonomy, he had to cope with “the stark impossibility of thinking that” (Foucault 2002, xvi), and all of a sudden he faces the limitation of our own Western way of thinking, which is successfully undermined by the above-mentioned classification. The problem is not simply the oddity of unusual and bizarre juxtapositions of incongruous objects that are mentioned in the classification; it is the destabilization of the established order which normally provides the foundation for our orientation in the world and our way of thinking, which is dependent on concrete historical, cultural, and geographical spaces. In contrast to this order, the cited classification represents a certain disruption, violation, and questioning of preferred ways of perception and thinking. Based on these facts, Foucault notes two specific types of disorder which destabilize standard arrangements and imply that the given cultural order does not have to be the only possible one, or even the best one. These types are *utopias* and *heterotopias*. Both these spaces (topoi) are related to all other spaces in such a way that they call into question, neutralize, and disrupt fixed sets of relationships (Foucault 1997, 332). The reason why utopias can be classified as disorders is the fact that, in contrast to a real space, they represent an unreal, imaginary space. Utopias are spaces without any real locality – placeless places that are impossible to enter (Foucault 1997, 332). In contrast to utopias, heterotopias are real. However, as types of spaces, they are different

from the usual types of spaces that we know and are therefore disturbing. In *The Order of Things*, Foucault notes:

“Heterotopias are disturbing, probably because they secretly undermine language, because they make it impossible to name this and that, because they shatter or tangle common names, because they destroy ‘syntax’ in advance, and not only the syntax with which we construct sentences but also that less apparent syntax which causes words and things (next to and opposite one another) to ‘hold together’”. (Foucault 2002, xix)

Consequently, through the disintegration of standard syntactic relationships, heterotopias make narration more problematic, as is evident in the case of Chinese taxonomy. In order to make it more comprehensive, Foucault later expanded the concept of heterotopia in *Of Other Spaces* (1967). He came to the conclusion that every community creates its own heterotopias, such as hospitals, prisons, gardens, cinemas, theatres, libraries, and ships, which are places with a specific organization and special means of entry, which suggests that we should move and think differently when we are in them.³

Based on Foucault’s suggestions, we would like to point out that specific heterotopias – spaces different from those that we are accustomed to – are presently discovered by means of modern technologies. Digital technologies penetrate deep under the surface structure of conventional real places or material objects and reveal the unknown dimensions of micro- and macro-worlds. This is particularly apparent in the realm of digital media and modern science. Digital media constitute a new type of space – the database – a specific space has grabbed the attention of many contemporary creative artists. The database, which is a set of digital data, neutralizes pre-fixed forms of order and preference. Images, sounds, and words are loosened from their original indexicality and are converted into numerical code, which enables the modification and combination of the obtained data. The database thus represents a new type of space which subverts the standard organization of signs. Newly created heterotopias can also be identified in modern biomedicine. The newest medical technologies, such as ultrasound, computed tomography, and magnetic resonance imaging discover the hitherto invisible internal environment of the human body. They enable us to image the human body at a molecular level and reveal new detailed structures and different patterns of arrangements from those we are accustomed to. The new visualizations of hitherto unknown spaces and the internal environments of the human body in many

ways specify, extend, and even completely refute our biological and medical forms of knowledge. The phenomenon of the current expansion of heterotopias corresponds with Foucault's opinion that every epoch creates its own spaces which strive to gain their legitimacy by opposing existing ones. This contribution seeks to point out that both types of heterotopia are breeding grounds for the phenomenon of one media form transforming into another, while the borders of all involved media are gradually wiped out. Furthermore, the fact that the experimental possibilities of digital databases and attractiveness of digital imaging that lure contemporary artists have resulted in several versions of mapping, bio-art, and science-art cannot be omitted.

The Database as a Heterotopic Space

The technological qualities of digital media have already been the subject of several specialized analyses (e.g., Feldman 1997, Manovich 2001). With respect to the theme of this work, we are only interested in those aspects which are indispensable in the digital environment for the constitution of a new heterotopy such as the database. *Numerical coding* can be considered a generally acceptable key element of digital media. Through numerical coding all sorts of information can be recorded and preserved. According to the well-known theoretician of new media, Lev Manovich, this aspect of digital media has several significant implications: first, all elements of media are mathematically coded; second, the elements might become the subject of algorithmic manipulation (Manovich 2001, 27; see also Feldman 1997, 4). Manipulation by means of appropriately chosen algorithms is enabled by the fact that all pieces of information are recorded in the same code. They do not have any permanent or static value but can rather be seen as dynamical variables. Media forms based on numerical code such as images, texts, and sounds, which lack their original meaning and content, are likely to be further modified and transformed. Another significant feature of digital media that enables modification is their *modular character*. At a higher level, the individual elements of digital media consist of discrete units (such as pixels, voxels, and polygons) which are stored separately from each other so they can be easily exchanged, replaced, or deleted without the necessity of exchanging the whole medium (Manovich 2001, 30).⁴ According to Manovich, these two aspects are fundamental prin-

ciples for many other technological features of digital media. The same numerical code and modulation enable, for example, the automatization of several operations during the creation, storing, and sorting of data, and at the same time they are also essential for *updates* and *transformations* of various media forms, which can be potentially unlimited. In this regard, digital media are significantly different from their analogue predecessors since users of analogue media could only create identical (though numerous) copies and not heterogeneous variants.⁵

The fact that digital media serve as a basis for the constitution of a new specific space which differs in form, function, and content from other spaces makes their above-mentioned aspects relevant. A database is a set of digital data stored in an internal or external computer storage medium. In the terminology of information sciences, this is a *structured set of data*, the main function of which is the effective search for information by means of a special language (e.g., SQL), whereas several functional models can be used for data management which are mostly relational, hierarchical, and network- and object-oriented (Downing et al. 2009, 127).⁶ In a broader cultural sense, such highly structured models are not always applicable, so a database can then be simply seen as a *collection of data* which can be used for various operations, such as selection and replacement, whereby the user transforms selected data into a certain desirable form (Manovich 2001, 219). In both cases, a database can be considered as an example of heterotopia. Although it is a virtual space, we should take into consideration that in this case the term “virtual” might be interpreted as possible, feasible, realizable, or achievable,⁷ because a database is a type of space in which it is possible to interactively⁸ enter, work, and communicate; in this regard, it differs from a utopia, a placeless place, which, according to Foucault, is impossible to get into. A database is a specific environment with unique content and its own system arrangement, and these two characteristics are the key elements of a heterotopia. Its content consists of digital sets of data originating from various discourses, cultural and historical contexts, and various semiotic systems. Due to its disparate content, its layout mode stands outside of conventional syntactic, semantic, and compositional rules. These rules were applicable only within one concrete system. Since the meaning of all the pieces of information is neutralized, and since they are stored flexibly in the form of numerical code in a computer storage medium, there are enough possibilities for various combinations and transformations in new unconventional sorts of arrangements depending on the user’s creativity. New structures produce new meanings. This is the reason why a database is not only a store of collected data but also a pro-

ducer of new meanings (Frieling 2004, 3). As a new form of heterotopia, it creates alternative modes of arrangement, and thus it presents reality from different angles. It disturbs us. Or maybe it is a creative restlessness that forces us to see and think differently. Evidence of the fact that we are dealing with a new type of space is the presence of a special means of entry which is typical for heterotopias. If the means of entry was not present, there would be no reason to speak of a special type of space. The special means of entry into a database, which both isolates it and makes it penetrable, is the interface. And since we enter a database through its interface and then influence it by our work, even leaving traces there that affect the overall shape of it as well as our way of thinking and thus our culture, we can speak of a heterotopia *par excellence*.

In relation to other spaces, heterotopias perform certain functions which oscillate between two opposite poles. According to Foucault, they either create spaces of illusion or compensation (Foucault 1997, 335); in other words, they reflect dominant preferences and their ways of arrangement. And a database performs this function. It represents that mode of the world's structure that is different from narration, which for a long time dominated in various discourses since it provided the legitimacy of the discourses and determined their competencies. The dominant feature of a database is its anti-narrative logic, by which it follows the tradition of distrust of great narratives and meta-stories initiated by postmodernism (Lyotard 1993, 143). While narration follows the logic of cause and effect, and thus preserves a certain linear development, a database is a collection of data which do not necessarily constitute an orderly unit. Manovich comments on the nature of this difference:

“As a cultural form, the database represents the world as a list of items, and it refuses to order this list. In contrast, a narrative creates a cause-and-effect trajectory of seemingly unordered items (events). Therefore, database and narrative are natural enemies. Competing for the same territory of human culture”. (Manovich 2001, 225)

The logic of plurality, of a database, stands in opposition to the consistent mode of logically organized sequences of events, which is manifested for example in contemporary artistic forms of databases such as multimedia encyclopaedias, collections of photographs on CD-ROM, virtual museums, galleries, and finally web pages. A typical feature of all these examples is that any user can enter them and not only browse the individual items according to a default setting but also edit and replace items

or add new ones – a web page is good example – making the result more of a heterogeneous collection than a compact narrative. After all, it is difficult to maintain a straight developmental succession if the basic, fundamental material perpetually changes. However, this does not mean that the database can substitute narration in all regards. As a type of heterotopia, it presents different, alternative possibilities to those of narration and advocates a viewpoint of plurality. However, in this regard Manovich points out at least one important fact: a change of priorities. While in the old media the syntagmatic level (narration) was explicitly present and the paradigmatic level (choice of possibilities) remained implicit, digital media invert this relationship. As a collection of possibilities, the database has become explicit while narration remains implicit (Manovich 2001, 230–231). The change of priorities indicates the state of our contemporary cultural preferences and undoubtedly emphasizes a particular ability of heterotopia: the ability to call into question any actual preference and thus demonstrate that any preference has only a temporary historically- and culturally-conditioned validity.⁹

Data Transfer in Art: Mapping Art

Besides the fact that in a digital environment there is the possibility to identify the constitution of a new heterotopia, such as a database, a collection of digital data, one cannot omit transformation as a significantly remarkable means of elemental arrangement. The fact that all data in a digital medium use the same numerical code makes transformation to any other media format easy. Manovich uses the term “transcoding,” which is a transcription of content into another format, and regards this feature as the most significant implication of digital media (Manovich 2001, 45). These technological features are remarkable mainly for one reason: they provide space for artistic and aesthetic imagination. They are presently used, for example, in the art of mapping, which is an art that is thriving nowadays and which includes text, music, sculpture, and architecture (Simanowski 2006, 70–71). Although “mapping” comes from cartography, where it denotes the drawing of graphic symbolic representations onto a map, it has recently acquired new meanings, particularly in connection with computer graphics and digital artwork.¹⁰ The flexible database format allows artists to configure data in many different ways, transfer them, and insert them

into new contexts. Primarily, the flow of data, which can be transformed into an unconventional harmonic shape, has become their source of inspiration. The art of mapping has shaped itself as an alternative means of data layout which has absolutely no ambition to correspond with standard systematic ways of data organization. Mapping combines data coming from various forms of art as well as from various discourses.

Mapping, an art based on data transfer, represents a specific form of contemporary art; however, according to Roberto Simanowski, it is also an example of the remediation of photography (Simanowski 2006, 74). He notes that mapping, like photography, unifies the documentary character with subjectivity, or, in other words, the documentary record of reality with a subjective choice of visualization. On the one hand the artist uses data from the database in the same form in which they are recorded, but on the other hand he chooses the way in which they will be transformed and presented. It is, therefore, possible to find traces of an old medium in a new one and uncover an artistic photographic strategy in the art of mapping. However, unlike photography, mapping can be characterized as being highly dynamic, since what is emphasized is not the result itself but the act of transformation, which is performed before the very eyes of a receptive viewer. While photography represents the events of the past, the art of mapping is performed at the actual time (Simanowski 2006, 74). At the same time, this unambiguous emphasis on the data transformation process foregrounds the question of material processed in mapping, i.e., digital data. If the material itself is thus foregrounded and centralized instead of being suppressed, then it is evident that the art of mapping uses the logic of hypermediacy as described by Jay David Bolter and Richard Grusin. In contrast to the logic of immediacy, which aims at the transparency and invisibility of a medium in favour of the work of art, the logic of hypermediacy focuses on the visualization of medium in the creative process. Both logics can be considered strategies of remediation reflecting the relationships of old and new media (Bolter–Grusin 2000, 45). Since the art of mapping stresses the process of data transfer from one form of medium into another, by which it applies the logic of hypermediacy, it can, therefore, worthily be considered an example of remediation.

The database demonstrates its difference from other types of space most notably by the specific manner of its elemental arrangement. The transformation of digital data, which is potentially unlimited, dissolves any hitherto valid elemental arrangements, opens new insights, and produces new meanings, which is good evidence that the database by its character can be considered a heterotopia. Therefore, it is not surprising that it at-

tracts the attention of many mapping artists. However, it should be noted that these artists cannot do without the appropriate technological knowledge or cooperation of specialists. Art and technology, therefore, not only inspire one another but also overlap and modify each other.

Heterotopias and Transformations in Science

The database is certainly not the only example of newly emerging heterotopias. Owing to the broad application of modern technologies, other spaces of micro- and macro-worlds, which very often refute or complement our knowledge, can be discovered. They function as heterotopias or other spaces – spaces different from those that we have been familiar with until now.¹¹ An example of this expanding phenomenon can be seen in biomedicine, which is one of the most well-known branches of modern science. The following part of this study briefly discusses the fact that in this field it is also possible to identify the presence of heterotopia, and it is also possible to observe the transformations which inform about the character of the newly emerged space.

Several new technologies have recently established themselves in biomedicine, which by means of light, ultrasound, and magnetic resonance imaging penetrate through the surface of the human body into its biological structures in order to obtain their visual image. The tendency to reveal to the human eye inaccessible and unknown spaces and to record their structure as a visual representation is not new in the history of medicine (Sturken – Cartwright 2009, 352–353). However, the rapid development of these technologies has enabled significant progress. For example, X-rays in computed tomography pass through an examined organ at different angles and it is thus possible to obtain important raw data which are then computer-processed and transformed into a visual representation. The obtained image of the internal organ of the human body consists of several thin layers which were scanned at different angles. Magnetic resonance imaging is based on the physical principle of a strong magnetic field and radio waves as well as the monitoring of changes in behaviour of hydrogen atoms in the magnetic field environment. The obtained data are transformed into detailed images of internal tissues by using complicated algorithms. As in computed tomography, the digital images are basically two-dimensional cuts which can be converted into volumetric 3D images.

Ultrasonography is used for the examination of soft tissues and is based on the application of ultrasound which echoes off the tissue. Echoes are then recorded and converted into a graphic record (Möller – Reif 2015).

The above-mentioned examples are just a few of the many methods and technologies used in biomedicine for diagnostics as well as for expanding knowledge of the human body. In terms of the theme of this study, they can be seen as sufficient and adequate illustrations. These methods demonstrate that the molecular system of the human body, which is explored by using modern technologies, can be considered a unique form of heterotopia. The space that is studied has a highly complex structure which is a result of varied interactions at various levels of the human body as a single unit (Mayr 2002, 23–29). Individual parts of this system are mostly multi-functional, and it is too difficult to describe their function in full detail. Therefore, in terms of their diverse aspects they have become the subjects of study in various branches of science. Since this highly complex and unique space perpetually modifies our existing knowledge, it can be considered a very important example of heterotopia. Its importance derives from the fact that we learn new facts about ourselves and the human body. A special means of entry into this space can be accessed by using medical technologies.

It should be noted that data transformation also plays an important role in the visual representation of invisible molecular parts of the human body. For example, different physical properties are monitored in magnetic resonance imaging, e.g., radio-frequency impulses, magnetic fields, and the density of hydrogen atoms. By using mathematical algorithms, the resulting image of the tissue is later generated from these properties. Such an image is the result of multiple transformations of measured physical data into their final visual representation. In ultrasonography, acoustic data are transformed into a graphic record. Ladislav Kesner notes that the digital images of biological structures obtained in the process of data transformation are not always isomorphic with their object, and they mostly have the character of a difficult *construction* (Kesner 2007, 169–171). The resulting image may even be modified in several ways. While art unanimously welcomes the possibilities of new constructions and designs for its experimental projects,¹² science, which aims at objectivity and accuracy, must be very careful in interpreting synthetically created digital images. While we can philosophically speculate about the objectivity of such a constructed image, its benefits in medical practice and in expanding knowledge of the human body cannot be denied (Kesner 2007, 170).

The biological structures of the human body have gradually become an attractive theme for contemporary bio-art and scientific art. In their work,

artists use cells, tissues, molecules, and genes, which they include into their visual images, and they do not even shy away from post-human visions where they combine human and non-human structures. It is worth mentioning the artistic works of Suzanne Anker, Mark Dion, and Eduardo Kac in this regard. Another interesting project, which originated in Slovakia, is the *Human Anatomy VR* educational application by Tomáš Brngál and Miloš Svrček, which functions as a comprehensive human anatomy atlas and provides useful information for medical students in 3D form. Projects like this prove the fact that heterotopias, like the molecular system of the human body, are an inexhaustible source of inspiration not only for scientists but also for artists.¹³

Conclusion

Michel Foucault characterized heterotopias as specific spaces which call into question, disrupt, and overturn our existing systems, the hitherto valid order of things, our ways of thinking, and our ways of attaining knowledge. They are significantly important, particularly from the point of view of culture, since they affect cultural dynamic shifts and transformations. The main aim of this study was to present the idea that such specific spaces are presently discovered and explored particularly by means of modern technologies. In terms of digital media, the database, a collection of digital data, has a heterotopic character; it subverts the standard arrangement of signs and enables the creation of innumerable variations and unconventional combinations. Modern technologies also reveal the other marvellous spaces of our world. One of them, for example, is the molecular system of the human body, which can be characterized by its high complexity, multifunctionality, and highly variable interactions; owing to these characteristics, our forms of knowledge are perpetually enhanced, developed, and sometimes even refuted. It is interesting that both of the above-mentioned examples of heterotopia use data transformation as a significant form of their elemental arrangement, where the borders between semiotic systems and scientific and artistic discourses are gradually wiped out. Lev Manovich ultimately concurs with this and considers transcoding to be the most important implication of digital media. Undoubtedly, one of the reasons is the fact that the domains of technology and culture increasingly affect each other.

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Notes

1 This article is a mildly modified version of the study: Tomašovičová, J. "Heterotopias and transformations in art and science," *World Literature Studies* 2017, Vol. 9, No. 3, pp. 3–13. It was written at the Department of Philosophy and Applied Philosophy of the University of Ss. Cyril and Methodius in Trnava as a part of the *Hypermedia Artefact in a Postdigital Age* research project (Vega No. 2/0107/14).

2 In one of his texts, Borges divides animals into the following categories: "a) belonging to the Emperor, b) embalmed, c) tame, d) sucking pigs, e) sirens, f) fabulous, g) stray dogs, h) included in the present classification, i) frenzied, j) innumerable, k) drawn with a very fine camelhair brush, l) etcetera, m) having just broken the water pitcher, [and] n) that from a long way off look like flies" (Borges in Foucault 2002, xvi).

3 In medicine, heterotopia is the presence of a particular tissue type at a non-physiological site. Another frequently used term, "dystopia," denotes an undesirable place, an antonym of utopia. Accessed 5 June 2017. <https://en.wikipedia.org/wiki/Dystopia>.

4 There is an interesting parallel between linguistics and digital media. Digital media contain levels of discrete representation and so does language: language divides reality, a continuous spectrum, into a series of discontinuous terms and discrete units on several levels (sentences, words, and morphemes), which enables communication (Manovich 2001, 28–29).

5 Jakub Macek deals with various aspects of characteristic features of digital media (Macek 2013). The influence of these features on electronic literature is further analysed in the works of Zuzana Husárová (2012, 79–90).

6 In the *Dictionary of Computer and Internet Terms*, a database is defined as "a collection of data stored on a computer storage medium, such as a disc that can be used for more than one purpose" (Downing et al. 2009, 127).

7 According to the *Slovak Dictionary of Synonyms*, synonyms of the adjective "virtual" are: 1. *possible* – feasible, realizable, performable, achievable, conceivable..., and 2. *unreal* – inauthentic, nonviable, abstract, fictitious, simulated, illusory, unnatural... Accessed 5 June 2017. <http://slovniky.juls.savba.sk/?w=virtu%C3%A1lny&s=exact&c=V378&d=sss&ie=utf-8&oe=utf-8>. See also: <http://www.thesaurus.com/browse/virtual>.

8 With regard to the term "interactivity", Bogumiła Suwara stresses that "in new media, the term does not apply to physical interaction (clicking, opening/closing a port, [and] body movements) but concerns psychological interaction. The following psychological processes might be involved: supplementing missing information, hypotheses formulation, updating

already known information/data, and identifications necessary for understanding a text or a picture” (Suwara 2012a, 193).

9 Róbert Gáfrík controverts Manovich’s point concerning the possibilities of applicability of new media to literary science. According to Gáfrík, Manovich’s book *The Language of New Media* only partially expands the horizons of literary scientists (Gáfrík 2008, 128). From the point of view of culture and philosophy, this book provides valuable insights into our culture in an age of the increasing influence of digital media. Manovich even considers the database to be *the cultural form* of our century (Manovich 2001, 225).

10 Katarína Ihringová dedicates her work to the study of the close connection between cartography and art as well as to the appropriation of cartographic semiotics in art in the wider context and in the concrete examples of Slovak visual art (Ihringová 2012, 148–170). See also: Sieber 2013, 93–106.

11 Pavol Rankov reflects on new spaces that are emerging together with digital technologies. He deals with the creation of such spaces in the digital environment, where terms such as “architecture,” “map,” and “chatroom” are being increasingly used. He is aware of the ability of new technologies to uncover spaces hitherto inaccessible to us (Rankov 2006, 23).

12 In discussing the visual synthesis which is not created by means of an optical instrument but rather by means of medical technologies, such as magnetic resonance imaging, Bogumiła Suwara points out the dangers concerning attempts at their interpretation (Suwara 2012b, 217).

13 Neuroaesthetics is a new scientific subdiscipline that combines scientific and artistic approaches to the neurological mapping of the perception of a work of art. Its visions, objectives, and interaction with the history of art is analysed by Katarína Ihringová (2016, 132–139).

**5. On the Path to the Remediation
of Academic Genres
and Their Presence/Absence in Central Europe**

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Abstract: Along with new ideas inspiring the design of science and knowledge, we observe numerous innovations in the ways of publishing research outcomes. It is possible that digital media together with artificial intelligence are causing permanent changes in scientific communication and in the design of research and publications. In the humanities, this phenomenon has led to the production of academic video and “born-digital” publications. How do these tendencies and initiatives fare in the environment of Central European universities? We have conducted an inquiry into this issue within the pilot research project named “Interfaces of Science” and the answers given by Slovak, Czech and Polish scientists and researchers indicate that they do not have good conditions to develop zeal and openness.¹

Introduction

It seems that similar to the case of digital media (“New Media”) spreading to the process of literary creation, the production of scientific publications has also been subject to the growing strength of their influence. In the field of literature, attention has been paid to investigating the material aspects of the medium in a comprehensive analysis (not necessarily a digital one, see *Media-Specific Analysis* by Katherine Hayles, 2007). The inclusion of digital media into academic work processes often raises questions regarding media innocence, autonomy of scientific publications and beliefs about the constancy of scientific standards. It is possible that digital media together with artificial intelligence are causing permanent changes in scientific communication and in the design of scientific studies, including scientific publications. To what extent are academics willing to use digital media?

It is legitimate to connect notions referring to the penetration of New Media into academic publications with the emphasis of construing the computer as “a medium” or just as “instrumentarium” (tools). And therefore, to go rather towards establishing systems that create digital documents (Ted Nelson 1977), or towards strategies focusing on the use of the digital space of written characters (Jay Bolter), specific media analyses of digital forms (Katherine Hayles), or the generative aspects of the creation of texts (Nick Monfort) are needed.

The first person who systematically addressed the possibilities offered by computers in the process of creating texts in a digital form was Ted

Nelson in the 1970s. His were mostly visionary ideas about the systems and structures that would simplify and enrich the process of document creation by comprehensive strategies of text cross-referencing or allowing parts of documents to be written into one another. So, the text would be structured in a way that would continue the process of improving an ideal hypertext system which Nelson dubbed “Xanadu”. Nelson’s notion of a hypermedium was then spread – for example, Janet Murray highlighted the procedural aspect and interactivity (Murray 1977). That is also why she, in her later publication *Inventing the Medium: Principles of Interaction Design as a Cultural Practice* (2012), presents the computer as a medium that is not only spatial and encyclopaedic, but also procedural and participatory. Murray describes these features of the computer medium in the context of creating web 2.0 structures, producing and processing metadata, developing various activities of human-computer interaction (HCI), and points out new cultural practices they determine. For example, new rituals (gestures mediated via computer installations, using Kinect, etc.) as well as new cultural conventions of content representation.

In this study, I would like to look at academic publications from the point of view of searching for new conventions of content representation. In the contribution, I will not address the issue of freedom/unfreedom of publishing the results of academic work – in the sense of the academic freedom tradition (slightly different in Europe and in the USA), which is now strongly influenced by restrictions and pressure from institutions providing employment, funding, or publishing service.² However, I will mostly present examples of remediations of digital-born academic essays and academic video essays.

At a time when the concept of remediation was being developed, Jay David Bolter advocated a view according to which the late 1990s offered suitable technical and methodological conditions to remediate academic publications into a hypertext structure. In his book *Writing Space: Computers, Hypertext, and the Remediation of Print* (2001), Bolter drew on the period ideas of universal textile practices, e.g. making use of structures: non-linear (Barth), fragmentary (Derrida), and rhizomatic (Guattari). That was why he promoted the “translation” of academic publications in the humanities (academic essays) into hypertextual instruments. It is surprising, however, that despite his erudite argumentation, the academic community was wary about his call and took a rather cautious than sympathetic attitude. Today, we have to extend Bolter’s points of departure, which were entrenched in opinions of that time, not only by the tendencies – growing particularly in the recent decades – of erasing boundaries between sci-

ence disciplines (from interdisciplinarity, through transdisciplinarity all the way to anti-disciplinarity), but also by the process of knowledge globalization (“transnational turn”), accessibility of visual media tools as well as practices of new knowledge design.

Why did hypertext essays not become a common academic practice (not just in Europe) and what limitations are related to the video essay? I will try to answer this question using empirical examples of “digital born” academic publications initiated by the American Historical Review (USA) and the activity of the inventors of the “academic video essay” published on the platform called “Audiovisual Thinking” (Western Europe). I am also interested in how these tendencies resonate among academics working in the humanities at universities in Central Europe. To what extent are they open and inclined to such practice? I probed into this issue in the pilot project titled “Interfaces of Science”.

New Forms of Designing Science/Knowledge

The work of Joichi Ito (2016) encourages us to accept an understanding of science which opens scientific research to the new challenges of civilization instead of tightly keeping to existing structures. As this concerns not only the discovery of “scientific truths”, but also important ideas, thoughts, views, and related social practices, the founders of the anti-disciplinary *Journal of Design and Science* envision the future of science through analogy and cooperation with design. On the one hand, science turns into a set of projects whose scope includes the production of new systems which may get out of control; on the other hand, a researcher is no longer an external actor in relation to the project but rather an active participant.

The new design of science is accompanied by new phenomena in academic work which also permeate educational processes (Senchyne 2016). Based on the humanities as an example, Jeffrey T. Schnapp describes the issue accurately in his recent publication titled *Knowledge Design: Incubating New Knowledge Forms, Genres, Spaces in the Laboratory of the Digital Humanities* (2014). Instead of a general notion of science, he works with the concept of “knowledge design”, a reaction to the digital entanglement of contemporary humanities. Schnapp uses the term “Knowledge Design” to relate to the academic work of contemporary humanists, which, on the one hand, interconnects the analogue culture – that is, the traditions of

academic method of research in the humanities, particular genres and forms of knowledge sharing – and, on the other digital content created in a shared and ubiquitous digital environment. This state of the interface (interconnection) thus becomes a motivation to do experiments using the tools of research in the humanities, as well as to seek ways to share the results of such research. The qualitative research that has so long dominated in the humanities will now have to struggle and compete with quantitative statistical procedures and solutions. Interpretations and descriptions have to face the power of graphical presentations of content and/or designed content and information.

Another consequence of experimentation is the erasure of the boundaries between libraries, archives, museums, as well as between the didactic and academic process. It is in order here to ask the question: “How to weave together forms of visual and verbal (and – why not? – acoustical, tactile, and olfactory) evidence? How to chunk information in a world that demands short as well as long forms, and where iterative and multichannel publishing is increasingly the norm?” (Schnapp 2014).

Thus, these new forms of publication indicate a role of participation in the production of information, not only in the meaning coined by Marshall McLuhan (the medium is the message), but also in the one preferred by Lev Manovich within the perspective of *infovis* (2011), arguing that visuality – as an aspect of structuring and designing information – is an important aspect of the production of scientific publications. There are many examples of this, but particularly noteworthy are the projects in the varied portfolio of the Dig@Lab website (diglab.org). In this chapter, we will describe two projects, one focused on the production of fully “born-digital” scientific publications and the other dealing with the publication of audio-visual academic recordings.

In the 1990s, there was a tide of enthusiasm concerning the new possibilities of hypertext technology – apart from being a profitable business tool (enabling contact with customers through web browsers) and a new field of exploration for artists (net art, New Media art) and writers (literary hypertexts), it also inspired new academic environments for the humanities. The new challenge was to produce fully “born-digital” scientific publications. One of the contemporary examples is the initiative of the editors of the *American Historical Review*, who started experimenting with various forms of scientific publication based on an existing structure of digital archiving of historical sources. They offered this possibility to several historians and the initiative has led to several projects being started: in 2000, Robert Darnton published *An Early Information Society*:

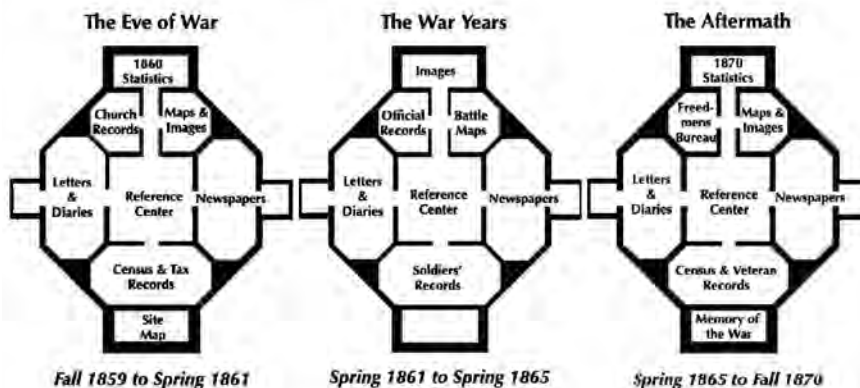
News and the Media in Eighteenth-Century Paris; in 2001 (2000) (Picture 1), Philip J. Ethington published the hypertext project *Los Angeles and the Problem of Urban Historical Knowledge* (Picture 2); and in 2003, William G. Thomas published the article *The Differences Slavery Made: A Close Analysis of Two American Communities*, which is also available in a hypertext version, created for the website of the *American Historical Review* in cooperation with Edward L. Ayers – all of these three projects can be accessed online.



Picture 1: Imaging the French Revolution: Depictions of the French Revolutionary Crowd (February 2005)



Picture 2: Screenshot – Phil Ethington *Los Angeles and the Problem of Urban Historical Knowledge* (December 2000)



Picture 3: The Valley of the Shadow: Two Communities in the American Civil War

Starting from his cooperation with Thomas, Ayers went on to produce a greater project, the platform titled *The Valley of the Shadow: Two Communities in the American Civil War* (Picture 3), which was launched in 2002, receiving the James Harvey Robinson Award from the American Historical Association (AHA) as the best teaching project.

This project is particularly significant for us not only because it offers a fully digital genealogy (created with digital tools and presented in a digital environment), but also because after a few years of existence, one of the authors recounted its creation both from the author-participant perspective (self-ethnography) and from the perspective of a participant of digital scientific communication. In the article titled *Writing a Digital History Journal Article from Scratch: An Account* (2007), William G. Thomas reports on the production process of a “new scientific rhetoric” (Thomas 2007) in his digital history project (wider, digital humanities, Robertson 2016).³

The fundamental difference was not only the change of cognitive framework for conceptualizing the project, but also the framework of electronic communication. The promising technological innovation turned out to be very problematic. It became obvious that hypertextual structures required radical changes to be made to the form of academic narration not only hypothetically,⁴ but also in practice. However this turned out to be a fundamental, nearly insurmountable, barrier.

Consistent use of available digital formats (HTM) was completely destroying the structure of coherent disquisition and clear reasoning used in printed articles. The challenge was to find a way of using digital hyper-

text – a structure of nodes and links – as a means of coherent argumentation: “We wanted to explore how we might integrate the digital form of presentation with the argument we hoped to make” (Thomas 2007). The project’s authors wanted to make sure that it would be based on the three pillars that are essential for every scholarly publication in the field of history: facts, argumentation, and disquisition. However, using hypertext technology as the communication framework, it seemed almost impossible to include these pillars in the project’s structure. How can one perform the fusion of form and content, if the cobweb structure of the text fragments the disquisition and reveals the beginning of the argument? During the implementation of the project, it turned out that hypertext does, after all, split and fragment the continuum of the systematic sequence of thinking to such an extent that it makes it more difficult, if not impossible for the reader to follow the author’s argumentation concept, and/or the correlation between facts and argumentation. Following Wiliam G. Thomas’s conjectures, it can be said that hypertext makes it more difficult for the author to clearly model the output, while the hyperlinks limit the reader’s ability to concentrate on the perception of content and to perform its critical reception. It was empirically ascertained that the use of hypertext in academic essays has little to do with the unwillingness and disinterest of authors to remediate their texts (Bolter 2001:144), but that it is rather determined by the status of the medium, which can barely adapt to the requirements of the logic of academic thinking.

These very aspects were not empirically or experimentally verified and elaborated in Bolter’s concept of academic essay remediation into hypertext format. Or, in other words, the researcher’s argument relied on the opinions of the narratological authorities of that time (Barth and Sontag), who claimed that coherent argumentation might not even be possible at all, or might even be – taking into account text deconstruction – irrelevant.⁵ The researcher took lightly how important the logic of gradual argumentation is, including the authorial concept of arranging both argumentation and disquisition – the succession and sequence of argumentation and facts. The empirically proved fact that the hypertext structure not only disrupts the linearity of text, but also inappropriately breaks apart the continuous argument planned by the author⁶ as well as improperly changing the arrangement of a discrete argumentation model. On the other hand, it has to be noted that experimenting with statistical procedures and interpretation of quantitative findings present further challenges in the process of making of conclusions and argumentation in the humanities. Namely, challenges related to the combination and alternation of research methods with-

in the “micro” and “macro” perspectives. And so, the following question remains unanswered: “How to construct arguments that zoom back and forth between the micro, the meso, and the macro, perhaps even overlapping those middle layers of analysis and narrative that once constituted the home turf of the arts and humanities disciplines?” (Schnapp 2014).

As a result of the discussions and consultations (during when it was programmers who expressed the greatest deal of optimism regarding the effectiveness of using HTM technologies in the project), a description of the research premises was added to the project, the proportion of generated content was constrained,⁷ and the project also received a new feature – a tracking system following the trajectory of a particular reader as he or she moves through the hypertext. Participants may now successfully explore not only historical information, but also information about the objectives of the project, one of which is to use a seemingly homogenizing history of a phenomenon – in this case slavery in the US South – to uncover its regional variants. In this regard a set of maps presenting particular parameters in two examined regions turned out to be irreplaceable – it seemed to be much more effective than the text presentation. Within a few years after release, this “born-digital” academic publication got into the curriculum of several universities’ postgraduate programmes in history. Still, among professional historians, printed articles remain more popular. Meanwhile, the number of guests on the project’s website keeps growing. They are probably students or passers-by looking for information about the Civil War (which begs the question of who is the target audience of these digital projects).

It seems that the experience of the project’s authors played a significant role in determining the official and unofficial recommendations developed by AHA precisely for the assessment of digital history projects,⁸ which in the subsequent year were taken over by the Association of Japanese Historians. As a result, the use of digital methods and media must have substantive grounds⁹ (for instance, when there are audiovisual sources) as well as exhibit reasonable utilization of new methodologies. Digital projects should support the transformation of scientific communication. The projects must respect the interest of maintaining the respective discipline’s research standards, presenting scientific values and supporting the development of the discipline. On the other hand, the Association (AHA) appreciates new forms of scientific communication (blogs, online publications, community portals), declares support for the researchers interested in digital tools, and recognizes the need for a wider engagement of researchers in the process of creating a new digital environment for historical research. It

seems to reject the discrimination of digital publications within scientometric systems.

The founders of the Internet journal *Audiovisual Thinking: The Journal of Academic Videos* have a much more radical opinion of the use of digital media in scientific publications. In a short proclamation, the editors describe the declining dominance of text as well as everyone's right to an autonomous choice of medium for scientific communication.

For hundreds of years, scholars have been limited to the written word and the occasional 2D illustration, but today, the revolution in affordable audiovisual technology is challenging the dominance of text as the primary means of communication and expression. We believe that scholars should also have the right to express themselves and their research and ideas in any (and as many) formats and media that they see fit (*The Academic Video Manifesto*).¹⁰

At the same time, the editors aspire to maintain scientific standards analogous to those of text-based journals, such as to:

- disseminate new observations, knowledge, insights, or theories, thereby adding to the existing body of knowledge,
- acknowledge previous knowledge, insights, or theories, and build upon the existing body of knowledge,
- credit all sources and references, be they visual, written, or oral,
- be self-critical and self-reflective (*The Academic Video Manifesto*).¹¹

The radicalness of the editors of *Audiovisual Thinking* likely springs from a need to protect the interests of researchers using audiovisual media who contend with the necessity of presenting audiovisual material in a textual form, as there are many aspects that are infeasible to be represented in text/language, including emotions, affects, sounds, and complex spatial artefacts. The editors are convinced that academic video must subordinate text to audiovisual measures (all submissions must be audiovisual), and it must do it in such a way that content understanding is not dependent on identifying the semantics of individual words.

In *Reflections on Academic Video*, Eriksson and Sorensen (2012) present a justification for this kind of proclamation. They mention various audiovisual communication practices such as recording academic lectures and making them available to students in audiovisual form, playing relevant videos in class or recommending useful audiovisual material on the Internet. In spite of the opposition of the representatives of academic disciplines, the authors call for introducing audiovisual forms into academic

practices on equal terms with textual discourse. In this regard, they quote authoritative research on digital convergence and its influence on how one may produce, watch, and make digital content available. They stress that academic video and video-essays are not mere futuristic expectations – these tools are already utilized and many of their aspects have been a part of the scientific discourse for a long time. The authors recount their own experiences as authors of academic video to prove their claims (autoethnography), using also Brodeker's concept of the specificity of an original personal documentary, the practices of visual ethnography, and the rules of *Dogme 95*¹² devised by Lars von Trier, which sought to liberate film from technical and technological embellishments. Subsequently, they describe examples in anthropology, visual sociology, history, or sociopolitics (alternatively socioaesthetics, Wodiczko 2015). Their work empirically implements the academic video-essay requested by the editors of *Audiovisual Thinking*.

Reflections on Academic Video is the kind of publication that is frequently used nowadays – the authors report on their own projects, focusing on the academic work process and sometimes exemplifying the used method. Apart from autoethnography, we can observe here the phenomenon of designing new research fields (new systems) as well as designing the research activity performed inside the project itself (Ito 2016), which can be interpreted as conscious (or subconscious?) adaptation of academic work to new technological possibilities. It can be said that the proclamation becomes an essential component in emphasizing the processual character of designing academic work processes.

The Visual Interface of Science

In the last few years, a lot of publications appeared in the Western environment referring to digital humanities' (DH) movements. It can be concluded that the fundamental tendencies, themes, and issues of the humanities have become only a sub-standard that disregards the DH perspective (including quantitative methods). However, this tendency does not concern the humanities in Central Europe, which very often operate within the analogue tradition of science, and thus they – seemingly – contend with the dilemma of functioning “between” humanities and digital humanities, i.e. between what are currently two opposing presentations

of “knowledge” – between the analogue tradition and the digital humanities’ practices. Some researchers have been trying to move away from the “analogue foundation” in which the humanities of this region are stuck and have been frequently confronted with the reality of digitisation and mediatisation of science. This has occurred, for instance, through their occasional participation in Western European projects, which demonstrated rather limited, though diversified employment possibilities of these institutions and revealed their weak (but still diversified) background of digital infrastructure. We have no knowledge of any research aimed at mapping the activities of digital humanities’ centres or digital projects in the fields of literature, culture, or general humanities in Central Europe. This fact has allowed us to carry out a non-professional survey in a small community of academic teachers, which, however, does not deal with the activities of researchers in the DH movement of this region. In a very limited scope, the survey presents the “openness” of the region’s academic community in the humanities to the digital environment. Due to a lack of institutional support to develop interest in DH in our region, we have decided to take a look at this “openness” in a mini-pilot project titled “Interfaces of Science” making use of a substitute issue, namely the aspect of “visuality”, which along with the DH material base can set up inclusive relations (Hayles 2012).

Since this is a pilot survey of the scope of openness to technologically motivated changes, it covers a small group of teachers of academic disciplines in the humanities in Slovakia, the Czech Republic, and Poland. We have decided to survey the aspect of openness/readiness of researchers to digital environment through the prism of the researchers’ approach towards visual aspects of the performed disciplines, and have tried to examine to what extent they use visuality, or what hopes and expectations they have in relation to it.

Encouraged by the presence of visual anthropology, visual sociology (Sztompka 2017) and the distribution of tools and applications to perform a presentation on the one hand, and because of the intense invasion of visuality into the Internet versions of natural science journals (e.g. in the form of graphical abstracts¹³) on the other, we wanted to find out what opens humanist researchers to visuality and vice versa, what impedes it or slows it down. Finally, we aimed to find out which university teachers in the Central European region have become involved in the processes of “inventing/finding digital media” (Murray 2012).

During the research, we interviewed 19 researchers (including 4 women), who represent various scientific disciplines in Slovakia, the Czech Republic, and Poland. The interviews were conducted between October 2016

and March 2017 and concerned two aspects. The first addressed the use of the Internet and digital media to promote science, extend the efficiency of scientific work, improve contacts between scientists, and so on. The second aspect directly tackled the issues of this article and concerned questions about the attitudes of scientists towards visualisation and visuality in science. The research focused on how much they are attached to traditional interfaces and structures of presenting research results, as well as to what extent they have opened to possibilities brought by the new media as far as visualisation of work results and the publication thereof are concerned.

The research was of a qualitative nature, so the results cannot be extrapolated to any extensive group of researchers in the countries in question. The respondents answered the following questions about visualisation in science (these questions were just a starting point and were frequently extended and made more specific):

1. Do you imagine your discipline of science in the visual form?
2. (4) What technical devices and media, in your opinion, do scientists need in today's world? Which of them could you do without?
3. (8) Do you prepare multimedia presentations of your papers, lectures? If so, when you prepare a presentation, do you skip any stages of the work, e.g. when you write an article?
4. (9) Do you think that in your field it will be possible for a multimedia journal to exist? Could the scientific publications in your field have other multimedia/visual forms? What criteria should such publication meet to be treated as scientific (review, annotations, what else)?
5. (10) Could the visual form of scientific publications exist independently or only as a complementation, component, or comment? What other function may it have (i.e. clarification and facilitation of its understanding)?

In the part of the survey *Interface of Science* in which we ask about consent to intensive "visualisation" of the performed disciplines, references are made to "academic video" – meaning that an analysis of an academic essay presented by the initiators of *Audiovisual Thinking* (AT) might constitute an analogy for organizing responses given by the representatives of philosophy, philology, sociology, marketing, and new media. The answers gained from Slovak and Czech male and female researchers, as well as a Polish female researcher, are not treated as elements of statistical research, but we solely want to disclose the views of a small group of academic workers employed in universities in Central Europe, and thus show the

opinions of providers of knowledge about the *modus operandi* in contemporary performance of science, and possibly also to provoke a discussion, taking into account the recipients of knowledge as well.

The initiators of academic video were criticised for their idea (*Reflections on Academic Video*) by the representatives of Dutch and Swedish academics – one stressed the superfluousness and inadequacy of the audiovisual mode in scientific discourse, that at best it was recognized as an unrealistic chimera, while another declared a strong attachment to the primacy of words over pictures and the inability to go beyond the word-picture dichotomy. In comparison, our respondents presented a great variety of opinions:

- a) Philosophers were convinced that it was necessary to focus on language forms, as well as on the reading and text interpretation process; but there was also a strong belief that philosophy might and should use visual forms; some also appreciated e.g. philosophical cartoons (Doxiadis – Papadimitriou: *Logicomix. An Epic Search for Truth*, 2009); some were curious to adopt visual forms for the purposes of academic discourse.
- b) Marketing researchers presented, even more consequently, the belief that visual components are important and indicated the equivalence of language and picture components.
- c) Philologists stressed the fundamental role of language – both at the level of examined objects as well as in academic literary discourse; only one response indicated the importance of visualisation in DH projects (in reference to the Czech Academy of Sciences and its project focusing on a quantitative analysis of a Czech poem).
- d) Sociologists were strongly in favour of the logocentrism of their own discipline.

For our respondents, the *sine qua non* condition for possible visual publications was an anonymous review process. This might be because the academic community in Central Europe views the peer review as a token of research quality and has not yet been contested by a historical analysis of the processes in which scholarly articles and articles for the academic public are assessed – for example, the way this is done in the United States (Baldwin 2018) or England (Moxham, Fyfe 2018). Could it be because the implementation of visual materials may decrease the degree to which the rules of coherent argumentation are respected and linear text is supplanted, because such a form of publication would have to be the subject of fragmentation, hypertext practices of structuring information? Would

an anonymous review eliminate these occurrences? Or would it resolve the issue of “suitability”¹⁴ between the form and content of a publication?

All respondents provided a very laconic and almost identical answer that requires interpretation because when we asked about the potential form of a scientific journal, the responses gave preference to the Internet over print – we found this agreement very surprising. We are aware that the communication framework of the survey is completely different from the framework of making such proclamations public. It is because the AT editorial section has not only taken the risk related to promoting the experiment, but also assumed the responsibility connected with possible attacks from opponents/critics. However, the answers provided by our respondents seemed very cold and formal to us. Formal, because at best they copy the structure of forms used by editorial sections of scientific journals in the peer-review process in our region and respond to the question about the relativeness of the issue in academic publications, as well as in the bibliography used therein. To a degree, they only formally refer to the needs for securing scientific publication standards. And cold, because the chances for innovative forms of one’s own discipline or journals were small due to the conservatism present in the environment of the individual disciplines, even though the researchers declared an open attitude. One would expect that along with the declaration of openness and greater interest, some open thought and the ability to conceptualize might appear. One of the explanations for this state of affairs is the fact that we indeed asked deliberately about image, which is closer to a mental experiment than an exemplification or description of any new occurrence, or a new object. If the media researchers are right who claim that they are still in an emergence condition (Murray 2012) – that the usage processes and occurrences of diversified communications related to them (including the scientific ones – Schnapp) decide about direction (emergence) – then, in this context, the question remains about the nature of the attitude presented by academics in our region. The answers collected by us suggest low involvement. Some justification of this state may lie in the low interest in being “self-critical and self-reflective” in the academic discourse in our geographical region, a conservative attitude of the academic environment, the funding structure of universities – namely, underinvestment of universities (?), or conservative university studies programmes. However, the simplest justification shall be connected with the low value of such publications in binding scientometric systems, which results in a lack of practical contact and little experience with using audiovisual tools.

Method, Discussion and Future Work

Our method relied on qualitative research, but only insofar as it was based on written/live responses to the survey questions carried out in a small (but international) group of university teachers. We also managed to meet our interviewees one more time to broaden the interviews by asking additional questions. However, it has turned out that the interviewees simplified the tasks for themselves and often answered routinely, which resulted in a lack of understanding of the subsequent questions, or that they avoided questions that were inconvenient for them – mostly when we were interested in the intensity of intellectual quests and the establishment of new intellectual contacts through on-line platforms. In this respect, our survey should be repeated and we should interview everyone face-to-face. By the way, we should not only reveal to the interviewees that we wish to find out in how much they are interested in new challenges in the humanities today, but also should disclose the fact that we did not ask about the DH issue straight away, in order to avoid having to check their competence or scrutinize their knowledge of DH issues.

“Cheating” the respondents included in the empirical research (Szpunar 2010) could not have harmed them (however, only one person reserved the right not to give their consent to disclose their identity and wanted to participate anonymously), because we did not plan to use the results to describe different or similar cases (*causa*), but wanted to use the answers to create a new task (research creation). In other words, we aimed to set the direction for the aspects of *visuality* in humanistic cognition, all rooted in the technology shift (in forecasting meaning), in what is happening with the visible interfaces of science. In this respect, the survey results determine a new field of exploration through questions that are fundamental for us: do the researchers imagine that their discipline, including scientific communication in professional magazines, anticipates visual forms or *visuality*? The respondents revealed what is important for them within the context of our questions (blurring disciplinary boundaries, declarative and rather pragmatic opening to *visuality* – different only with those who work with *visuality* more intensively – as well as a conservative approach to coherent text culture and consistent argument). In terms of the attitude of the respondents and academics working in the humanities towards visual forms of a discipline or publication, our survey has, albeit slightly, but still shown a tendency towards integrating anthropological approach in the qualitative research (Forlano 2015).

However, in conclusion, our survey pays attention to the need for

a greater interest, in the academic environment of our region, in the current necessity of inventing/emerging/new image of the humanities, in new communication of scientific humanities. In this context, the following points seem to be significant:

1. Pondering of the general requirements in relation to a digital project and new-media reflection of literature in the context of digital history experiences and the audiovisual academic essay.
2. Incorporation of the thought about consequences of the selection of a medium, particularly communication technology for designing the humanities (knowledge).

Communication technologies nowadays extend scientific communication and make it a subject of new conventions. As a matter of fact, we need to develop new principles for it, which will be defined based on looser boundaries between science and knowledge, establishment of a new agreement on the appropriateness of scientific publications in which it is presented, i.e. a new agreement between the provider and the recipient, allowing for a variability of standards in the creation of publications (e.g. Dighub). In this process, Habermas's (1981) views¹⁵ will be important, as well as experiences of regular or new digital rhetoric.¹⁶

To sum things up, one should find that in relation to the challenges of modern "visible interfaces of knowledge", it is not enough to refer to the proverbial "openness" (well-known from behavioural psychology) of university teachers towards civilizational and intellectual "novelties". The weak responses brought to our attention the fact that the value of creativeness in the work of an academic also includes active participation in the creation of the "scientific" process (because only one respondent referred to this implicitly). As it appears, the things that are really missing within the "openness" observed by us are the intellectual curiosity, intellectual quest, the uncompromisingly and even crazy (as in inquisitors) aiming at the exploration of new levels (both appealing, mysterious and prohibited). The inquisitiveness and zeal presented in the behaviour of researchers in Stanisław Lem's story *How the World Was Saved* is also one of the four basic indicators of "curiosity" which Merck studied as a conglomeration of the factors (openness, inquisitiveness, creativity, distress, tolerance) determining the achievement of creative innovative solutions. It appears that in accordance with the views of the questioned workers in the USA, Germany, and China, the conditions favouring inquisitive follow-up through the field of new thought (theories, hypotheses, etc.) are significant for zealous curiosity, for broadening of human thoughts. It seems that the answers provided by the questioned teachers highlight the fact that they do not have good

conditions to develop and display zealous curiosity. However, this opinion should be checked and described in detail in the context of designing science and knowledge in our region.

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Notes

- 1 The contribution is an extended version of the article “New forms of knowledge design and their presence/absence in Central Europe Prolegomena to the issues” published in *World Literature Studies* (3), 2017
- 2 For example, a selection from several contributions: Rick Anderson *The Scholarly Kitchen*, available online at: <https://scholarlykitchen.sspnet.org/2018/11/05/open-access-academic-freedom-and-the-spectrum-of-coercive-power/?informz=1> – accessed on 5 November 2018
- 3 About relationships and differences between digital history and digital humanities, cf. Robertson 2016.
- 4 Bolter assumed that the re-modelling of linear text into a hypertext structure might not require a radical change of academic output (2001:143), but perhaps only a cosmetic adjustment.
- 5 Bolter refers to Susan Sontag’s opinion in the introduction to the monograph “Barthes Readers” in which Sontag says, in relation to the reflection of Barthes’s concepts: “For modernist - that is, formalist - critic, the work with destruction of the “story”, in nonfiction, the abandonment of linear argument. The presumed impossibility (or irrelevance) of producing a continuous argument has led to a remodeling of the standard long forms - the treatise, the long book - and a recasting of the genres of fiction, autobiography and essay. (Susan Sontag, 1982 - Barthes Readers)
- 6 In this respect, it should be considered whether Susan Sontag’s view (which Bolter cites), namely that it might be pointless to maintain the notion that non-fictional texts cannot – and perhaps do not have to at all – rely on continuous argumentation, is convincing enough. It is obvious that, in addition to continuous argumentation, discrete models are frequently used, or the models are combined. Then, logical arrangement of the elements of argumentation is superior to the types of argumentation and hypertext structure can threaten this arrangement easily.
- 7 Today, this solution – reducing the amount of generated information content within the interactive exploration of the project by a user – is a systemic one for digital born projects. Similarly, the issue of reducing the information generated from the sources of a project was tackled by the authors (Giovanna Ceserani, Georgio Caviglia, Nicole Coleman, Thea De Armond, Sarah Murray, and Molly Taylor Poleskey) of a Stanford University project titled “The Grand Tour and the Profession of Architecture, 2017”). In this regard, the possible problems and possibilities of digital textual and visual sources has been also pointed out by Lara Putnam (2016).
- 8 Published in September 2015 at: <https://www.historians.org/teaching-and-learning/digital-history-resources/evaluation-of-digital-scholarship-in-history/guidelines-for-the-professional-evaluation-of-digital-scholarship-by-historians>). Accessed June 25, 2017.

9 Lopes (2009) formulated similar expectations to computer arts to be used for media in some way justified with the artist's intention.

10 The Academic Video Manifesto. Accessed April 25, 2016. <http://www.audiovisualthinking.org/about/manifesto/>.

11 The Academic Video Manifesto. Accessed April 25, 2016. <http://www.audiovisualthinking.org/about/manifesto/>.

12 Accessed May 15, 2017. https://en.wikipedia.org/wiki/Dogme_95.

13 Accessed May 20, 2017. <https://www.elsevier.com/authors/journal-authors/graphical-abstract>.

14 About "suitability" and differences between *convenientia* and *decorum*, cf. Fischer 2015.

15 For example, the series *Digital Debates* 2016.

16 See Ridolfo – Davidson 2014, Douglas 2015.

6. Video-Remediations: From Transmission Medium to Data Landscape Three Phases of Video-Remediations

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Abstract: The chapter reflects on the impact of video and video art from the 1960s on contemporary art forms a cultural paradigm of dynamic reality. Originally, the video format was remediating the reality of TV and film production and initiating a democratization of the medium, till the 1990s and further, when video itself got remediating into digital media platforms of YouTube and its clones. Video, we argue, started a revolution that emancipated digital devices after which they themselves became a part of a digital world in which we live in. From then on remediations happen not only within the media, but also on a deeper, interconnected levels of digital reality. If one cannot talk about mediations without remediations, then every mediation is always already remediating the mediated world.

Introduction

Since the 1960s, the video-remediation of cultural processes have progressed in three main phases. The first one concerned the video camera as a medium of recording reality and its directness, availability, and live documentation. This is where artistic experiments were vital – they took into account the registration abilities of the medium itself and the new auto-referential and cognitive perception parameters which stemmed from its transmissive nature. The artists experimenting with the medium usually emphasized the experience of a technologically duplicated image of a human, object, or event; the possibility of the constant repetition of these representations, their rewinding, and stopping. No previous technology offered such features. The works were focused around pictorial analysis and fluid subjectivity; they often used image psychologization strategies as well as perception disturbances, including noise, overvoltage, feedback loop, and visual modulations. Therefore, they were able to discover a new pictorial somaticity (as was the case with many performances, e.g., by Vito Acconci or Bruce Nauman) and indicated a possible new meditative dimension of the relationship between the watching subject and the abstract data recording (the famous project *Zen for TV* by Nam June Paik).

The next phase started with the popularization of video recordings in the late 1970s and the 1980s. The process was influenced by the democratization of technology and economic availability of video cameras for the common user and the establishment of new independent cable networks based mostly on the artistic ideal of democratic videospheres popular in the 1970s¹ which had become common by the 1980s. A phase of minor proj-

ects became a massive branch of the media industry.² Unlike in the case of traditional media, in this new system the content was provided by many producers. In fact, one could say this was the time that mass convergence culture started (Jenkins 2008), together with the process of video images spreading. The narratives of the mainstream media (such as major TV stations) began to intertwine with private narratives produced with home video sets. Thus, the camcorder cult was born. It produced a massive number of confessional recordings and launched the first forms of reality TV. Small cameras, wiring, and transmission systems allowed for the recording of reality in its most private dimensions. In many ways, the *Confessing Nation* (Dovey 2000) generation simply reached for the strategies of the first performers experimenting with intimate video narratives, this time spreading on a global scale.

Video-remediations became even more prolific and varied with the emergence of the Internet and social networking sites such as YouTube, which constitute a practically constant and never-ending stream of video images. This was a vital process in the redefinition of the communicative situation which entered its third phase – one often named by media experts as the “post-media phase” (Manovich 2005)³. Video-remediations are no longer practised only through the medium itself (its physical presence, aesthetics, and specific pictoriality) but also through the streaming of meta-data filled with much more hidden, fragmented information, which change communicative and cognitive strategies.⁴ The process had really started during the second phase in the late 1990s as the Internet became more commonly available. The video became the technological system that enabled various coding and data translation actions between any given input and output. This was, therefore, the moment when the system became incorporated into the field of code, which can be seen as the deepest tissue encompassing all of the cultural phenomena (Manovich 2013) (Kitchin et al. 2011). The system of recording data using various video recorders creates a dynamic *data landscape* (a complicated, acentric database, where data is constantly being transferred, stored, and reproduced in the network), but with the use of proper protocols and procedures it can also be revitalized on the surface of culture through many strategies of interpretation and visualization. It is also in the late 1990s that culture entered a period of post-visibility: any video image recorded by any medium using this technology became a part of a massive database and could be replayed in completely new forms of visibility. This important cultural remediation was started in the 1960s through the first video experiments.

The Origins of Videocracy

For many artists of the late 1960s and 1970s, it was very important that video enabled direct live transmission between a recorder and a receiver. No detailed knowledge concerning technology or image treatment was necessary to operate it. The effect was readily available through *plug and play*. The specific character of the video-specific narrative stemmed, however, from more than just the possibility of a direct image and optics transfer, which had already been used before in photography and film. As a medium, video presented a nature linked to electronic signal transfer, it was one of the first creative technologies that produced a new understanding of reality and first and foremost enabled the user to control the abstract properties of electromagnetic waves. It allowed the user to manage it by modulating and directing the transmission. The streams of video impulses could be freely modified by a variety of processors and synthesizers and be transmitted simultaneously in visual and aural form. Video was the first truly audiovisual medium. Unlike film technology, it was not an image divided into separate physical units (of a 35 mm film tape moving through the projector at twenty-four frames per second). In this way, it was not material in its representation of reality, unlike, for instance, a single celluloid frame of a film. Moreover, video was able to unite the image and the soundtrack in one recording, in which it completely remediated its cinematic predecessor. It can be said that video was an “abstract” medium in nature, and its primary expression was electromagnetic noise. The light shining through the lens of a video camera was not “set” in photosensitive material but rather transformed into signals recorded on magnetic tape and/or transmitted to the decoding device. Changing and pulsating pictoriality was – naturally – also shaped by such factors as the type of the decoding device or scale and the form of the image reproduced.

The enhanced ability to manipulate the video signal appeared with the creation of video synthesizers, processors, and mobile devices that enabled control over various image parameters. The creator of one of the first such devices was Nam June Paik. His project was executed in cooperation with Shuya Abe, a technician and TV expert, from 1969 to 1971. A synthesizer enabled simultaneous work with seven different video sources, which could be edited and modified in real time. Each of the cameras connected to the device recorded only one colour. The image was then mixed through synthesizer operations. Paik described the possibilities of the creative use of the synthesizer in his manifesto entitled *Versatile Video Synthesizer*, where

he presented a few variations of the techniques of image shaping as a remediation of the painting. The effects of his actions were named after the great painters from art history:

This will enable us to shape the TV screen canvas
 as precisely as Leonardo
 as freely as Picasso
 as colorfully as Renoir
 as profoundly as Mondrian
 as violently as Pollock and
 as lyrically as Jasper Johns. (Paik 1974, 55)

Video was also one of the first media that separated creativity from haptic control over the artistic material. To a degree, the electronic activity of video was unpredictable, which led to defining the medium as independent and “living”. It operated with categories of streaming, modulation, coding, decoding, and interference, leading not only art, but in fact the entirety of culture towards the dawn of new media. From this point of view, video was an extremely advanced medium and technology; despite being analogue, it was responsible for the creation of a paradigm of digital art. In 1966, Nam June Paik, the proud first owner of a Sony Portapak camera in New York, presented a manifesto of cybernetic art:

Cybernetics, the science of pure relations, or relationship itself, has its origin in karma. Marshall McLuhan’s famous phrase “Media is a message” was formulated by Norbert Wiener in 1948 as “The signal, where the message is sent, plays equally important role as the signal, where message is not sent.”

As the Happening is the fusion of various arts, so cybernetics is the exploitation of boundary regions between and across various existing sciences.

[...]

The Buddhists also say

Karma is samsara

Relationship is metempsychosis

We are in open circuits. (Paik 1966, 42)

Paik’s manifesto was an expression of changes in culture in the late 1960s. Marshall McLuhan’s technological determinism gained a new face. A communication model rooted in cybernetics became linked to many phenomena that manifested the ideas of anthropology, sociology, psychology, and even psychoanalysis.⁵ A dynamic, transmittable and democratized

(anyone could own a video camera) pictoriality led to a simultaneous deep remediation of such arts as painting, photography, film, and the entirety of audiovisual culture. The video camera became a tool for sublime experiments that aimed at creating new definitions of technological visuality in art. A very special role among these first experimenters in the field was played by Woody and Steina Vasulka. Their works are not only experiments with modern audiovisual forms but also pioneer devices for transforming and modifying visual experience in real time. Such films as *Noisefields* (1974) and *Orbital Obsessions* (1977) were created using original hardware sequencing and composition of image from signal received from multiple sources. This way, visuality was becoming autonomous. It was a result of a technological process and the role of the artist was constricted to the function of a designer and constructor. From this viewpoint, the creation of image becomes synonymous with the process of coding, i.e., a process that is constructive for new media art. Yvonne Spielmann describes the Vasulkas in the following manner:

Starting with his film experiments in the early seventies, Woody has been interested in exploring and developing machine processing functions into programming. In using the electronic signal as “raw material” from which to build up an electronic language system, he found a parallel in the investigation of digital image processing, where the search for the smallest programmable unit is seen as the “point zero” from which a “syntax of binary images” could emerge. (Spielmann 2004)

The perception of electronic signals as the smallest units that can be generated and organized into code was a foreshadowing of a new definition of programmable reality.

In all these actions, video was transforming the socially perceptive optical sensitivity. It introduced direct “access” to the events, almost the immediate recording and replaying of images. It enabled the separation of the acts of recording and replaying. Recording as a database could be coded in all possible manners. This way, pictoriality lost the stability of expression, and art came into contact with new definitions of culture seen as a set of data which can be mixed, redefined, and read in many different ways and in multiple technological outputs. This situation visibly shows how strongly culture and technology intertwine, creating a shared circuit since the 1970s. This new hybrid sphere of coexistence will be a place of situations and events with an aesthetic – but also social and political – dimension.

Schizoid Subject

New technological experiences had their impact on the process of remediation of the subject's perceptive parameters. The recorded reality seemed to be dynamic and inconstant; therefore, the subject's cognitive apparatus was distributed together with the images created and received by it.

In her article, *Video: The Aesthetics of Narcissism* (1976), Rosalind E. Krauss described video as a "narcissistic" art. To the American researcher, placing a camera lens in front of oneself and looking into it as into a mirror defines what she calls a "video narcissism": a rudimentary aesthetic, formal, and psychological principle of this form of art. Krauss's analysis is based on Acconci's *Centers* (1971), a work in which the artist records himself with his arm outstretched – pointing his finger at the central point of the screen.

For *Centers* was made by Acconci's using the video monitor as a mirror. As we look at the artist sighting along his outstretched arm and forefinger towards the center of the screen we are watching, what we see is a sustained tautology: a line of sight that begins at Acconci's plane of vision and ends at the eyes of his projected double. In that image of self-regard is configured a narcissism so endemic to works of video that I find myself wanting to generalize it as *the* condition of the entire genre. Yet, what would it mean to say, "The medium of video is narcissism?" (Krauss 1976, 50)

Krauss easily understood the technological nature of video, defining it as a separate and independent medium. At the same time, she saw its psychological character and nature, as opposed to painting and film, which she called "physical" due to their material pictoriality (paint, photosensitive film tape). Therefore, video remediated the visuality of painting, film, and photography and at the same time redefined the cohesive, fixed identity of the viewing subject, whose pictoriality could only be realized in an act of transmission – an act of communication. This communicativity had at least two dimensions – internal (autoreflexive) and external (reflexive). Referencing the concepts from Freud's and Lacan's psychoanalysis, Krauss wrote:

[...] autoreflexion and reflexiveness refer to the same thing – that both are cases of consciousness doubling back upon itself in order to perform and portray

a separation between forms of art and their contents, between the procedures of thought and their objects. (Ibid., 55–56)

The principle defined by the researcher not only provided means to characterize the aesthetics of video art – based on a dematerialized and duplicated image of the person who is looking – but also uncovered elements of the ontology of the medium itself. She suggested the existence of an internal, hidden mechanism determining the perception of a subject. An intuitive link between this mechanism and psychoanalytical discourse was an indication to place it within the field of the subconscious, which did not present itself directly but only in an act of communication and technological duplication of a subject.

Mirror-reflection [...] implies the vanquishing of separateness. Its inherent movement is toward fusion. The self and its reflected image are of course literally separate. But the agency of reflection is a mode of appropriation, of illusionistically erasing the difference between subject and object. Facing mirrors on opposite walls squeeze out the real space between them. When we look at *Centers* we see Acconci sighting along his arm to the center of the screen we are watching. But latent in this set-up is the monitor that he is, himself, looking at. There is no way for us to see *Centers* without reading that sustained connection between the artist and his double. So for us as for Acconci, video is a process which allows these two terms to fuse. (Ibid., 56–57)

Therefore, it is clear that for Krauss, the most important characteristic of video is its processuality. It is a medium that constantly dematerializes and materializes an image using autonomous pictoriality; at the same time, it invades the relationship between the artist and his representation, between a cognitive subject and reality.

Self-encapsulation – the body or psyche as its own surround – is everywhere to be found in the corpus of video art. Acconci's *Centers* is one instance, another is his *Air Time* of 1973. In *Air Time* Acconci sits between the video camera and a large mirror which he faces. For thirty-five minutes he addresses his own reflection with a monologue in which the terms “I” and “you” – although they are presumed to be referring to himself and an absent lover – are markers of the autonomous inter-course between Acconci and his own image. Both *Centers* and *Air Time* construct a situation of spatial closure, promoting a condition of self-reflection. The response of the performer is to a continually renewed image of himself. (Ibid., 53–54)

According to Krauss, video at the same time can be a sender, a receiver, and a transmitter; it becomes an unrevealed structure that duplicates and separates the layers of “self”. By becoming more sensitive to a looped image of himself, the subject of Acconci’s experiments becomes an element of eternally duplicated technological structure. One could say that with his senses he touches the loops of perception, regulated through the frequency of refreshing the video image; he nests in the interlaces of this image, which cannot be grasped. In this sense, from the cultural perspective, the mediatised subject exists in split between the willingness to stop the perceptive system, in which his own image is given, subordinate, and fully achievable to him in an act of looking, and the dynamics of an influx of photons of the inconstant video projection.

The technological duality defined and executed in art resulted in concepts of duplication and the purposefully modelled schizoid subject, which gradually stopped being used as a stable benchmark for scientific considerations of philosophical and cultural theories. Its quickly spreading images further deepened the impression of its relativity to a situation, context, and ultimately abstract data. In the framework of the schizoanalytic metamodelling of reality, proposed – among others – by Gilles Deleuze and Félix Guattari (1987), subjectivity was becoming dynamic, changeable, and always ready to be distributed in culture, society, and politics. This gave the artists a chance to stop being part of fixed schemes determined in advance and instead to dynamically record fragments and scraps of auto-narrative. While entering the field of emergence of thought, awareness, and deteriorated subjectivity, the French philosophers indicated in the 1970s that in the situation of self-cognition, the importance lay not only in models but also in spaces between them, places that are undetermined and ambiguous. Thus, the technological nature of video became one of the important systems of transmitting and experiencing a schizoid auto-analysis of the distributed poststructuralist subject for many artists and cultural theorists. Although Deleuze and Guattari saw the schizoid strategies dynamizing the subject as a source of power to oppose the systemizing forces of politics and commercialism, this strategy that employed (among other things) video technology quickly became a part of a global economy of transmitted images and, therefore, distributed parts of autobiographies and personal narratives.

At the end of the 1980s, video, together with all its electronic pictoriality, became a part of mainstream media narratives. Bad (non-TV) picture quality became a sign of recordings made by amateurs, making them seem “authentic”, without any intention to manipulate the facts. Amateur record-

ings began to constitute new documentary forms, focused not on providing a complete image of reality, but on subjective, private impressions. What used to be seen as a guarantee of authenticity of experimental activities of such artists as Acconci became a new commercial format; the video clip itself was seen as a fetish of realism. Together with this process, a fundament of new methods of spreading media messages was established. It transformed the traditional roles played by producers and viewers; what remained gave start to a new paradigm: user-generated content. Amateur videos, made by everyone who wanted to connect to this new transmedial world, have not only remediated the reality of film and TV production, but – first and foremost – became a cornerstone of such services as YouTube a decade later.

Therefore, video, which in the 1960s and 1970s was a medium defining a new culture of democratized communication based on a two-way exchange of content (as was the case, for example, with the Californian artistic avant-garde and the group Ant Farm) and which served as a tool for scientific and artistic cognition, expanded in the 1990s using strategies that allowed it to be spread across various forms of personalized affects, auto-narratives, and biographic creations. Methods of data distribution established by the video users, reaching the viewers directly – in a way by hiding the media frame separating the maker and the recipient – have created what Jon Dovey calls “confessional narratives” (2000). The concealment of the formatting frame, which in reality meant entering the narrative model of first-person media, was a visible sign of the fact that video is becoming less of a medium; it gradually integrates itself with technological and communicational reality on multiple deep levels.

Postvisuality and the Data Landscape

Video has become a system that, unseen, has merged with the media reality of everyday life. It made its structures inherent to multiple other areas of life. In the last few decades, it has directly remediated – among other things – telecommunication systems (videophones, videoconferences, various Internet video communicators, and video chats), popular music (a music video is seen as a whole, with no separation between the musical and visual part), and home entertainment (video games). Video co-founds virtual, satellite, and physical networks. Today’s closed-circuit

television (CCTV) systems, which were supposed to have a form of closed input-output transmission network, are merged with open telecommunication systems (and many are connected to local Internet networks). Ultimately, we can see a single Internet circuit that covers both virtual and material reality within its range. While we are still at the planning stage of the Internet of Things, the video networks have been long present in this reality. All these systems not only closely entangle and co-create the space of our everyday lives but also shape modern identity processes, in which a performative subject undergoes constant changes through – among other things – a growing number of different videospheres that he encounters every day. While in the 1970s every replaying of a recorded image was intentional and still linear (the length of every analogue video loop was restricted by the length of the magnetic tape inside a video cassette), the life of contemporary videospheres is regulated by logic and an economy of constant, independent repetition. Economic models of all digital social networks based on video distribution depend on the number of views. There is no place for linearity here, no place for a beginning or an end; videos intentionally recorded by the users become independent from them and start a life of their own. They are virally spread, transformed, copied, and embedded into the structure of the acentric web on the code level, using the “embed” command. The transmission is never over – each video links to another one and is structurally connected to other transmissions. Single videos create spheres, and groups of videos create “foam” (Sloterdijk 2011) that keeps spreading, entwining all communication systems on the code level. Archived audiovisual data form new digital structures (landscape data). This landscape is no longer a horizon spreading in front of a person, but – as defined by Bruno Latour – it has a structure built by translation and data mediation networks. In the analyses of this situation, both human and non-human factors (e.g., data, software, and devices) create systems of interactions, shaping a modern relational bloodstream of technoculture.

The awareness of this fact repositions the focus of culture studies: from images themselves towards the process of their creation, modulation, and translation as well as revival through visualization strategies. Postvisuality, which – as mentioned above – became one of the important consequences of spreading video technology, enables practically endless data manipulation. At the same time, it redefines the most important cultural categories, including the understanding of subjectivity, which from the perspective of technoscience seems dynamic, constantly redistributed, and unfinished. It is simply a relational hybrid, whose multiple definitions depend on its digi-

tal world interactions with various technologies, media situations, and the languages of the code that co-creates its images, creations, and identities.

Therefore, the remediation that has been in process since the second half of the twentieth century through the video camera has some very significant and far-reaching consequences; not only for the digital aesthetics spreading between the possibilities of data translation itself but also for a new understanding of visibility, perception, and the relationship between what is human and what is non-human in shaping culture. This process has embedded itself so deeply into the structures of cultural production that we have moved away from the schizoid subject (who sees and experiences the consequences of split perception; who watches his technologically generated image and at the same time breaks away from it) through a system of spreading, multiplying, and changing images to a situation where video and audio data shape a global, dynamic data landscape, combining a large number of different, interconnected spheres. In the twenty-first century, video as a medium is definitely becoming less influential in culture reprogramming than was the case in the second half of the twentieth century; much more importance is gained by the data transfer system, which was once started by this technology. As Brian Massumi writes in *Semblance and Event*, in the digital world the problem of the medium disappears, since digitalism cannot be linked to just one medium. Digital technology is rather a developing network of connections and possible fusions: any given input can be chosen, in every sense of modality, and translated or transduced, transformed into something completely different (Massumi 2013).

The contemporary paradigm of dynamic reality recontextualizes levels of understanding of many classic definitions and terms; with this process, people face the necessity to grasp the dynamic and virtually endless procedures of the constitution of the cognitive subject as a resultant trajectory of various phenomena present within the sphere of technoculture's databases. These bases are constantly updated, broadened, tagged, and reconfigured. The act of cognition proceeds, therefore, in a network system, whose activity is much higher than that of a traditional catalogue. Cognition can also have the form of a mass data transfer; the data reconfigures the shape of the whole base. Thus, the system is based on constant creation and finding new connections in the network, which continuously broadens the sphere of perception. According to Brian Massumi's strong thesis, which is very relevant to new cultural studies, contemporary existence techniques are truly techniques of perceptive relativity (Ibid., 103), and therefore the functions of ontology and epistemology within the research paradigm of technoculture must be combined (Latour 1999). An analysis of the transfor-

mations caused by video indicates that this relativity uncovers the increasing autonomy and situational agency of the technology itself in its non-material (data transfer) and material (hardware) dimensions. One could even say that, in a sense, video has started a revolution that emancipated technological devices as generators, transmitters, and communication modulators. We are facing another new field of research in which remediations do not only happen within the media themselves but concern much deeper levels; they are connected with a complex technological system that co-creates the digital reality. Therefore, this is not a case of observing the technological coatings of video-images; it is a case of coexisting with the whole network of their constant distribution.

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Notes

1 One of the examples of realizing the artistic ideals of democratic videospheres was the work by the American group Ant Farm in the 1970s. The members of this media collective used cameras to create independent networks of visual information exchange. The most important element of the whole cultural system designed by the group was the possibility to share the experience by long-distance image transmission. This is how performative values typical for live arts became a strategy of the media arts as well. (Scott 2008) (Jelewska 2013).

2 A clear example of this is the history of MTV, which from the position of a niche broadcaster in the 1980s became a media mogul in less than a decade.

3 In this article, Manovich indicates the equivalence of the digital nature of new media, which exceeds the sole definition of a medium towards convergence of digital reality. In the book *Provocative Alloys: A Post-Media Anthology*, (Apprigh et al. 2013) the authors give another possible definition of post-mediality, elaborating on a concept by Félix Guattari of a reality in which the digital, cultural, and social are assembled together.

4 Metadata can provide various kinds of information, e.g., concerning such things as exact location, equipment and software used, compression, and changes made. In the end, all these elements are a separate cultural and technological narrative about the user and his communication system.

5 The video camera has also become a great research device for social studies. It allowed the researchers to record, re-analyse and compare the material. To a large degree, the camera became a microscope for psychological, behavioural and social phenomena in the second half of the twentieth century. Not only did it introduce new methods of observation, it also changed the status of the observer himself, who, by abandoning anthropological definitions, moved towards being an involved object, therefore becoming more of an equipment operator than a direct witness.

II. HISTORIES

1. The Russian Silver Age Literature as a Hypertext–Background Text–Subtext

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Abstract: Whoever attempts to get familiar with the Silver Age, the literature, and culture of Russian modernism will soon realize its importance in Russian cultural history as well as in the context of European culture. For the Russian tradition, this cultural period is important not just for all the aesthetic experiments and innovations in poetic language but also for the atmosphere of free discussion and the multiplicity of aesthetic views reflected in numerous journals, literary salons, and literary groups. The intention of this chapter is to show how the Silver Age tradition manifests itself in the sphere of the Russian Internet and Russian net literature, where this tradition is explicitly and implicitly present and frequently referred to, to an extent that it creates something like a background text/subtext of a major part of Rulinet (the Russian literary Internet).

Seteratura and Rulinet: Russian Literature and the Internet

Rulinet is one of the specific Russian terms used to speak about the Internet. It refers to all Russian websites that deal with literature; in this article, it will be used alongside the word *seteratura* (net literature) and Runet (the Russian Internet). *Seteratura* is a Russian term used to describe works of literature which were published on the Internet for the first time or did not have a printed version at all. In some cases, these are works that are technologically connected with computers and the World Wide Web, they either have a hypertextual structure or involve interactive communication. In general, contemporary authors' *seteratura* works can be transformed into print easily as the usage of modern technology in this field is still relatively rare, but Russian authors still use the term *seteratura* (*cetepatypa*) as word play, pointing out "cetera" and stressing its difference from printed literature. In what respects does *seteratura* differ from print? This is a question that appears in many debates online as well as offline, in virtual space as well as on the pages of traditional Russian literary journals.

Browsing the Russian literary Internet, sooner or later one comes across the following statements and has to deal with them. The most radical statement says that net literature "does not exist". A less radical one says that there was an attempt to create net literature on Rulinet, but it failed. The third one is not even a statement; there is an area in literary history and literary theory (not necessarily Russian) on Rulinet where net literature is taken for granted, as a fact, as an area of literature with its specifics, a history, a present, and undoubtedly a future as well. To pres-

ent a complex view of Rulinet, it is necessary to take into consideration all these points of view.

When writing about Rulinet or Russian net literature, it is necessary to always take into account two perspectives – a sociological and historical one as well as an artistic one. The sociological and historical perspective helps us understand the importance of the Internet in connection with Russian twentieth-century history, the impact historical events had on literature and culture, and the ideological pressure and censorship that resulted in the division of Russian art into official, émigré, and underground (distributed as samizdat) branches. Also, the very specific position of the artist, especially the writer, in Russian society, and the almost sacred status of books in the Russian tradition, have to be taken into consideration. Looking at Russian net literature as a part of the literary tradition, looking for interpretational approaches towards new media, and putting aside the abovementioned aspect is not yet possible. Most articles and studies that deal with the topic of Russian net literature and Rulinet either focus on the possibilities of new media as a huge archive or library and cast aside the new creative possibilities as a marginal phenomenon, or they express a very sceptical opinion on the creative potential and prospects of net literature, connecting it with the cultural context of the 1990s.

The Polish literary historian Alicja Wołodźko-Butkiewicz included a chapter on Rulinet in her book *Od pierestrojki do laboratoriów netliteratury*. Published in 2004, the text gives a very detailed overview of the situation in this field in the 1990s; it presents the discussions of Russian literary critics, authors, and journalists, listing relevant writers and websites (such as Internet journals and literary contests). The historian's conclusion, which corresponds with the point of view of some of the most radical critics of net literature, is that it was just a short-lived experiment that exhausted all its creative potential during the 1990s and then gave way to the Internet as a virtual library (Wołodźko-Butkiewicz 2012, 140–174). Tomas Glanc, a respected Czech scholar and an expert on Russian twentieth-century avant-garde art and the experimental movements of the 1970s and 1980s, recently published a book that gives a broad picture of the Russian cultural context at the beginning of the twenty-first century. The opening study gives a short overview of Rulinet and emphasizes its importance as a virtual library where practically everything ever written in Russian literature is accessible to readers. He also mentions net literature (*seteratura*) in the narrow sense, i.e., as a kind of literature that is created using new technology and cannot be adequately reproduced in print. He does not give any evaluation of it, or take the side of either its supporters or

its opponents. Nevertheless, he does not find any net literature author or work that would be worth mentioning and sees its creative potential as more connected to art rather than literature, to the visual modality rather than anything textual (Glanc 2011, 11–15). One of the few authors from the field of Russian studies who does not express doubts concerning the possible future of net literature and does not see virtual space first of all as a library is the Belarussian scholar Irina Skoropanova, who compared the state of creative as well as critical work that has been done on the Russian and Belarussian Internet. Her article was published in 2007, not long after Wołodźko-Butkiewicz proclaimed the era of net literature to be closed. On the contrary, Skoropanova says:

Traditional literature studies turned to it with quite a delay, mainly in the twenty-first century: firstly, with no expectation to discover in this so uncommonly transformed branch of literature anything of aesthetic worth; secondly, not possessing the necessary means for its research and estimation; [and] thirdly, having an insufficient amount of information and finding its bearings in the labyrinth of the Internet only with great difficulty. The initial discoverers and theorists of net literature were its creators, or at least those who possessed appropriate inclinations and abilities. (Skropanova 2007)

Skoropanova cites the same authors as Wołodźko-Butkiewicz, for example, Alexei Andreev, and acknowledges their limitations caused by the cultural context, sometimes by an inadequate understanding of the whole literary process of the late twentieth century, sometimes by a too narrow perspective of opinions, or a limited knowledge of the field of literary theory. Nevertheless, she expresses no doubt concerning the future of net literature and states that:

While the Internet cyberspace on the subject concerned has been insufficiently researched, it is still possible to draw the following conclusion: the theoretical and methodological groundwork for net literature research has been laid in Russia, giving the clue to its comprehension and mastering. The part 'Net Literature' has been added to a textbook on Russian literature which was published in 2005 in Moscow and addressed to philology students. (Skoropanova 2007)

Although it is hardly possible to fully agree with her statement that “[t]he pioneering role of Russia in the conception of the net literature phenomenon among Slavonic countries is confirmed by the active application of its experience in other Slavonic countries,” her paper shows that

theoretical work on net literature is being produced. Hopefully it will be able to step out of what Glanc calls “a kind of autism” (Glanc 2011, 25) and incorporate the theoretical work that has been done and is being done outside Russia, such as in Poland, when speaking of Slavonic countries. Using existing theoretical studies in net literature and e-literature, and applying this theoretical base on the specific Russian experience can be undoubtedly enriching for both Rulinet and contemporary literary theoretical studies. After all, Lev Manovich, when writing about new media in relation to the avant-garde of the 1920s, focused mostly on the Russian and German tradition as the most radical sites (Manovich 2012). This does not necessarily mean that one fruitful and rich period of Russian art has to result in a new experiment, or that success can somehow be transferred to the present day and be built upon. However, it does show one possible perspective from which we can look at the Rulinet phenomenon. We can look at it through the prism of Russian cultural development in the twentieth century and take its specifics into consideration. The art of the Russian Silver Age can help us understand the importance of Rulinet as a virtual library and literary salon. Looking at the Rulinet phenomenon through the prism of the Silver Age can help us accept the virtual space not just as a new and possibly free area for storing and distributing works of literature but also as a new sphere in which some trends that have been present in literature for decades can continually develop or be radically altered.

In her study called *Art-poetic Genres as an Intermedia Genre*, Grażyna Bobilewicz writes about visual aspects in Russian poetry, starting from the early twentieth-century avant-garde and going on to review the development of the visual aspect in poetry over the whole century. She states that:

Up till the beginning of the twentieth century, the dominating component and basic carrier of semantics was verbal text. Graphic and artistic means, various configurations, and design played a serious but subsidiary role. Visualization gave the verbal text an additional level of expression, possibly intensifying its lexical elements. (Bobilewicz 2012, 246)

As examples, she uses the works of the Russian futurists Velimir Khlebnikov, David Burliuk, and Vasilii Kamenskii, and the artistic strategies of the constructivist poets. Bobilewicz then describes the development of this line in poetry up to visual poetry, which synthesizes the creative strategies of literature and visual arts (whose authors denied textual dominance in the middle of the twentieth century), and continues to the characteristics of the twenty-first century as the age of post-culture, where the field for

experimentation widens significantly with the audio-visual receptive process, the progress of science and technology, and the new concepts of the author (artist-syncretist) and recipient (an active, creative participant in the creative process):

Up-to-date visual poetry is determined by new information carriers, it develops in online/cybercultural space. The means of mass communication provide art with new concepts, methods and technologies, and enable them to spread rapidly. Visual poetry assumes an increasingly serious position in the creative process, which is proven by the appearance of new genres such as electronic poetry, video poetry, digital poetry, bio-poetry, etc. (Bobilewicz 2012, 247-249)

She defines video poetry as a genre in which the visual aspect and the poetic text are organically connected; the text can be either presented on the screen or recited while the video carries additional meaning. Of the Russian authors of visual poetry, Bobilewicz names Konstantin Kedrov (Bobilewicz 2012, 249). It is obvious that the creation and distribution of this kind of poetry is possible thanks to new technology and that the Internet is organically connected with it. It is also natural that the author of such a study accepts the existence of visual poetry and all the above-mentioned new poetic genres as a fact, seeing it not as a marginal phenomenon but rather as something that has to be researched and considered in the context of cultural development that has been highly influenced by modern technology and discourse changes in the last few decades. At the same time, she demonstrates that the new technological means only heightened the intensity of existing experimental trends. In this respect, her study is in agreement with Manovich and his view of the avant-garde as software.

Bobilewicz's approach shows how studies of e-literature and inter-medial art have advanced in Poland and how much Polish and Russian discourse differ. In the Russian context, Rulinet is mostly looked at as an archive or a library; this opinion was even held by one of the Rulinet pioneers, Roman Leibov, who said as much in a 2010 lecture on the Internet and literature. In the 1990s, Leibov was the author of the famous *Roman* (Novel) project, a novel written online with multiple authorship. Today he reflects as follows:

Except for me and the kind person who edited everything, nobody will ever read this poor project that people keep mentioning until the end. ... Playing is interesting while the play goes on, but trying to present one's play as a *chef d'œuvre* is sort of ... ridiculous. (Leibov 2010)

Leibov summarizes literature and the Internet in the 1990s as follows:

Hopes appeared that the Internet would provide a completely new form of existence for Russian literature. That books will look like this: you click a link, a new website opens up, and you yourself write a chapter and submit it. Everybody will rejoice and contribute. I did this, it was interesting for me to see what was going to come out of it. Nothing came out of it. (Leibov 2010)

Being a philologist, a professor of Russian literature at Tartu University, Leibov finds the Internet very useful for literature. However, he stopped seeing it as a phenomenon which could bring radical changes or innovations into the literary field. In his lecture and the discussion that followed, he listed the three connections between literature and the Internet: the first of these is the Internet as a library – a space for storing information and an area of stability and text. This is connected with the non-stability and non-text of speech, for which he uses the metaphor of a “smoking room”. Once again, the Internet is seen as a library and a virtual literary salon: it makes books, critical opinions, and authors’ and readers’ comments easy to access and distribute. Leibov’s third connection is literary works related to the Internet as a motif or subject (Leibov 2010).

Re-entering the Silver Age

The virtual library most Russians write about is not monolithic. Different approaches of presenting literature can be traced. There are professional websites focusing on literary texts from certain periods and by individual authors, presenting critical texts and commentaries from the field of literary theory. The feb-web.ru website can serve as an example. On the other hand, there are a lot of websites created by amateurs and fans of certain authors. The quality and style vary, but nonetheless a general trend can be traced. For works from periods up to the nineteenth century, virtual space is used as a traditional library. Practically everything can be found there. A different approach can be identified with respect to the authors of the Silver Age (the era of Russian modernism and the avant-garde: 1890s–1920s). The strong tendency here is not just to store the complete works of different authors and make them accessible to a large audience but in a sense also to recreate the period, its atmosphere, and

reconstruct the world the Silver Age artists lived and worked in. Significantly, their websites are often called “The World of ... [e.g., Velemir Khlebnikov or Marina Tsvetaeva]”. Websites are frequently linked, thus showing the relationships between the Silver Age poets, pointing out intertextual connections and interactions with other artistic fields, and recreating the debates in early twentieth-century journals and literary salons. The early twentieth-century view of the work of art as *Gesamtkunstwerk* plays a significant role here.

The Silver Age was an exceptionally creative period in Russian art history. One of the most dynamic, fruitful, and diverse periods of Russian culture, it remains highly inspiring even in the early twenty-first century. However, it did not end naturally in the process of artistic evolution and cultural paradigm changes. It was brought down by the political events of the 1917 revolution followed by the Russian civil war and the installation



K. Kedrov, *Kvadrat Malevicha*. <http://futurum-art.ru/gallery/video/index.html>



0,10 Exhibition, Petrograd 1915
http://en.wikipedia.org/wiki/0.10_Exhibition

of the new political regime. The evolution of Russian culture was interrupted, and the Silver Age was erased from Russian cultural history for the next several decades. Its tradition was partly revived as late as in the 1960s, but it had to wait until the 1980s for an official return to Russian cultural and literary history. During the 1980s, many authors were returned to Russian literature: the official, underground, and émigré branches were connected, samizdat and émigré works got published, and many authors were discovered or rediscovered. This process was accompanied by a very lively and intensive interest in the Silver Age and a rediscovery of its poetics, and it also brought debates that have been reflected in the area of *seteratura*.

When studying websites about the Silver Age authors, we cannot overlook those dedicated to contemporary poetry, which at the same time explicitly turn to the tradition of Russian modernism and the Silver Age. At least two such projects deserve attention; one is connected with early modernism and the tradition of St Petersburg poetry, and the other refers to the tradition of the Moscow avant-garde. The first project is called ARGO, and it points out its connections with the literary journals of Russian modernism such as Apollon and Golden Fleece (*Zolotoe runo*). The name ARGO can be read and understood in several ways, one of the official interpretations treats ARGO as a shortened form of the word Argonauts. On the website we can read the following:

The direct reference to the myth is supposed to remind us that any meaningful cultural work is a risky business with far-reaching consequences, but only acts connected with risk and challenge can become a part of history. The literal meaning is also important – *argo* (Russian for argot) is a language understood by just a few, and contemporary literature can also be seen as a special language which has to be mastered and which is taught neither at home nor at school (provided that it is literature and not mass-produced works or quasi-classical imitations). Similar to the key projects of the beginning of the twentieth century, the ARGO project is created as a gesture rejecting the dead mainstream of the past century.¹

Projects that openly proclaim their connection to the Russian avant-garde, especially its futurist position, as well as the convergence of verbal and visual aspects, include the Union of Twenty-first Century Writers and its journals, futurum-art², and Children RA (*Deti RA*)³. Like ARGO, RA can be interpreted in several ways; it is not only the name of the Egyptian god of the sun but also an abbreviation of the “Russian avant-garde”. On their

website, we can see the video poem *Kvadrat Malevicha* (Malevich's Square) by Kedrov, an interesting example of the connection between contemporary literature and the avant-garde tradition that is expressed both on the textual and visual levels. Grażyna Bobilewicz mentions Kedrov as one of the authors of video poetry. Watching this video poem, we can agree with Bobilewicz's statement that the visual level adds a new meaning to the text. The text from 1981 gets back to Malevich's most famous painting, Black Square, equating it with the night and turning it into an abstract, immaterial, but at the same time eternal and all-embracing space. It is the dusty moonlight cast on a chest of drawers that creates a square under a square, a square that nobody, nothing can wash away, a square that "itself like the horn of plenty, the absent thing, contains many more things"; at the end of the poem, "the square flies up, flies away, leaving behind the shadow of a square" (Kedrov 2011).

The video poem shows the visual component as an illustration of the text and demonstrates how the interpretive possibilities of the textual and visual differ. It shows that pictures, video, and sound add an extra meaning, interpretation, and – in the tradition of the Russian formalism theory of *ostranenie* (defamiliarization) – constantly remind us of the potential difference between words and images, thus making us reinterpret the text again and again, and see/read it in a new context. On the visual level of the poem, in addition to the Black Square being present, the author evokes the exhibition where it was first shown and the way it was presented. At the first exhibition, the Black Square was placed in the Beautiful Corner (*Krasnyi ugol*), the most honoured place and the corner where – traditionally in Russian interiors – only icons and sacred images are positioned. Putting the painting in this corner was supposed to shock and draw attention to the central image of a new trend in art that corresponds with Malevich's theory of Suprematism, which sees the artist as a creator, which was being formulated at the time. In the video, an interior is shown with two walls full of paintings. This immediately evokes the exhibition, although the Black Square is not placed directly in what would be the Beautiful Corner but slightly lower. The shadow on the floor is placed so that it could be the reflection of a painting hanging in that corner, but as such it could reflect any painting. The most important and most telling fact is that no painting is there to cast that shadow, making it the shadow of "the absent thing", the all-embracing entity. The suggestion that the Black Square embraces everything is expressed on another level as well: although the interior evokes the 1915 exhibition, the paintings placed there, except for the Black Square, are not the paintings that were presented at the exhibition. They are Ma-

levich's later works, which were potentially present at the exhibition and potentially present in the Black Square painting.

Kedrov's video poem is a striking example of the connection of the Silver Age tradition with multimedia discourse, binding the best tradition of experimentation with contemporary experiments, functioning as a reminder of avant-garde radicalism and provocation. In a way, it can be seen as a poetic counterpart to Manovich's theories. Although the area of *seteratura* is seen by many primarily as a conventional library, a permanently open literary salon, or in Leibov's words "a library and a smoking room", Kedrov and others demonstrate that it has additional potential that contemporary authors are ready to use.

This video poem can serve as an example of some authorship problems that can occur in virtual space. We can find at least two versions of the video on Rulinet; the one used in this chapter appears on the futurum_art website under the name *Kvadrat Malevicha*, and Kedrov is cited as the author⁴. The same version can be found on the kedrov.ru website; it is presented as an interpretation of Kedrov's poem *Kvadrat Malevicha*⁵. Another version which is slightly different can be found on several other websites, presented as a video by Gennadii Shportalo (on Rutube) or as a poetic clip.⁶

Remediating journals, books and authors

Net journals and literary projects are frequently connected with printed anthologies, which can cause natural restrictions for authors whose ambition is to publish in print and who hope they can use virtual space as a starting point for a future career in print. It limits the use of modern technology, and at the same time works created for the net are seen as works that will later be printed. The amount of texts that are supposed to be published on the net and the form into which they are organized should be looked at as well. In his article *Net Literature and the End of Postmodernism*, Sergei Kornev, one of the *setearatura* theoreticians, claims that on the Internet all works by one author turn into one great book – what used to be a metaphor gradually becomes materialized. He writes:

In reality there are only two ways to organize a writer's works in space: a library and a museum [what Kornev has in mind here is a museum placed in

a late author's flat or house; the home-museum, or *dom-muzei*, is very popular in the Russian tradition]. In a library, the author is presented as the sum of works out of their context, lined up in alphabetical order among other writers' books. [...] The museum is an opportunity to collect all the author's works in one place, incorporated into the context of his life, but this luxury is granted only to the greatest authors, and moreover, always only after they die. As opposed to this, the museum on the Internet is a site where the author is presented in full complexity. (Kornev 1998)

He also mentions aspects of authorial identity in virtual space, the possibility of changing identities, and the creation of an author as a project.

However, when looking for contemporary poetry in virtual space, we find one or just a few poems by a single author much more often than collected works presented as a whole. For example, the *Moskovskii kom-somolets* newspaper offers to publish the works of beginning authors in a section called *Seteratura*. Texts can be published in this section under two conditions: they have not been printed before and they adhere to a strict limit: three poems for poetry and a certain amount of characters for prose.

Traditionally, when thinking about a poet's works, what we have in mind are books of poetry. Along with journals and anthologies, a book of poetry represents a closed, finished unit, a text. In the Silver Age, a book of poetry was often a work of art where the visual aspect played an important role, e.g., Alexander Rodchenko's illustrations for Vladimir Maiakovskii. Virtual space and net literature work with the "a poem, several poems" category rather than with a "book of poetry" or "poetic cycle". Moreover, the book as defined by Kornev is not a closed text: as long as its author is alive and active, it is an ever-changing text.

Here it is necessary to mention Andrei Belyi, one of the most important and well known authors of Russian symbolism and modernism. He was known for returning to and revising his published texts even years after their original publication. For each new edition he changed his verses, re-writing them so that they would reflect the new social situation as well as the ever-altering code of versology, which he, as a recognized expert, was very sensitive to. In the 1920s, some people even suggested establishing a literary society that would protect Andrei Belyi's works from the author himself (Kšicová 2007, 317). Belyi can serve as an example of an author who sees his work as a complex text, a text that changes and is closed only after the author's death. New ideas and changing views on poetics as well as, in the case of Belyi, new metaphysical findings are reflected in new texts and in constant revisions of the older works. In this respect, such an approach may

correspond with Kornev's ideas mentioned above. As a multimedia sphere, *seteratura* gives authors different possibilities. Rulinet is a space that provides frameworks for publication, an archive, as well as the technological possibilities to transform texts into multimedia and multidimensional works.

A negative view of *seteratura* expressed by some established authors in the 1990s and later can be seen as a reaction to a possible change in hierarchy; they viewed net literature as a threat to their position in literature and also as a threat to book culture. The reasons for this are clearly explained in Pančenko's essays on Russian culture and literature. He writes about books in the context of Russian medieval culture:

The book was not just a thing but a kind of property that cannot be stolen. Instead of a man owning a book, a book owns a person; it 'heals' him. Books as well as icons represent spiritual authority, spiritual leadership. ... it is not accidental that in old Russian the word 'read' also meant 'worship'. (Pančenko 2012, 177)

In his essay *The Russian Poet or Profane Sanctity as a Religious Cultural Problem*, Panchenko writes about the position of poets in Russian society:

Russia has always been proud of its saints, of their multitude, which was understood as proof of God's countenance and protection. But it was as if Peter the Great held up the Russian sacredness. ... The nation turned away from the tsars; it gained fewer saints than it had lost. There remained poets. (Pančenko 2012, 297)

Even in the twentieth century, Russian readers frequently viewed their writers as prophets, as the voices of the nation's conscience. At the end of the century, political changes brought radical changes in society and the cultural atmosphere; restoring the unity of Russian literature, which had been divided for many decades into official, underground, and émigré branches, was not a smooth process either. While many authors started to use the Internet and the possibilities it gave them for self-presentation, only some incorporated the new technology successfully and made it a theme of its own. Others radically opposed the idea of net literature and any change connected with it. Dmitrii Bykov, a contemporary writer, wrote several times about the phenomenon of *seteratura* with disrespect, seeing it as the continuation of twentieth-century samizdat and as a space for those who do not succeed in print. He repeatedly stated that there is no such thing as *seteratura* (Bykov 2000).

We can trace two approaches in works that deal with the possible future of books and the fate of print culture. The first approach sees traditional books as already “dead”. The second one, which is not so radical, states that we have to get used to a changed paradigm and a new status for books, possibly a new appearance. While some expect printed books as we know them to disappear, others see them changing. Even in the relatively conservative Russian context, some scholars (for example, Leibov quoted above) express no doubt about the approaching death of printed journals and the dominance of e-books: “A book will be a luxurious item, a good present, a beautiful thing; books will not disappear, just as paintings have not disappeared” (Leibov 2010). Creating hand-made books and other hand-made artefacts is yet another path that some contemporary Russian artists are taking. One could mention Vitalii Melnikov, the author of book-art; the French-Russian poet Bruno Niver, who synthesizes poetry with other arts and is the author of the synthetic genre of poetry-painting (Bobilewicz 2012, 253, 257); and Linor Goralik, who is a Russian writer and journalist with a special interest in handcrafted artefacts.

There is no doubt that Rulinet is an important archive and a strategic space for publication and the exchange of opinions. It greatly helps in filling the traditional gap between major Russian cities and the provinces, and bringing Russians living in Russia and Russian expatriates together. Nevertheless, it offers more than the chance to browse through books like in a huge library and to chat in a virtual smoking room. There are authors who exploit the possibilities of new technologies, and some of them are already internationally acknowledged. To many of them, the Silver Age tradition serves as an important source of inspiration; it can inspire not just with its aesthetic experiment and poetic anti-dogmatism but also with its tradition of creative freedom, courage, pluralism, and openness.

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Notes

1 www.argoproject.ru/

2 www.futurum-art.ru/#

3 www.detira.ru/

4 www.futurum-art.ru/gallery/video/index.html

5 www.kinostok.tv/video/2829/kkedrov-kvadrat-malevicha

6 www.rutube.ru/video/2f1af64e9bcf0e67d8c3dbb9bef2f642/

2. Serialized Novels in the Context of Digital Publication

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Abstract: Serialized novels have a long history in world literature, with most of the credit for their popularity going to the Romantic-era French journalist and novelist Eugène Sue for his *Les Mystères de Paris* published in *Journal des débats* between 1842 and 1843. In the Czech sphere the platform for serialized publications include the *Světobzor* journal where prominent authors published their works between 1867 and 1899. Serialized novels still maintained its relative importance in the first half of the twentieth century.

This chapter aims at comparing the traditional print-based practice of serialized fiction with contemporary digital practices in the context of remediation. Czech serialized novels published online by authors of popular genres (Pavel Renčín, Otomar Dvořák, Alex Drescher, Sabrina D. Harris) are a continuation of an extensive tradition. Among the opportunities afforded by the Internet one of the most promising for authors is a more direct and intensified contact with readers. However, the affordances of digital media blur and alter the serialized novels genre more than their creators would like, and evidently more than they are actually aware of.

Serialized Novels: A Brief History

Serialized novels have a long history in world literature, with most of the credit for their popularity clearly going to the Romantic-era French journalist and novelist Eugène Sue for his *Les Mystères de Paris*, which was published in *Journal des débats* between 1842 and 1843, achieving worldwide fame. The serial novel enjoyed its heyday in the latter half of the twentieth century, when works of popular literature were published in this manner as were prestigious standard works and those with high literary ambition. Flaubert's *Madame Bovary* came out in *Revue de Paris* from October to December 1856, while in the Czech sphere the platform for serialized publications include the *Světobzor* journal, in which Alois Jirásek, Karolina Světlá, Jakub Arbes, Vilém Mrštík, Karel Matěj Čapek Chod, Karel Václav Rais, and others had their prose works published between 1867 and 1899. In 1883, readers of *Národní listy* had the opportunity to cut out a Czech translation of Dostoevsky's *Crime and Punishment* from the literary supplement and so forth. The publication of serialized novels still maintained its relative importance in the first half of the twentieth century. Almost all of Karel Poláček's prose work came out first in serialized form at that time. Čapek's *Továrna na absolutno* (The Absolute at Large), pub-

lished at the end of 1921 and the beginning of 1922 in *Lidové noviny*, met with a notable success during the interwar period. In some cases, aspects were involved that are more to be expected with the advent of interactive digital media, e.g., collective authorship, which forms the basis of the novel *Záhadné stopy* (Mysterious Tracks) published in 1907 in the satirical magazine *Švanda dudák*. There were instances of ongoing and, in principle, competitively-based interactions between the readership community and the periodical and, indirectly, the author of the novel in question, as in the case of the novel *Životem vedla je láska* (Love Led Them Through Life), which was published in 1926 in the magazine *Hvězda československých paní a dívek* and which we shall return to later.

In the latter half of the twentieth century, this method of publishing prose gradually diminished in importance. More frequently than in dailies, serial novels appeared in youth magazines and satirical/humorous periodicals such as *Dikobraz*, which published the novel *Trpaslíci mají přednost* (Dwarves Have Priority) in 1977 and 1978 to lampoon the dissident movement and underground culture.

In a sense, the “baton” of literary serials was taken up by serialized comics and radio dramas. At the end of the century, serial novels disappeared entirely from the pages of literary and other periodicals, and only in 2009 was an attempt made to return to this form of literary communication, when Pavel Kohout published his novel *Cizinec a krásná paní* (The Foreigner and the Lovely Lady) in the daily *Mladá fronta Dnes*. In 2012, he repeated this successful media and marketing ploy with his novel *Tango mortale*, which also came out immediately afterwards as a book.

The Blog as a Technical Structure

The term “serialized novel” made a broad comeback to literary communication after 2000 with the advent of new digital media. It was brought back to life by blogs and the gradual expansion of their content focus from purely authentic texts of a diary-like nature to openly fictional texts.¹ The question of whether blogs can be a medium for narrative structures is by no means a simple one. New media theory provides several quite different answers. For example, in *Blog Theory* (2010), Jodi Dean promotes the view that blogs are based on the ongoing provision of information and that subjectivity is not narrativized during blogging; in other words, stories

are not told, but moments are presented in the form of images, reactions, sensations, and events. Dean understands blogs as a means by which oral communication is presented by linear writing (cf. Dean 47). Jill Walker Rettberg has a different approach to this issue in her book *Blogging* (2008), which understands blogs to be the narrative forms that basically differ from film or novel narratives. Walker Rettberg finds that blogs are characterized by an episodic style of writing, which wields a fundamental influence on the narrative structure. She defines this as a fragmentary narrative presented in brief episodes, which are relatively closed and can be read separately, although if they are read together they form a broader story (cf. Rettberg 111). Walker Rettberg is aware of the connection between blogs and the older tradition of serial publications, but she believes that blogs differ from those older forms in their brevity and the concision of individual episodes as well as the fact that there does not always have to be any obvious continuity between episodes. Clearly, although Walker Rettberg is writing here about blog narrativity and their fictional content, she does not fully appreciate the role of purely literary blogs, which also differ from the older forms of serial publication and yet are comparable with their predecessors in terms of episode length and narrative continuity. Nor does research into Czech novel blogs confirm the view that, in contrast to traditional narratives, blogs do not tend towards a conclusion but rather have an ideal of uninterrupted continuity over the long term. This otherwise undoubtedly valid attribute of blogs comes into conflict with digital serialized novels, which is not infrequently made explicit in discussions between readers and the author.

In her study *“Blogi jako forma literacka”*, Anna M. Szczepan-Wojnarska does not for one moment doubt the narrative potential of blogs, which she describes as a polymedial genre combining the media characteristics of web pages and letters or diaries (cf. Szczepan-Wojnarska 2006).

In my view, the key to using the term “blog” is to openly define whether we understand it as a technical structure or a communications structure. In this study, I hold to the first option, and I shall use the term “blog” in the sense of a technical structure, which allows for various forms of communication.² A constituent function of blogs is to publish any type of content on an ongoing basis in which the relationship between the individual content segments is based on the identity of the author’s subject and need not – but may – be bolstered by the compositional interconnection of the segments in a single joint narrative structure, which transcends the boundaries of separately published content segments. The second constituent technical attribute of blogs conceived in this way is the discussion field, which en-

ables readers to make comments on each episode and to hold dialogues with the author and each other. Therefore, I do not see blogs as a communication structure that necessarily serves to communicate personal views on current events (amateur/civic journalism) or to publish information on the author's private life – even though such communication objectives and content are primarily and most frequently met with. Blogs may also have literary content, while current literary practice (and not just in the Czech Republic)³ indicates that, in addition to the periodical press, they are now another medium for the serialized publication of works of prose. During the remediation process, this form of media presentation of literature has naturally undergone some substantial changes. It is the aim of this study to identify and analyse these differences in order to contribute to an understanding of the specific nature of literature published on freely available digital publication platforms, particularly blogs.

Serialized Publication in the Periodical Press

Let us begin our comparison of printed and digital serialized novels with a summary of the determining characteristics of the older of these two media forms: novels serialized in the periodical press. Our starting point here might well be Pavel Janáček's study *Fiction in the Periodical Press: The Specific Context of Publicat* Janáček summarizes the history of serial novels, recalling their economic context. Thanks to the serialized mode of publication authors received work and a stable income, while the periodicals themselves then acquired the continual input of attractive content thanks to the considerable popularity of serial novels, which was of decisive importance for the sellability of newspapers and magazines in the nineteenth century. The phenomenology of reading is not neglected: serial novels are read for a longer period of time than their book-published counterparts, and they are read in discrete steps, which structure the readers' reception of narrative (Janáček, 2005). However, here, Janáček is dealing with and supplementing the basic typology of the acts and situations of publication put forward by Miroslav Červenka in his studies *Textology and Semiotics* and *The Semiotics of Samizdat*; the situation of a "perfect publication" in the form of a book and the situation of a "drastically limited publication" in the form of samizdat are joined by a third type: the situation of a "drastically unlimited publication" in the form of a serial publication. This form of publication is defined in terms

of the four factors that distinguish it from the book format. In the following discussion, I will confront Janáček formulated determinants with the form of serial novels (or works that present themselves as such), whose technical medium is the Internet and whose software medium is most frequently one of the freely available blogging tools.

Heterogeneity

A literary text serialized in the periodical press is closely integrated into the heterogeneous context formed by the other texts that make up the current number of the periodical in question (see Illustration 1), but this element is not as strong in the case of online serialized publication. A serial novel episode does not usually share space on the same web page with any other texts from different discourses. The most typical type of close context is the personal blog or the author's personal website – the heterogeneity of context and paratexts is thus limited by the semantic field surrounding the individual author. (This fact frequently induces and seduces the reader to perform a biographical reading and often fudges the distance between the narrator and the author – as can be seen from the discussion under the episodes of Martin Fendrych's novel *Slib, že mě zabiješ* [Promise You Will Kill Me].) Serial novels sometimes also appear on corporate websites (e.g., large journals and social magazines). Here, they are also assured a relatively high degree of independence. Heterogeneity comes to be involved in online serial novels in a different way by means of hyperlinks that can easily take the reader from the novel episode to another part of the website or indeed to another place on the Internet. In this way, serialized digital novels come to be involved in ephemeral contexts that arise as the user moves around the Internet by means of hypertext links, which I have previously attempted to define as the “virtual codex” (Piorecký 2010).

Complexity

In addition to heterogeneity, printed periodicals can also be said to involve an opposite quality, i.e., a semantic complex that is by no means without its (ideological, thematic, and intertextual) influence on the way a text

for a particular newspaper or magazine title is written and interpreted. To a large extent, this also applies to digital serialized novels unless they are published as a part of personal blogs or websites (it is certainly not possible to write a serial novel for the *Renčina červená knihovna* website in the science-fiction genre or on everyday life in the Middle Ages and the like). However, the application of the complexity factor is generally optional for the above reason.

Collectivity

In connection with the heterogeneity and complexity factors, Janáček also points out that periodical publication in the press depersonalizes the subject of the literary work and connotes a collective authorship mode. The practice of collective authorship – particularly in anonymous contributions in the nineteenth-century press – is well known. Evidently, *Záhadné stopy* (Mysterious Tracks) was one of the oldest novels in the history of Czech literature to be openly authored on a collective basis. It was written during 1907 by Ignát Hermann together with a number of co-authors and printed in the *Švanda dudák* journal with this challenge: “Jointly and collectively authored by an unregistered association of authors with more or less limited liability. Other partners still being accepted” (Gilk 2006).

For twenty-first-century serialized novels being published digitally, the point involving depersonification and the trend towards collective work are quite obviously in operation (as they are in line with the basic principles of digital communication), albeit again not in an absolute manner and not with the same motivation. On the other hand, novels published on personal websites and blogs have a greatly strengthened connection between the subject of the work and the individual author. Elsewhere, however, the authorship is hidden beneath an impenetrable nick that does not allow any of the author’s biographical details to be ascertained.

Collective authorship is a principle that has been adopted by serial novels and highlighted in several cases. Two types of collective authorship can be distinguished among serial novels:

- 1) a collective work on a novel based on the readership competition principle
- 2) a collective work on a novel as a joint activity between the reading community and the author.

Collective Serial Novels Based on the Readership Competition Principle

In some cases, collective authorship is the determining principle behind a novel, which thus becomes a collection of contributions from various authors, whose selection is based on the principle of competition. This is the case of Michal Viewegh's *Blogový román* (Blog Novel) and similar projects such as *Zápalkoví lidé* (Matchstick Men), *Slovensko píše román* (Slovakia Writes a Novel), and *Twitteropsaní s J. Rudišem* (Tweeting with Jan Rudiš). Based on the principle of collective writing, Viewegh's *Blogový román* was published on the *Mladá fronta Dnes* daily newspaper website from September to December 2009. This established author wrote the introductory chapter to the novel, sketched out the characters, and challenged the readers to get actively involved in carrying on the story and writing the following chapters. All the alternative instalments to the novel that the blog readers sent in were published. This produced a total of ten chapters, each of which comprised the alternative considered best by Viewegh and an award of 10,000 crowns from the sponsor along with publication with the first chapter written by Viewegh himself, thus combining the blog with the creative-writing course principle while attracting considerable public and media attention for Viewegh. For this commercial author, the blog provided an opportunity for an even more accommodating approach towards readers than that offered by the printed medium with its pandering subject and simplistic narrative; the blog enabled him to place his text among those of his readers, create the illusion of rapprochement between author and reader, and establish a seeming intimacy (note his efforts in sending personal mail to competition participants).

The same principle applied to the *Slovensko píše román* project (from May to October 2009), even though a certain national emphasis can be seen in the title and the announcement of the competition. The editor was the commercially successful prose writer Evita Urbaníková, who wrote the initial and final chapters and selected the readers' chapters that ultimately found their way into the book publication. The competition sponsor was the Martinus.sk Internet bookstore. Bookstore marketing also produced the *Román na pokračování* (Serialized Novel) (<http://romannapokracovani.sms.cz>) project, which took place from December 2007 to November 2009 and was sponsored by the Luxor bookstore in Prague. The prizes were bookstore gift vouchers and an undertaking to publish a book, which was not actually implemented. The way the project presented itself as the

“first Czech serial novel” demonstrates the author’s feeble awareness of the tradition behind serialized narratives. Zdeněk Král, the publisher of the *Příběhy na 50 slov* (50-Word Stories) website, launched the *Twitteropsaní s J. Rudišem* project (<http://pribehynapadesatslov.cz/twitteropsani-ukazka-hotove-povidky/>) on 21 June 2012. This event took place in a similar manner to Viewegh’s *Blogový román* project. An established, popular prose writer wrote the introductory episode of the story, and subsequently any Twitter user could add his instalment under the #připiš tag. A committee set up by the project organizer selected the best instalments to make up a complete story on the *Příběhy na 50 slov* site; hence the principle is similar to that of *Blogový román*. However, the microblog context brought with it a contraction to the creative collectivity model both in terms of time (the entire project took place over a single day) and space (each episode was limited to 140 characters, i.e., one tweet). In contrast to Viewegh’s project (sponsored by the Karlovy Vary mineral water company), the co-authors did not have the incentive of a financial award but merely an opportunity for some playful literary dabbling.

Collective Work on a Novel as a Joint Activity between the Reading Community and the Author

Collective authorship has actually developed in another form even in the case of “single-author” novels when the author brings the community of readers into the novel creation process, lets them make statements on individual episodes in the form of comments beneath the text of each instalment, formulates poll questions, and incorporates the results when writing subsequent episodes. Pavel Renčín, whose *Labyrint* project will be dealt with later, has most consistently taken advantage of the opportunity provided by blog writing in his novels, as has the author behind the nick Sirael, who published a novel entitled *Oklamaná láska* (Love Betrayed) on the

Renčina červená knihovna website in 2008.

I believe it will be of benefit to follow the specific nature of the digital serialized novel genre in this case in contrast with its older counterpart published in the periodical press, specifically with Bohumil Brodský’s novel *Životem vedla je láska*, which was published in 1926 and 1927 by the journal *Hvězda československých paní a dívek* and which also comes under the

genre of “pulp romance”. However, we will not be as concerned with Brodský’s novel itself as with the way the journal handled it, as it launched the “Write a Novel” competition at the same time as it published the first episode. (The difference from the blog novel competition will soon be evident.) Based on the initial episode, and in particular on ten pictures portraying key moments in the novel’s plot, he challenged his readers to write their own brief version of the entire story on one manuscript page. The reward for readers was both the publication of their texts (or extracts from them) in the magazine and more valuable awards: the first prize was kitchen furniture and equipment: a sideboard, a washing table with two drawers, an ordinary table with two drawers, two chairs, a stool, and a lidded scuttle. The competition enjoyed extraordinary acclaim and the editorial board received tens of thousands of contributions. As Dagmar Mocná pointed out on the basis of her analysis (1996), the competitors presented a broad range of different solutions to the key issue in the novel: the chief protagonist’s unwanted pregnancy and the birth of a child out of wedlock. Characteristically, Brodský (without explicitly indicating it) chose whatever the largest number of readers proposed as resolutions to his novel. This was not just a readers’ competition but also the embryo of a collective creative approach, which in the field of popular genres aims to select the solution that is best received by the broadest possible circle of readers.

The Internet novel *Oklamaná láska* also conforms to this principle, making it obvious and explicit while increasing its role in the text creation process. The author is in a very intensive and ongoing liaison with her readers, primarily with the aid of comments beneath each novel instalment. These comments are spontaneous, as the author motivates and calls upon the readers to send them in: “And do please send the comments, which are somehow not getting to me 😊”; “I do like to be inspired by your ideas” (Sirael, 2008).

She works with the readers’ ideas quite openly and programmatically, reflecting them in her subsequent writing and trying to accommodate them to the maximum possible extent. In their comments, the readers interpret the characters and what moulds them; they raise questions, form hypotheses, and sometimes openly dictate what they would like to read – thus helping generate the text (Illustration 4). Practically speaking, the readers develop several conceptual parallel plots which will never achieve the form of a literary narrative but which potentially exist in the blogosphere texts surrounding the novel narrative. Some aspects of these unrealized narratives, however, get included in the author’s version of the text. In their comments, the readers imagine themselves in the story; they

judge the characters as if they were real-life individuals, which is not just the outcome of a naive approach to reading but which also stems from the very nature of this processual work. The readers are also a part of it: they are its protagonists just like the literary characters as the boundary between the text of the work and the metatext of the comments is not sharply defined (e.g., we get to know the characters from the way their actions are portrayed and their speech is stylized in the novel episodes as well as from what the author points out about them in the commentaries and discussions with readers). However, the author also puts another tool in the readers' hands with which they can have an influence on the further development of the story, or indeed even make decisions on it. This tool is the questions in the poll that appear under each novel instalment: e.g., "Will Annabel accept Lord Doolish's invitation to supper?" or "Will Henry kiss Annabel? Yes/No". The author also put the required size of the novel up for a vote and attempted to keep to the result. The technical side of the voting is covered by BlueBoard mini-apps, so all the readers need to do in order to vote is click on one of the options and then check to see how the statistics unfold. This gearing towards the readers and their opportunities to enter into the work is also a decisive factor in the narrative technique, which moves rhythmically from one turning point at the end of a chapter to the next. The author herself reflects this in one of her comments: "The serial novel has certain limitations, particularly in length (as a rule, 10 A5s of handwriting) as well as in content. I need to lead you from one point to another, so there is something to decide about" (Sirael 2008). At the end of *Oklamaná láska*, the author found out through polls which characters were most liked by the readers because they were included in the next instalment, as in the case of the written novel *Panství Doomsday* (Doomsday Demesne). Here Sirael made use of rather erotic scenes, which were only available to those who sent in a declaration that they were over eighteen years old. Others were able to read the novel as well, albeit in an abridged ("censored") version form without certain passages. Hence two parallel versions of the novel came about.

Paratextuality

Among the specific factors distinguishing book and periodical publication, Janáček also refers to the fact that periodical publications provide

more opportunities for paratexts relating to the literary text (interviews with the author, interpretative glosses, competitions, and campaigns). This also applies to the same or to a much greater extent in the case of digital serialized novels. A telling example where paratext options have expanded to a considerable extent in digital media is Renčín's novel *Labyrint*. Such a creative community of readers gathered at his website that even the paratexts which made up the immediate environment surrounding the novel itself were stylized in an artistic way: first as a heavy metal opera and then as comics. The strong role played by the paratext is characteristic of practically the entire novel published on his personal website. This stems from the general nature of digital textuality, which is characterized by the difficulty of separating the text from the paratext, as pointed out by Federico Pellizzi (5): all the texts and the processes (comments, searches, and the like) surrounding the text itself are hypertextually interlinked with the relevant text passages, becoming a part of the text and creating it.

Material Limitations

Another of the factors used by Janáček to define the field of periodically published prose is that of material limitations. In the case of the printed media, this particularly involved the periodical format with its strict limits on space which literary texts had to conform to, and which had its effects on the style and rhythm of the narrative. Another example was perhaps *Trpasličí mají přednost*, which had its own stable, defined place within the framework of the fixed lay-out on the Dikobraz magazine page for cutting out.

Digital publication platforms have much less in the way of material limitations. Texts of practically any length can be published on blogs and websites. However, even here some quite considerable discipline is evident in the choice of text size, which authors are not compelled to make by material limitations but which come about due to readers and their ability and willingness to read as well as conventions requiring texts on websites to be fairly short so that they can be read onscreen without difficulty. Segmentation of the narrative also naturally comes about due to the circumstances of the author, who perhaps over the course of a week is only able to create a limited amount of text. Text segmentation is also a style-creating element used to raise readers' expectations and heighten tension. What previously used to be (or acted as) conformity to the material limits of the printed me-

dia is now accepted as a voluntary choice and a tried-and-tested communicative literary device. In the case of Renčín's *Labyrinth*, this also applies in the opposite direction; here the author retained the segmentation in small episodes (blog "entries") even for secondary magazine and book publications of the same novel.

Continuity

As for the continuity factor, Janáček refers to the fact that the entirety of a work serialized in the periodical press is not available all at the same time but appears in the form that it has in the present issue, which again has an influence on the morphology of the novel in question: a large role is played by episodicity, i.e., the means for bringing about tension and maintaining the readers' interest while organizing the thematic level in such a way that the characters pass smoothly through the story and remain under the reader's "surveillance".

The continuity factor acquires a somewhat different form in the case of digital serial novels. In contrast to printed serial novels, the novel is not available in its entirety at any one time, because it is growing progressively; previous episodes are, of course, much more readily available as they accumulate on the blog or website in question, and readers can come back to them at any time at their convenience (they are not compelled to cut them out or collect and archive individual parts of the novel in any way). In this respect, reading a digital serial novel is closer to reading prose published in book format (this is evident from the comments for the novel *Oklamaná láska*, whose readers compare how a particular character behaved in older episodes and make it clear they see the narrative as a whole, thus expecting an internal logic and meaningful coherence). Nevertheless, it is the case that digital serial novels are moderate with regard to character poetics. They definitely do not wish to be "overpopulated", and the entrance of a new character into the plot is always a minor event which the author and reading community often comment on and perceive with irritation.⁴

Topicality

The last of the series of factors used by Janáček to define the serialized publication of prose works in print is that of topicality. Periodical publication in print is associated with cyclical and historical time. Each episode of a serial novel is associated with a specific date and its thematic, emotional, and intellectual timeframe (the influence of church holidays or current historical events, for instance, Christmas episodes of serial novels).

The topicality factor undoubtedly also applies to digital serial novels. In any case, it also arises from the nature of blogs as instruments designed primarily for publishing diary-like entries and comments on topical events. However, in the novels under review the topicality factor does not arise so much in individual episodes as in comments and the author's paratexts, from which readers frequently have the opportunity to familiarize themselves with up-to-date and topical information from the author's private life. The difference is due to the fact that stories from the present day are a thematic minority in Czech digital serial novels, whereas fantasy and historical fiction are popular.

The Digital Publication Context

We now come to that point where the question is inevitably raised: What does Janáček's set of factors defining serial novels in the periodical press fail to describe from the standpoint of digital serial novels? In what respect is the current form inadequate for our needs?

Our answer may remain within view of Červenka's theory of the act of publication, which Janáček also based himself upon. When examining digital serial novels (and surely other text types mediated in digital network format) through the prism of this theory, we come up against a fundamental contradiction based on its very core, formed by the premise that the text only becomes a literary work when it acquires a sign-based form; for this to happen, it had to be released from its psychophysical author. Červenka believed that this happened just at the moment (or during the process) which he calls the "act of publication":

During the course of literary communication, a moment can be determined in which a literary text on private matters turns into a text of a literary work, i.e., into a cultural-social fact, thus acquiring a specific ontological status. In the literary process this moment represents a turning point (...). Its character might be summarized by calling it the act of publication. (Červenka, 2009b: 99)

Červenka understands the act of publication to be the result of a conscious decision by somebody (not necessarily the author) and as a directive aimed at the public to assign a particular semantic correlative to his work:

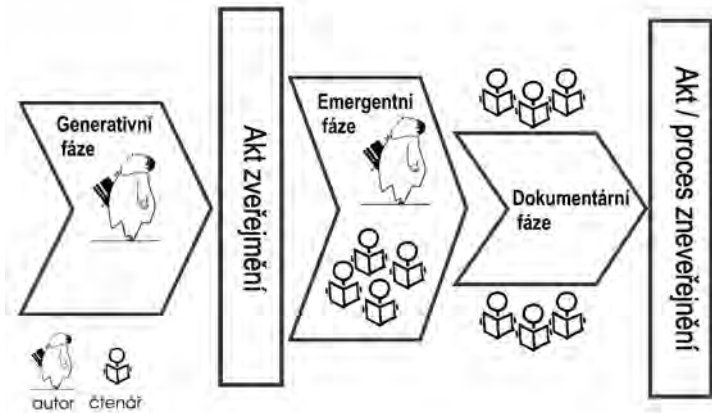
This involves a total restructuring of the text, which can be described as a shift from causality to intentionality, or, in other words, from external to internal motivation: if previously both the overall nature and the individual characteristics of the text might have been motivated as a private expression, i.e., due to the original relationship with the psychophysical individuality of the author, then in the case of the published text, if it is conceived as a literary work, this motivation loses its sense and is replaced by a motivation deriving from the relationship between the nature of the text and the “individual”, i.e., a purely semiotic construct that is ascribed to the text as its hypothetical guide, as the possible initiator of acts of volition, on the basis of which the work came about. (Ibid.: 100)

But can we speak of “this watershed moment in the history of a text” if as readers we are constantly supplied with claims, such as that a particular episode came about during a boring lecture at this or that school, or that another episode must have been finished quickly just before the author went on holiday⁵ (i.e., a situation where we have a surfeit of biographical details behind the creation of texts, which themselves form a kind of macro-story into which literary-style text is merely placed)? Can we speak of the act of publication, in Červenka’s sense, in the case of texts that we can immediately afterwards discuss directly with the author, argue against, offer alternatives to, or even create fully-fledged or hypothetical alternative narrative sequences for, and then attach them in close proximity to the initial text? Last but not least, indeed above all, does a text with variable readings also acquire a semiotic nature even after the moment of publication, as the author then has the option of interceding and in a number of cases demonstrably does so?⁶

Clearly, Červenka’s publication act schedule presented in a study entitled *Textology and Semiotics* in 1971 cannot be applied in a straightforward manner to the digital publication of literary texts. Červenka’s systemic and methodologically sound solution needs to be complemented by elements of

more recent textual theories based on contact between literary theory and new media theory. But let us associate ourselves closely with the influential ideas of cybertext as presented by Espen J. Aarseth in his *Cybertext: Perspectives on Ergodic Literature* (1997). Aarseth attempted to present a view of digital text as a textual machine, programmatically cutting himself off from previous conceptions of text, thus undermining his opportunity to adopt a historical-comparative approach to digital text, which is important and essential for examining remediation processes. What is particularly limiting is the choice of material that he bases himself on and uses to illustrate aspects of his cybertext theory; for the most part, this material comprises works that systematically experiment with the opportunities provided by hypertext structures and computer games understood as text. In this respect, Aarseth's proposition is a product of the early stage in the development of the Internet, which was characterized by these digital media usages. Much more fitting for our purposes is the idea of digital textuality, put forward by Pellizzi (inter alia in polemics with Aarseth) in his study *Dialogism, Intermediality and Digital Textuality* (2006). Pellizzi states that nowadays we no longer make do with a conception of a text as a coherent set of meanings and signs, as a digital text presents what is more like an open set of processes, acts, and reactions to these acts (2006: 2), and may be understood as a textual happening (2006: 8). Reflections on the processual nature of text lead Pellizzi to distinguish two fields, or we might preferably say two stages, in digital text: initially there is generative text with such traditional attributes as cohesion, coherence, intentionality, autonomy, and the like. At this stage, the author is the only entity wielding any influence. The second stage of the textual happening comes about with his entry into the process of reading, and Pellizzi calls this the emergent text, whose attributes include successiveness, editability, and montage, while it is changeable and occasional in nature.⁷ For Pellizzi, digital textuality begins the moment the reader comes onto the scene. This statement is correct but incomplete; theoretical literature examining digital text (hypertext or cybertext) frequently focuses too one-sidedly on the influence of the reader on the form of the text and somewhat neglects the secondary influence of the author on the life and form of the text after the moment of its publication. Both these enactors may play – as we shall demonstrate – a significant role in the emergent text stage. The act of publication itself is also undervalued as the turning point that is so strongly emphasized by Červenka.

Therefore, we might say in Červenka's language that in the context of digital publication it is more a matter of entry into the next stage of text generation, not the completion of this generation. This involves the cre-



Textual happening process

Generative stage, Act of publication, Emergent stage, Documentary stage, Act / process of depublication: author, reader

ation and publication of a work of a processual nature. Here the act of publication retains its activeness, creating an active literary work, which might be called a “literary happening”. The textual trace that is left behind is in an analogous relationship to an actual active literary work as a photodocumentary is to an active work of art. The sense comes about during the emergence of the work, not afterwards. A third stage, which might be called the “documentary stage” (or the “documentary text”), might be added to a textual happening in this sense: this follows the emergent stage, though the text is now stabilized in a single final form, and the readers approach it from the outside, no longer with the creative ambition of taking part in a literary happening but now merely as spectators familiarizing themselves with a document on a previous literary action (this stage may also include a transmedia shift to printed media). Following on optionally from the documentary stage comes the act of depublication (e.g., the author decides to take the work off the Internet for economic reasons) or the process of depublication (the website is left without technical support and gradually succumbs to technical decay).

It is with the act of publication in digital interactive media that processual active literary works emerge. However, Červenka was already on the track of this finding in *The Semiotics of Samizdat* (1990), in which he supplemented his analysis of the act of publication with a reflection on the specific nature of the situations of texts disseminated in the form of samizdat transcriptions, which strike him as “still a manuscript, a private

document, a work in progress, [which] challenges readers more to consider what might still be changed rather than any ongoing perception and experience of a completed work” (Červenka, 2009a: 202). He is taken aback by the special case of Bohumil Hrabal and his passionate love for his own typescripts, typos, and all defects, seen as manifestations of the dynamics of the creative moment. In Hrabal’s case, Červenka retreats somewhat from his otherwise strictly held principle that a literary work is not a thing but a sign:

Here what is elsewhere a relic of objectivity becomes in itself an independent sign, at least for the author, as a reminder of a creative surge, a record of an action (as in action painting), and it is not by chance that Hrabal speaks of his originals as graphic sheets of their kind. (Ibid.: 203)

In the case of digital serial novels, we can happily leave out “at least for the author”: even after the completion of the generative process, collective literary texts remain publicly accessible to an unlimited broad public, which has the opportunity to read them, albeit “only” as a document, no longer as a processual active literary work.

Digital Serial Novels as a Manifestation of Collective Writing

However, we need not necessarily go for terminological inspiration to the spheres of art or art history. For a number of years now, manifestations of collective creativity in digital literature theory have been described by such terms as *Mitschreibprojekte* or “collaborative writing”, and in Czech as *projekty společného psaní* (collective writing projects). Therefore, it is also necessary to correlate digital serial novels with this context, but I deliberately only do so in the second sequence as I fear that digital literature theory quite often has a tendency to present phenomena within its field as entirely unique and without precedent in previous media forms of literature. In the case of serial novels, I consider the dialogical remediation and historicizing perspective to be more productive than submitting to the lures of emergence, which for understandable (marketing) reasons is close to the hearts of the authors of the works under review.

In his book *Interfictions* (2002), Roberto Simanowski defines the basic forms of collective writing projects:

- 1) Authors work successively on a linear story.
- 2) Authors write a multilinear story and work on its various branches at the same time.
- 3) Authors make a collection out of their contributions, which is linked thematically and via hyperlinks.

Digital serial novels that we know from the Czech Internet might coincide in their individual outlines with the aforementioned types, but they definitely cannot be classified among any of them: the leading role of the initial author is preserved in digital (blog) serial novels, while the writing activity of the community of readers is more that of a committee, which is jointly thinking, evaluating, discussing, and putting forward proposals. In his intellectual and verbal activity, the author is led in the direction which his majority agrees upon. However, the democratic framework of relationships between the protagonists in the creative process has its limits – even in projects based on a competitive principle, the word of the arbitrator standing above this community of contributors is decisive. First and foremost, Simanowski's observation does not apply to digital serial novels, i.e., that in the case of communal writing projects democracy in the writing process prevents the success of the project or the successful accomplishment of a set objective (Simanowski 2002: 33). Precisely the opposite is the case for digital serial novels that are written through close liaison between the author and the community of readers – all those taking part make painstaking efforts to ensure that their project succeeds, which within the framework of popular literature⁸ (which most of these Czech projects come under) means conforming to the majority taste shared by the community so as to entertain it. Besides, the objective of an author entering comments on his own text is primarily to find out what his readers want and primarily to leave the key decisions directly to the readers.

Between Pragmatic Immediation and Illusive Hypermediation

Digital serial novels are thus set out between two opposing contexts: on the one hand there is the context deriving from literary tradition, which

includes serial novels published in the periodical press beginning in the 19th century; on the other hand there is the context deriving from new literary forms facilitated by the Internet. Entirely in keeping with the extraordinary embarrassment over any kind of experimentation in literature that can be observed throughout the 1990s in the Czech literary sphere, Czech serial novels definitely remained closer by nature to print rather than digital media on the imaginary axis between the extreme points of the remediation process. However, what is remarkable is that in paratexts, none of these new serial novels mentions the rich tradition of this genre, at best glimpsing an analogy of its interactive principle in *Kinoautomat*.⁹ The roots of this type of literary communication perhaps lie in the unconscious of the literary community, which took on the role of tradition bearer for the phenomenon known as the “serialized novel”, a phenomenon whose name merely strikes this community as a sound from ancient times which comes into would-be effective contrast with the inaudible operation of the medium that currently presents it. It is a name that suggests relative completeness (which blogs otherwise do not offer) and at the same time an alluring seriality, which readers find an attractive attribute in itself.

Czech digital serialized novels therefore tend to follow Bolter’s immediation principle, not stressing their dependence on the digital media form but being based more on the paradox of the transparent transfer of the published form to digital media, whereby the original form “merely” acquires some additional attributes, or some attributes that were only provided with difficulty in the printed form (e.g., interactivity and collective authorship) are now strengthened. Projects described by neologisms, such as “blogonovels”, or blog novels, aim in the opposite direction. These endeavour to suggest novelty, ergodicity, innovation, and perhaps even experimentality, but in reality they do not differ in any way from other novels published in this form. They feign a pioneering role which perhaps only the authors themselves believe in due to their ignorance of the history of this genre.

As I have already indicated, contextualization with older printed literary forms strikes me as sounder and more relevant. Besides, this is also indicated by the unwritten, albeit widely accepted, rule that if it is even slightly possible and the public interest is obvious then a work that originally emerged in the digital network environment needs to be transferred into printed form, ideally into book form.

Transmedia Shifts

A notable case of these transmedia processes is that of the novel *Labyrinth* by Renčín, which started to be published on the author's website in November 2007. Soon a fairly large community of active readers formed around it, increasingly starting to use comments and polls to influence the development of the text. In early 2008, the novel began to come out in parallel in *Pevnost* magazine, which specializes in fantasy literature. The author attempted to eliminate the lead held by the online version by reducing the frequency of contributions from three to fourteen days, while firstly printing a large number of episodes at the same time in the magazine. However, the magazine version no longer included a field for comments, which in the digital version played a significant role in the creation of meaning within the framework of the literary project as a whole (some of the protagonists were explicitly reflected as more important than Renčín's text itself). In the online version, it only referred to a link printed on the title page of each episode. The text semiotized in a manner that even satisfied Červenka and acquired a stabilized form and even a traditional parallel printed concretization in the form of illustrations that attempted in a relatively normative manner to present an appearance of the chief protagonists of the novel. In addition to this "semiotic" motivation, the magazine publication had another objective: through placement in the context of the *Pevnost* revue, an appeal was made to the community of readers, who in accordance with the unforgettable signs in the novel are very active and seek opportunities to enter into creative authorial contact with the medium (see the numerous competitions, workshops, and polls printed in the magazine). In this way, Renčín undoubtedly lured a considerable number of new readers to his website.

In parallel with his publication activity on his personal website, Renčín disseminated his novel through his blog at the iDnes news website (<http://rencin.blog.idnes.cz/>). Here, too, he attempted to form a liaison with readers and to mobilize them (e.g., with a poll on which of his book abstracts appealed to them most), but entirely without response. In contrast to his personal website, more sharply critical voices emerged in the discussions. It will be hard for us to find these on the author's website, as it is visited exclusively by a community of positively inclined fans. However, overall these responses on iDnes were very sparse, and with the shift to the environment of a medium focusing on a maximally broad and thematically undefined public, the project lost its communicative potential. However, the

iDnes blog also served to promote the *Labyrinth* novel project written online in collaboration with the readers.

Labyrinth was eventually brought out as a book in 2010 by the prestigious Argo publishing house, thus bringing the entire project to its apex with the publication of a novel that was attractive to readers and which met public expectations. In the book edition, the author also included the comments that followed each episode in the Internet version, although in the book version he made them a selection which he placed at the end of the work as a summary together with parallel displays of readers' creativity inspired by the novel during its digital existence (a *Labyrinth* metal opera libretto and comics). Hence the readers were offered the continuous text of the novel – i.e., using Pellizzi's terminology just the generative section of the textual happening – which places no obstacles, and its atypical generation was only recognized at the end of the work with a scroll of comments presented as a point of interest and a paratext partially documenting the history of the text. It was quite beyond the author's intention to document the emergence of the text in all its processuality (which would involve treating the comments with maximum reverence as they are transferred to the printed version) as the emergence of an active literary work. The economic benefit that undoubtedly followed on from the sales of the book version created in this manner in the network interactions of this novel outweighed any artistic benefits that such activity might have brought about.¹⁰

The only Czech case in which the author resorted to the conversion of a blog novel into book form with literary intentions is Fendrych's novel *Slib, že mě zabiješ*, which was originally published in episodes on his blog at the social weekly *Týden* site in 2007 and 2008 (Illustration 11); the Argo publishers brought it out in book form in 2009 with the subtitle *blogoroman* – a blog novel.

Even in the printed version of the novel, Fendrych preserved all the attributes of the blog form, including the dating of individual chapters and the discussion contributions that follow. In this seemingly simple way, he has highlighted the specific features of a literary blog which appear natural in a web environment, but when transferred to printed media their weight and unnaturalness become obvious. Fendrych has sensibly combined a marketing usage of new media with his literary reflexes, remediating the novel genre and enhancing both the new blog genre and the "old" novel genre, and above all implicitly offering subjectivities for a critical reflection in digitally mediated communication, as Fendrych has succeeded in starting a semantic game that creates tension between the natural fictional nature of the novel's narrative and the real world in which his blog

exists. The characters in Fendrych's novel are the readers of his blog, and occasionally within their discourse passages they make statements on its development, articulating their positions and acquiring information from the blog which they subsequently utilize as part of their (speech and other) activities. Another level of the relativization of subjectivity and fictionality in the novel is that of discussions following individual chapters in which the novelist himself participates under the nickname of *Soukromý očko* (Private Eye), channelling the readers' reflexes and seeking feedback. A large number of the discussion contributions express admiration for what the narrator has been through and how he has coped. All Fendrych then needs to do is imperceptibly support this natural trend among readers with occasional confirmations that the events narrated really happened, even though (as we know very well) authenticity in the digital medium environment is even more relative than in the case of printed media. But as has been said, Fendrych's novel is an honourable exception from the rule, or from the general niveau, which determine works that come under the sphere of popular literature.

Digital Serialized Novels as a Manifestation of Vernacular Culture

As we have seen from a number of examples, Czech serialized novels published online are a continuation of an extensive tradition behind the serialized publication of prose. It is entirely in keeping with this tradition that the opportunity to develop it has been seized precisely by the authors of popular genres (e.g., Otomar Dvořák, Alex Drescher, and Sabrina D. Harris, as well as those already mentioned above). Among the opportunities afforded by the Internet, these have identified not only a chance to experiment and to seek new methods of literary communication but also an unprecedented space for intensifying contacts with readers. The previous finding that readers of popular literature are a very active public who willingly meet challenges to participate in emerging texts has been confirmed; this is a way both to maximize hopes of success and to gain a positive response from the public, as they themselves say what the resultant text should look like. Of course, this was always the aim of authors of popular reading matter. The interactive medium has merely allowed for this dream to be implemented more systematically.

However, as a result the digital publication context has altered serialized novels more than their current authors would like, and evidently more than they are actually aware. With the breakdown of the boundary between the author and the readers, the highlighting of the processuality of writing and openness towards a collective principle behind creative work, these works have lost their traditional form as a literary sign, becoming active and time-bound works, while their plots have become dependent upon the activities of the communities that developed around these works and the publication platforms that disseminate them. The digital publication of serialized novels has become a marketing strategy, whose (economic) sense for the most part only comes to fruition with the conversion of the work to book form. This is not just the case for competitive collective writing projects, which as ends in themselves are the bearers of advertisements for sponsorship logos and the names of established authors. Both these types of digital publication for serialized narrative are parts of a broader cultural process, which is an inevitable and natural consequence of remediation – i.e., the vernacularization of literary culture. Henry Jenkins uses the term “vernacularization of culture” to describe culture created by amateurs. He finds that new digital tools and new distribution networks have increased the opportunities for ordinary people to participate in their culture: “Once subculture and fandom groups have tasted this power, they will never again become compliant and invisible” (Jenkins 162). This undoubtedly also applies to literary culture, even though in that section of it that is traditionally called “popular” there is a certain difference after all: the public at whom popular literature output is targeted was never meant to be “compliant and invisible” in the past. This community of authors and readers has long felt a considerable liking for one another, but until the advent of digital media they only kissed through the glass, as it were, and it is only remediation that has enabled them to fruitfully come together.

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Notes

1 To a lesser extent, prose has also been published in serialized form in amateur literary forums (e.g., contributions to the Serialized Prose category at *Písmák*), although these were mostly shorter prose pieces (not novels, but serialized short stories). Collective serialized short-story projects subsequently emerged on social networks (e.g., in the *Povídky ze zdi* Facebook group).

2 A combination of different forms of communication and diametrically opposed types of content is brought together in the space of a single blog based at blog.cz by Pavel Kreperát: in addition to personal messages, comments on latest social events, recipes, photographs, and a book presentation on therapy work (A Lexicon of Healing Stones), the blog also includes two serialized novels.

3 For example, a listing of English-language blog novels updated for 2010 is available here: <http://conversationswithwriters.blogspot.cz/2008/11/links-blog-novels.html>. However, several of the blogs linked are no longer in operation.

4 Clearly it is better in the novel *Labyrinth*, where a whole poll is devoted to the entry of a new character into the plot: the author proposed several new characters and he gave readers the opportunity to think up a character. The winning character in the poll was actually made up by one of the readers (see <http://www.pavelrencin.cz/anketa-popis-postav-i-ctenarskych>).

5 “I was hoping that I would start preparing the entry on Sunday so I could put it up on Monday (I am off skiing early Wednesday morning till Sunday.)” (<http://www.pavelrencin.cz/labyrinth-zapis-31-anketni-kapitola#comment-455>). “Early tomorrow morning I am off skiing in the Alps until Sunday, so I shall be offline. I promise two entries again as of next week! :)” (<http://www.pavelrencin.cz/labyrinth-zapis-32-tomas-sliva#comment-458>). “Iris, the right time is sometimes awkward for me, so OL gets written quite often at lectures in school 😊 otherwise you are quite right about patience. I often feel like writing something, but I simply don’t force myself, 😊 but it is different for *Oklamaná*. I know that somebody is waiting for the next episode, so I am happy to write it 😊” (Sirael, no longer available online).

6 We can find proof of intervention in an already published text, for instance, in the comments to Rencin’s novel *Labyrinth*, in which the author himself writes: “I have to admit I’m not happy with this entry yet, but I promised to put it up yesterday, so I did. I’ve amended

it a bit now, so that Kořínek's lie isn't such a long monologue..." (Renčín 2008, <http://www.pavelrencin.cz/labyrint-zapis-36-nepritel-pred-branami#comment-644>).

7 Katarina Peović Vuković identifies this phenomenon with a specific semiotic digital text and proposes a fitting term for it: an "oscillating sign": "The creation of a digital text is based on flexibility – the option of change, manipulation, modelling with a digital 'oscillating sign'" (Peović Vuković, 2012: 20).

8 A considerable limitation on a large proportion of contemporary theoretical literature on the subject is its restriction to displays of "high literature", i.e., Strehovec's definition of the term "digital literature" as a manifestation of experimental writing together with net art and computer games is unsustainable (Strehovec 2012: 29). Digital literature undoubtedly includes its popular variant, which does not wish to test or criticize the opportunities provided by the new media, but quite pragmatically makes use of them to heighten the effect (or success) among readers. Ideally, the entire field of literary culture should be examined as well as its transformations brought about by the advent of digital media.

9 "The serialized novel is an excellent idea. Reminds me of a kinoautomat 😊. I cannot wait for the next episode 😊" ("sulda" on Renčín's "red library" website, no longer available).

10 Similarly, a very successful blog written under the pseudonym Ostravak Ostravski was converted into book form. Only a very brief selection of readers' comments is given in the book edition on the introductory page.

3. Text and *Téchnê*

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Abstract. This chapter discusses the process of creating popular narration through the process of hiding, or “masking”, the craftsmanship, or what is in the ancient Greek named *téchné* (τέχνη). It emerges from the fundamental distinction between high and popular culture and is based on the concept of remediation by David Bolter and Richard Grusin (2000), or precisely the distinction between the two processes of immediation and hypermediation. This model is demonstrated in two cases. The first is the structure of popular computer games, where immediation is presented as the mechanism of a “seamless bond” between narration and the algorithm. By contrast, high-culture technotexts are shown as texts in the modernist tradition that often show a special affinity towards non-transparent hypermediacy. The second case is Croatian experimental literature, which serves as an illustration of the popular/high dichotomy injected into the literature as such. The chapter discusses modernism as a specific turn in pictorial representations that can be described through the concept of immediacy/hypermediacy, since modernistic art is radically hypermediated and non-transparent. Following this, the chapter questions the political aspect of such affinity, or technotextuality, as the cultural logic of late capitalism. In order to define the phenomenon of *l’art pour l’art* – the authentic art that is free from the commercial aspect – the chapter stresses the fundamental distinction between computer games and works of high culture. Finally, the chapter discusses the concept of actuality (*actualitas*) as a specific characteristic of postmodernity. This horizon defines literature through the highly empirical and pragmatic aspect of *téchné*, while its ontological dimension is excluded as sublime and highly theoretical (and for that reason) non-commercial art. In elaborating the problem of actuality, the chapter follows Martin Heidegger, especially his writings on technology (“Die Frage nach der Technik”) as well as his elaboration on the end of philosophy and the task of thinking (“Das Ende der philosophie und die aufgabe des denkens”).

Introduction

Postmodernism is sometimes defined as “a culture which no longer recognizes the distinction between the high and the popular culture” (Storey, 2006: 9). Such a “blurring of the distinction between ‘authentic’ and ‘commercial’ culture” (Storey 2006: 9) produced the erasing of two different cultural registers or types of production, and indeed the *raison d’être* of culture today. The chapter will try to show how a final distinction between the high and the popular lays in the material aspect of literary work. Such

a distinction between contemporary popular culture and high art can be defined through the concept of remediation proposed by Jay David Bolter and Richard Grusin (in *Remediation: Understanding New Media*, 1999). Bolter and Grusin proposed a distinction between various media genres, a distinction that will be applied in an analysis on a more abstract level, and a distinction between the high and popular. This chapter will stress these differences using various examples from the realms of computer game culture and art. Since computer games are one of the most prominent contemporary popular genres, an analysis of it is the logical way to proceed. Conveniently, as an opposition in the realm of high art, we find “art games”, the high-culture twin of the popular model.

Remediation

Originally, “remediation” as a term emerged from the distinction between seeing through and looking at something. Remediation, as John Guillory writes, “makes the medium as such visible” (2010: 324). Sometimes texts tend to hide the medium. Transparency is the phenomenon that relates various theoretical approaches to media and culture. This was the main interest for Marshall McLuhan in his theory on analysing media. McLuhan’s famous formula that the “‘content’ of any medium is always another medium” aims exactly at revealing the materiality of media that determines its content (McLuhan, 1964: 10). He writes that “the content of a medium is like the juicy piece of meat carried by the burglar to distract the watchdog of the mind” (McLuhan, 1964: 25). In other words, in order to understand the media, one must pay attention to its structure and its grammar. Starting from this idea, Bolter and Grusin elaborate two representational strategies responsible for media transparency. They stress the fact that not every form of media hides its artificial structure, media material, or the notion of media as *remediated*. (Which is another way of saying McLuhan’s formula that the “content of any medium is always another medium”). Immediacy and hypermediacy are two representational strategies that have a long history that dates back to the Renaissance and the invention of a linear perspective. Immediacy is an attempt to erase or conceal the process of remediation by making the medium invisible, while hypermediacy calls attention to the process of remediation by acknowledging or highlighting the medium itself. The dichotomy of the popular/high culture

could be defined through Bolter and Grusin's model. Nevertheless, in their immediacy/hypermediacy model, the dichotomy of the popular/high culture cannot be clearly carried out. The working thesis of this chapter is that popular culture shows an affinity towards immediacy, and media material tends to be transparent, whereas high art shows exactly the opposite tension as it is often hypermediated and non-transparent. The examples of immediacy Bolter and Grusin provided are varied; they elaborate the concept of immediacy by analysing linear perspective painting, photography, the style of Hollywood films, and other areas. Examples of hypermediacy are similarly heterogenous: for instance, television, rock music stage productions, and the World Wide Web. Bolter and Grusin stressed that the difference between hypermediacy and immediacy is not so clear. Hypermediacy could be interpreted as immediacy and vice versa depending on the point of view. While hypermediacy "makes us aware of the medium or media", at the same time it always "reminds us of our desire for immediacy" (Bolter and Grusin, 1999: 34). In other words, hypermediacy is sometimes simply the failure of an artist/creator/designer to design an artefact in such a way to hide the medium. Here, elaboration brings something valuable in terms of distinguishing between popular and high culture. Although hypermediacy is a non-achievable immediacy, in the world of high art we find works that are intentionally hypermediated. In Bolter and Grusin's elaboration, we find modernist collage and photomontage on the side of hypermediacy. These are the only works that cannot be elaborated on as works that simply did not manage to be transparent; these works are intentionally hypermediated.

The History of an Idea

The definition of art as a self-reflective object is also implied in several influential definitions of modernism. Clement Greenberg, an American art critic, formulated the idea that modernist art brings something new in representational strategies in the West. Greenberg stated: "It was not until modernism that the cultural dominance of the paradigm of *transparency* was effectively challenged". Greenberg (followed by Richard Lanham and others) made this conclusion because non-transparent representation has become "the central technique" in visual art since modernism. The role of auto-referentiality, of the self-reflectivity, of modernism is not related only to

art practices. Greenberg stresses that “[t]he essence of Modernism lies, in the use of characteristic methods of a discipline to criticise the discipline itself” (Greenberg, 1982: 5). Greenberg defines this self-reflectiveness as being much wider and historically recent than Kantian self-criticism; “Kant was the first to criticize the means itself of criticism”, writes Greenberg (1982: 5).

Susan Sontag also followed this idea of the auto-referentiality of modern art in her discussion about the “aesthetics of silence” as a specific spirituality of the modern era that is happening in the process of the “abolition of art itself” (1969: 5). For Sontag, the real trauma of modern art is the abolition of realism. The central moment of modern art is the figure of an artist that only processes information, manipulating with ready-made material. But if a realistic representation is silenced, the other characteristic of an artwork starts to speak loudly. The abolition of realism is the abolition of transparency in art and the abolition of immediacy. At the same time, it is the formative moment of self-reflective art, which no longer aims at transparency but insists on its craftsmanship and its technological dimension. In a way, it is the return of the original understanding of art and technology, as related to skill, practice, and craftsmanship. The classic Greek word for technology is *téchnê* (τέχνη) which stands for “the art of craft” (Murphie and Potts, 2003: 3). Only in the second half of the nineteenth century did the word “technology” develop in the modern sense as a “system of machines and processes” (2003: 4), while the word “technique” still referred to a specific skill. Sontag describes the abolition of art through the abolition of realism and transparent realistic artwork. In that sense, modern art is also a new beginning, a new established art of art itself, and at the same time the beginning to an understanding of art as *téchnê*.

Modernist Rupture in Representational Strategies

Bolter and Grusin discussed the importance of non-transparency in the modernistic work of Richard Hamilton in his collage from the 1950s entitled “Just What Is It That Makes Today’s Homes So Different, So Appealing?” The collage is non-transparent work that problematizes the fact that modern living brings the practice of accumulating technical devices. It is not only this content, the fact that work represents different technical devices, but also work’s *technique* that makes the observer aware of the process of construction and the artificiality of Hamilton’s work.

In his essay “Remediation and the Desire for Immediacy” (2000), Bolter does not mark modernism as a historical moment of rupture in Western representational strategies; instead he notices a certain tendency of modern times. Bolter points out that there is a tendency in Western representational strategies to erase the medium and present visual signs as “natural”. While modern times have shown realism to be constant in Western representational strategies, there is also a non-transparent representation. In *Remediation* Bolter and Grusin make a list of works and a theoretical elaboration of immediacy. In his treatise “On Painting”, Leon Batista Alberti (an Italian fifteenth-century painter) describes the process of painting as like looking through a window; Albrecht Dürer noted that a perspective means a “seeing through”; André Bazin writes that photography could be regarded as a perfect Albertian window; while graphical interface designers have directly reflected on this windows metaphor (Bolter and Grusin, 2000: 24). However, no matter how realistic visual representation is, the medium always makes itself visible.

To elaborate the history of immediacy as a history of failures, Bolter uses the example of flight simulators: “Immediacy of experience [in flight simulators] is pure hypermediacy”, writes Bolter in his essay, concluding that failure is a result of the tendency of hypermediated experiences (2000: 65). Hypermediacy is the real experience of being in the cockpit, monitoring the instruments, and flying the plane (2000: 65). For Bolter, hypermediacy (aiming at immediacy) is a common characteristic of contemporary experiences. Bolter is right to locate such a tendency in the present day. Nevertheless, there is a profound difference between the function of a medium in art representations and the function of a medium in popular culture. While the first of these truly aims to erase the medium and simulate the “natural” experience, the second insists on awakening the spectator from a representational dream. The difference is an initial function of hypermediation. While popular culture aims at transparency and the fabrication of immediacy of the hypermediated experience, high art has overthrown in advance the possibility of transparent representation, even if such a thing could have been possible.

Bolter and Grusin claim that in the postmodern era subjects are more and more accustomed to hypermediacy, which is why they can participate in hypermediated experiences as immediated ones. But there is lot of controversy in the understanding of hypermediacy. The main question is whether it is possible to define non-transparent hypermediacy by using normative, neutral criteria. As Bolter and Grusin noticed, something which intended to be transparent became non-transparent and the other way

around. For example, there is the unintentional hypermediated experience of graphical interface design. While designers aimed at immediacy, using Alberti's windows metaphor, the experience of multi-tasking, the opening of several windows and software at the same time, make it a hypermediated experience. Not only is the distinction between hypermediacy and immediacy somewhat vague, there is also the question of intentionality. Bolter and Grusin did not offer a model of intentional hypermediacy, since most of their examples (except the modernist collages) could be understood as non-intentional hypermediacy. Modern art itself could be interpreted as a *téchné* of intentional hypermediacy, creating a world populated with media and technical devices but also thematizing art techniques and other things.

Cultural theoreticians have been claiming exactly the opposite regarding what Bolter and Grusin analysed as the postmodern, hypermediated era. If the modern era in the realm of high art initiated the radical poetic of hypermediacy, the postmodern era initiated a new domination of immediacy. Sherry Turkle writes that the 1980s saw a turn from the transformation of a modernist "culture of calculation" towards the postmodernist "culture of simulation" (Turkle, 1995: 20). Slavoj Žižek has noticed the shift towards transparent virtual simulation. He writes about that shift as the fundamental shift in the very use of the term "transparency". While modernist technology is "transparent" in the sense of retaining the illusion of an insight into "how the machine works", postmodernist "transparency" designates almost the exact opposite. The interface screen is supposed to conceal the workings of the machine, and to simulate our everyday experience as faithfully as possible (e.g., the Macintosh interface, where written orders have been replaced by simple mouse-clicking on iconic signs, and so on). It is a specific form of everyday thinking, "which makes the very quest for 'what lies behind it' irrelevant" (Žižek 2008: 167–168). Although such a tendency could be true for popular culture, these claims certainly do not describe works of high art. The distinction between popular computer games and art games plastically illustrates the failure of levelling the two cultural registers.

Computer Games: Popular Culture and Immediacy

As popular culture *par excellence*, popular computer games provide us with more than enough examples of masking the medium and erasing the

traces of technical artificiality. Popular computer games are stories run by algorithms which allow players to interact with the program. Although the algorithm is a crucial technical aspect of the computer game, the primary intention of computer game design is to hide its technical aspect. In other words, the crucial process is a process of transforming an algorithm into a story. The algorithm becomes obvious only when a player is faced with errors, the crashing of a system, the freezing of an interface, or a problem when loading a game. These are inconsistencies that spoil the pleasure of gaming, since in a moment a player is facing a non-transparent algorithm. At the same time, it is a moment of revealing the artificiality of the imaginary world.

Playing as well as designing computer games is a twofold process. The first part is the process of forming an algorithm that is running a game. It is a process of contextualization, which is a practice of defining/contextualizing the non-narrative mathematical algorithm into a human experience (driving a car, shooting an enemy, collecting things, and so on). The second process is one of re-contextualization, its mirror reflection being fundamental for learning and understanding “the logic of a game”. It is a process of reversing a narrative into an algorithm, a process of thinking like a computer. The story contextualizes the algorithm, which is itself alien to any conceptualized experience. Jesper Juul describes two types of rules: the first one is “the ball is out of play when it is far away”, and the second one is “the ball is out of play when it crosses the white line drawn on the grass” (2005: 64). The first rule is descriptive, while the second is algorithmic; the first one can be defined as “storytelling”, and the other is a precise algorithmic description.

Winning a game is a process of the internalization of the game’s algorithmic logic. Firstly, the narrative forms the gaming experience into an experience as natural as can be. It is a process of contextualizing the non-narrative mathematical algorithm into a narrative. Contextualization allows the player to be immersed in narrative worlds. However, there is also a second process. In order to understand what to do, the player must internalize algorithmic logic, the logic of a machine. Ted Friedman describes implied dialectics as follows:

The way computer games teach structures of thought – the way they reorganize perception – is by getting you to internalize the logic of the program. To win, you can’t just do whatever you want. You have to figure out what will work within the rules of the game. You must learn to predict the consequences of each move, and anticipate the computer’s response. Eventually, your decisions

become intuitive, as smooth and rapid-fire as the computer's own machinations. (Friedman, 2002)

The moment this process of contextualization/decontextualization becomes the most visible is when it is obvious that the player had not decided to act on the basis of understanding the content but on the basis of understanding a structure. The causal relation between the lowering of one parameter and the proportional increasing of the other is a classic example of understanding the structure, while it is not important to understand the narrative. Such a causality allows children to use the terminology of the economy in order to elaborate the importance of "lowering the taxes on the industrial production if we want to develop the industrial zone" in *Sim City* (Johnson, 2005: 136).

While the strategy of transparent immediacy is immanent for popular computer games, art games often use the opposite strategy, one of non-transparent hypermediacy. Art games use techniques of modern or post-modern art immanently marked by non-transparent hypermediacy. For example, Stewart Hogarth's *The Naked Game* (2008) (an unfortunately lost piece) was an art game that elaborated the disclosed structure, a mechanism which usually remains hidden. The game reconstructed the primitive version of *Pong* by exposing the version of a code governing the game and the variables affecting its mechanics. The player could remove lines of code and see the effects in real time. (For example, if a player decided to remove a line of the code, a paddle or ball would disappear, a game rhythm would be distorted, or a similar thing would happen.)

Hypermediated art games question the role of the interface as a mediator between the work and the subject, between the algorithm and narration. Art games separate content from form (algorithmic code), addressing the complexity of interpretation. Franc Cadet's *Sweet Pad* (2004) allows one to play the highly aggressive game *Quake 3 Arena* in an unusual way. Instead of using the joystick, the operator acts by gently touching the sphere. In the game *Massage Me* (Perner-Wilson and Satomi, 2007), the player massages his/her partner in order to hit the opponent in the violent game *Tekken*. Shooting an enemy or fighting with bare hands in a highly meta-referential pose is a poetical mechanism that relates art games to modernistic art, or a postmodern novel or film. An obvious gap between content and acting is crucial for the meta-textual level, pointing to the difference between two arbitrarily related spheres: acting according to an algorithm and telling a story, conceptualizing the gamer's acting according to a violent narrative. The gap is always there, but the players are usually not aware of it.

The distinction between high art/popular culture as a distinction between transparent and non-transparent textuality is not limited to computer games and art games. Antony Easthope detected a similar opposition between popular novels and modernist novels. Easthope (while citing Mary Ann Doane) refers to the practice of popular culture as “a will-to-transparency” (Doane, 1987: 71; Easthope, 1991: 90). Easthope compares Joseph Conrad’s modernist novel *Heart of Darkness* and the popular novel *Tarzan of the Apes* by Edgar Rice. Although both share similar interests and motives (a story in the jungle), the modernist novel is deeply entangled with language. While Conrad’s text is abstract, complex, and connotative, Rice’s aims to be concrete, simple, denotative, and literal (Easthope, 1991: 87).

In defining hypertextual literature as literature of the modernist era, Espen Aarseth provoked the similar reading. Despite a common understanding and describing the early hypertextual literature as postmodernist literature, Aarseth insisted that works such as Michael Joyce’s *Afternoon* rely heavily on classical modernist devices, narrative strategies, and forms. From its beginning, electronic literature uses materialistic strategies in order to reveal active mechanisms behind the text. These strategies are defined in modernism.

Croatian Experimental Literature

Having in mind a twofold literary tradition of hypermediated high modernistic art and immediated popular culture, we can sketch the context of contemporary Croatian literature in a simplified manner. As an outcome of the spectacularization of literature and art in general (initiating festivals, mixing celebrity culture and art, the imperative of media presentations for artists, and so on) from the 1990s onwards, Croatian literature has split into two distinctive groups: a literature of communicative, simplified expression and literature that echoes the modernistic art tendencies. It is not a symmetrical relationship; the second group is, at least in public space, barely visible. These rare experiments in Croatian literature are nevertheless artistically interesting since they contain elements of modernism, especially New Tendencies: rich media art in Croatia during the 1960s and 1970s, in Croatian literature from the 1980s, and in the literature of the Quorum Generation. New Tendencies was a joint exhibition of Euro-

pean artists in 1961 that grew into an international movement. The movement promoted the avant-garde tendencies of the time with a whole array of themes and subjects. Programmed and computer artworks (such as Vladimir Bonačić's computer-controlled dynamic objects, Ivan Picelj's and Aleksandar Srnec's optical and kinetic-visual art, and the works of Goran Trbuljak) were part of the New Tendencies annual international exhibition and *Bit International* magazine, which practically and theoretically promoted the technical media approach.

The second influence is that of the The Quorum group or so called "The Quorum Generation", who from the 1980s onwards explored literature as media material and experimented on linguistic artificiality as well as its mediated status of literature. (The name of the literary group was derivative of the title of the literary magazine that summoned literary theoreticians, poets, and novelists.) *New Tendencies* as well as *Quorum* both presented hypermediated art engaged in the exploration of artistic media material.

On the margins of Croatian literature, there are several works that have inherited that tradition. One example is "Commedia" (2006), which is a multimedia poetry collection by Krešimir Pintarić. Although it is very purified in its language, it is the poetry of investigation, experimentation with media, and media boundaries. Another example of the second tendency is a "Novel about the Sea" (*Roman o moru*) by the prominent Quorum writer Damir Miloš (2003). This novel explored the new media and the relationship of the author with the reader, and at the same time demasked the process of writing. In 2000 Miloš started writing the novel and offered his readers the chance to rewrite some parts of it or to illustrate its paragraphs. (The project took place on Miloš's website entitled "Sea Pig" (*Morsko prase*), which offers a heterogeneous mix of sailing and literature.)

Given the history of media art in Croatia, visual artists have expectedly played an important role in experimenting with new media art forms, even in literature. Kata Mijatović's "The Dream Net" (*Mreža snova*) was the Internet adaptation of the ambiance present at a previous exhibition (K+Z in the Fine Arts Gallery at Slavonski Brod in 2001). This work presents the textual and visual representations of the artist's dreams in order to elaborate the role of the unconsciousness in the creation of artistic work. (Mijatović later expanded this work for the 55th Venice Biennale, but in its first version it was a classic hypertextual work with links and lexias that are composed of verbal material and photographs.)

A collaborative hypertextual poem by four authors (Andrea Pisac, Snežana Žabić, Stjepan Balent, and Krešimir Pintarić) "Mixal, Wenders, and I, Hanging Out at the Supermarket" (2000) is a purely literary example

of an artwork that leans on the modernistic tradition. This tradition is already present in the title, which is a verse from a poem by the famous Croatian Quorum writer Branko Maleš (2015). One word of the sentence “was given” to each of the four writers as their starting point. The outcome was labyrinth of personal confessions, self-elaborations, and comments on literature either as a personal choice of profession or as a social practice.



Picture 1: A screenshot of *Mixal, Wenders and I.* (2000).

Postmodernism as a Cultural Dominant

The meta-referentiality of high art, hypermediacy, being insistent in material, or as a *téchné* in some cases, radically confronts art within its socio-economic model, or using Jameson’s term, within postmodernism not as a style but rather as a “cultural dominant of late capitalism” (Jameson, 1991). The hypermediacy of high postmodernist art is not only a style but also a tendency of opposing the capitalistic drive to turn every human experience into a commodity. (The contemporary Croatian division of literature clearly demonstrates such an economic dimension.) On the other hand, hypermediacy is co-opted as a new form of a cultural dominant, one that offers new economic possibilities in the realm of new media art. Here the elaborated examples challenge us to take a more radical view towards the distinction between popular and high culture. Different representational strategies emerge from different political functions of representation. The difference between the art object as “purposive without purpose”, in Kantian terms, and popular culture that finds its purpose in profit, is

reinstalled in hypermediacy as a specific affinity towards thematizing the media material. In this socio-economic context, high art's subversion is, as Greenberg insisted, an important form of subversion.

However, high art is not excluded from the logic of late capitalism. Capitalism promotes progress but at the same time such progress is in fact limiting cognitive and aesthetic possibilities to pure profit. Such is the definition of electronic literature, which is nevertheless postmodern high-culture art interested in a self-reflexive investigation. It is a problem of reducing one complex phenomenon in the pragmatic actuality of the new, or precisely the technologically new. The entrepreneurial aspect of several contemporary phenomena can only be understood in the context of late capitalism. The Electronic Literature Organization defines electronic literature as a "work with an important *literary aspect* that *takes advantage* of the capabilities and contexts provided by [...] [the] computer" (cited from Hayles, 2008: 3, the italics are my own). In this context, "new media literature" is interpreted as being better than classic types of literature simply because it takes advantage of a computer's code and digital numerical media. Such a definition pinpoints the specific aims and goals as well as the highly empirical motives of contemporary high culture. In such context *téchné* is welcomed only in a form of *actuality* and *newness*, in a form of *taking advantage* of what is actual and new.

The Croatian philosopher Žarko Paić detects the specificity of the contemporary state as the crucial problem of elaboration of all contemporary phenomena in the era of late capitalism. Paić criticizes the postmodern tendency to limit cognitive-theoretical questions about the character of the society to a pragmatic definition of actuality or entrepreneurship (2011: 75).

The tendency of pragmatism and limiting cognitive-theoretical questions about the character of society to a pragmatic definition of actuality was, of course, a central question in the philosophy of Martin Heidegger. In an elaboration on the end of philosophy and the task of thinking, Heidegger addressed the problem of forming contemporary thought according to a specific model of thinking. Heidegger uses the term *Vorstellung*, which could be translated as either as "presentation" or "representation" (Richardson, 2003: 108). Precisely this presentation/representation limits the ways in which the world could be contextualized.

The specific phenomenology of thought is a specific framing of the question that has great consequences on the question itself. (This fact was not only important for Martin Heidegger; it is what the later poststructuralist Jacques Derrida (1976) offered in a form of his critique of Western thought.) Reading Frederic Jameson (1991) or David Harvey (2010), there

are reasons to ask whether such a representation is a specifically technical and scientific model (Heidegger believed that the cybernetic is a scientific model according to which all questions are formulated) or framework for the definition of the world and art provided by the capitalist way of production and consumption and accompanied by neoliberal ideology. The conflict present in this definition of electronic literature is a direct reflection of socio-political conflict in postmodernism as a whole.

The question proposed at the beginning was whether there was a reason to differentiate between popular and high art, since, according to theoreticians of popular culture, authentic and commercial culture have merged. Following Heidegger's formulation, we could ask whether the blurring of that distinction is an organic process that emerges from the definition of a world. At the same time, a distinction between the high and the popular is reinstalled in the understanding of media, *téchné*, and material. Although it seems that art games could not be a better example of blurring of a popular/high distinction, they show that the relationship is more complicated. The goal of understanding new artistic forms such as art games or electronic literature would be to disclose those tendencies. In this way, hypermediacy/immediacy is seen as a final distinction in postmodernism in David Harvey and Frederic Jameson's notions of the term.

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4. The Aesthetics of New Media Art: The Nature of an Interactive, Real-Time, Interconnected, Hypermedia, and Augmented Artwork

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Abstract: In this chapter we attempt to point out that new media art cannot be described by former art theories. The fundamental difference in reception is that new media artwork requires proactive behaviour and interaction from the reader/viewer. We need a new theory that derives from the idea of remediation presented by Jay David Bolter and Richard Grusin. Our starting point is that new media is continuously (re)written; video, image, and music can be modified easily by users who, in the process, become creators. Early theories of text, for instance, focused on the technical details of creative environments, such as linking techniques and the software that make the former possible. This approach may turn out to be mistaken, as in our opinion, the perception of new media art is carried out by the most popular, common digital tools, and thus the aesthetic analysis needs to be performed proceeding not from the technical conditions, but from the point of view of the perception of reality – the devices used by common users.

Introduction

New media works of art created in digital environments are different both in the medium used and in the way they are perceived in relation to tangible works (e.g., books and paintings) or to those created in a real space and which require the presence of an audience (performing arts such as theatre performances and concerts). New media art cannot be described by old theories. The remote, “delayed”, and often collective author often just plays a secondary role in the creation of new media works of art, while the process of their perception is technically determined and depends on digital users’ attitudes. In other words, the fundamental difference in reception is that new media artwork requires proactive behaviour and interaction from the reader/viewer.

In new media, text is continuously (re)written; video, image, and music can be modified easily by users who in the process become creators. We undertake – going beyond the theoretical horizon – to analyse some artworks and to point out that works based on augmented reality change the museum itself. We also describe how several kinds of valid stories can be written with the same characters in the environment of videogames.

This chapter also pursues the thought that the discussion on aesthetics of electronic literature is poorly represented. We need to emphasize here that we do not and cannot strive to create a new, universal, and comprehensive media theory. Nevertheless, we do make an attempt at analysing

the nature and aesthetics of new phenomena occurring in the last decade, at the same time asserting that the analysis of the technical environment determining new media art will not lead us closer to our aim with certainty.

Early theories of text, for instance, focused on the technical details of creative environments, such as linking techniques and the software that make these techniques possible. This approach may turn out to be mistaken, as in our opinion the perception of new media art is carried out by the most popular and common digital tools, and thus an aesthetic analysis needs to be performed proceeding not from the technical conditions but from the point of view of the perception of reality – the devices used by common users.

There has been a paradigm shift in connection with the visual artworks of new media but not in the case of literature or texts. Communication technologies created by computers changed the arts when they came into being. In 1985 Jean-François Lyotard at the Centre Pompidou in Paris came up with an idea and then curated a substantial exhibition: *Les Immatériaux*. The exhibition occupied the whole fifth floor of the museum. It took two years to plan and was the most expensive exhibition ever staged by the Pompidou (McDowell 2014). Visitors had to wear headphones as they walked around, navigating a labyrinthine maze of grey-metal mesh screens. These headphones would then pick up various sounds. Every visual display was paired with an audio text, from Antonin Artaud and Frank Kafka to Paul Virilio, but not only literature and theory were represented; advertising jingles and noise could also be heard. Summarizing the exhibition, Gere points out that *Les Immatériaux* aimed to present the contemporary cultural effects of new information and communications technology (even though at that time the term “information and communications technology” – ICT – was not used). The “subject” of the exhibition, says Gere, was how the existence of ‘new materials’, or rather, ‘immaterials’, mostly generated by computer and electronic technosciences, mediates and effects human activity and indeed the idea of the human (Gere 2006). Gere continues, saying that besides examining the effects of materials (ICT) on culture, Lyotard’s intention was to “question the idea of Man as a being who works, who plans and who remembers: the idea of an author” (Lyotard 1996, 159).

Given the way tools which had once been separated are now used, and that the content which can be viewed on them forms one unit, it might be said that media convergence has been created. In other words, reception interprets this phenomenon as the unification of the way digital tools are used and the content carried by them. Virtual museums and galleries are

the scene and means of information transmission, and with their digital technology they are also part of convergent media.

One of the consequences of media convergence nowadays is that on all of our screens (whether it be a computer, television, smartphone, or tablet) we can access the same content in the same way, thereby merging the features of media which have hitherto existed parallel with each other. An important point of our chapter is related to the problem of defining the boundaries of visual culture, of what can be discussed as phenomena of convergent media, and of what belongs to the field of art.

It is unquestionable that there are no sharp boundaries between the two fields. We consider two borderline phenomena as examples of this. One of them is a video game based on narration in which the physical body of the player is projected onto the virtual world, and the other is a virtual museum in a digital environment. Video games thus exceed the boundaries of the entertainment industry and spill into the discourse of arts.

The present state of new media art can be characterized by the following transformations:

Image + motion picture + audio + text → multi- or intermedia (paradigm shift)

Image → digital image (paradigm shift)

Motion picture → digital film (paradigm shift)

Audio → digital sound, remix (partial paradigm shift)

Text → hypertext (partial paradigm shift)

Performing arts → moving into virtual space, space as a factor has ceased, the concept of real time has expanded (partial paradigm shift)

Following from the above statement, we focus mainly on multimedia formed by the merging of image, film, audio, and text in the environment of media convergence, and on the transformation of image and text to a lesser extent. As the present aim is to determine the subject of this chapter, we have to state that the emphasis is on artworks created in a World Wide Web environment and presented in browsers. Works of art get to the widest circle of viewers in this environment. Its usability is well-known to users so they can bravely take up the opportunity of interaction; the network provides a real-time experience, and, moreover, this environment can be written, read, edited, and perceived simultaneously according to the principles of Web 2.0 collective content creation.

Theoretical Insight

As communication and media processes involve the World Wide Web and digital technology, we use the concept of new media more and more often. Lev Manovich has argued in favour of this conceptual definition as well. In *The Language of New Media*, he described new media as an encounter of two formerly different phenomena in terms of their historic development, that is, computer technology and former media technologies. According to Manovich (2001, 34), new media make possible new combinations of graphic, film, sound, and text.

An idea developed in a book by Gere (2006) entitled *Art, Time and Technology* is concerned with this issue as well. In his work, Gere focuses on the role that art plays in real-time digital systems. He understands these systems as information, telecommunication, and media systems which are part of the everyday user's life and have a greater and greater role in it. Our present digital – or “techno” – culture is based on these real-time computer systems.

Real time, however, occurs in the desire for the immediate feedback made possible by the World Wide Web and new media. If we place Manovich's and Gere's opinions side by side, a question arises, and with good reason: Does the World Wide Web extinguish the experience of real time by the fact that – somewhat overstating the case – it never forgets and stores everything automatically and instinctively due to its broadening capacity to make it possible for anyone to have a look at these works of art again and again?

Real time, one of the most essential pillars of the performing arts, which makes the real-life experience of recorded works of art possible in contradiction to creative arts, is transformed by the possibility of digital recording and “anywhere-anytime” replay. It is not surprising that theatre, singing, and instrumental music performance have not found their “carriers” in new media since performing art, by its very nature, cannot mean mechanical reproduction but rather repeated interpretation (and *re*interpretation).

New media art is a genre that incorporates work of art created with digital technologies and emerging online technology platforms. It includes both computer graphics and animation, virtual and online art, and video games. It is digital, interactive, and interconnected, often augmented and created in real time. New media art distinguishes itself from traditional art by deriving cultural objects. Video games, digital maps, and web cameras

used for observation, as well as smartphones and GPS systems, become means of art. However, the technology which operates them is developing and thus continuously undergoing transformations; their technical parameters do not determine the use of them as a means of art.

By its very nature, new media art comprises interaction between the artist and the reader/viewer, or between the artwork and the reader/viewer. All of this is enabled by the arrival of ubiquitous computing. Pervasive and ubiquitous computing (PUC) is the growing trend towards embedding computers in everyday life. The words “pervasive” and “ubiquitous” mean “existing everywhere”. PUC devices are fully connected and constantly online. Today’s mobile communication devices have changed people’s lifestyles and created new subcultures (Choi et al 2003).

The World Wide Web is not only hypertextual; going beyond the dimension of text, it is a hypermedial context as well since its start and end points can be an image, film, or sound in addition to text. In new media, hyper-text forms a non-linear unit with image, film, and musical works due to its (hyper) links. We classify it as part of interactive works, online museums, videogames, and works which use the techniques of augmented reality.

We have mainly spoken of information and communications tools which provide the means of creation of new media art. These developments are used for scientific (supercomputers, which are suitable for modelling weather and solving graphical tasks), military (GPS, high-resolution observation cameras, fast networks, and digital maps), and business (personal computers, web cameras, video game consoles, online media surfaces, and communication tools) purposes. Nevertheless, works of art occur in their environment.

At this point, it has to be made clear that the discourse about new media art needs to call in the aid of the knowledge and theories of visual culture and communication, media, and computer sciences. The treasury of technical tools of new media covers a wide spectrum as well; canvas, paper, pencil, and brush have been replaced by software and the screen.

The course of this discussion is focused on interactive, multimedia, and interconnected Internet art that can be created in a wide range of media. Our intention is to examine art created using websites: Internet-based dedicated software projects, video games, interactive videos, augmented reality, online maps, and other networked environments.

It is important to clarify the terminology early on in this chapter. We mainly use the concept of multimedia to describe works created by a combination of different kinds of media (text, image, film, and sound). This choice partially derives from the fact that the carriers of new media are

essentially information and communications technologies, and that in the context of information technology the concept of multimedia is standard. However, other terms are used to describe the phenomena we discuss here, in part to prove that the roots of new media art reach back to the time before the World Wide Web came into being in the 1990s and the computer revolution that followed it. The term “intermedia” was common in scientific discussions in the 1990s, and it mainly referred to those works of art created with the help of a computer, which involved several elements of the media mentioned above and was based on the system of the World Wide Web.

The concept of hypermedia, which attempts to describe the phenomena emerging in the context of literature and text, has a similar function. Hypermedia is an extension and expansion of hypertext by audiovisual elements and objects (e.g., image and sound). Therefore, hypermedia emphasizes the multimedia nature of the system in relation to the possible text orientation of hypertext. According to János Sugár, hypermedia involves different kinds of fields from literature to interface research (Sugár 1996).

The concept of hypermedia was first used by Theodor Nelson (1965). Similarly to hypertext, we can rather talk about entry and leaving points (when the user finishes reading or searching) than about an outset or end in the traditional sense in the case of hypermedia works because of the divergent nature of the system. The first hypermedia system was the *Aspen Movie Map*,¹ developed by Andrew Lippman in the framework of the MIT Architecture Machine Group.

The system made it possible for users to roam over the whole territory of the city of Aspen on their screens just like in recent FPS video games.² Most current websites are hypermedial, but only a small part of them were created as works of art.

The confusion of the concepts of hypermedia, multimedia, and intermedia shows that image has not found its stable function in the online context. One thing is certain: interactivity, real time, multimedia, and interconnection in the World Wide Web is part of the very nature of new media art.

Hypertext, intermedia, and multimedia, along with digital communication networks, became part of the “expanded field” of computing as it developed in the 1970s and 1980s. Meanwhile, confronted with the possibility of real-time systems, conceptual art represented a strategy of resistance to the performativity and instrumentality of the use of language they represented”.³

As hypertext makes the former schemes of authors, publishers, editors, and readers more flexible, new media changes the functions of artists, galleries, and curators. The context makes it possible for users to become art-

ists who can publish their works on the web immediately or organize the works of art already published on web into collections as online curators and share them with the public.

These days we are in the age of digitally created, recorded, and presented works of art which can be reproduced and remixed. As Oliver Grau (2003, 3) states, computer graphics, animation, and the interpreting strategies of interactive online visual arts will receive a greater and greater space in discourse concerning visual culture in general.

At the same time, Grau points out that (the category) of the observer (user) located in virtual space has its antecedents; there were similar renderings in antiquity, in ancient Roman villas and in 3D and storyworld video game trials – which has the receiver and the spectacle acting within the same system. This is the heritage of this endeavour. Mitchell already saw computer-aided design, synthetic holography, computer animation, automated image recognition, and motion control on the screen of “electronic visual culture” in 1994, the year after the appearance of the Web, when users’ experience was essentially different to the experience of current users.

Hypermedia works of art are brought to life by interaction; immersion is almost impossible due to the fact that readers/users are expected to take an active part in the process of the reception of the content on the screen. The interpretation of a possible message of a particular work is replaced by the understanding of the operation mechanism (links: what to click on).

Definitions

In accordance with the nature of the topic, an excellent summary is provided by the new collection of Monoskop.org,⁴ which was created in a freely editable Wiki new-media environment. This project, which was established mainly by Central European researchers, collects the most important essays related to new media art. As this collection discusses the topic in a relevant way, our chapter takes an attempt at a definition as its first task.

There have been several attempts to point out the connection between digital computer technology and art, the most important being Walter Benjamin’s essay *The Work of Art in the Age of Its Technological Reproducibility*. In the 1930s, Benjamin was interested in the effects of mechanical (at that time obviously analogue and not digital) technologies of reproduc-

tion on art. At the time, these were photography, film, and gramophone records, as mass printing had already been introduced five centuries previously (Benjamin 1968). Charlie Gere, recalling Benjamin's ideas, points out that "[u]nlike his contemporary Martin Heidegger, who, in his essay on 'the question concerning technology', opposed poeiesis to techne and to the Gestell or 'enframing' of technology, Benjamin saw the effects of mechanical reproduction on art as potentially liberatory and transformative". Benjamin, Gere points out, simply stated that mechanical reproduction weakens (erodes) the 'aura' of artwork (Gere 2006, 3).

While looking for origins or parallels in the past, Lev Manovich suggests that the aesthetic principles defining new media culture were developed almost a century ago by Russian and German avant-garde film makers. This is a strong claim. According to Manovich, the cornerstone of new media is the screen.

In our opinion, the aesthetics of new media art has to be approached from the point of view of interaction and real time. These phenomena form a constant thread in Gere's work. In his book *Art, Time and Technology*, he gives special attention to the question of real-time systems in art. (It is important to emphasize - because of some statements given later in this chapter that prove the under-representation of the literature of new media - that by "art" Gere understands visual art, not literature.) Real-time systems involve information, telecommunication, and multimedia technologies, and as a consequence of ubiquitous computing they can be found virtually everywhere. "Real-Time systems span several domains of computer science. They are defense and space systems, networked multimedia systems, embedded automative electronics" (Juvva 1998).

The artistic works of new media can be classified according to the technology they are created by. Stephen Wilson (2003) differentiates more than eighty categories. Oliver Grau speaks of a paradigm shift. He says that interactive video, computer graphics and animation, the Internet, and telepresence art starts "to dominate theories of the image and art". According to Grau, "the artist is at the same time a scientist", and the:

media artists represent a new type of artist, who not only sounds out the aesthetic potential of advance methods of creating images and formulates new options of perception and artistic positions in this media revolution, but also specifically researches innovative forms of interaction and interface design, thus contributing to the development of the medium in key areas, both as artists and as scientists. (Grau 2003, 3)

The horizons of new media art are described in a broad sense by Mark Tribe and Reena Jana. In accepting their statement, we can speak about the aesthetics of open sourcing, telepresence, surveillance, and hacktivism besides the abovementioned forms of art (Tribe and Jena 2006)

The way new works of art are created based on the interaction between the author, who launches the process of creation, and the community (that is collective content creation) is an important element of the art of new media, while the structure of the works is distinguished by non-linearity and linkability, which will be developed later.

In the context of new media and hypertextuality, due to hyperlinks, art is leaving the path of linearity behind, letting users/viewers create their own experiences with the artwork. Non-linearity is a leap from traditional literature, theatre plays, radio dramas, films, and so on. But non-linearity requires interaction and participation from the audience, thus creating a writer from a reader, and a producer from a viewer. At the same time, they alter or even create and author the content.

The Iconic Turn on Screen

The idea of the iconic turn comes from both W. J. T. Mitchell and Gottfried Boehm. Mitchell coined the phrase “pictorial turn” (1994), while Boehm (1994) used the expression “ikonische Wendung”, that is, the “iconic turn”, in scientific discourse dealing with pictures and texts. There is no need to say that they both borrowed the rhetorical topos of turn from Richard Rorty, who created something really enduring in 1967 with his “linguistic turn”. Mitchell says that it is obvious that the age of video, cyber technology, and electronic reproduction has brought into being a new toolbar of visual simulation and illusionism which had never been experienced before. Nevertheless, the fear and anxiety that the “power of images” can also destroy their creators and manipulators is as ancient as the creation of images itself. Idolatry, iconoclasm, iconophilia, and fetishism are not “postmodern” phenomena. In our opinion, this paradox is special at this moment. The “image revolution”, the fantasy of a culture totally dominated by images, has become a real technical possibility all over the world. Peter Weibel lays down two phases of the appearance of the image revolution: in the first half of the twentieth century, the avant-garde movements (Futurism, Cubism, Cubofuturism, Dadaism, and Surrealism) celebrated

the image. The second phase can be characterized by Fluxus, Happening, Pop Art, actions, and performance movements (Weibel 2015). It is to be remarked here that the latter require real time and actual presence, and because of their demand for actual presence they have not found their place in new media art.

Paradoxical though it may sound, hypertextual literature also serves as proof of the iconic turn. The phenomenon of the iconic turn in new media art is best described by Miall and Dobson (2006). On the issue of their visual nature, they claim that topography in hypertext consists of two parts: the first is visual information and the second is textual. They are paired on the screen: "It requires the connection of separate images within a linked structure available to the reader". Another theory immediately comes to mind; regarding the question of where to place the image in new media theory, Lanham proposes that hypertext has altered the balance between alphabet and icon. While in book culture the icon (and the image) was neglected, even suppressed, hypertext permits its restoration to the position it held at times before the invention of the printing press (Lanham 1993). According to Lanham, the reason for this lies in the fact that after the advent of the printing press and standardized books, texts printed for adults' icons were mostly excluded. In the age of printing, claims Lanham, children are readers in training, and so they are allowed to appreciate the icons. But when they grow up and finish training, the apprenticeship is over and the skill of reading a text without images is mandatory for adults.

The appearance of the first graphic browser, Mosaic, and the steady acceleration of network data communication made it possible for users to receive an ever-greater volume of multimedia content. Hypermedia's combination of different kinds of media plays an outstandingly higher role in visual communication (whether it is interactive or mass communication, or based on an image, sound or motion picture) than in the visual arts.

The Nature of the New Media Artwork: Interactivity, Real Time Creation, Interconnection, and Multimedia

The point of interactivity, which is characteristic of new media art, is realized in multimedia environments – we initiate a process by clicking on or touching an image or a text, and this process leads us into another context, starts a video, or displays a text.

Proceeding from link to link is called “clicking” by everyday users; touching as an operating tool makes interaction possible, too. In connection with the transformation of the tradition of interaction, Lev Manovich wrote that in the past we looked at a picture and mentally followed our associations to another picture (Manovich 2008). Now interactive computer media ask us to click on a highlighted sentence to jump to another picture and follow pre-programmed objective associations.

The new form and user interface of interactivity not only avoids the obstacles of language but culture-dependent symbols as well. “Real time” is an essential feature of interactive, online (new media) works of art. This phenomenon differs from non-real-time and stored content (images, videos, and texts) due to the fact that it provides the experience of participation for users.

We may encounter non-real-time yet realistic-looking image manipulation in digital films. CGI (Computer-Generated Imagery) places virtual elements into real space. New media artworks do the same in real time since they have to provide the possibility of interaction with the content to users. Video games are a kind of borderline case, falling somewhere between CGI and new media artworks, as they generate virtual elements dependent on the interaction of the user.

In our chapter, we have aimed to analyse the “functioning” and the process of perception of three artworks. Certainly, examples abound. We have chosen artworks found in the ELMCIP anthology and We Tell Stories project because the former is a result of a relevant European research programme into hypertextual art and the latter is the experiment of a well-known book publisher; both of them may be freely accessed via online browsers.

The ELMCIP anthology

The artworks published in the ELMCIP anthology have a representative function. The aim is to display a wide range of European multimedia art. The editors append instructions for its use and interpretation. In our chapter, we take these instructions as the starting point of our analysis of the artworks. The author of *The Flat*, Andy Campbell (2013), is published in the anthology. According to the description on the website, the work was inspired by the author’s dreams and experiences.

The Flat presents viewers/readers with a challenging mouse-controlled environment. In this environment, the narrative fragments left behind by an abandoned building's previous inhabitants linger. *The Flat* is a mixture of images (photography), short texts, and sounds. During the reception, the viewer/reader is allowed to wander around numerous rooms in the apartment to explore them with a computer mouse or touchpad and interact by clicking on flickering areas filled with content. As the rooms are revisited, the textual narratives change in real time. The original author adds a discomforting feeling of pressure and urgency, and at the same time "encourages the work to be revisited" as a timer is placed in the top right-hand corner of the screen. When the time runs out, the viewer/reader is thrown out of the narrative and has to go back to the starting point: the front door of the flat.



The Flat - screenshot

Another work in the anthology is Christine Wilks's *Underbelly*, which is a piece of playable media fiction. The main character in this fiction is a woman sculptor, carving on the site of a former colliery in the north of England. While she works, she is interrupted by variety of voices, and the viewer/reader is rushed into an underworld of the inhibited fears and desires of the original author. These fears are combined with the hitherto overlooked stories of nineteenth-century coal-mining women. Fiction is combined with reality as the text is fragments of the testimonies of women miners collected in 1842. As the editors point out, *Underbelly* integrates a rich and surreal mix of imagery, spoken word, video, animation and text "within a traversable map-like narrative terrain. The cultural work that *Underbelly* performs goes beyond its literary and aesthetic exploration of the operations of a multimodal work, to ask questions about the historiography of modern society" (Wilks 2013).



Underbelly – screenshot

We Tell Stories

New media art is based on hypertext (hypermedia), as with the World Wide Web, but on a different technological basis. The works on the Wetell-stories.co.uk (WTS) page represent a paradigm shift.⁵ New media communication forms and surfaces give life to artworks. There are six published works, but our interest focuses on one. In contrast to the earlier, static, individual homepages, these pieces are to be found in a new media con-



21 Steps – screenshot

text. In the WTS project, the geo-locating narrative of *21 Steps* (Cumming 2008) using maps utilizes the possibilities offered by new technologies to the greatest extent. It literally puts the story on the map in the context of new media. In his work, Charles Cumming integrates the characteristics of the hypermedia environment. He tells the story of *21 Steps* with the help of Google Maps, which allows him to visually draw the territory on a map. The users do not turn pages but click to move on, following the route of the actor on a map; they can also decide to explore the map outside the confines of the story.

The Aesthetics of Augmented Reality Art

Attempts at representing virtual reality, 3D rendering, the quest for realistic (HD) resolution, image and face recognition, the possibility of controlling games which are run on consoles by the movements of users, speed (bandwidth), and a continuous online state in close connection with these attempts have become important questions of reception in new media.

According to the definition, augmented reality is dependent on digital tools; users can perceive virtual content with the naked eye, not (yet) in real space but on digital screens. It is a relevant aspect of this question – as we pointed out in the introduction of this chapter – that the phenomena of augmented reality-based information, communication, and convergent media are realized in well-known usability-based systems in common everyday use.

Augmented reality is real-time and marker-based. Its medium is hypertext; it can be displayed by digital tools, it demands interactivity and a proactive user behaviour, and it lays an emphasis on true-life experience. Technology based on augmented reality has come into general use recently due to the fact that users are surrounded by digital tools on a daily basis, such as smart phones, tablets, and game consoles. These tools can access broadband Internet; have sensors like GPS, a gyroscope, and a camera; and are provided with high-resolution displays. Thus these tools are suitable for a kind of true-life construction of augmented reality technology.

One of the first and most evident forms of augmented reality may be the 3D transformation of books. The technical principle is relatively simple: a tool which creates augmented reality after recognizing particular markers draws an information layer that can be perceived by users with

a screen onto the material world. A book of this kind is a piece of artwork and a new media surface at the same time.

Works of art using augmented reality can be displayed by mobile tools and browsers (e.g., Layar). In browsers, users can choose the type of the information that is to be projected onto the material world. For instance, the streetARt-layer – which is also related to the issue of augmented reality – is a communication form of a subculture and a media surface, since users can display graffiti and other kind of artistic forms which have been placed in the material world in their environment on their phone screens using the layer along with the comments written and added by other users.

Therefore, comments exist beyond the virtual layer, and users can “see through the walls” in this way, too. What stands out is that the layers of AR are created by collective content production, and, in this case, by collective authors as well. Reception often refers to the concept of Web 2.0 or new media as an online manifestation of participatory culture. According to this understanding, users are not simply the subjects of online content but also interactive participants as well (Molnár 2012). This represents consumption as well as enrichment, creation, and the sharing of content. Our participation is not passive; it is manifested in the activity of manipulation.

The newest generation of new media video games, which may be understood as artworks, is based on greater and greater degrees of interaction on the part of users and on the technology of augmented reality as a means of achieving this. WonderBook – where, thanks to AR, printed books also converge – are an obvious example of representing interactivity and content projected onto real space. WonderBook, developed by Sony, is a kind of printed book where markers are placed on pages. These are not QR codes; they blend into the illustrative environment of the book. Readers perceive them as illustrations and machines perceive them as markers.

The point of WonderBook is that while users read a book, a Sony Eye PS3camera system reads the markers and displays a picture of the user on the screen at the same time. As it recognizes different markers, different content is displayed. Following the recognition of particular markers, the virtual content projected on the environment of the user is displayed on the screen and thus an interaction with the characters of the book is created. In certain cases, letters come to life, pages are covered by dust, or well-known characters of the Harry Potter universe appear. Users interact with virtual characters via a Move controller. Events are displayed dynamically and in high resolution so the demand for true-to-life experience is fulfilled as well.

The graphics of video games are based – with an additional element detailed later – on the mimetic canon of Renaissance painting. The more real

a game is, the more highly it is praised. “Reality in this case is directed mainly in the direction of the fullness of light and shade and colour effects. The question is not whether there are zombies or not: but if they exist, how would the light of the setting sun twinkle on their slimy hands?” (Gárdonyi 2005).

With regard to this point, it is clear that the fact deriving from the technical features of photographs is that everything we can see must also exist in nature, roughly in the same way as it is displayed in the picture; in the case of virtual space displayed in augmented reality, this is not true. Layers drawn onto the material world of objects do not derive just from objects but also from the documentation of events that have taken place in time. Examples of this may be found in the layers of YouTube geotagged videos.

Why Has There Been no Paradigm Shift in Literature?

The discussion of electronic (new media) literature is poorly represented in literature, opposed to visual arts, where multimedia is now a canonized phenomenon. We might say that there are two literatures. The traditional print-based (also imitated by e-book readers) and the hypertextual one (Szűts and Yoo 2016).

In order to make the reasons of under-representation understandable, we have to refresh the definition of hypertext. Hypertexts are interactive multimedia pieces that force readers to make choices. Hypertext’s main characteristics are that it contains links, diverges from linear writing, makes detours, and gives the reader the opportunity to go elsewhere, while at the same time enticing interactive engagement. Hypertext is non-linear and non-sequential writing; it is not pre-determined as to how its component fragments follow one another in the course of reception (Szűts and Yoo 2014). Hypertext often includes interactive multimedia, and can be characterized by multi-sequential text patterns or nodes (McNabb 2005-2006, 76).

Solway gives an even more abstract explanation for under-representation, claiming that hypertext is breaking the reading mind into numerous pieces. It creates a labyrinth of links, webs of nodes, maps, illustrations, diagrams, sound bites, and animations (Solway 2001:342).

Another reason that hypertexts are not widespread is an aesthetic one. We claim that hypertext is lacking in immersion, joy, and entertainment. We find the arguments of Liubinienė and Keturakis (2015) substantial. They point out that storytelling has always played a central role in our

culture. The purpose of the stories has never changed. It has a function of recording practices, influencing morals, trying to explain origins, and primarily entertaining. We enjoy stories. Furthermore, in opposition to new media artworks, stories in traditional literature are linear. Linearity requires attention and explains the world we are trying to define. A reader who immerses himself deep in the story will get involved and will transport himself into the middle of it. In this way in his mind he will face the exact dangers and share the same sadness as the characters of the story. But the reception of new media works – that are interactive and multimedia, that is, they combine text, picture, video, and sounds – is a different experience (Szűts 2013). Liubinienė and Keturakis point out that non-linearity and multimedia is bad for storytelling: “In the new media, the story gets broken and the reader loses the direction and the same time interest as well”. When arguing about the aesthetics of hypertext, the altered way of reception – reading – has to be mentioned. The reader’s involvement and level of allowed interactivity has changed. Espen Aarseth (1997) states that the reader was powerless before new media art. They were nothing more than a spectator at sports game. They could speculate and shout but were never a player. In another analogy, Aarseth then continues with another example: the reader is like a passenger on a train who is able to observe and understand the landscape changing in front of their eyes. They can rest their eyes where they want. As a radical action, they can even pull the emergency brake, stop the train, and step off. But this is an apparent freedom as they cannot “move the tracks in a different direction”. They only feel the simple joy of voyeurism.

The reason that new media literature has not made a breakthrough is that links in hypertext make immersion into the story difficult if not impossible. When the user has to make a choice (pick a link), his immersion is gone as he is brought to the surface. At the same time, the non-linearity urges the same reader to run through the text, to get as far as possible, and unveil as many secrets concealed behind the links as they can.

Broadening the Discourse of Art: Transformation of the Museums

When discussing the altered role of museums in new media, we have to define the characteristics of digital context – in ICT terminology called Web

2.0 – where artwork is created and presented (exhibited). The distinctive features of Web 2.0 originate not from technology but rather from media and art theories. In comparison with the previously dominant paradigm, which focused on editors and gatekeepers, there is a radical difference in content production. The emphasis has shifted from publication to sharing and from passive presence to active participation. User and service attitudes have changed in the same way. Blogs, wikis, and social networking sites merely provide frameworks which users fill with content. Hereby the write-protection of the web ceases and the position of “speakers” becomes more open (Gelegony 2011, 93). What was not previously chartable and invisible becomes everlasting, mappable, and viewable (Manovich 2009). Anthologies which are generated by users and are free for everyone to read, online galleries, and museums are created in this way.

With the promise of the endless digital storage space, the eternal desire for collecting as many digital objects as possible was born. There is no lack of space anymore. Nothing has to be selected or thrown out. Computers in the 1970s and 1980s were first associated with the natural sciences – anything that was related to machines and not to art. But in the age of ubiquitous computing, we are surrounded by them and they are embedded in art. Even such conservative art institutions as museums have learned to embrace computers. Through the process of digitalization, the content of museums is now augmented with the dimension of virtual space to form: for example, the biggest virtual museum in the world – the Google Art Project – which exhibits ultra-high definition images of masterpieces. These digital images are not just copies of the originals, they are somewhat more. On a digital screen they can be enlarged, and details previously not visible with the bare eye can be seen (Szűts 2012). This provides a new aesthetic perspective.

Becoming an exhibit in a gallery has traditionally been regarded as the last step of canonization. Even the avant-garde movements, which so fiercely rebelled against the institutionalized culture, would never have seriously questioned the very role of museums. But the World Wide Web will change this role in virtual space for good.

The transformation of the concept of galleries, museums, and other places that host exhibitions is part of the changes generated by the technology of augmented reality. The Layar browser mentioned above brings the artworks of the material world from the walls (graffiti and guerrilla artworks) with the assistance of streetARt and collects them on our screens. In doing so, the system changes spatial perception, diminishes distance, and brings information requested by users closer due to interaction.

In virtual space the museum is augmented. Arthur Danto (1997, 318) points out that while the concept of artwork is bonded to the museum, at the same time this institution is used to represent the power of authority. “The possession of art was a symbol of authority, as much in the eighteenth century as in antiquity. [...] It is as emblem of power that the museum enters modern consciousness, and not simply as a place to see aesthetically impressive works, or to study the masters”. But the museum which in the new media era becoming embedded into Web 2.0 technology is no longer a symbol of authority. Anyone can view or exhibit artwork online and attract viewers.

Nah Ilmin (2013) recently explored the usable definition of the artistic and museological use of the term “new media” and its characteristics: digital, multimedia, immaterial, electronic, and interactive. In his work, he overviews the museological challenges raised by modern art museums. They range from collecting and exhibiting to preserving new media artworks. He asks a legitimate question that should be answered in following papers: With the advent of new media, what do the terms “artwork”, “author”, “ownership”, “exhibition”, and “preservation” mean?

Conclusion

We began this chapter with the definition that new media art is a genre that incorporates works of art created with digital technologies and emerging online technology platforms (primarily the World Wide Web). New media art thus includes computer graphics and animation, virtual and online art, hypertextual literature, video games, and augmented reality art. It is digital, interactive, multimedia, interconnected, often augmented, and created in real time. New media art distinguishes itself from traditional art by deriving cultural objects.

Speaking of hypertextual literature, we could draw an analogy. If traditional literature is the cinema, which can be experimental, seeking new ways of expressing itself, then the new media literature is the theatre. In analogue and pre-computer-age cinema, the film – however much it tried – could not leave the screen, and viewers could not interact with it. At the same time, new media literature is experimental theatre, a context where a play can become interactive, presented in real time, and involve the audience.

In as much as we display an object that also exists in nature, within the framework of an augmented reality-based artwork, the image has to dis-

close that relevant information which we would get to know if we were looking at the represented object *in situ*. In this way, visual artists can draw an “artwork layer” made of the statues, images, and videos generated by them onto the material world, and this raises the extremely interesting issue of context. Although the artworks generated by them exist in virtual space due to being technically determined, they can be viewed using a Layar browser only in a concrete, real environment. Therefore, these artworks are located not at a certain point but rather in a particular area.

As a consequence of this technology coming into general use, artworks and objects occur beyond that context which has hardly changed over the centuries; the role of museums and maps has been taken over by augmented reality. Collections are created by a community in a space where the canon represented in Web 2.0 is valid. In this context, the role of the curator is taken over by the creator of the layer which is laid on reality. Artworks of literature, music, and video in new media are completed by the remixes or comments of authors who used to be receivers.

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Notes

1 <http://www.youtube.com/watch?v=Hf6LkqgXPMU>.

2 The following question arises here: Can true-life computer games which take place in the free world on the World Wide Web and the users who continuously form this world by their decisions be considered as hypermedia or not?

3 See: Gere (2006). A similar terminology and chronology is adapted by Miklós Peternák (2000). According to him, intermedia occurred in different points of the world, such as in Vancouver, Amsterdam, Germany and Denmark. On one hand, this happened independently of each other, on the other hand it was a part of the Fluxus movement. In parallel with this, in addition to artistic photography, experimental and augmented film and video art became more and more important in the 1970s. These new media were called technical images from the 1980s, and renamed media art as a result of the spread of computers from the 1990s.

4 http://monoskop.org/Media_art_and_culture.

5 <http://wetelstories.co.uk/>.

**5. Between the Book, the Image,
and the Performance**
***Pantomima* by Vítězslav Nezval**

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Abstract: The 1920s Czech avant-garde is associated with the *Devětsil* group and the quest for artistic ideas that resulted in the formulation of a new art school known as “poetism.” The upcoming generation refused to “do art” for a narrow elite circle, instead opening up a “new beauty” for everybody, even those social strata that were missing out on art. The chapter discusses Vítězslav Nezval’s *Pantomima* (1924) as one of the prominent examples of intermedial and remediation practices of the pre-war avant-garde movements. For Nezval his project incorporated “a meeting of arts accomplishing a joint task,” which would not have been possible if poetism had not drawn inspiration from the new media and art forms that they brought with them.

Introduction

In the first collective appearance of the *Devětsil* group in the *Devětsil* anthology, and under the slogan “New Art Will No Longer Be Art,” the art theorist, artist, and typographer Karel Teige expressed a simple point, but nonetheless one that was fundamental to the development of Czech avant-garde art: “The *beauty* of new art is of this world. It is the task of art (which in any case is being accomplished more or less punctiliously by some branches of art, particularly cinema) to create analogous beauty and to sing *all the beauties of the world* with vertiginous images and undreamt-of poetic rhythms.” (Karel Teige 1922).

In the second anthology, which displays the efforts made by the *Devětsil* group in the literary and artistic spheres, the programmatic poem *Všecky krásy světa* (All the Beauties of The World) is printed on the first few pages. At Teige’s instigation, this was jointly started by Vítězslav Nezval and Jaroslav Seifert and completed by Seifert on his own. Teige’s surviving correspondence makes it clear that at that time the artistic and ideological harmony between Teige and Seifert was very close. The words that end the *Devětsil* anthology and the second anthology, entitled *Život II*, are not there by chance. Seifert’s verses are a literary implementation of Teige’s manifesto.

For our poetry we found utterly new kinds of beauty,
 you moon, island of vain dreams, burning out, cease to shine.
 Be silent violins and ring your horns of automobiles,
 may people crossing the street suddenly begin to dream;
 aeroplanes, sing the song of evening like a nightingale,

ballet dancers dance on bills between black typeface,
 the sun may not shine, – from towers floodlights beam
 into the street they will a new flaming day.

Jaroslav Seifert in the *Život II Anthology* (Ed. Jaromír Krejcar, 1922)

This is art in the middle of the everyday city – in the noise of the crossroads, the glare of electricity, and the power of technology. The book remains a medium of literature, but “black typeface” has the same weight on the billboard as it does in art.

New technologies and poetry

Admiration for the new technologies meant the expansion of the genre structure of Czech literature. New media, photography, and film and audio recording had become the engine in the quest for new forms. Wireless telegraphy and radio, which the French included under the term “*telegraphie sans fil*,” came to be part of the title of Seifert’s poetry collection under the international abbreviation “TSF” in *Na vlnách TSF* (1925). The artistic and reporting opportunities presented by film were another thematic and media source for film librettos, which are short prose works in the form of screenplays meant primarily for reading. The emphasis on typography contributed to the development of literary experiments, such as calligrams created in close collaboration with a typographer. Competition from new media triggered a shift in the perception of poetic text, which may be interpreted in terms used by Jay David Bolter as a process of remediation, in which the new medium does not supersede the old one but rather enters into a meaningful tension with it (Jay David Bolter 2011).

The second official *Devětsil* exhibition in the autumn of 1923 bore the profane title *Modern Art Bazaar*. In addition to pictures and sculptures by young artists, they also exhibited photograms by Man Ray, the wax head of a figurine from a barber’s shop, and steel ball-bearings. Teige also confirmed this shift in the perception of art in the first issue of *Disk*, where he included photographs of ball-bearings among the reproductions of statues by Jacques Lipchic and Ossip Zadkin, while prominently placing the title “Modern Sculpture” in the middle.

A hitherto unique work of art was exhibited which might well have been

reproduced by film and photography and disseminated in this way in magazines and books, but reproduction only confirmed the exclusivity of the original. This new art form, the picture poem, allowed for the democratization of artistic communication, as anybody could become the author. The most important thing was not the original but the printed disseminated object. In addition to the admired billboard, as testified in an article entitled *Reklama* (Advertisement) by Josef Šíma in *Život II* (Josef Šíma 1922), the book was also a medium: “Mechanical reproduction enables images to be printed in book form. Books of picture poems will need to be published. Mechanical reproduction will safely result in the mass-produced popularization of art. Printing is a medium between artistic production and the audience, not a museum and exhibition. The old kind of exhibition is on its way out, as it bears too close a resemblance to a gallery mausoleum. The modern exhibition must be a bazaar of modern production (a trade fair or a world exhibition), a demonstration of the electrical century or the machine age. Mechanical production and printing will ultimately make originals redundant. After all, we throw manuscripts in the trash after we have printed them.” (Karel Teige 1923) The solution was to form a link between the language of art and the language of poetry to produce picture poems. The creative method was primarily the collage, which was later complemented by photomontage.

The exhibition hall ceased to be a place for art, just as the book no longer needed to be the exclusive “medium” of literature: “The image is either a billboard [or] public art such as the cinema, sport, or tourism – its place is the street; or it is poetry, purely visual poetry beyond literature, in which case its place is the book, a book of reproductions, such as a book of poems. It is never right to stick it on the wall of a room. The traditional framed picture has suddenly been abandoned and has lost its actual functionality.” (Karel Teige 1923) Modern architecture has rejected sculpture, while other kinds of art, including literature, have undergone a media transformation. Karel Teige also understood the current crisis in literature as a crisis of material. (Marie Langerová 2002) Marinetti, whose *Liberated Words* was published in Czech translation in 1922, was one poet who got rid of punctuation. Calligrams popularized by Apollinaire (translated into Czech by Karel Čapek in 1920) stressed the graphic side of poetry. “Poetry used to be sung, but now it is read. Recitation is becoming pointless and the economy of poetic expression is primarily optical, not phonetic or onomatopoeic.” (Karel Teige 1923) Art has found itself in a situation in which the traditional artistic genres have lost their traditional forms; hence there has also been a change in the media communications of individual types of art. In

his study entitled *Obraz* (Image), Jindřich Štyrský highlights the fact that the form was to be dictated by the objective and was to be “brief, precise, comprehensible, entertaining, clear, constructive, and simple” (Jindřich Štyrský 1923). In the case of hanging pictures and the book presentation of literature, Teige saw a solution in the fusion of various artistic kinds and genres: “There is but one art: poetry.” (Karel Teige 1923)

Nezval’s *Pantomima* came to be the first representative of this new approach to poetry. Published by the Central Students’ Publishers in Prague in September 1924, it is considered to be the second book of poetry by Nezval, even though this is not a collection of poems in the traditional sense. In addition to series of poems such as *Abeceda* (Alphabet), *Rodina harlekýn* (Harlequin’s Family), *Týden v barvách* (The Week in Colours), and *Exotická láska* (Exotic Love) as well as the poems *Múza* (Muse), *Srdce hracích hodin* (Heart of the Musical Clock), *Cocktaily* (Cocktails), the long poem *Podivuhodný kouzelník* (The Amazing Magician), and the experimental poem *Raketa* (Rocket), he also published the drama *Depeše na kolečkách* (Dispatch on Wheels), which had to wait another two years for its premiere at Osvobozené divadlo. Nezval also included *Papoušek na motocyklu* (Parrot on a Motorcycle), which represented his conception of poetism in the July 1924 edition of *Host* alongside Teige’s *Poetism* programme (Karel Teige 1924). These were highly varied texts: a photogenic poem inspired by Deluc, essays, vaudeville, typographic poems, and picture poems. Following Nezval’s texts, a blank space on the page was filled with quotes from the authors espoused by the *Devětsil* programme (Rimbaud, Apollinaire, Cocteau, Tzara, Epstein, Mallarmé, and Baudelaire), but there was also an anonymous anecdote present. Other *Devětsil* members were also involved in the book: the score, entitled *Nezvalova Pantomima* (Nezval’s Pantomime), was authored by Jiří Svoboda; the afterword was written by Jindřich Honzl; the editor was František Götz; the author of the picture poem on the cover was Jindřich Štyrský; and the typography and visual design of the other picture and typographical poems was set out by Karel Teige. Instead of illustrations, the book was interspersed with reproductions of works by Jindřich Štyrský and Marie Laurencin; the fascination with the exotic was highlighted by photographs of African sculptures and Indian miniatures, while New York cinema neon signs recalled their adoration of the modern pulsating city. With photographs of the Fratellini brothers from the Paris Merdano Circus and the dancer Alla Nazimova, the book admiringly espoused contemporary popular culture.

The first edition of *Pantomima* came close in its typographic design and format to a number of other *Devětsil* books, e.g., the *Revoluční sborník*

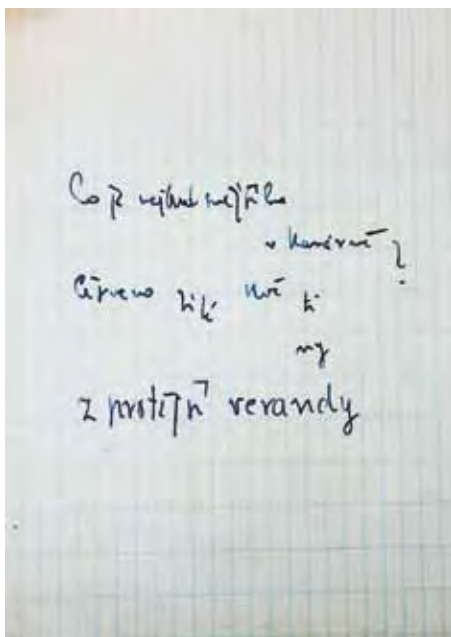
Devětsil, collective publications edited by Seifert, and *Život II*, compiled by Jaromír Krejcar. It also followed on from them with the subtitle *DEVĚTSIL poesie* just below the book title on the front cover. Nezval chose the title to indicate that this was not exclusively a poetic text, because *pantomima* (mime) as a theatrical genre abandons the voice, shifting theatre more towards a visual experience. However, Nezval certainly did not abandon poetic language; he authored individual texts, although *Pantomima* was actually a collective work. Several texts that Nezval included in this book were first published in magazines. If we compare the manuscripts with the magazine and book versions of his texts, we can spot differences that did not fail to have an effect on the way the content came across.

The birth of pictorial poem

Nezval's personal papers, housed in the Literary Archive at the Museum of Czech Literature (PNP), include surviving fragments of manuscripts that made up part of Nezval's second book. Surviving manuscripts from the previous first edition of *Pantomima* include the poem *Pierot cyklista* (Pierrot the Cyclist), which proves that Nezval had considered a different stanza structure. Nezval recalled that Karel Teige supervised the typesetting at the National Policy printers: "Teige actually found his way to every single shelf, where interesting type lay scattered about. Yes, modern poetry was meant to show its freshness and novelty in its very external appearance. Wielding his chibouque, Teige floated high above the work of the print-shop foremen and full of excitement he took the first proofs of his successful pages to the café. The printing managers shook their heads, but our stubbornness was stronger than their scepticism." (Vítězslav Nezval 1959) However, he remained silent on just how much of a contribution he made to the final form of Nezval's work.

Shifts in graphic form can be shown in manuscript fragments of the *Srdce hracích hodin* cycle. Nezval's archive collection includes No. 9 (according to the first edition), No. 10, No. 12, and No. 14.

The visual form of the poem in the first edition was created by Karel Teige, who made a "patchwork" of coloured and striped squares and triangles in his graphic representation in order to form an association with the coloured materials of the canopies that shaded the café windows in summer. For the text of the poem, he selected the seriffed fonts used by



signwriters on shop signs. However, he divided them up differently to Nezval. His conception was close to the aesthetics of pictopoetry, which were formulated at the same time by Victor Brauer and Ilarie Voronca in the 75 *HP* journal, the only issue of which came out a month after *Pantomima*. However, Nezval's manuscript came out differently (Karel Srp 2009). In terms of the division of the verses and the size of the fonts, the author likewise highlighted the question marks and the final verse while achieving other meanings with the division of the words *červené / bílé // kvě / ti / ny*, associating fragmentariness and movement, as if the flowers (*květiny*) were bending in the wind and the petals falling onto the street. Poem No. 12 has been preserved in its manuscript form, i.e., in a clean copy penned on a loose sheet of squared paper in blue ink, and printed under the title *Žurnály* (Journals). In the first and second editions, Teige only divided it into two verses:

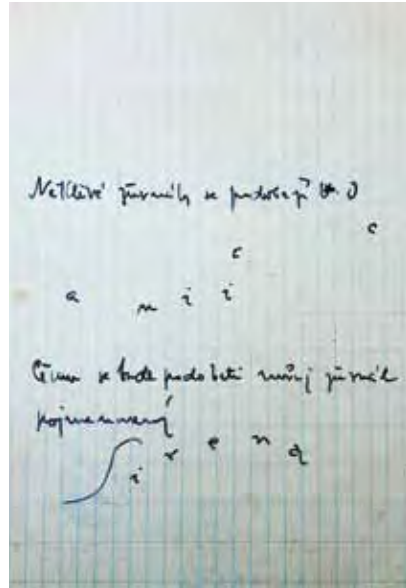
XII

Žurnály (Journals)

Některé žurnály podobají se Oceánii (Some journals resemble Oceania)

Čemu se bude podobati můj žurnál pojmenovaný Siréna? (What will my journal called Siren resemble?)

Nezval's manuscript version works with five verses, while the author breaks two of them up into individual speech sounds. Apparently, Nezval also considered this text as a basis for a picture poem. He was able to plan a collage of letters and maps, i.e., using very common motifs in this genre. Jaroslav Seifert and Karel Teige made use of this approach in the poem *Objevy* (Discoveries) in the collection *Na vlnách TSF* (On the Waves of TSF, 1925). Using the map motif, Teige created a picture poem *Pozdrav z cesty* (A Greeting from a Journey, 1924), as did Jiří Voskovec in the picture poem *Sifony koloniálních siest* (Syphons of Colonial Siestas, 1924). Jindřich Štyrský and Toyen also used a map in a picture poem for the cover of a book by Jan Bartoš called *Plující ostrov* (Floating Island, 1927), and a map appeared on the cover of Nezval's *Pantomima* (Jindřich Štyrský, 1924).



Nezval's poem comes up against the fact that in some of the magazines the typography involves a large number of font types, not only in the horizontal division of the text but also on the level of the words. These bring to mind small islands and atolls scattered over the sea. He might possibly have gone through them in Teige's workroom, as he stressed that in *Pantomime* "Teige worked independently, selecting fonts with great sensitivity and a sense of beauty," and, "He knew all the prominent reviews from all over the world and worked on a worldwide level." (Vítězslav Nezval 1959) Likewise, Nezval scattered individual letters from the word "Oceania" all over the page. However, without this graphic arrangement, alluding to Apollinaire's calligrams, the poem loses its meaning and wit.

Poems Nos. 9, 10 (11), 12, and 14 have survived in a typescript which is completely different from the book edition. In the first edition of *Pantomima* as a typographical poem, Teige was only taken by No. 10. He designed it as an abstract drawing (Karel Srp 2009), in which the last two verses cross the blank page diagonally, but he backtracked from this idea in the second edition. As a poet, Nezval thought of them differently. The typescripts show that he himself was thinking in terms of space and he wanted to move his

texts towards optical or lettrist poetry. He had access to a typewriter in the Masaryk Encyclopedia editorial office at the *Československý kompas* publishers, where he worked from 1 March 1924 until the summer of 1925 as a secretary (*Pantomima* came out in September 1924; Milan Blahynka 1981). Nezval did not acquire his own typewriter until 1927. The 1920s dating of the typescript poems is supported by the fact that they use a similar principle involving letter and sound play, which enhances the poems with other meanings, as do typescript variants of other poems from *Pantomima* including Nos 10 and 12 from the *Srdce hracích hodin* cycle. This case would involve the first lettrist poetry to use a typewriter in modern Czech literature.

Collective authorship

We cannot hope to know why Teige did not accept Nezval's authorial invention and what kind of discussions took place over the *Srdce hracích hodin* manuscripts and typescripts. What we do know is that Nezval accepted Teige's typographical arrangements without reservations. Nezval did not attempt to make a strong authorial gesture, but he internally agreed that his *Pantomima* ranked among other *Devětsil* artistic gestures. Nezval felt himself to be the poet and author of the text, but the overall effect of the book was a collective effort as in the case of the first two collections. "As soon as the craft attained a certain proficiency," Nezval noted in his essay *Kapka inkoustu* (A Drop of Ink), printed in the third annual review collection *ReD* in 1928, "as soon as the perspiration of labour had dried, as soon as a week of toil had passed, then it was that rare thing, a piece of cake. The material in it is so perfectly mastered that no trace of it is left. This eradication of traces means that we consider it to be a work of nature. In the most perfect works, the poet is anonymous, adapting to nature." (Vítězslav Nezval 1928)

The collective version of the entire collection was highlighted when it was staged at Osvobozené divadlo. *Večer Vítězslava Nezvala* (The Vítězslav Nezval Evening) had its premiere on 17 April 1926 at Slup Hall. It was directed by Jiří Frejka, while the costumes and stage set were designed by Karel Teige, Antonín Heythum, and Josef Šíma. The poems were recited by the idolized young actress Jarmila Horáková. The choreography for *Abeceda*, the first part of Nezval's *Pantomima*, was presented for the first time by the dancer Milča Mayerová (for the stage production, see Matthew

S. Witkowski 2004). It was only then that *Abeceda*, written at the end of 1922, became an iconic work. This was confirmed by an independent edition subtitled *Taneční kompozice Milči Mayerové* (A Dancing Composition by Milča Mayerová) with photographs by Karel Paspá, which formed the basis for typographical collages by Karel Teige, which he called *typofoto* in reference to László Moholy-Nagy (Aleksandar Bošković 2013). Similar ideas about art were held by the Bauhaus circle, and their mutual inspiration brought together the dancer Gret Paluccu, László Moholy-Nagy, Paul Klee, and Vasilij Kandinský (Karel Srp 2009. In his foreword, Nezval described the blending of the poetic word, the image of the act of dancing, and typography as “a meeting of arts accomplishing a joint task,” which would not have been possible if poetism had not drawn inspiration from the new media and art forms that they brought with them (for the textological history of *Pantomima* see the commentary by Milan Blahynka 2011).

In his analysis of such prominent poetist achievements as Nezval's *Pantomima* and Seifert's *Na vlnách TŠF*, the critic F. X. Šalda noticed that just as in the case of the impressionists ten years previously, *Devětsil* was focusing on a new “fluid, liquid, variable” artistic form. He did not forget to point out that this method was just a short step away from a kind of breach of poetical professionalism and the demolition of barriers between the reader and the poet: “Some may find it amusing, but for a long time I have had in mind a state of society that restricted as much as possible the division of labour in ‘cultural’ affairs [...]. *Poetism goes off and leads to that kind of aesthetic communism, even though itself it resisted those consequences.*” (F. X. Šalda 1925) Referring to aesthetic communism, Šalda not only meant that anybody could write picture poems and lettrist poems; he was also alluding to the collective concept of authorship recognized by *Devětsil*. The book version of Nezval's *Pantomima*, its staged production and the prestige book edition of *Abeceda* with photographs of Mayerová's dance interpretation should therefore be understood as a complex work of art and a collective creative gesture by *Devětsil*.

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Notes

1 Vítězslav Nezval's manuscript of the Lettristic poem "What's the Most Beautiful in a Café?" Preserved in the *Pantomima* collection of autographs. Literární archiv Památníku národního písemnictví v Praze (Literary Archive of the National Literature Memorial in Prague), Vítězslav Nezval collection, own manuscripts, *Pantomima* (fragment).

2 The picture poem "What's the Most Beautiful in a Café?" in the first edition of Nezval's *Pantomina*. Graphic design Karel Teige (1924, Ústav pro českou literaturu AV ČR; Institute of Czech Literature of the CAS).

3 Vítězslav Nezval's proposal for a graphic solution in the handwriting of the poem "The Journals". Literární archiv Památníku národního písemnictví v Praze (Literary Archive of the National Literature Memorial in Prague), Vítězslav Nezval collection, own manuscripts, *Pantomima* (fragment).

6. Sacrum in the Digital World: The Processes of Remediation on the Example of the Liturgical Books of the Catholic Church

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Abstract: The aim of this chapter is to establish how the processes of remediation of the book as a medium influence the changes in liturgical books of the Catholic Church. Adaptation of the e-books to liturgy is not only a matter of the pragmatism, but it depends on the theological reflection and the Canon Law. The digital nature of the e-books seems to be the most serious difficulty in this adaptation because the theology of the liturgy is strongly connected to the symbolism of the paper book. The processes of remediation of a book in the area of liturgy can be stopped by the Church's liturgical regulations, based on the sense of the sacrum, the seriousness, and significance of liturgical acts. Remediation is approached here in from a multidisciplinary perspective, with references to the fields of history, theology and technology.

Introduction

The liturgy is an integral part of every religion. The prayer, sacrifice, and community help people to believe and to worship God. But in modern society, the role of religion is changing. The development of modern technologies impacts our mentality, societies, and way of thinking. In this article, I would like to answer the question: How does digital technology impact religious experience? I will analyse the liturgical books of the Catholic church as an example.

The article is multidisciplinary. The author refers to the history of the media and the theory of communication, visualisation, art, and theology and to the Canon Law. Focusing on terminology and methodology in these areas is essential due to the complex nature as well as multiple aspects of the problems covered. However, the article deals only with the presentation of historic changes in the book as the medium as it pertains to the liturgical books of the Catholic Church. These considerations serve as motivation for reflecting on book remediation and the questions arising from regarding the adaptation of changes in the liturgy of the Church. The process is slowed down by the relevant aspects of law and liturgy as well as by the dignified nature of the liturgy. The sense of sacrum relates to the theological reflection on the meaning and significance of liturgy in accordance with the regulating principles.

The concept "remediation", is a key concept regarding the purpose and focus of this article. This concept was introduced to the terminology of media studies by Bolter & Grusin. They conclude that "along with immediacy

and hyper-immediacy, remediation is one of the three traits of our genealogy of new media” (Bolter & Grusin 273). It applies to situations when “one medium is itself incorporated or represented in another medium” (Bolter 65). We can conclude that “remediation is the result of production activities of communication entities. It represents the transfer of texts and meanings into the socio-cultural space-time, manifests through media products, and depends on the media and on the application of the relevant communication technologies. The term remediation refers to the process taking place between the two communication media regarding the content of media. Pavelka emphasises that digital media, are not old media, but new, re-mediated texts and meanings” (Pavelka 1237). In essence, remediation is the replacement of one medium, which is currently the dominant by more recent mediums. Some of its features are extended and improved by other media and technology. Certain characteristics of a medium are retained, while others are either transformed or removed (Pisarski 2003: 285).

The evolution of the Book as a Medium

“The medium is the message” is a phrase coined by Marshall McLuhan meaning that the form of a medium embeds itself in the message, creating a symbiotic relationship by which the medium influences how the message is perceived. How to refer the significance of this statement to the reality of a book?

The book as a medium has undergone a long evolution. Books have been known since antiquity. For a long time, they have existed parallel to oral sources. In ancient times, stone, metal, wood, and plates of wax and clay were used as carriers of information. The ancient Egyptians used papyrus, acquired from the stems of the plants growing along the Nile. The writing material received in such a way was stored in scrolls. Despite an apparent impermanence of papyrus, the books written on papyrus have survived till this day. However, at some point in history, Egypt was no longer capable of producing enough papyrus to satisfy the constantly growing demand, locally as well as in the neighbouring states. This gave rise to the invention of parchment, made from calfskin, made smooth. Finally, paper, invented by the Chinese, was originally received from silk fibres, later from cellulose. Yet another aspect involves the evolution of the book from inconvenient scrolls to the codex. This entails a file of pages bound by stacking and fixing

one edge, usually secured from the top and from the back with a hard cover. The materials used and the outer form evolved from embossing signs on wet clay, through embossing on wax tablets, handwriting with inks and dyes, all the way to the print technology (Howard 1–30).

The last few centuries have maintained the book as a material object in a form of codex printed on paper. This format continued until the digital era.

One can refer to the following features of the paper book as a medium:

- The primacy of the word over the image book exists primarily as a typographic message. However, there are books, such as albums, where the image is an equal participant in the act of reading but always accompanied by the word.
- Linearity—a printed book is characterised by linearity, being a pattern of words. The text is followed in a linear manner provided in advance except for publishing information and some modern novels.
- Analyticity – verbal language functions analytically, because the individual verbal components are ordered one by one.
- Portability book (the codex) is an object, perfect in its simplicity and is easy to use in different environments, small, requiring no additional equipment.
- The need for competence in order to participate the ability to read a book, language and reading skills are essential.
- Intentionality of perception – a deliberate focus on the activity of reading.
- Statics – a book, by definition, is intended to last, to store the message contained therein. Above all, it needs to be functional. The characteristics of these show relatively little revolutionary (rather evolutionary) variability of the material and design (Falkowska).

The Interface

In defining a book, the emphasis was primarily on the material dimension. The book's close relation to the text was also highlighted. On the one hand it is expressed in separating, organising, and closing the text in the matter of the book and, on the other hand, in matching the contents of the book to its look. In terms of communication, the book should support the message conveyed and at least not to be contrary to it. (Ozóg 61–62).

This approach carries with it consequences in the sphere of knowledge and world view: “The physical layout of a book, with the pages sewn in the back, urges us to follow the text in a linear manner. This implies going from left to right on a page, from page to page and from chapter to chapter.

The book (as a codex), and even more, the technology of printing in general, thus entered the collective human fascination with the realm of etiological and teleological. Questions about the beginning and the end and the desire to locate oneself in correlation to some specific center.

The ideas of asymmetry, nomadism, a maze with no exit, rhizomes – were brought up to the edge of thought brought up on books” (Pisarski, online). The advantages of the paper book were glorified. An example is Umberto Eco who, in his lecture delivered in Warsaw in 1996, said that the book form is one of those inventions (just like a hammer, spoon, knife, fork) for which, over the centuries, nothing better, in terms of ergonomic equivalents, have been found. The book fits the hand well; it can be read almost in every situation... (Masłoń 29).

One can, therefore, refer to the universal interface of the paper book. The word “interface” itself comes from physics. In the IT terminology it stands for hardware or software facilitating the transfer of information between different applications and devices or between the computer and the man (Sitarski 453). In the analogue world the term “interface” is identical to and inseparable from the term “medium”. Only the digital media separate “medium” from “interface” and it is the interface which comes first. New media can have many interfaces which can be additionally improved by *update* (Celiński 68).

Printed versus Digital

For centuries the book has been undergoing the processes of remediation. The remediation was made by the Greeks with spoken literature when they started recording it on papyrus scrolls (ear-to-eye). Both forms of spreading literature were accompanying each other for centuries. Around the second century AD there appeared a code which, following Gutenberg’s invention, became remedied by print. Remediation takes place in the so-called field of writing. As for the printed book, the field of writing was the book page. For the hypertext, the writing field is an interac-

tive screen (Pisarski 285). However, it is more complicated for e-books due to the multiplicity of formats, carriers, and definition methods.

The concept of the e-book is polysemic. An e-book can denote one or more, or all, aspects of the hardware, the software, and the content. The content can be anything from a linear structure (e.g. paper book) to an architecture consisting of isolated pieces (e.g. database). The hardware can be also divided into several categories (e-reader, computer, tablet, smart-phone, etc.), which in turn can use one or more different multi-modalities (e.g. text, sound, moving images).

Additionally, other definitions of digital books, such as 'audiobook', should be noted. Hence, it is common that current definitions of e-book emphasise the book-analogy approach. For many people, an e-book is a digital counterpart of a printed book. But principally, there seem to be two main standpoints that emerge when one examines existing definitions of the e-book: one focusing on physical entities and the other on content. It has been mentioned, however, that the focus on content is gaining ground (Leckner 108). The development of technology brought new possibilities to publish electronic books. We can agree, that "an electronic book (also e-book, ABC, digital book) is a text-, acoustic-, and image-based publication in digital form. It is produced on, published by means of, and readable on computers or other digital devices. E-books are presented visually or aurally, as with the audio book, which re-purposed text on a page into an aural medium—a precursor to, and limited exemplum of, electronic publishing's potential. Components other than text have been considered by some as enhancements, including multimedia (sound, images, film/video/animated graphics)" (Gardiner & Musto 271).

However, we should not confuse e-readers with tablets. A tablet uses a screen that emits light and has more multimedia functions than an e-reader. E-readers are monochromatic (and as such are more often used for reading books than newspapers and magazines). E-readers use the electronic paper (e-paper) which is actually a type of display that mimics the traditional paper. It does not emit light, which sets it apart from the commonly used display (like regular paper, the reflected light is easier on the eyes). The displaying of text does not use energy which is only used turning pages (this is why the battery time of those devices is measured not in hours, but in page views).

A sheet of this paper consists of a vast number of microcapsules with a diameter comparable to that of a human hair. Each microcapsule contains positively charged white particles and negatively charged black particles, immersed in a transparent liquid. Depending on the load of

electromagnetic fields used, white or black particles move up in the liquid creating desired image on the screen. The whole device is encased in a form of a flexible sheet. Curiously enough the particles stay in the same place when the sheet is moved, or the field is turned off (Adamski 234–237).

The current shape of the book determines the reception of the content, through the process of reading. Recent literature forms, electronic media that is, e-readers and tablets – despite their differences – often seek to represent the external form of a paper book (although the tablet gives more options when it comes to multimedia, interactivity and hyper-textuality). However, electronic media form is received by the reader in a different way than paper – even at the level of how the brain and eyes work with it.

The literature on e-reader or tablet brings a different “message” to the reader than a traditional paper book. So, we can ask: “What is a book? Is it a product, a process linking author and reader, or a cultural habit open to any number of iterations? (...) Are games, telephone directories, interactive narratives, or the results of data mining, meaningfully conceived as books? What roles do the author, the reader, and the medium play in our evolving understandings? For example, do the ever-changing content, bookmarks, and hyper-links in an iPhone constitute a non-replicable book?” (Gardiner & Musto 284).

The dichotomy of tablet/electronic text dominates in the discussions. On the one hand, readers are fascinated by the endless capacity and portability of the tablets which are not single texts, but whole libraries. The reading platform becomes a network connected to the world instead of a fixed inscription of a particular text. On the other hand, the incorporeal nature of electronic texts bothers the readers. They are missing in the experience (spatial memory, annotation, physical possession for display) (Tosca & Pedersen 366).

As we can see, the remediation processes change the book as a medium. Let us, therefore, look at the remediation process in relation to a specific type of book, namely liturgical books.

The Liturgical Catholic Books: How They Have Arisen and Have Developed

The history of liturgical books in the Catholic Church has developed with Christianity. Judaism respects the books (scrolls) being the words of

the Holy Scripture, which have been written on it. During the Sabbath liturgy in synagogues a piece was read out from these scrolls to be later commented on (see Luke 4, 16–21).

In the Catholic Church the liturgical book is the book which contains texts and rites used to celebrate a ritual of liturgical celebration and used during that celebration (Maciukiewicz 79). It can include adequately selected and sorted fragments of the Bible or especially written texts of prayers, blessings, etc.

The liturgical books are, to some extent, a carrier of the tradition of the Church. They do not have a single author but they are a result of processes and practices within the the Church which were developing for centuries. They are also a product of some culture, specified by time, place, and the mentality of the people who participated in their formation and final editing. One can say that the liturgical books contain words and gestures through which a given culture sees and deciphers the action of God. For that reason, the liturgical book is a full-fledged element of celebration, an important element; it is a sign in itself. It is respected through various gestures such as censing or a kiss.

This respect also refers to the time outside the celebration and it impacts such aspects as an adequately beautiful and durable edition, storage, care for maintenance, etc. (Maciukiewicz 79-80).

The history of the development of liturgical books in the Catholic Church is divided into 5 periods:

- a. The time of improvisation (the 1st to the 3rd century). The only liturgical book is the Bible, all the prayers are said spontaneously by the celebrant, although gradually some patterns of those prayers became fixed. Interestingly, the Roman Church still in the 3rd century, was praying in Greek. Much later was it Latin which became the official language of the Church's books. Although the process of Latinization was slow; still in the 9th century the liturgical texts were translated into Slavic and Old Slavic. Later (the 10th to the 11th century) Latin got fixed in the liturgy, except for single cases, it remained the language of the liturgy until the Second Vatican Council;
- b. The 4th to the 6th century; specifying the liturgical rites. Single sheets with prayers appear;
- c. Pure liturgical books (the 7th to the 9th century). The so-called sacramentaries for presbyters and bishops are created; they include prayers used for celebrating the Eucharist and other sacraments. Lectionaries, including readings from the Bible, antiphonaries, including texts to be sung during the Holy Mass, and the so-called *Ordines Romani*, includ-

ing authoritative rules, the so-called rubrics, explaining the way of celebrating the liturgy, also date back to that period.

- d. Complete or mixed books. For practical reasons since the 10th century the books including pure texts were combined with the books containing rubrics. The following books are created: The Pontifical, containing the texts for the bishop and ritual (for the presbyter), the Roman Missal, combining prayers, rites, readings, and the Breviary, used by the clergy for the prayer with psalms; the Liturgy of the Hours;
- e. Over the period after the Council of Trent (the 16th century). The Council aimed at standardising the liturgical books in the entire Church. The Council made them strictly subordinate to the authority of the Holy See. The books remained in fact unchanged until the Second Vatican Council (Maciukiewicz 80–84; Matwiejuk 38–41).

The Catholic Church's currently valid Canon Law Code of 1983 clearly provides that managing the liturgy is vested in the Holy See and, compliant with the law, in the diocese of bishops. It is also the responsibility of the Holy See to take care of the translations of the liturgical books into national languages (Can. 838). After the Second Vatican Council, the liturgical books were translated into national languages, e.g. as for the translation into Polish, only in 1970–1985 about 30 books were translated and published (Sobeczko 143).

Before the liturgical book is published in any language, the model edition of the liturgical book by the Holy See, the so-called *editio typica*, must be issued. All the further editions, reprints, and translations must be based on *editio typica*. Their compliance with *editio typica* must be stated by the competent church authority. The translations, however, are not slavishly made word by word; the spirit of a given language must be considered (Maciukiewicz 84).

Currently the most important liturgical books in the Catholic Church are as follows:

- The Roman Missal: it contains texts of the prayers for celebrating the Holy Mass;
- A lectionary: containing fragments of the Bible read out during the Holy Mass;
- The Gospel Book: it is a big ornamented book containing only the fragments of the Gospel, or the other readings, to be read out during Holy Masses;
- Pontifical;
- Liturgy of the Hours: the Breviary, for everyday prayer;

- Martyrologium: the calendar of liturgical memorials of saints with their hagiographies;
- Agendas, rites and rituals of celebrating sacraments.

The external form of the book used in the Catholic liturgy, the form of codex, namely a file of printed sheets fixing one edge, definitely prevails.

Still there was the time in history when the liturgical texts were oral, passed in the tradition of the Church and in presbyter's creative invention. When they were written down for the first time, they did not assume the form of an arranged code; first as loose sheets while longer texts – in a form of scrolls. The stage of pure liturgical books development already coincides with the times of revived activity of monasteries in Europe (e.g. the Benedictines) whose job was to amongst others, to rewrite books. The liturgical books in a form of manuscripts, and later old prints (incunables) showed a durable, dignified and, at the same time, sophisticated form. They were written down on parchment and later on paper. Ornamental initials and illustrations, various miniatures, painted manually by monks, were characteristic features. Similarly, once print was introduced, the custom of decorating some books with ornaments manually remained. And even though with time the custom was given up, still liturgical books, especially those for special occasions, have kept a little of the majesty and dignity of medieval manuscripts. Interestingly, they are almost always hardbound and published on good-quality paper. There are indeed some paperback editions, which are hardly decorated. However, they are more for everyday use, in small groups or to be used during pilgrimages.

The use of symbols on the cover refers to the motif of the gate, and thus to the words of Jesus Christ: "I am the gate" (John 10:7). The use of symbols of the metals used for bookbinding (gold, silver, iron) as well as leather and fabric the cover was coated with (silk, satin, velvet, linen) are. The liturgical books colours are also interesting. Currently three basic colours are applied: black, red, and golden (in ornamental editions for most special occasions). The golden colour symbolises light, angels, stars, and fire used by God to write His ways on the firmament of the heaven.

The black print symbolises darkness and impenetrability of the human fate, the future hidden in the darkness of mystery. The red colour symbolises life as well as the martyrs; blood shed for faith; hence, usually the red covers of liturgical books. The black and red colours are two basic colours of the books. In black, one prints the text of readings and prayers, in red – the lines with the music of chorales and rubrics. What is interesting is the imagery of the bookbinding yarn as the symbol of combining the visible

with the invisible as well as earthly life with the eternity? Therefore, the book combines the material world with the spiritual world, and, hidden in its spine, the nodes symbolise, on the one hand, the durability of human work and, on the other hand, a combination of earthly life with eternity (Drózdź 78-80). With its use of symbols, writing preserves the man's metaphysical desires. Thanks to it the man experiences the energetic power, radiating from the past, experienced especially intensively by those who believe in God's presence in sacred, divinely inspired, books.

At some point, in some agreed area of cultural space, specific books start to be perceived as metaphysical books. Due to such a transformation all the elements of the book, starting from letters graphically preserved, through fabric and cover, assume the symbolic dimension and are used for symbolising the world; they are a tool for understanding and the way to organise the collective experience (Drózdź 56-57).

Such use of symbols for e-books is irrevocably missing; all the materials are replaced with plastic, whereas the structure of paper, newsprint, yarn, and cover itself is replaced by a binary jet of electric impulses inside the computer, tablet, or e-reader, displaying a pixel mosaic on the screen. The durability is replaced with volatility, and the external structure and texture flattened to the screen pane of glass. This is how we deal not quite with the medium but, with digital spectra of old media (Celiński 51) in which digitally approaches traditional interfaces, just like a steamroller, it smashes them, totalises their diverse material forms (Celiński 53).

Yet another aspect are colours and illustrations, as long as preserving them is possible on the tablet and display panels, still so far no technically satisfactory e-paper, reproducing colourful print, has been developed. The year 2018 is said to bring such devices on the market; earlier attempts were rejected by the users due to the quality which was low. However, the image on the screen is still only a susceptible-to-manipulation cluster of pixels (Suwara 251). In the relation "character-digital character" only the fact of relationality remains unchanged, whereas the change occurs at many levels. It affects the materiality of character, its structure, status and the functions played (Szczęsna 17). Another essential feature of e-text is its volatility, which is noted by Delany & Landow. In their opinion, a possibility of the electronic edition of the text on the screen changes the culture as essentially as the changes triggered by the invention of movable type. Letters on the screen are, in fact, temporary short-lived representations of codes stored in the memory of the device. Here we deal with separating the text from the contents and the medium (Delany & Landow 81-82).

The research of Professor Anna Mangen from the University of Stavan-

ger (Norway) shows that there is a relationship between the text medium and the quality of reading. The quality of memory for a read text changes drastically if it is printed on paper or displayed on a screen. The fact that the text moves or not is also of great importance. When reading from the monitor, the text is moving (scrolling), and there is a difference in spatial orientation than when we are in contact with a printed form (Mangen 404-419). Moreover, the quality of writing displayed on the monitor is usually much lower than the printed magazine. The image displayed on the monitor, and viewed from a distance of about half a meter, usually does not reach such limits of spatial frequencies that a human visual system can. For typical monitors the ratio of the maximum frequency displayed, to the resolution limit of the eye is as 1 to 2. (Pyka 135). We must also take into account that the printed version and an electronic form of display monitor usually use different fonts. There are specially designed typefaces optimised purposely for reading on a screen.

Here comes the question about the effect of the remediation of the book as such on the remediation of liturgical books. It seems that at the start one must define at least three dimensions: technical, theological, and legal. Thus:

Is there a possibility of using smartphones and tablets (or maybe other text interfaces) in liturgy? Is the only problem the law and tradition, or maybe the nature of the digital media?

As for the technical aspects of using electronic books for liturgy, one must state that there are no impediments to it. Many priests recite the Breviary using convenient mobile applications or the laptop. It is a private use, however, the use of electronic books for celebrating the Eucharist happens as well. In 2011 Mexican Cardinal Norberto Rivera Carrera celebrated the liturgy of the Holy Mass using, instead of the paper Missal, a tablet with the prayers downloaded (*Mulica online*). The texts of the prayers can be saved both in the PDF format and as documents in the text editor or even in a special application. The fact of a possibility of their online updating is convenient if changes in official translations, liturgy regulations or new feast days or liturgical memorials of the saints and the beautified occur; for example, the Liturgy of the Hours (Breviary) is available in a form of electronic applications and provides many more possibilities than the paper version. It is definitely more user-friendly e.g. while travelling. It does not require moving to various places of the volume during the prayer and the whole of the office of readings is presented as a continuous text. Some pro-

grams also allow for applying the speech synthesiser (such functionality is available in the Polish application of the Bible, “Holy Scriptures”). Having started the application of texts of office for a given day, they can be listened to directly from your smartphone without any help from the third persons, which can help the visually impaired or the blind. However, it is not the reproduction of the recording or live broadcast; the prayer text is generated by the computer program. Thus confronted by the intermediately of electronic liturgical books: in terms of technical data processing there is an integration which abandons the division of the media (Chmielecki 46).

The key difficulties in the adaptation of electronic devices, which display text in liturgy concern its sacral, interpersonal and community nature. It was emphasised by Cardinal Robert Sarah, Prefect of the Congregation for Divine Worship, at the Fifth Roman Colloquium on *Summorum Pontificum*, held at the Pontifical University of St. Thomas (Angelicum) on September 14, 2017. In his address, Cardinal Sarah told: “I cannot participate fully and fruitfully in the Sacred Liturgy if my focus is elsewhere. We all benefit from the advances of modern technology, but the many (maybe too many?) technological devices upon which we rely can enslave us in a constant stream of communication and demands for instant responses. We must leave this behind if we are to celebrate the liturgy properly. Perhaps it is very practical and convenient to pray the breviary with my own mobile phone or tablet or another electronic device, but it is not worthy: it desacralizes prayer.

These apparatuses are not instruments consecrated and reserved to God, but we use them for God and also for profane things! Electronic devices must be turned off, or better still they can be left behind at home when we come to worship God. (...) We cannot focus on God if we are busy with something else. We cannot hear God speaking to us if we are already occupied communicating with someone else (...).” (*quote for: Montagna online*).

The liturgy regulations of the Church are not exclusively practical regulations of the points of order but they are rooted in the theological reflection. Theology, on the other hand, is naturally the study based on the Revelation of God. Theology of the liturgy stresses its importance and significance in contact with God. The Second Vatican Council and Catechism of the Catholic Church emphasise that “Rightly, then, the liturgy is considered as an exercise of the priestly office of Jesus Christ.

In the liturgy the sanctification of the man is signified by signs perceptible to the senses and is effected in a way which corresponds with each of these signs; in the liturgy the whole public worship is performed by the Mystical Body of Jesus Christ, that is, by the Head and His members.

From this it follows that every liturgical celebration, because it is an action of Christ the priest and of His Body which is the Church, is a sacred action surpassing all others; no other action of the Church can equal its efficacy by the same title and to the same degree.” (SC 7; CCC 1070). Such understanding of the liturgical acts assumes their solemnity and dignity, which, in turn, necessitates a high-quality of the materials used in liturgy, the beauty of the places where it is usually celebrated and no hurry, which means that the Church, defining the liturgical norms, does not primarily follow the logic of pragmatism and usefulness but the dignity, solemnity and the sense of *sacrum*.

In the General Instruction of the Roman Missal we can read: “Special care must be taken that the liturgical books, particularly the Book of the Gospels and the Lectionary which are intended for the proclamation of the word of God and hence enjoy special veneration, really serve in a liturgical action as signs and symbols of heavenly realities and hence are truly worthy, dignified, and beautiful” (GIRM 349).

Discussion and Conclusions

A critical opinion of one of the most prominent cardinals in the Roman Curia could not have remained unanswered. However, does it mean in practice the Church getting closed to the process of the remediation of liturgical books? Not quite. First of all, in the history the attitude of the Church to the application of the media to evangelise has changed, e.g. the question of broadcasting the Holy Mass on the radio. Still in 1927, to the question asked by the Archbishop of Prague František Kordač, “is it allowed to broadcast and listen to the sung Holy Mass via the radio receiver?”, the Congregation of the Holy Office gave a negative response and the justification was short: “it is inappropriate” (“non expedire”). Pope Pius XI himself expressed his negative opinion whereas the broadcast attempts were referred to by the Congregation as an abuse (Szczepaniak 10). In discussions statements were made that it was inappropriate to broadcast the liturgy in the medium which was considered a tool of demoralisation as it broadcast e.g. immoral songs. On the other hand, however, Rome used to stress it was an official stand of the Church on broadcasting and the answers given were the answers to questions about specific situations (Draguła 31–33).

A change in the stand occurred quite fast: already on 12 February 1931

the Vatican Radio was established, while on 26 June 1932 Pope Pius XI in the Apostolic Palace “listened to” the Holy Mass on the radio (it was part of the celebrations of the International Eucharistic Congress in Dublin) and addressed the message to its participants (Szczepaniak 8). At that time, he referred to himself as the “participant” of the events in Dublin. Where was the former distance from? Maybe the vision of a “virtual” participation in the Holy Mass via radio waves could clash with the postulate of the liturgy understood as *a holy act in the true sense of the word* (*actio sacra praeexcellenter*), *social prayer, born in the depths of the mystical internal life of the Church* (Szczepaniak 17-18). Today the practice of broadcasting the liturgy on the radio and television is commonly recognised and appreciated in the Church even though it is still subject to some guidelines and legal norms. Despite allowing the Holy Mass broadcast, listening to it (even actively, with giving responses, singing, assuming the adequate posture at the specific moment in liturgy) is not an ordinary way of participating in the liturgy. The stand of the Church was expressed e.g. in the apostolic letter by John Paul II *Dies domini* (1998) “..this kind of broadcast does not in itself fulfil the Sunday obligation which requires participation in the fraternal assembly gathered in one place, where Eucharistic communion can be received” (*Dies domini* 54).

Secondly, one must remember about the attitude of the Church, expressed in point 21 of the Constitution about the Liturgy of the Second Vatican Council: the liturgy is made up of unchangeable elements, established by God and of those which undergo changes to make their understanding to participants easier. It would be quite difficult to consider the material and interface of the liturgical books as part of the first category, however the use of symbols of the book is strongly rooted in theology, which is elaborated on further on.

Thirdly, one must note the precedent of replacing the traditional song-books with overhead projectors or electronic tables which display the texts of songs as they go and the Ordinarium parts of the liturgy. They got applied in churches already a few dozen years ago and today they do not trigger any surprise or controversy any more. Nevertheless, one must remember that they play only auxiliary functions in the liturgy; in no way do they replace liturgical books.

Last but not least, one cannot consider the response of Cardinal Sarah as a criticism of technological advancement. Here we must refer back to the question of treating the liturgical books in the Church and their use of symbols. The book in liturgy is a symbol, it is a legitimate element of the celebration, it is respected by external gestures. The liturgical book is used

exclusively for celebrating the liturgy. It is therefore difficult to imagine kissing or censing the tablet which is also used for Internet searches, reading the news, watching movies or playing games. Similarly, with radio and TV broadcasts, the TV set or radio is an ordinary everyday use object one of the applications of which is listening to or watching liturgy celebrations, however they are not treated as blessed objects, excluded from everyday use.

Besides, e-readers and tablets are usually provided with the manufacturer's logotype. It would trigger strange situations, disturbing the significance of the liturgical sign; for example, in the case of the Gospel Book. It is ceremoniously brought in the entrance, sensed, kissed. Those gestures are a proclamation of the Gospel, it contains God's Word. If in the procession a tablet with the manufacturer's logotype were brought, a question could appear if it is the proclamation of Christ or a specific company, producing electronic devices (Sławiński 308).

Would it be a solution to create electronic books in an electronic form (tablets, e-readers or other multimedia display panels), containing liturgical texts, dedicated exclusively for the liturgical use? In terms of the external form it would not be difficult to stress the uniqueness of their use by binding them with ornamental cover or creating their special design, with its symbols referring to the liturgy. However, for many people to see the celebrant kissing or censing the tablet could be difficult to accept. An argument against is also definitely an imperfection and possible failure of the devices and their dependence on power supply. Going flat, system freezing or other breakdowns during the liturgy would disturb its solemnity. Besides, especially the celebrants less skilled in using electronic devices could experience much discomfort due to changes being introduced.

The problem, however, is much more profound as the question appears: what about the existing use of the symbols of the book, with its significance as a sign, justified and rooted in theological consideration? Only apparently is it a minor problem since, as already mentioned, liturgy intermingles with theology and originates from it. As for the new media, we are facing their new logic and a new language. This language "... is not merely an interchangeable and temporary veneer; rather, it is the living, pulsating context in which human thoughts, anxieties and projects come to life and are patterned in gestures, symbols and words. The human being, therefore, does not only "use" but, in a certain sense, "dwells" in language (Benedict XVI). The language is created by the man, however, at the same time it shapes its creator. Therefore, it develops with the man. Language is an integral part of the optic human heritage, the testimony to man's body and spirit structure. Language appears as hermeneutics; as reading the essence of be-

ing and describing its widest horizon (Liszka 340-341). Pope Benedict XVI, known as “the theologian of the digital world” unambiguously encourages to reflection: what challenges does “digital thought” pose to faith and theology? What questions and requests? In his opinion, technology is called by vocation to the profound link with the human spirit, while “the world of communications involves the entire cultural, social and spiritual universe of the human person. If the new languages have an impact on the way of thinking and living, this in some way also concerns the world of faith and the understanding and expression of it. According to a classical definition theology means the understanding of faith and we know well that understanding, perceived as reflective and critical knowledge, is not alien to the cultural changes that are under way. The digital culture presents new challenges to our ability to speak and listen to a symbolic language that talks about transcendence. In proclaiming the Kingdom Jesus, himself knew how to use elements of the culture and environment of his time: the flock, tents, the banquet, seeds, and so forth. Today we are called to discover also in the digital culture symbols and metaphors which are meaningful to people and can be of help in talking about the Kingdom of God to contemporary man” (Benedict XVI).

What could be the direction of such reflection? It could, for example, refer to the matter being subdued by the spirit. It could also refer to a dynamic nature of the text which appears on the screen. Traditional liturgical books symbolised the steadiness and unchangeable nature of God’s ways. In the Jewish Christian tradition also a sacral use of symbols of writing which is the symbol of the thought verified and purified from falsehood has got embedded. Christ, see St. John’s Gospel (John 1:14), is the Word which became Flesh, namely got embedded in the matter which became worthy of Christ (Drózdź 63). The symbolic and theological interpretation of electronic text, on the other hand, could point to a living and dynamic character of the Word of God “So shall My *word* be that goes forth from My mouth; It shall not return to Me void, But it shall accomplish what I please” (Isaiah 55:11).

It seems therefore that from the point of view of theology, the transition from *mimesis* to *simulacrum* as using the electronic text to liturgy could be somehow, even though with some difficulty, justified.

Such assumptions are confirmed by considerations of religion and culture researchers who notice a progressing convergence between *sacrum* and *profanum*. That Eliade’s dyad was destroyed, the boundaries between its elements get blurred. A new category emerges: *sacrofanum*, expressing the state of transition, compliant with the idea of liminality.

Typically, sacral elements penetrate to popular culture and the other way around: secular elements get sanctified (Strzelecki 93-94). One can also refer here to considerations by Guy Debord. In his opinion, in the struggle between tradition and innovativeness, being a cultural development springboard, what is innovative always wins. However, the struggle with own assumptions and the pursuit of culture to separation leads to its crisis. The society losing its community character of the old communities combined with mythical concepts loses at the same time all the references of the language really common (Debord 125-126).

Thus an unreflective adaptation of technical novelty to the liturgy and abandoning the heritage of the symbolic and cultural world can pose a threat for the essence of the liturgy, namely a community communication with God; it can reduce it to the role of post-modernist performance for a group of accidental people with no sense of community. With that in mind, it seems justifiable to claim that the criterion of admitting modern inventions to liturgy is their ministerial role to the ritual which shows a dimension which is commemorative, updating, paraenetic and eschatological. If a modern technological invention neither helps the liturgy participants to focus nor makes experiencing mystery rituality it rather creates spectacle in a group, it may not be used in liturgy celebrations (Sławiński 315).

What will the process of remediation of the liturgical books be like? It will definitely be slower than in everyday life. It will be preceded with a symbolic and theological consideration; it can require the adaptation in terms of excluding electronic liturgical books from everyday use and giving them the adequate look and setting. It is quite probable for the electronic books to be allowed in the liturgy in extraordinary situations (pilgrimages, missions, parish chapels in distant locations), however their use will be subject to some conditions. Depending on the attitude of the clergy and the faithful, some dioceses and parishes will adopt electronic books more and faster while others—less and slower. It will be a non-homogeneous and varied process, both in time and across the territory. Officially the Church documents will surely still stress the priority of paper books, however there will be some celebrants who will consider allowing electronic books in extraordinary situations as their silent acceptance in everyday use.

The convergence of *sacrum* and *profanum* will be progressing, innovation will win again. However, in a long run it will affect the liturgy as such, the way it is experienced by the participants. Let us remember, however, that the participant upbringing in the digital culture which will take its toll on the participant's way of thinking, reading, functioning and even the structure of neurons in the brain.

However, from the point of view of the logic of development and media transformations, the situation described in the article shows what various factors sometimes affect the processes and their rate and scope. It can be compared to the riverbed development: sometimes it faces an unexpected obstacle and it must create meanders. In that case the dam is the solemnity and the use of symbols in liturgy, strongly related to the traditional ornamental paper book the dignified look of which enhances the beauty and solemnity of liturgical acts and carries the use of symbols, rooted in the Bible and many-years cultural traditions.

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III. POETICS

1. Strategies for the Creation of Meaning in Digital Art

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Abstract: This chapter investigates the influence of the semiotic organization of the digital message on the creation of meaning and highlights its impact on the poetics of artistic text. Atomization, kinetization, and modulation – as universal characteristics of the semantics of digital art – are described through examples taken from hypertext fiction, cyberpoetry, and narrative video games. These freshly established genres illustrate new signification processes in the electronic environment (atomization relates to spatial phenomena, kinetization refers to temporal flow of the work, and modulation points towards its programmable nature). The discussed strategies are a result of important modifications on the material level of sign production in virtual space, which in turn changes the semiotics of verbal and visual signs. This article shows how programming, remixing, and linking can modify the understanding of artistic creation. It concludes by stating that the digital technologies significantly redefine the discourse of art.

1. The Impact of the Digital on the Poetics of Text and Meaning

Creation of meaning in digital communication is widely conditioned by specificity and structure of the digital sign: a basic unit of any signification, regardless of the perceived expression (iconic messages, words, sound, and mixed media) or area to which a message belongs. The new structure of the digital sign determines the message being conveyed, its function, and content. In this way, the materiality of signs, common to all screen phenomena (electromagnetic waves), and the uniform numerical organization of signs on the level of programming causes every visible manifestation on the computer screen to have the same ontology. As a result, every digital message can be subjected to similar processes of the fragmentation, multiplication, and recombination of elements in accordance with its semiotic form.

These properties are particularly important within the discourse of art, where aesthetic and signification processes are crucial in the creation of artistic works. Of particular importance is the homogeneous semiotic organization of iconic, verbal, audial, kinetic, and navigational elements within the digital space. The similar semiotic status of links, cursors, and other elements of the interface makes them equally valid as creative tools employed in new strategies of signification. In hypertext literature and video games, all available tools for text manipulation and the enhancement of

reading, like transferring the user from one page to another, become full-fledged elements of the work with the same rights as words and images.

Our findings indicate that aesthetics based on the digital materiality tends to blur boundaries between a text and the tools of its creation and manipulation. On the one hand, programmable tools are textualized (links in hypertext fiction, being utilized for building a higher order and metaphorical structures, become part of a narrative discourse). On the other hand, traditional textual components are often employed as tools for interaction and navigation. This leads to the emergence of a new rhetorical figure, which we call accumulation, which is built upon a homonymic assignment of different functions to a single verbal or iconic element. For example, highlighted text (if it functions as a hyperlink) is usually both a semantic entity and a navigational device.

Within the domain of digital art, user activity is equally challenged. Although operations on text are pre-programmed and inscribed into the ontological status of the discourse, they are also designed as a creative activity. This means that the digital environment brings the possibility of the intentional involvement of users as a form of their creative agency. Even if the user's role is limited and she can only determine the order in which a work appears on the screen, the process of autonomous signification is in the works. Participation on the part of the user is an active element of artistic strategies and a source for both the new trans-semiotic rhetorical figures they employ and the narratives they create.

The user's empowerment in the creation of meaning does not start on the level of interpretation, like in traditional art, but on the level of text presentation and display. Thus, viewer/user/reader participation becomes a representation of any creative agency, which favours an even stronger commitment on the part of users; as such, it has a strong persuasive quality.

The numeric nature of digital signs allows for a combination of various semiotic forms: static and kinetic images, sound, and words recorded in graphical or audial forms. The dissolution of borders between semiotic systems and media discourses, in combination with the interplay between achievements of postmodern thought and digital technology, prompted scholars to characterize new media using three main properties: remediation (Bolter and Grusin, 2000), re-discoursivation, and resemiotization. In order to immerse users in a work that has a changed status and becomes an event of active participation (Ryan, 2001, game poetics within art discourse), creative strategies rely on former semiospheres, media, and discourses.

The emergence of trans-semiotic figures and transmedial narratives, or making use of trans-semiotic rhyme and rhythm (Simanowski, 2011: 6), are not a product of the digital age (these strategies were present in analogue culture, in film, advertising, and posters). Similarly, the novelty of new media does not rely on the interpenetration of various sign systems, on the introduction of metatextual tactics (which were in common use in postmodern art), or even on combining physical attributes with virtual ones (Bolter and Gromala, 2003: 98). The newness of new media, in our assessment, is about the ease with which these processes can be undertaken and their universality, which allows them to shift from the realm of experiment to the realm of norm. The formula for digital text (Ryan, 2001) is based to the same extent on active participation and on the reinterpretation of previous media and design strategies: “Virtual reality can thus be seen to remediate all previous point-of-view technologies” (Bolter and Grusin, 2000: 162); “(...) in interactive art, the dialog between the audience and the artwork can occur on two levels, interpreting the rules of operation and interpreting the content” (Simanowski, 2011: 214).

Our findings suggest that one of the most important contributions of digital art towards existing strategies of signification is its ability to atomize the process of communication. Moreover, the kinetic and programmable aspects of digital media allow for the animation, reshaping, and modulation of artistic components (letters and shapes, along with their basic qualities, like colour, scale, or resolution, can be manipulated at will). Although previously they served an ancillary role, today they gain a status of semantically independent entities ready to be taken out of one context and linked with each other in another context. In print, a word or letter has a definite shape, size, and colour, and it is given a settled position on a page. In the digital domain, each of these attributes becomes an autonomous property exposed for manipulation that changes the meaning of a word or letter. The atomization of attributes is accompanied by modulation and kinetization. Every element of representation, in its many variable states, can be modelled separately by the same set of values and then linked with other elements according to the principles of montage (Manovich, 2007: 47), because both semiospheres (graphics, music) and their qualities are ontically the same from the point of view of digital technologies. Thus, if we could narrow down all known characteristics of digital media, we would choose a triad composed of atomization, kinetization, and modulation. Atomization allows for treating each element of the work as a discrete entity of representation. Working with movement, colour, or light allows for the production of additional meanings even on the level of a single character.

Finally, modulation allows for the attribution of different functions to different elements and for the control of the dynamic flow between all layers and phases of artistic communication.

2. Strategies of Signification in the Digital Domain: Examples

The most common starting point of a digital art object is clicking on an item that sets the work in motion. This motion, however, is not the classical kinetic phenomenon known from film, but rather a remediated one, where the movement is bound to the layer of representation and its atomized structure. Therefore, while a classical moving picture is recorded and played back as a closed kinetic entity with its individual components not subjected to modification, the kinetics of digital objects, with its discrete units opened for manipulation and assignment of variable functions, is dynamic and open for the user's participation. In computer games, net literature, and many interactive works, users' input (a single mouse click or a touch gesture) can alter various elements of the work or – if programmed as potentially kinetic – can activate them and set them in motion.

Kinetization animates (and sometimes also anthropomorphizes) the layer of representation. The fact that it is the user who initiates the movement further enhances the effect of an immediate, almost physical, intervention into the very fabric of a work of art. The layer of representation is thus not limited to a perceptual, passive reception of the content, as is the case with analogue media, but is subjectified through the means of the user's involvement, inscribed into his discursive identity as a quasi-authorial agent which is responsible for an outcome of textual events. A seamless and animated change of colour, brightness, or size of one element on the screen may serve as a semantic device by means of which one can emphasize a given item, put a specific value on it, or shift the focus in its direction. These strategies allow the extraction of new meanings from the same verbal or iconic units and show a multiplicity of potential meanings of each sign. For example, in Zenon Fajfer's "Ars Poetica" or Katarzyna Giełżyńska's "C () NDU It" new meanings are often uncovered as a result of constant recontextualization within a limited resource of graphical (alphabetical and iconic) or audial elements of representation.

Atomization, combined with movement, calls for changes in our understanding of the traditional relationship between basic semantic elements

of representation and attributes of representation responsible for the modulation of meaning. While in a traditional poem the order of words is fixed and the appearance of words, lines, and stanzas are meant to be considered as a secondary feature to its semantics, in digital poetry it might often be the opposite.

Digital art introduces important ontological and axiological inversions to our notion of primary or secondary components of meaning in the process of signification. Semiotic atomization, in conjunction with kinetic effects, assign values to elements traditionally considered as secondary. As a result, it becomes possible to create poetic figures (metaphors, repetitions) that arise at the intersection of the semiotic layer and the narrative layer. Semiotic elements are no longer transparent (their role is not only content delivery) but become part of the represented world. For example, in Susan Gibb's hypertext "Blueberries" all linked words are highlighted in purple. They borrow their look from titular berries. Within the story, the image of ripe berries is linked to the memory of the main character being sexually harassed by her grandfather as a child, and on the screen the purple words relate to segments of texts in which traumatic memories appear. Clicking on purple words turns them first to red, then to light grey. Such an effect represents a multi-layered trans-semiotic metaphor.

Words and links are saturated with meanings contained in the story and become representations of inner processes in the mind of the protagonist. The purple font of linked words is an analogy to obsessively returning memories of berries and the marks they left on her dress after walks to the forest with her grandfather. The motif of berries returns constantly and reappears in the paintings the female protagonist makes in her adult life. In this way, the memories of berries on the level of the story, the purple words, and the background image of ripe berries in a basket form on the level of interface a kind of inter-semiotic repetition and a multi-level metaphor that utilizes both elements of the story and the figural and verbal body of text. The red words (red as the colour of blood, suffering violence) play a similar role and depict experience of pain, injury, loss of virginity, and the state of the protagonist's psyche. Accordingly, words in light grey (which turn purple once clicked) echo the story's final event: when the female painter – just before an important exhibition – decides to paint her works over with white. This turns out to be a failed attempt as the blueberries from the original layer pierce through the white paint and, just like the traumatic experiences from childhood, cannot be erased completely.

Digital art enables the formal and the thematic layer to exchange their vehicles of meaning. Elements of narrative – contents of story and plot –

can be mirrored or evoked on the basis of metaphorical relation both on the level of operation (interface) and on the level of kinetic, iconic, and auidial occurrences. The empathy effect, or user's identification with the protagonist' thoughts and feelings is happening not only in the realm of interpretation but also in the sphere of perception. The sense of touch is of particular importance in this hypertext fiction. Its presence reverberates throughout the whole work as it is being read. The user's touch of a mouse button (or touching the link on the surface of a tablet or a smartphone), made in order to proceed into the next stages of the text, turns into touching the purple words (analogous to blueberries), which evokes traumatic memories of the "bad touch" from the protagonist's childhood. Semiotic and narrative metaphors and repetitions are thus literally experienced through the sense of touch.

It is by touch that both the artistic creation and the life of the protagonist become the user's own experiences, made active and present by the click of the mouse or tap of the finger. As a result, the desired empathy on the part of the user is amplified, hyperbolized, and intensified by physical stimuli, which takes the processes of identification – with the act of creation of art and with the depicted world – to a higher level, adding complexity to the already complex whole. As it turns out, even simple literary projects in the digital domain, those that employ only words, images, and simple behaviours, fall into the same category of works as installation projects which engage the whole body into the virtual space of the work (Vesna, 2007: 5–13; Bolter, Gromala, 2003: 98).

The emergence of new strategies of meaning creation in digital art does not change the very nature of art. Digital art has the same aesthetic, ludic, or reflective functions as art in general. It sets for itself the same goals: searching for hidden meanings and reaching out beyond the literal by referring to metaphorical thinking and the use of fiction. At the same time, it seems to take advantage of existing structures of text and transforms them in new ways to expand the repertoire of already existing forms and their established meanings. With its roots in preceding inter-media art forms and movements such as happenings, concrete poetry, Fluxus, visual novels, sound poetry, and performance, digital art can take all of these forms and freely merge them with one another in a new context (Funkhouser, 2012: 30). This constant oscillation between cultural continuity and novelty justifies the use of already existing tools of digital text analysis, while at the same time allowing for their modernization and reinterpretation. As noted by Roberto Simanowski:

(...) a theoretical discussion of digital arts is best grounded in combination of new and old criteria. Genre theory, for example, is still a valid analytical tool, along with well-established concepts such as story, plot, and character, which apply in computer games, interactive drama, and hyperfiction. Other concepts – allegory, isotopy, rhyme – as deployed in classical rhetoric need to be adapted to describe the stylistic devices of digital literature and art. For example, if in conventional literature allegory is understood as a narrative representation of ideas and principles by characters and events, in digital literature, this representation may be provided by the animation of words. Similarly, in the context of digital literature, the notion of rhyme may be extended beyond the repetition of identical or similar sounds in words to the repetition of identical or similar animation as a new way of creating paradigmatic relationships between the elements of a kinetic text. (Simanowski, 2011: 5–6)

3. Kinetization in Theory and Practice

As universal characteristics of digital semantics, atomization, kinetization, and modulation aim to describe general rules of some new signification processes taking place in the digital environment. While situating an art object in a multi-modal and virtual space, they target three distinct dimensions: atomization relates to spatial phenomena, kinetization refers to the temporal flow of the work, and modulation points towards its programmable nature. While hypertext fiction, as interconnected networks of segmented text, is best described in terms of spatial attributes, the temporal side of digital semantics can be better understood on the basis of digital poetry. The movement, the flow, and the process, as the most frequent descriptive categories applied to a broad category of works under the umbrella of digital poetry, encourage viewing an e-poem not as an object but as an event. In this case, temporal aspects come before spatial ones; the time of reading is supplemented by the time of work and the rhythm of interaction. How does this change our notion of semantics? What is the basic unit of meaning in this temporally oriented perspective? Before looking at some examples, let us propose several modifications for traditional models of meaning creation in order to apply them to the digital domain.

If a single meaningful unit of reading implies not only interpretation but also action, for example a link activation followed by traversing from text

segment A to segment B, the meaning is firstly built upon the interpretation of A and B, and secondly in the process of movement between them. In other words, the meaning (C) is the sum of A, B, and the user's movement between them. Thus, the classical semiotic triad consisting of a sender, a message, and a receiver asks for an expansion that would encompass the presence of the receiver's interventions (layer of interface) and the movement of the work (layer of scripted kinetics). Several scholars have done such supplementation, with the most notable example coming from Espen Aarseth's "Cybertext: Perspectives on Ergodic Literature". Aarseth proposes his modification in the form of a triad operator-medium-verbal sign that would best represent the "text-machine" or cybertext model (Aarseth, 1997: 21). At the same time, it serves as one of the first frameworks for digital semantics that includes performative aspects of the work. What is significant, after discussing and rejecting Peter Bøgh Andersen's typology of computer signs as not sufficient to encompass the unstable, transient, and flickering ontology of digital objects, Aarseth concludes that the semiotic approach is not able to describe the "dual nature" of the cybernetic sign (its on-screen expression and the hidden code that governs its behaviour):

What goes on external level can be fully understood only in light of internal. [...] two different code objects might produce virtually the same expression object, and two different expression objects might result from the same code object under virtually identical circumstances. The possibilities of a unique or unintentional sign behavior are endless, which must be bad news for the typologies. (Aarseth 1997, p. 40)

For Aarseth, transformations of computer signs, a situation when during on-screen interaction a single image turns into a button, which in turn becomes an actor, amounts to the impossible semiotic apprehension of digital arts and communication. Nevertheless, other research also situates itself within the general framework of Aarseth's own typologies, and the models of the cybernetic sign believe that the textual units of meaning in digital works, especially if combined in relationship to other multi-modal elements, can generate a new, meaningful poetics or "harmonics" in art (Mammot 2006: 315). Our approach, based on analysing the digital art from the point of view of atomization, modulation, and kinetization, situates itself along those approaches that take this transitional nature of signs on the computer screen as given and try to work within the field influenced by phenomena that re-shape the text and make it less an object and more of an event.

Taking as a starting point Algirdas Julien Greimas's distinctions (some as a basic unit of discourse), Jim Rosenberg introduces the concept of acteme – a basic unit of reading and interacting with digital objects (Rosenberg 1996: 22–30). Acteme points to the activity involved in the perception of a digital work of art and makes a good starting point in discussing its semantics. To prepare the ground even further, let us introduce yet another supplementation of the classical findings of semiology: the sign model and the influential distinction between form and substance (and respectively their content and expression) made by Trolle Louis Hjelmslev in his “Prolegomena to a Theory of Language” (Hjelmslev 1979: 44–147). What happens if the distinction on the plane of content and the plane of expression, which Hjelmslev is referring to as “narrative practice”, is extended by an additional plane of activity? The substance of expression is a range of material vehicles of narrative: words, images, and sounds. The form of expression is narrative discourse comprised of elements common to every act of storytelling, regardless of the medium. Accordingly, the substance of content is the general pool of available experiences, objects, and events that could be subjects of a story, and the “form of content” is a particular content of the narrative in question. Extending Hjelmslev's model requires establishing two new categories: substance and form of the activity plane. The first one would be a single unit of the work's progression (a change, a movement, or a jump activated by users or triggered by an underlying algorithm). The second one, the form of activity, would be comprised of narrative and semantic patterns and regularities that are derived from the substance of the activity. If the scope of these new activity planes is equal to the scope of a single acteme, a specific poetic effect takes place in the form of a hyperlink effect, cinematic effect, or – in general – interaction effect. If the scope reaches beyond a single acteme and extends to a group of interface activities, a pattern of effects takes place (Bernstein 1998).

Table 1: Hjelmslev's model in the digital environment

	Expression	Content	Activity
Substance	medium	“world”	progress from interface element A to B
Form	narrative discourse	narrative content	pattern, effect

The proposed semantics of digital work is formed by the particular “grammar” of actemes: if the progression of the work (its activity performed by human or non-human agents) forms some meaningful se-

quences with repeatable and recognizable units, or – in other words – if a sequence of actemes forms a sentence (a larger portion of some higher order meaning), parts of the work can be summarized, resolved in a closure, and prepared for interpretation. Some other parts of the same work, in a temporal flow of its phases, might stay unresolved. Aarseth, referring to the temporal aspect of programmable works, introduces the concept of “event space” that is traversed by users in a consequent but somehow uneven rhythm of aporias and epiphanies. They are – respectively – moments of dead ends and sudden solutions that let users progress to the next phase (level) of the work (Aarseth, 1999: 31–40). Markku Eskelinen further clarifies that the aim of the user’s activity within this event space is a process of “proceeding from the beginning to the winning or some other situation” (Eskelinen, 2004: 38). Although these two authors speak mainly about computer games, their strengthening of the opposition between narrative and non-narrative forms of digital art might encompass not only games but also lyrical forms, like electronic (digitally-born) poetry, especially if one considers the notion of “some other solution”, which might stand for any meaningful sequence of actemes. To put this theory into practice, let us look at “rozstrzelam krew” by Łukasz Podgórn, one of the members of the Perfokarta group from Poland. The notion of this work of art as a participatory process and multi-phase event is applied at every stage of the poem.

In comparison to non-interactive digital poetry, like the already mentioned “Ars Poetica” by Fajfer, which designates users, not unlike cinema goers, to the role of passive viewers, “rozstrzelam krew” demands some non-trivial efforts in order to reveal its content. The initial screen, after showing the poem’s download progress indicator, presents us with a short author’s note, where Podgórn gives a significant hint:

The probability of discovering hidden levels is extremely difficult. To access them, users have to undertake actions strictly determined by the author.

With no explanation as to how this poem is different from its conventional cousins, the author assumes that his readers take the role of explorers eager to discover new levels of the work and asserts that it will not be an easy task. Next comes a screen with a vertical stave and a block of five buttons that appear with accompanying sounds of voice synthesizers reciting some barely understandable Polish words. From now on readers must take the role of active participants, and various alternative sequences of actemes are possible. Clicking on buttons will trigger a dynamic graphic at

the bottom of the screen with some flickering, illegible words over-imposed on each other and cause several letters to appear at the bottom of the stave and start their movement upwards and back down. All moving letters pretend to function as active buttons, hovering on them will cause some noise to be heard (reminiscent of sounds from a vintage Atari game), but only the “S” will take the readers to another screen. The second line of action – hovering on the dynamic graphic – will activate yet another sound loop with some voice synthesizer mumblings in a deliberately slowed tempo. At some point, still within the same screen, a rotating caption appears: “gather points”; hovering the mouse on the caption reveals yet another text – “you have” – as if the program wanted to say how many “points” the reader had gathered, of which there is no indication at all. Even at this early stage of the work, there are lots of things happening that involve text, graphics, sound, and movement. The order of actemes can be arranged differently by different users and end with success or failure, with an aporia or epiphany. Nevertheless, the seemingly loose network of actemes on the single level is being channelled into a single bottleneck: only by pressing the moving letter “S” are readers allowed to progress to the next phase. Loyal to his introductory statement, Podgórní retains his role as a master of dramaturgy, granting permission to the next stages of the work under specified conditions (pressing the button “S”). In the next level of this kinetic work, readers can produce more configurable outcomes. On the screen that appears after pressing “S”, the stave remains in its former position and is accompanied by a new, vertical block of five buttons that trigger four lines of a poem that become visible on the right side of the stave. The text is written with a clear indication that its lines were generated using a Dadaist or surrealist method of *cut-up* or *cadavre exquis*. Translated it sounds as follows:

*You repeat kings to pearls
When you own to ore
Made from bending If from here
was set no one into a whole*

If users decide to press one of the four buttons again, a new line is generated that consists of a couple of new words: the rest of them are re-used from the previous pool:

*you turn the dogma to silk
when you are keen to ore*

*If you had been a harpsichord for us
was set no one into a whole*

Some of the phrases (here in bold) can be dragged and put in different lines at the reader's will. In this way, users can both generate new lines by repeatedly activating buttons and decide on the content of a single line. Although at the moment of the time-based work spatial aspects come into play (arranging the words and generating lines), they are quickly counter-balanced by temporal effects. The fifth of the vertical buttons does not trigger another line of poetry but rather a musical sequence in which a synthesized voice says aloud some of the poem's phrases, which by being repeated over a rhythmic sound-clip while balancing the spatial with the temporal, function as a sober predication of things to come and as an important auto-commentary. The robotic voice repeats: *clicking on the scrap of meaning, memory – so far/thoughts and moments will flow into long before*, as if to describe the user's own situation, where the entropy of meaning does not allow for any stable discursive validation. The only set of semantic patterns that build itself around users' improvised activity might be the need for meaning, which at some moments of the work seems to appear but then slips into half-meaning and points readers to a dead end or back to the beginning.

"Rozstrzelam krew" will continue to several other screens with new sounds, moving objects, words, buttons, and puzzles. But regarding the poem's semantic level, none of the actions that were possible so far and would be possible in the next phases will amount to anything more than the last message delivered by the program. No stable meaning emerges, and no finite closure arrives; there is nothing that could be summarized in the simple logical statement: "This work is about that". Whether we like it or not, there is no hidden level with a stash of secret meaning! All actemes end up as mere actions, with no real discursive power behind them, apart from the semi-logical scraps of meaning, memories of previous steps, and the delicate thrill of what regularity or pattern of this specific "active" meaning will come next. This does not make the digital work meaningless or unadventurous. Quite the opposite. Nonetheless, rewards seem to come more often to users who feel relaxed and at home within the digital environment: especially in connection with those activities that are unexpected, such as some undetermined steps and secret "hacks" that let users experience the work in a way not planned by the author or computer code. In this way, yet another level of "poetry" or "art" could be discovered.

If we go back to Hjelmslev's model and its expanded version accommodated for digital textuality, a strong shift of balance towards activity and away from substance becomes apparent: users, viewers, and interactors are first confronted with moving objects and other forms of activity of various on-screen elements; then they start to differentiate their expressions (semiotic ontologies). It is mostly at the end that the semantic level, the actual narrative, or the lyrical content of the work is comprehended.

Lastly, one needs to account for the problem of semantic instability in kinetically oriented works, the peculiar condition under which a word turns into a button turns into image: the very reason Aarseth rejected semiotics as insufficient to describe the complex phenomena within the digital domain. In "rozstrzelam krew", the character "S", as a moving letter-object, is initially inactive, but it simulates an active button and then becomes active and reveals the next parts of the cyber-poem, at the same time functioning as a note on the stave and a semantically active initial ("S" stands for "start", "shooting", and "stop"). Does this mean we cannot apprehend the semiotics of such a semantically rich object? Janez Strehovec claims that a digital word-object, thanks to its numeric nature and readiness for modulation, becomes a "soft" signifier that can take numerous meanings:

It is an independent entity with as many perceptual as well as quantifiable features as possible. It is not defined only by its semantic and signifying qualities; nor is a sentence, word combination, or a message its immediately superior syntactic unit. It is an entity with visual, tactile, energetic, and kinetic qualities: an independent and complex signifier. (Strehovec, 2003: 40)

Any study of digital art, in order to understand its specificity to broaden the existing cognitive categories, needs to embrace this complexity.

Semantics of digital art, especially the temporal kind that makes use of kinetization, consist of a series of activities, possible chains of actemes that do not necessarily have to mean anything apart from what they are: pre-programmed actions that are played out by the reader in order to be experienced in a - paradoxically - less mediated manner. Actemes, as opposed to semes, resist the double logic of signification, with the signified/signifier structure of the sign. As a result, they manage to trespass the borders of logocentrism and pave the way for activity as the basis of artistic communication.

3. Video Games: Strategies of Immersion

Video games bring forward a good example of semantization of the textual tool and those signification strategies where the border between text and apparatus gets blurry. One of the most frequent strategies happens when the graphic interface is being textualized and when an additional space for the emergence of meaning is created on the level of interaction between the interface and the game world. Of particular importance are textual procedures on the semiotic level of the interface that aim to increase the effect of immersion.

By digital interface we understand a set of semiotic occurrences, with their main role being to provide players with additional information not directly available by observation or interaction with the game world.

Some types of interfaces are solely of a character mode (as in the game “Doom”, where the main role of the interface toolbar is to inform players about, for example, the percentage of their characters’ health status), but it is quite often that an interface employs both character and tool-type elements, for example, as a graphically presented panel with shortcuts for users’ possible actions. It is also on the interface level that the effect of accumulation takes place: the process of the homonymous assignment of several different functions to a single element: in this case, the element serves both a semantic purpose and – by being a shortcut responsible for in-game actions – a functional one.

The effect of accumulation exposes not only the textual character of the interface but also its modular aspect. It means that graphical interfaces, by inscribing the functional layer into a signifier, which allows players to perform the desired actions, are able – in a mediated way – to also shape and modify meanings inside a virtual game world.

As we have noted in the previous parts, one of the most important characteristics of digital communication is its distinctive tendency towards the user’s engagement: by encouraging readers to use the text and not just read it, the whole message – by implying the user’s empowerment – becomes personalized, which in turn leads to a more immersive experience on the receiver’s end. There is a heightened engagement by the user, a kind of absorption in her/his actions within a game world as if it was an actual situation, which game scholars refer to as “immersion”. Although the effect of immersion is desired by game designers, who consider the user’s excitement and full concentration on the game world as a clear indication of their production’s success, the very presence of interface, with its verbal, iconic, and graphical sub-systems of meaning, seems to work against these

immersive goals. Interface, by definition, is an on-screen mediator between the user and the virtual world. A similar mediating aspect was brought up by Slavoj Žižek, who claims that interface is yet another “frame” which facilitates our entering into “fantasmatic space”. As noted in “The Abyss of Freedom”:

[...] is not this dispositif—the frame through which one can glimpse the Other Scene—the elementary dispositif of fantasmatic space from the prehistoric Lascaux paintings to computer-generated Virtual Reality? Is not the interface of the computer the last materialization of this frame? What defines the properly “human dimension” is the presence of a screen, a frame, through which we communicate with the “suprasensible” virtual universe to be found nowhere in reality. (Žižek, 1999a: 98)

The presence – and visibility – of the interface predominantly narrows the immersive scope of a digital work because it emphasizes the mediated character of our encounters with the virtual universe, which happens through the frame of a computer screen. To prevent this from happening and to sustain the immersive effects, game designers apply several techniques of interface design, which effectively become creative practices of on-screen art and communication.

- a) **Minimalization:** This is a tendency towards the transparency of elements visible on the screen by limiting their numbers or size.
- b) **Stylization:** Interface elements are not being hidden or limited but instead merge with the aesthetics – the “look and feel” – of the world depicted in a game in order to create an illusion that the components of the interface (for example, text that uses a stylized font) are part of the game world.
- c) **Thematization:** Rather than hiding the on-screen components, this strategy relies on emphasizing the interface presence by making it the fundamental element of the gameplay.
- d) **Transposition:** Information usually present on the level of the interface is transposed onto elements of the game world. As the interface visibility is reduced as a result, this strategy can be considered a particular occurrence of minimalization.

This last strategy underlines the modular aspect of digital texts: transferring one signifying unit from the interface level to the in-game world does not change the meaning of the message, but in a significant way it influences the use of the message and the effects such a utilization creates. In this particular situation, a deeper sense of immersion is observed, which

on the one hand is the result of empowerment techniques on the representation level in digital texts and on the other hand a phenomenon that is the key to understanding video games in general.

4. Conclusion

Digital technologies reinterpret the rendition and functioning of texture (the semiotic layer of a text). Atomization, kinetization, and modulation make every component of texture (a single, graphical sign, colour, tooltip) semantically autonomous: being able to become a separate text. Any element of both the interface and the semiotic layer, thanks to possible modulations triggered by the programming level, is able to evolve into a discrete chunk of narrative and become a distinct semantic unit, while at the same time constituting a component of a higher order signification. The strategies of meaning creation in digital art demonstrated in this paper point to a significant remodelling of text ontology. The analogue culture made texture a static and stable fundament for repeatable interpretations and re-readings. In digital culture, the texture becomes a matrix capable of generating various parallel textures (fundaments) which are not mutually exclusive. The interpretative, open character of digital texture makes the interpretation processes of the reader more complex and more variable.

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2. “Stoberskiade,” or Stickers as a Literature-Distribution Platform

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Abstract: Contemporary experimental writing often directs its attention to its writing space, its medium, the material on which it is presented. Very often this medium is meaningful and becomes part of the work – the printed text transferred to another media context (for instance, into a traditional book) would become crippled and incomprehensible. Literature distributed on stickers is a form of writing that is divided into small fragments of texts (a type of constrained writing), physically scattered in different locations. One of the newest challenges in literature are books with augmented reality, AR, which examine the relation between the physical (the medium) and the virtual interaction. Sticker literature is a rather simple analogue form of augmented reality literature. The stickers have QR codes or web addresses printed on them, so the viewer who reads/sees a random sticker in the public space can further explore the text online. The medium is even more varied and nuanced. The viewer can read other parts of the text on photographs (the photograph being another medium) of other stickers placed in different locations. The author will discuss the use of stickers throughout literary history, beginning with 20th century French situationists, through different textual strategies applied by visual artists and ending with literary forms such as the Polish sticker biography *Stoberskiade* (2013). The author shall try to explain why experimental writers decide to use this form, discuss how the text is distributed and received and how the city space is used in such projects.

"Experiment Promises to Extend the Boundaries of Knowledge"

The *Stoberskiade* project that I started and co-authored was aimed at distributing stickers with elements of the spoken, polyphonic biography of Jan Stoberski in public places around the world (Marecki 2013). This text consists of the report about the implementation of the project. While describing the idea behind the project and its production, I am also investigating remediation and the fragmentation of the narrative in the digital age, as well as its scattered presence, participation of different media in telling a story and the participatory culture.

Stoberskiade can be treated as a part of the artistic and academic project which I am conducting with several other people using the lab work model. *Stoberskiade* can also be perceived as experimental writing in the 21st century, by which I understand a kind of academic research that examines the limitations of the literary expression. As the authors

of the introduction to *The Routledge Companion to Experimental Literature* argue: “Experiment promises to extend the boundaries of knowledge, or in this case, of artistic practice. Strongly associated with modernity, it implies rejection of hide-bound traditions, values and forms. To call literature experimental in some sense to aspire to compete with science.” (Bray et al. 2012, 2)

Stoberskiade was born in 2013 in the United States during my postdoc program in The Trope Tank lab at the Massachusetts Institute of Technology. The work was produced in Krakow by the *Korporacja Ha!art* publishing house. Owing to the stay in the Professor Nick Montfort’s lab, the conversations, meetings, research and the project made there I realized the meaning of material platforms as a literary medium.

The lab in which I finished my postdoc program has a clearly set goal: “Developing new poetic practices and new understandings of digital media by focusing on the material, formal, and historical aspects of computation and language.”¹ Contact with the laboratory model of collaboration in the humanities, characteristic of American universities, was something completely new for a scholar who came to the MIT from Central Europe, and for someone working at a university which values mostly theory and the effort put into individual research. Focus on a practical approach, developing technical skills as well as treating the university as a place for producing not only knowledge, but also artefacts, objects, applications or literary works – those were the most important differences between the research model I was familiar with and the one that I was just learning about.

I also soon realized that most American scholars have artistic affiliations, seeing the works they produce as a kind of experiments, as well as a part of their academic practice – which is interesting and rarely seen in Poland. The atmosphere in the Trope Tank itself has provided a good environment for this, with place for the scholars, artists, writers and programmers. The place and the people creating it all encouraged the team work. The lab organized meetings dedicated to coding and interactive fiction, as well as lectures by people connected to the Electronic Literature Organization.

It is also worth mentioning the huge impact that just reading the relevant books had on a scholar from Central Europe. When I look at this work from the perspective of a few years, I believe that it is also a record of fascination with the texts read for the first time, about the narration in the digital age and the materiality of texts, that previously were simply unavailable for me; they were a part of the equipment of the lab, or the Hayden Library at the MIT.

It was at the MIT where the first stickers were produced; it was also there where I first had contact with the people participating in the project by distributing stickers on their own, or by translating them into other languages. I myself have also put the stickers up in various places in the United States and later on other continents. I also presented the work at The First Annual David Foster Wallace Conference in Normal-Bloomington, Illinois.² Before leaving MIT I wrote a report which was later published in a series of technical reports from The Trope Tank (Marecki 2014b). This text uses the elements of the previous one, published and available on the lab's web page. However, it also contains elements of the academic essay, the purpose of which is to put the work in context by comparing it with several other projects that use similar methods.

Derivative Writing

The material solution that I used – stickers as a medium for the text – is connected to one of the digital strategies of writing, which was called derivative writing by Janez Strehovec. This Slovenian scholar uses new forms of expression to describe the strategies applied in the electronic literature field, while also using methods known in the social sciences (e.g. economics.). Strehovec assumes that in the contemporary economics markets are extremely unstable, having no basis in the real value of the items purchased and sold by subjects. Strehovec writes: “the latter is a far more abstract economy, where the exchange of commodities is replaced by a series of new financial instruments, including derivatives; more than with stable artefacts, we deal with unstable concepts, ideas and, of course, code” (Strehovec 2012, 82). Artists produce derivatives in which they reference works that possess “unquestionable” values, e.g. values in the literary or art world, thus establishing their own position. It is, therefore, not surprising that in the uncreative writing strategy framework, works borrowed from Stanisław Lem, Franz Kafka or Jorge Luis Borges can be found. Another derivative is the rewriting of *On the Road* by Simon Morris, and his signing it as his own using the title *Getting Inside Jack Kerouac's Head* (2010). Strehovec does not perceive such activities in a negative light, or as imitation. In his opinion, they are the effects of the lack of stability and uncertainty in the field. He writes: “connecting to other works, in the form of ‘derivative writing’ allows them to add value to their works, which often implies

an entry into the valuable archives of literature and art, whose common denominator is a surplus in the field of creativity and innovation. Thus, derivative writing presupposes writing, which deploys such an underlying asset (which has a big part in the attention economy) to help the author to enter the valorized archives of the e-literary world" (Strehovec 2012, 83).

While creating *Stoberskiade*, I consciously referenced the idea of derivative writing, but the reference point for my own derivation were not the famous masterpieces by Lem or Kafka, but the creators of the unstable field of e-lit: Scott Rettberg, co-founder of the electronic literature field, and Nick Montfort, president of the Electronic Literature Organization and creator of *The Trope Tank* (also, my mentor at the time, who taught me the writing techniques and methods of researching the digital culture and platforms). Instead of a classical work I chose *Implementation* as a reference point – *Implementation* is a lesser known experimental novel written on stickers that exist online and are put up in various places around the world, and that are mentioned in academic papers.

In my research, as well as in the practical and laboratory works, I focus on the phenomena of decentering in digital media, highlighting the hegemony of the English language and the western technology in the digital media field. *Stoberskiade* – as a work created in the polemics about the hegemonic practices of the imperial world and the English world used in *Implementation* – can also be included in this area of interest.³

Remediation, Platforms, Writing Spaces

21st century techniques of experimental writing suggest that the book is no longer considered the only or the main – to use Jay David Bolter's term – writing space. According to contemporary scholars, the material platform of a text is now seen as a significant aspect of a literary work. Describing the content and the text itself, one should also focus on the technical and material conditions of the medium. Therefore, N. Katherine Hayles proposed the term 'technotexts' to define literary works with significant material qualities, which can be read with a medium-specific analysis in mind. Current spatial approaches to literature (e.g. textual caves), conceptual and uncreative writing, as well as experiments in the field of electronic literature are only a few examples of such writing machines. Contemporary writing platforms include walls, websites and floppy discs, to mention only

a few ways of expanding the writing space. In an artist's statement: "All objects are walls for writing on. Take any form and project it onto any surface. Earrings can be billboards, tables can be screens, buildings can be magazines. We are the Babylonian translators" (Gerritzen et al. 2011, 129).

Using stickers means, above all, an intervention in the public space. According to the definition, a sticker is a small piece of printed paper, self-adhesive on one side. It is also a kind of label usually used to create object identification through a word, idea or image. However, in capitalism, stickers can also have an ambiguous meaning; on the one hand, they are signs to promote and identify a product; on the other hand, they may be a subversive and effective way to fight a system (such as capitalism). Predominantly, stickers are attached to public spaces, generally without permission, which is why they are treated as vandalism. They are placed in heavily populated areas as well as in and on buses, trains (mainly near their doors to be better seen), cars and other vehicles, bikes, tunnels, road signs, dumpsters, suitcases and public toilets.

Artists started viewing stickers as a platform for their work at the beginning of the 20th century. The Dada movement, considered to be the first avant-garde formation, distributed its works on stickers, which was part of how it explored new forms of expanding writing techniques. It is worth emphasizing that the Dadaist attitude – based on absurd, pure nonsense and randomly generated text – was a method of fighting the system's oppression (World War I). Therefore, the history of stickers in the 20th and 21st centuries can be seen as a history of subversive and oppositional strategies. When used in this way, stickers speak against totalitarianisms (e.g. Nazism and communism in Poland), the society of the spectacle (Western Europe), or American imperialism. Wherever one can find oppression or abuse in society, a public intervention such as stickers can be used to express independence, struggle and everyday revolution.

Situationism, Fluxus & Folklore

There is a significant number of critical approaches that can help to read and understand sticker literature projects. A few of them are based on the history of visual art and numerous subversive strategies (e.g. Fluxus, Situationism). Sticker literature can also be read as a folklore literature, which can circumvent the professional institutions (e.g. publishing houses, bookstores – usually part of free-market logic). There are also some digital

techniques and terms which could be useful when describing this kind of work (e.g. distributed narrative).

Recontextualizing all of the aforementioned approaches goes beyond the frame of this chapter. Situated between media, stickers are considered intermedia projects, which contain almost all Fluxus ideas discussed by Ken Friedman in "Forty Years of Fluxus"⁴: globalism, the unity of art and life, experimentalism, chance, playfulness, simplicity, implicativeness, exemplativism, specificity and presence in time. Moreover, putting up stickers can be a psycho-geographical strategy to transform and react to the common space in a poetic way. Using stickers in public spaces also means creating a situation and working collaboratively. According to Situationism International, psycho-geography is considered to be "the study of the exact laws and specific effects of geographical environments, whether consciously organized or not, on the emotions and behaviour of individuals..."⁵ Since public space is a maintained area used and organized by businesses and the local government, Situationism proposed to make the public space the people's.

According to Situationism, such psycho-geographical action can be considered a rebellious strategy opposed to the ubiquitous Spectacle. Debord criticizes the spectacle's domination effects. He argues that people, controlled by mass-media, become observers, non-participants. Consumers do not experience life nor do they act in life, but replace reality by contemplation as they lead a superficial and inauthentic existence. Also the Society of the Spectacle is characterized by a lack of human perception, and a complete degradation of knowledge and critical thinking. Debord argues that society has experienced "the decline of being into having, and having into merely appearing" (Debord 1994).⁶ Creating situations and psychogeographical strategies can be a kind of stimulus from the environment that may wake up senses and experiences. Situationists believe that such strategies can be a tool for an individual, everyday revolution: "Every situation, as consciously constructed as can be, contains its own negation and moves inevitably toward its own reversal. In the conduct of an individual life, a situationist action is not based on the abstract idea of rationalist progress (which, according to Descartes, 'makes us masters and possessors of nature'), but on the practice of arranging the environment that conditions us."⁷ As Joseph Hart argues, we need "a whole toy box full of playful, inventive strategies for exploring cities ... just about anything that takes pedestrians off their predictable paths and jolts them into a new awareness of the urban landscape" (2004). Putting up stickers means creating a situation, a poetic response: not a serious revolution, which can

change the system, but a start to perceive the environment in a different way. Scott Rettberg, co-author of a novel-length sticker project, mentioned that putting stickers up in his normal traffic environment helped him to find a canvas and a kind of playground for his city. He discovered several signals he had never noticed before: "I am seeing the city in a new way. I am noticing the signs of graffitists and street artists. I am observing and thinking more intensely about what is at my eye level and what lies beneath my feet, the manhole covers and the details of streetlights, hidden conversations between the official languages of civic life in the city and its subcultures" (Rettberg 2010). He reinvented his own city and public space for his use. As Situationists fought for freedom from the society of the spectacle and criticized middle-class bourgeois society, Rettberg's and Montfort's printing and attaching a couple hundred stickers can be treated as a revolutionary transformation, glorifying freedom from oppressive ideas and discussing in an open way the unpopular approaches to life in such an imperialistic country as the United States.

Another tool one can find useful to describe stickers in the public space is given by the anthropology of everyday life. Today's ethnological approach focuses on contemporary aspects, like cultural margins and digital activities. Since one of the most important qualities of folk literature is its oppositional and non-official nature, stickers can be considered a flagship genre of this kind of writing. In a sense, attaching stickers to public surfaces has an ethical and practical function: the goal is to provide meaning. Stickers can be treated as a form of communication, visual written dialog in public space (that is why they often contain e-mail addresses or URLs).

Just as with graffiti, ethnology considered stickers a tool to help shape the world. That is the reason behind placing stickers in places which are unfamiliar, unknown, ugly and belong to anybody. Attaching stickers in such areas could be the expression of a will to change those places, to make them safer and better described. Moreover, stickers interact with other signs in the public space. Especially big cities are considered to be areas where the number of signs is overwhelming, and where signs usually contain restrictions or manipulations designed to keep us consuming. In addition, stickers use strategies to provide a feeling of safety that contradicts macro-aesthetics (large size, noisy and manipulative). Paradoxically, small stickers can be more visible than large-size means of communication. Small size is significant because it provides an opportunity to react immediately and to move quickly. Furthermore, a sticker can be carried all the time in the pocket. All in all, a sticker is a compact sign and new kind of text, usually appropriated from well-known slogans which do not require

a description. Stickers can be characterized as folklore literature because their audience is accidental: the reader is someone who does not plan to go for a reading series or to the bookstore. Apart from the accidental audience, sticker artists address their works to other sticker artists and in this way, create a kind of community (Kwiatkowska 2002, 185–193).

Distributed Narrative, Transmedia Narrative

Jill Walker sees sticker projects (along with e-mail novels and new websites) as flagship examples of distributed narratives. According to her research, artists in the postprint era tend to invent new genres, which do not achieve unity. Experiments in the digital era go further in opening the formal and physical aspects of literary works than postmodernist text chunk, fragmented plot or style. Notably, contemporary works are spread across time, space and the network (Walker 2004). Walker points out that literary works based on distributed narratives do not have clear boundaries (like book covers or the linear narrative). In her view, distributed narratives become ambiguous because readers and critics must describe and locate things that are not things but connections. Walker argues that because of the word alteration, one's understanding of it must be revisited. Distributed narrative can help to realize the novelty and "sometimes invisible way of seeing and communicating who we are." Refusing Aristotle's unity of work, Walker distinguishes a new kind of text distribution, which appreciates fragmented and networked structure. Instead of homogeneity one can notice three kinds of distribution: "in Time," "in Space" and "of Authorship."

One of the most radical projects shaped as distributed narrative is Shelley Jackson's *Skin* – a short story that is literally tattooed into the skin of its readers, one word at a time. That means the whole narrative cannot be read. The platform for a literature's work is the volunteer's body, which distributes part of the text around the world. The project will also be disintegrated, as people (words) pass away.

Another project that does not use the paper book as a medium is *The genieBottles*, a system build in MIT Tangible Media, presenting stories told by genies who live in bottles. The story begins when a bottle, treated as the packaging of a story, is opened. If more than one bottle is opened, the stories begin to intertwine: "When users interact with the system, they

capture the genies at a particular moment in time, during which they talk about their state of being in bottles, about their pasts, and about their expectations or desires for the future."⁸ There is no single place in which the whole narrative can be experienced. Also, there is no single author and group of authors who is in control of the narrative, and there is no unity of time. Distributed narratives also upended the established definition of a narrative, which (for scholars) consists of events ordered in time with some kind of causal connection between them.

The vocabulary proposed by Jill Walker is not the only one that describes the phenomenon of creating narrative across various media. Mark Ruppel proposes the term "cross-sited narratives" which he understands as "multisensory 'clustered' or 'packeted' stories told across a divergent media set." Such narratives are usually created from sequences distributed through different media channels (print, film, browser, live performance) (Ruppel 2009, 281–298). Meanwhile, Christy Dena uses the term "transmedial fiction," which in her opinion describes a fictional world functioning across various media and art forms. "A fictional world can be expanded across stories and games and is often expanded across both digital and nondigital media" (Dena 2014, 486). On the other hand, Henry Jenkins proposes a certain umbrella term to describe the polymorphic narratives – "transmedia storytelling." "A transmedia story unfolds across multiple media platforms, with each new text making a distinctive and valuable contribution to the whole. In the ideal form of transmedia storytelling, each medium does what it does best – so that a story might be introduced in a film, expanded through television, novels, and comics, its world might be explored through game play or experienced as an amusement park attraction" (Jenkins 2006, 95–96). Transmedial narrations and distributive narration are being told in the world of participatory culture. The participants in the activities designed by the artists interact with them and often perform the work.

Jay David Bolter posits in *Writing Space*: "The reader performs the text, perhaps only for herself, perhaps for another reader, who may then choose to perform the first reader's text for others" (Bolter 1991, 73). Bolter compared the users of interactive works to actors or musicians who know the potential of their instruments or their scripts, just as the user of a digital medium knows the potential of his or her computer or app. While a musician plays for an audience, this is not required even by most interactive fiction, for which only users are necessary. Works scattered across a space enable users not only to see the whole work, but also its smaller parts. Nick Montfort and Scott Rettberg, who explained the ways in which the readers

are being immersed in their novel, written on stickers, talk about different roles:

Several overlapping categories of people will experience the project in a potentially meaningful way. People who have sheets of stickers and who read all the texts of the novel, or of an installment, are “sheet readers” and define one of the audiences/readerships of the project. People who see the stickers situated around in the environment are “place readers.” People who visit the website, view images of posted stickers and read the corresponding texts online are “web readers.” Additionally, some people will hear us read texts from the project during literary readings and will experience the project as an audience. Finally, those who post stickers in public places, photograph them, and send photographs to us constitute another group. These people are called “participants.”⁹

There are many digital or hybrid works that have the participation of the user embedded in their structure. One of them is web drama *Online Caroline*.¹⁰ According to Jill Walker, it is a story told to and, importantly, with its reader.¹¹ The story proposed by its creators is based on the data provided by a reader who answers the personalized e-mails from Caroline, the protagonist. Users participate in the project for 24 days. It is a kind of online performance and it is impossible to accelerate the speed of the story. Each reader feels that the elements of the story are really addressed to him or her. This is how Jill Walker described her experience of participation in the project: “My hair is still wet from the shower when I connect my computer to the network, sipping my morning coffee. I check my email and find it there in between other messages: an email from Caroline. I read it quickly and then visit her website. She’s waiting for me. She holds up a shirt she’s bought to the webcam, asking me afterwards by email whether I’d like her to send it to me. ‘Yes,’ I answer, clicking and typing my responses into a web form and giving her my physical address. Caroline and I are friends” (Walker 2004b).

One of the works offering the most immersed interaction was *Invisible Seattle: The Novel of Seattle*, by Seattle, published in 1987. Its creators collected a large amount of texts and information from the citizens as a basis for a book of fiction, signed by the city. “[t]he first years of IN.S.OMNIA only confirmed that an extraordinary creativity on the part of people who did not consider themselves writers could be tapped under the right conditions” (Wittig 1994: 128). Rob Wittig, co-creator of the project, confirmed that the novel involved the citizens, who are neither seen as its creators, nor do they think about themselves in this way. Scott Rettberg, who was engaged in many participatory literary projects, prophesized: “One can imagine a writ-

ing community with the robustness of Wikipedia, dedicated to a collective vision of writing a novel that is in effect many novels with interchangeable parts, written according to sets of specific constraints to ensure a degree of formal unity, and tagged with metadata that would make it possible to easily remix novels in thousands of structured configurations. Such a project would be performance, game, and literature" (Rettberg 2005).

Stoberskiade

There are two main reasons why a story distributed around the world on stickers was created. On the one hand, it was an attempt to produce an experimental biography of Jan Stoberski, the writer whose name appears in the work's title. The second goal was to create a work about travelling and the tensions between the global and the local.

Jan Stoberski (1906–1997) was a writer from Krakow, known only locally and only in the communist period. He left behind several collections of short stories (he wrote only short literary forms) in which he described apartments around Krakow, their dwellers and the objects he saw there. His short stories as a whole can be seen as conceptual. For example, for a few decades he published almost the same works, usually with somebody's name as a title. He described people in the apartments through details, such as different ways of arranging their pillows or displaying various objects. In the communist period (and unification as its defining feature), Stoberski's approach to people and objects was especially extravagant. That is why he was commonly known as Proust from Krowodrza.¹² Stoberski was well known around Krakow in the communist era – his last books were published at the end of the 1980s, then he went silent. After the establishment of the new capitalist system, almost everyone forgot about him. His books, circulating in large amounts in the communist period, can today be bought at auctions and there are no reprints.

Yet Jan Stoberski interested me also for a different reason. According to the local legend, he was a minimalist, wrote only by daylight, ate meals at his hosts' homes and never used the city commute or cars. He always walked everywhere he went. It is also said that every day he was able to visit several apartments in different neighbourhoods of Krakow (these visits were an inspiration and material for his short stories) and that every evening he walked dozen kilometres. He also walked longer distances, e.g. Krakow-Zakopane (about 110 km,) even if it took him 2–3 days. Stoberski had neither family nor work, except writing, so he was able to continue living in this way.

In the communist period, Stoberski wrote for “Przekrój” – a magazine published in Krakow that was widely perceived as open to the Western trends and which regularly presented art related news from abroad. The magazine was rebellious to an extent, and the editors had a good sense of humour. In the country that was practically cut off from the rest of the world, where approval for a passport was rarely granted, news from abroad were a big event. The editors of “Przekrój” decided to present Stoberski to their readers as a model globetrotter. Obviously, it was an ironic gesture. Stoberski did not travel with the purpose of seeing the Niagara Falls or the Rockies, but just to see a puddle or a pebble on the side of the road.

My interest in Stoberski began in 2010. I knew that the author did not leave any memoirs, but I also knew that some of the people he visited in Krakow were still alive. I published an advertisement in the local newspapers, saying that I wanted to write a book about Stoberski and that I would like to collect memories of those who knew him. I received only few answers, but still I managed to find the apartments, meet the people and record interviews with them. These interviews later became the basis not only for Stoberski’s biography, but also for the sticker-based project. Every person I questioned about Stoberski told me a story about a different man. Some people said that Stoberski has never driven a car, others said that he did use a car, as a passenger, for example for his toe surgery. Some people said he used to eat meat, others claimed that he never had a piece of meat in his mouth. I soon realized that while collecting stories about the writer, what I was really telling was a story about those who knew him. Stoberski usually came uninvited to different apartments in Krakow and spent some time with his hosts. During such visits, he used to listen to people’s confessions, nodding his head, sometimes eating something. There were also apartments where he would have some sleep, in some apartments there was even a blanket waiting for him to cover himself with during the visit. After his visits, Stoberski would leave and go to the next place where he also went uninvited. All his visits had one thing in common. Stoberski almost never talked. He came, sat down and listened. That is why all people he visited remembered him as a different person.

Since I collected the stories about Stoberski from the people of Krakow, they were something like Citizen Kane’s story *à rebours*. While Kane had many possessions, Stoberski had nothing. Another reason I am referencing Kane is because the narration that has crystalized during the project was very similar to that in Orson Welles’s movie. By collecting different stories, which usually contradicted each other, the mystery of this man was

created. In the end, his mediocrity and mundanity, as well as his consistent sticking to his routine – in visiting apartments or walking long distances – made him transparent to the people he put in his texts. One of the people I interviewed even said that when Stoberski entered someone's apartment he became, in a way, invisible.

I decided that the information collected about the writer would be a perfect text to present in the form of a distributed narrative. A few dozen¹³ voices talking about, supposedly, the same man, but in reality about several different people, suggested that the adequate form would be a physically scattered narration. Considering all those factors, I decided to dedicate to him his biography scattered around the world. While completing the project, I was personally responsible for the adaptation of the texts, and dividing them into elements fitting the sticker format. In this sense, preparing a sticker is a kind of writing under constraint. The extent of the text has to be limited. According to the document prepared at the time, the first stickers had 25, 16, 15 and 32 words. The texts chosen by me were then illustrated by Katarzyna Janota, graphic artist collaborating with Korporacja Ha!art. We also put QR code on the stickers, providing links to the website where the stickers could be downloaded and then printed, and also presented pictures of the stickers in public spaces.



The Stoberskiade, Kraków 2013.

From the very beginning we have treated the project as a participatory work. When our friends go somewhere we give them the stickers to put up in their chosen places, then they send us the pictures that we publish online. Our idea was also to allow those interested in the project to print the PDF files and create the stickers. We counted on people who, intrigued by one sentence read in Sydney, would go on the website and become co-authors of our project. When it was first published, we provided the basic information about the idea of the sticker biography sticker itself and about the writer, but we also encouraged people to take active part in the project.

The Stoberskiade is several hundred stickers scattered across all the continents of the globe, which, after being photographed, will come together on a website to create a wholly unique “street biography” of Jaś Stoberski. This is simultaneously a tourist route through the life and work of a writer, which owes a debt to situationist psychogeography, where the concept of the map is set on the basis of drifting through places that are, by premise, unattractive and untouristy. This “sticker biography” is an open-ended non-fiction, encouraging the viewer to download a sticker from the Ha!art website, print it out, stick it in a place where the great stroller Stoberski might have gone and then send a photograph to the website administrators (portal@ha.art.pl).¹⁴



Texas, The Stoberskiade, Kraków 2013.

Besides instructions, we also sent e-mails to encourage people to join our initiative. For example, on December 28, 2013, I sent my friend Aleks the following message: "I think you'll like his minimalism and complete ascetics, it's a kind of very experimental journey which we can all find in the places beyond tourism, our own places. I think you have a lot in common." It was one of many encouragements to active participation in the project.

From the very beginning, our project functioned in the bilingual form, in the Polish and English version, translated by Soren Gauger, Ewelina Tota, Katarzyna Wąsala and Katarzyna Woszczek were the new graphic artists who designed the stickers according to their own concept. Anna Domaszewska and Izabela Konieczny translated a few stickers each into Spanish, and Agnieszka Żuk into French. Altogether we produced several hundred stickers in four languages. People participating in the project were also sending us pictures. At present, several dozen photographs can be found online, mostly from Europe and America, but also from Australia and Asia.



Somewhere in New Mexico, The Stoberskiade, Kraków 2013.

While we encouraged participation in the project, we never gave any instructions. We only asked people to choose some unattractive places and places that are unpopular among tourists. However, most people decided to put them in the first place they could: at the bus station in the city they visited, at airports or on street signs with the name of a place or US state.

Many stickers were also put up in nondescript places, about which not much can be said.

Only after receiving the pictures we managed to see a certain preference for places that cultural anthropologist Marc Augé calls a non-place. In his understanding, it is the opposite of a place, that is, a tamed space, close



Huston, TX, The Stoberskiade, Kraków 2013.



Delhi, The Stoberskiade, Kraków 2013.

to a person, used in daily life. According to Augé, non-places are a symbol of our contemporaneity because they lack an owner and emotional connection for people. They are places that we pass through, like shopping malls, gas stations, crossroads or airports (1992). Leaving the stickers in a non-place was – according to the situationist principles – an intervention into this untamed space.

* * *

The presented work was connected to the principles of a distributive narrative, a locational and participatory project, as described in the text. People who decided to take the stickers to different places around the world, leave them there and photograph them in their new environment, played a key role in the initiative. In this sense, it is also a hybrid project that uses various media: analogue stickers, photography, and websites. The stickers were also designed as hybrids, containing text, illustration and QR codes, which allowed passers-by to go to the website and get acquainted with Stoberski's full biography. Stoberskiade is also a half-analogue, half-digital work, produced in the late age of print, participating in a narration about the dialogue between the analogue and digital media, and about the remediation of print. The platforms, media and material objects involved were connected to the narration; the purpose of the work was to problematize the questions of travelling, non-places and intervention in the public space. The Proust from Krowodrza seemed perfect for this task.

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Notes

- 1 http://nickm.com/trope_tank/ [Accessed: 2/02/2018].
- 2 David Foster Wallace Conference, Scholarship of Contemporary Literature, Publishing, or Culture Department of English, Illinois State University, 5/23/2014
- 3 More on differences between Implementation and The Stoberskiade can be found in the technical report on The Trope Tank's website (Marecki 2014b). I also interviewed the authors (Marecki 2014a, 90-101).
- 4 Ken Friedman, "Forty Years of Fluxus", <http://www.mostowa2.net/angelpastor/kfriedman40yearsoffluxus.html> [Accessed: 2/02/2018].
- 5 Guy Debord, "Report on the Construction of Situations and on the International Situationist Tendency's Conditions of Organization and Action". <http://www.bopsecrets.org/SI/report.htm> [Accessed: 2/02/2018].
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- 7 "The Meaning of Decay in Art", *Internationale Situationniste* #3 (December 1959), Transl. John Shepley <http://www.cddc.vt.edu/sionline/si/decay.html> [Accessed: 2/02/2018].
- 8 <https://tangible.media.mit.edu/project/geniebottles/> [Accessed: 2/02/2018].
- 9 http://nickm.com/montfort_rettberg/implementation/description.html [Accessed: 2/02/2018].
- 10 <http://www.onlinecaroline.com/> [Accessed: 2/02/2018].
- 11 <https://elmcip.net/creative-work/online-caroline> [Accessed: 2/02/2018].
- 12 Krowodrza is one of Krakow's neighbourhoods.
- 13 The stickers contain the texts by: Adam Macedoński, Andrzej Kowalczyk, Jan Pieszczechowicz, Aniela Birecka, Leszek Walicki, Lucyna Merklinger, Jan Masłowski, Barbara Sommer-Czycz, Barbara Kotlarska, Stanisława Mięśowicz, Łucja Mróz, Paweł Heszen, the Hałatkiewicz family.
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3. *Poème électronique* Remediated

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Abstract: The concept of remediation denotes a recurrence of media in another medium. *Poème électronique* (1958), a project by Le Corbusier, Edgard Varèse, and Iannis Xenakis, could provide a good example of the thematization of such a process, even in the form of “meta-remediation”.

***Poème électronique*: Some Facts about the Project**

The subject of this chapter is *Poème électronique* (1958), one of the first comprehensive multimedia works, which consistently used movements of audio material in space. The work was prepared by a trio of artists: Le Corbusier, Edgard Varèse, and Iannis Xenakis for the presentation of Philips, a world-famous company based in Eindhoven.

In this chapter, the title *Poème électronique* is widely understood as a comprehensive term for a set of artistic acts associated with the Philips Pavilion at Expo 58 in Brussels. This complex work was the result of com-



Figure 1: The Philips Pavilion at the Expo 58 World Exhibition, Brussels

Source: themusicalon.blogspot.com



Figure 2: Sound paths created by hundreds of pyramidal speakers placed in the interior of the Philips Pavilion

Source: grahamshawcross.com

binning the architectural design of the pavilion sketched by Xenakis on the basis of his work *Metastaseis* (1953–1954), Xenakis's electro-acoustic intermezzo *Concret PH*, a visual design conceived by Le Corbusier (a narrative film describing the rise of mankind combined with colour light design), several sculptures hanging freely in space, and finally Varèse's eight-minute composition *Poème électronique*.

The aim of Philips was to exhibit the technical innovations and possibilities representing the company. In that sense, the primary goal of the exhibition was to highlight all technologies involved (such as sound reproduction systems and light projection systems). On the other hand, there was an obvious tendency to create a simulacrum presented by immersive film and light projections onto the curved inner surfaces of the pavilion combined with three-dimensional sound movements.

The *Poème électronique* project was conceived as a total work of art (in terms of Richard Wagner's *Gesamtkunstwerk*) enabled by a unique blending of the personal poetics of strong artistic personalities. The historical importance of *Poème électronique* in the development of electro-acoustic music and media art in the twentieth century is evidenced by a rising volume of foreign-language literature published on the topic in recent years and decades. It is also affirmed by numerous remakes and remediations of this unique project in the form of attempts at either its physical or virtual reconstruction.

Rethinking Remediation: From Bolter and Grusin to “Eco-logic”

Although already described by a handful of scholars, perhaps the most influential model of remediation has been provided by Jay D. Bolter and Richard Grusin in their seminal book *Remediation: Understanding New Media* (Cambridge, the MIT Press, 2000). Special attention should be paid to the chapter entitled *Immediacy, Hypermediacy, and Remediation*.

There are two types of remediation logic represented by the model: immediacy and hypermediacy. Immediacy refers to a medium which has the purpose to disappear. Virtual reality is presented as an example of this (Bolter and Grusin 2000, 21). The basic condition of this process is an immediate relationship to the contents of that medium, which erases itself by making its interface transparent so that the user is no longer aware of confronting a medium as such but is instead standing in it (Bolter and Grusin 2000, 24). The second type of remediation logic is hypermediacy, which is based on the acknowledgement of a medium.

In the logic of hypermediacy, the artist (or multimedia programmer or web designer) strives to make the viewer acknowledge the medium as a medium and to delight in that acknowledgement. She does so by multiplying spaces and media and by repeatedly redefining the visual and conceptual relationships among mediated spaces – relationships that may range from simple juxtaposition to complete absorption (Bolter and Grusin 2000, 41–42).

In relation to the process of hypermediacy, multimediality should be mentioned. Analogous to multimediality, hypermediacy works with multiplication across media, juxtaposition, and the replacement of one medium with another.

Hypermedia CD-ROMs and windowed applications replace one medium with another all the time, confronting her to consider why one medium might offer a more appropriate representation than another. In doing so, they are performing what we characterize as acts of remediation (Bolter and Grusin 2000, 44).

In Bolter and Grusin’s theory, remediation is understood as a representation of one medium in another and it is claimed to be one of the key characteristics of new digital media. Four grades of remediation are rec-

ognized within the mentioned theory. All of them are dependent on the extent to which older media are remediated by new digital media:

1. An older medium is highlighted and represented in a digital form without apparent irony or critique. Examples include CD-ROM or DVD picture galleries and collections of literary texts.
2. There is a tendency to emphasize the difference rather than erase it. An electronic version is offered as an improvement, but the new version still remains dependent on the old one. Examples include electronic encyclopaedias and expanded books.
3. There is an aggressive tendency of the new medium to refashion the older medium while still retaining the character of the older medium, resulting in a sense of multiplicity or hypermediacy. Examples include collages, mosaics, and montages.
4. The new medium is trying to absorb the older medium entirely. Examples include interactive films and online TV.

One of the influential commentaries on Bolter and Grusin's theory was made by Umberto Eco.¹ As Eco points out, historically there are no legitimate grounds for concern over the disappearance of old media forms. It turns out that older forms either exist in parallel with newly appearing forms, or their distinctive features are remediated and appropriated by new media forms. In his deeply penetrating text on the future of the book, Umberto Eco reminds us Jay Davis Bolter's remark on Hugo's *The Hunchback of Notre Dame*, where Frollo, comparing a book with an old cathedral, says: "Ceci tuera cela" ("The book will kill the cathedral, the alphabet will kill images").² Eco is not so apocalyptic in this case, rather he is an "integrated intellectual" as the title of one of his books suggests:

Certainly, the advent of cinema or of comic strips has freed literature from certain narrative tasks it traditionally had to perform. But if there is something like postmodern literature, it exists because it has been largely influenced by comic strips or cinema. This means that in the history of culture it has never happened that something has simply killed something else. Something has profoundly changed something else (Bolter 1990, 1).

What Eco accentuates here is the mutuality of the process of remediation. It works in both directions: new media are influenced by old media, which are themselves changing under the influence of emerging media.

The concept of remediation is not particularly new. However, it seems that its use within new media could be quite innovative. Despite this, the concept of media itself (or even new media) is becoming more and more obsolete. All traditional “hardware” media have “dissolved” in a homogeneous digital code which conclusively affirms McLuhan’s claim that the “medium is the message”. In binary code, there is no difference between the medium as form and its content. Differentiation starts with its interpretation or representation provided by an interface. It implies that where there is no solid medium, there cannot be its repetition but only an individual variation of the model. In the conditions of homogeneous digital code, the process of remediation does not apply. In these recently constructed conditions, we tend to talk about a post-media era and about software studies.³

As already mentioned, the concept of remediation primarily applies to hardware media and relates to our thinking about media as objects. It is based on the simple presumption that older media forms are repeated (remediated) by more recent ones. Perhaps the process of rethinking itself is a part of remediation, or rather a continuation of remediation by other means.

***Poème électronique* in Terms of Remediation**

When analysing the complex work of multimedia represented by *Poème électronique* from the perspective of remediation, a comprehensive list of individual media components should be provided:

- a) the “liquid” architecture of the Philips Pavilion based on the musical score of *Metastaseis* by Xenakis
- b) a film collage designed by Le Corbusier
- c) colour light projections and ambient lights
- d) a spatial realization of the *Poème électronique* musical piece by Varèse
- e) a piece of electronic music entitled *Concrete PH* by Xenakis playing during intermissions
- f) fluorescent objects hanging in space (human figures and polygons).

Under the perspective of remediation theory, this list of components should be perceived as a group of media being hypermediated in one creative multimediality. Each of them remains visible and recognizable within

the whole. Nevertheless, *Poème électronique* uses much of the logic of immediacy as well. Its tendency to construct a virtual reality leads towards the total immersion of spectators into a colourful world of moving sounds.

To sum up, it seems that both logics described by Bolter and Grusin are taking place in the process of performance. On the one hand, there was an obvious tendency by Philips to show the abilities of the technological products and the level of their development, but on the other hand one could surmise that there was an evident artistic intention by the authors to blend separate media into a new multimedia form.

It is crucial to observe shifts of categories inherent in the process of remediation. It leads to a certain relativism based on overcoming traditional categories of binary opposition such as old–new, medium–context, and original–copy. This is caused by the fact that remediation is not a part of structuralist thinking anymore. Rather it is postmodern, where the solid old opposite categories are blending within a new complex. In the case of *Poème électronique*, there is a set of traditional media (a film, two pieces of electronic music, light art, and sculptures all enclosed by architecture) arranged to form a completely new multimedia experience. Due to the automation of the whole process of spatial projection, a question regarding the originality of the work arises. Repeated presentation of this exclusively artistic masterpiece created by Le Corbusier, Xenakis, and Varèse thousands of times challenges not only Walter Benjamin’s notion of “aura” but also the culture industry as such.

Remediation Remediated

The processes of remediation within the complex work of multimedia becomes even more complicated. At least three interesting projects based on remediating *Poème électronique* could be mentioned. The Alice Foundation based in Eindhoven (the Netherlands) strove in the past years to reconstruct the pavilion on a reduced scale on one of the main streets of the city. Since the original pavilion built for Expo 58 in Brussels was dismantled due to concerns about its technical equipment being exposed to changes in the weather, this attempt should represent a recontextualization of the work in time and space.

The second of the approaches leading to remediation of *Poème électronique* was a project called “Virtual Electronic Poem: Make It New”

(finished in 2005). Four European research facilities participated in this “resurrection” of the Philips Pavilion with its unique architectural and acoustic environment. VR & MM Park and the University of Torino conducted a survey of historical documents, the architecture of the pavilion, and the script of the light environment, and spent time obtaining original video sources before providing an implementation of a 3D digital model of the pavilion’s interior. The Department of Computer Science at the University of Bath researched the original sound sources and prepared the software and hardware for the digital processing of the resources. Researchers in communication sciences at the Technical University of Berlin provided an acoustics and technical study of the spatialization of *Poème électronique* and subsequently implemented the technology used by Philips in 1958. Finally, the Instytut Informatyki Politechniki Śląskiej Gliwice prepared a design and implementation of the WWW interface for an online interactive installation of the 3D model of *Poème électronique*.

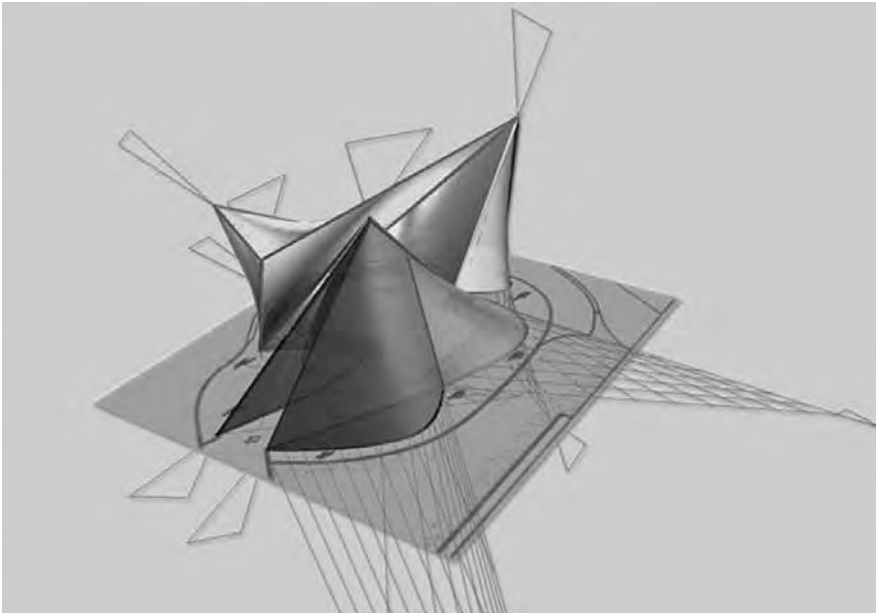


Figure 3: The model of the Philips Pavilion with handles for adjustment

Source: http://www.edu.vrmmmp.it/vep/immagini/images_VEP_modeling/model_from_top.jpg

The project objectives were formulated as follows:

1. Reconstruction of the Philips Pavilion in virtual reality (VR) is a tribute to the first multimedia project of the electronic era. It serves to preserve Europe's cultural heritage.
2. Installing the VR will potentially make it possible to reach a wider audience than its real variant in 1958.
3. In terms of scientific research, this project is the basis for the further study of contemporary architecture.
4. In terms of art theory, this project aims to enrich creative thinking by the means of new technology, especially VR.
5. From a technological point of view, the project hopes to create a comprehensive digital space mixing video and audio, which requires special approaches to the integration of different media.

The whole complex of scientific approaches applied in the reconstruction of the Philips Pavilion could generally be called the "archaeology of multimedia":

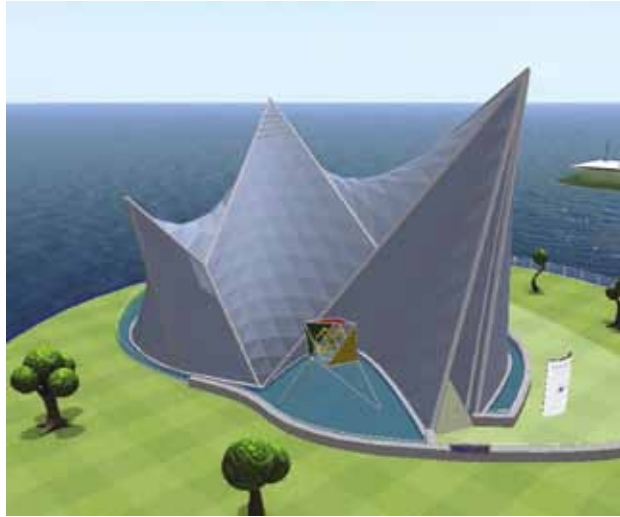
In fact, the supports of the media contents as well as the control devices become obsolete in short time, and the renovated fruition of a multimedia installation becomes a matter of archeological investigation, that must access the media contents with a current technology, discover how such contents were structured in the original installation, propose a method for the description of the performance, provide a mean for the delivery of the new experience that can recreate or mediate the original setting and dynamics. We call this *remise-en-oeuvre* of an installation archeology of multimedia.⁴

The third attempt at remediating *Poème électronique*, more than a "no-men omen" in this context, is the virtual reconstruction of the pavilion in *Second Life*. This massive multiplayer online world provides a unique opportunity to construct liquid architecture artworks independent of gravity or economic support. The young mathematician, researcher, and artist Henry Segerman – who usually researches 3D geometry and topology, particularly involving ideal triangulations – was asked by Philips in 2008 to provide help with modelling the pavilion consisting of a number of hyperbolic paraboloids on Philips Island in *Second Life*.⁵

The original *Poème électronique* (1958) still provokes new attempts to mediate this unique multimedia artwork. It seems that a work of art based on technological reproduction can repeatedly stimulate human creativity which is more than a good price for the alleged absence of "aura".

Figure 4: The Philips Pavilion virtually reconstructed in Second Life

Source: http://www.segerman.org/2ndlife/poeme_electronique.jpg



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2 BOLTER, Jay David. *Writing Space: Computers, Hypertext, and the Remediation of Print*. 1st Edition. Routledge, 1990, p. 1. Often referenced phrase „*Ceci tuera cela...*“ became a topos of the remediation discourse.

3 See, for example, the essays by Lev Manovich in *Post-media Aesthetic* (2001), *Introduction to Info-Aesthetics* (2008), and *Software Studies* (2008, rev. 2011). [Online]. [Accessed 15. 9. 2013]. URL: < <http://www.manovich.net/articles.php>>.

4 LOMBARDO, Vincenzo et al. *Archeology of Multimedia*. ACM Multimedia 2006, p. 1 [online]. [Accessed 15. 9. 2009]. Available at: <www.edu.vrmmmp.it/vep>.

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4. The Radio Remediation of Umberto Eco's *Baudolino*

Dagmar Sabolová-Princic

In this article, we would like to address a number of questions concerning remediation, including that of inter- and intrasemiotic recoding and the relationship between the process and result of recoding and remediation. The second question related to the topic is that of the status or role of radio in remediation and its relation to digital media, since radio, as we will see, creates virtual reality as well; there is also the question of transposing written to spoken words and sounds in general.

A radio adaptation of Umberto Eco's novel *Baudolino*

Translation of *Baudolino*: Dagmar Sabolová-Princic

Scheme: Dagmar Sabolová-Princic

Dramatization: Viliam Klimáček and Dagmar Sabolová-Princic

Dramaturgy: Katarína Revallová and Ján Uličiansky

Recorded by: The Slovak Radio Symphony Orchestra and the Slovak Philharmonic Choir

Composer: Roman Žiaran

Sound editor: Peter Daniška

Director: Jaro Rihák

In this article, we would like to address a number of questions concerning remediation, including that of inter- and intrasemiotic recoding and the relationship between the process and result of recoding and remediation. The second question related to the topic is that of the status or role of radio in remediation and its relationship to digital media, since radio, as we will see, creates virtual reality as well; there is also the question of transposing words from written to spoken form and sounds in general.

The philosophical grounds of the origin and function of remediation were exhaustively treated by John Guillory in *Genesis of the Media Concept*,¹ mentioning, among others, the semiotic concept of Charles Sanders Peirce. Here we would like to mention a collection of studies entitled *Forme della traduzione* (Forms of Translation), the theory of which is based on Peirce's understanding of translation as a transition from one sign system to another. Umberto Eco's² theory moves in the same direction, speaking about "translation between two different semiotic systems, for example, translating a novel into a film, an epic poem into a comic strip, or creating a painting based on the theme of a poem."³ Obviously both of them, and Umberto Eco in particular, talk about the kind of "translation" which equals remediation, or, to be more specific, the result of remediation. The question arising here is what difference there is between these approaches. Apparently, both talk about the result, the work which is conceived in

the transition between two semiotic systems: e.g., film, radio adaptation, comic strip, and painting. The relationship to remediation is different in the respect that remediation focuses on the process of creating the result.

In the experiment we performed in *Forme della traduzione*, translation in the sense of Peirce's and Eco's concepts was understood as a synecdoche of all kinds of rewritings, shifts, and transformations not only of artistic works but also of literary, philosophical, and cultural theories, doctrines, and aesthetic canons. In this study, we did not consider the change of medium, because the examples we found in the history of literature did not always include the change of medium; sometimes it was only change of genre, for example, the translation of Voltaire's *Candida* from French to Italian in octaves, analysed by Franca Sinopoli (2009). Armando Gnisci (2009) analyses the development, transformation, and fall of utopian theories about happy worlds, compares theories and their infamous realizations – the New World in America with its two magical keywords (“melting pot” and “American dream”) and the Soviet Union, aiming to realize another utopian dream, communism, the society of ultimate equality. So much for an example of transforming theories, philosophies, or ideologies.

The example we chose is an “intersemiotic translation” (and the result of the process of remediation) in the transposition of Umberto Eco's novel *Baudolino* from written text to spoken word and the sounds of radio drama. “The ‘content’ of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph.”⁴ If the spoken word is the content of the written word, the remediation of writing back to speech and sound is all the more natural.

Literary texts dramatized in sound constantly oscillate between mass appeal and aesthetics. They bring the literary text nearer to the audience, but they also aspire to preserve the artistic features of the original text in sound, a different form; a new work of art is created. Another oscillation in the adaptation of a literary text is between adherence to the original text, which means moving within a sphere of possible interpretations of the text contained within it, and its conversion to sound. In other words, it is an intersemiotic translation from a written to sound sign system, a change from written material to sound material. Of course, there is a theoretical possibility of a completely free variation on the theme of the original work, but this remains on the theoretical level due to the practical aspect; a living author usually does not give permission for such use. Work on the final sound version of the text oscillates between these extremes, between various choices the creator has to make. The ways of adapting a literary text vary

from the simplest ones, from isolating one narrative plane to using the text as an inspiring stimulus to create *one's own text*. A famous text can be parodied or given a sequel, such as in the case of Alexandra Ripley's *Scarlett* (the sequel to *Gone with the Wind*) or Lin Haire-Sargeant's *Heathcliff: The Return to Wuthering Heights*, but it can also be made into a radio drama.

***Discovering the Medium in the Text**

In the novel, Baudolino is telling an unbelievable or unlikely story to the chronicler Niketas, who subsequently writes it down. It is a complicated narrative structure: the narrative structure of Baudolino's unlikely, but possible, world hides in the narrative structure of the chronicle set down by a trustworthy historical character, the Byzantine chronicler Niketas Choniates. It seemed impossible to transfer this complicated structure to radio form without disorienting the audience. The audience need to know that what they are entering is only a possible world, which the script accomplished in a different way: by having Baudolino himself write it. Therefore, Baudolino's story in the script for radio begins as follows:

Sound sample, beginning of Part 1

BAUDOLINO: I, Baudolino, the son of the peasant Gagliaudo and the adoptive son of Emperor Frederick, Anno Domini 1140, I am beginning to write my Chronicle Baudolini in the name of the Lord.

All five parts of the story end with Baudolino stopping the writing of his chronicle:

BAUDOLINO: You don't have to believe all the things I was telling you. Oftentimes do I babble about things I only imagine, but when the others nod, I come to believe them myself. Who knows today how it all actually happened? Only chronicles remained and those were scraped and rewritten... Oh Lord. This sigh ends the first parchment of the Chronicle Baudolini written by me, Baudolino, a sinner and a liar.

In the text of Eco's novel *Baudolino*, we discovered and preserved the basic narrative structure of a fairy tale. We can use the Slovak folk tale *Popolvár najväčší na svete* (Popolvár, the Greatest in the World) as an example: Baudolino, the greatest liar in the world. Popolvár sets out for a quest to find happiness: to conquer the copper, gold, and silver mountain. Baudolino sets out for a quest to find happiness: the empire of Priest John, an unlikely possible world. He finds three loves: Empress Beatrice, his wife Colandrina, and a forest being called Hypatia. Eventually, he disappears into the unknown – he disrupts the narrative structure of a fairy tale by casting doubt, by an unbelievable possible world:

PAPHNUTIUS: He left! A day passed, then a night, a whole month, but he never came back. No one has seen him since then. (*sigh*)
It seems that I, the blind Paphnutius, must finish his story.
Chorus, please!

SOUND: *Gregorian chant in the background.*

PAPHNUTIUS: All his life Baudolino was lying only with the noblest intentions, and that is why the Lord has been helping him. I think I know what he is trying to do somewhere far away at this very moment. He will find the nameless grave of his friend Abdul and erect a gravestone for him.

SOUND: *One toll of a bell with a chant.*

PAPHNUTIUS: Second – he will find the empire of Priest John, because he promised it to Emperor Frederick.

SOUND: *One toll of a bell with a chant.*

PAPHNUTIUS: And third – he will find Hypatia, who is the mother of his child and will protect them.

At the first glance, the adaptation of a literary text to a radio version might appear easier than its materialization into a visual version, but it involves a change of medium as well. Radio has revived the acoustic sensibility of the audience by presenting original demands on the acoustic atmosphere, the acoustic background of spoken word, and important situations realized only in sound. According to the Swiss radio drama theorist Marcel Merminod (a director at Radio Lausanne), “The sound, the accompanying music should not be the background, it should be the theme. The author should write his piece as a musical piece, freely compose voices, sounds and musical interludes, or consider them as a counterpoint to the work as a whole.”⁵ The critic points out the example of the Czechoslovak tradition, renowned for “intelligent, penetrating, and effective use of sound.” The cre-

ative team of Slovak Radio took up this tradition in two projects, one of them being *The Lord of the Rings* and the other *Baudolino*.

From this perspective, Umberto Eco is a peculiar phenomenon for analysis: he is a living author, and what is more, he is a theorist who has dealt with many aspects of adaptation as a form of intersemiotic and intrasemiotic translation on the theoretical level, above all in *Lector in fabula* (1979) as well as in the more recent *Saying Almost the Same Thing* (2003). In this article, we will be trying to compare the principles and opinions formulated by Eco in his theoretical works on adaptation and translation, but also on the means of composing a novel, with the possibilities of transformation into the medium of radio offered by his novel *Baudolino*. Based on the status quo of radio drama in the European context, to isolate one narrative plane of Eco's novel can be considered obsolete and outdated. A much bigger challenge is to attempt to reconstruct and remediate *Baudolino's* possible world and its elementary narrative structure in sound and music.

Multiple times and in different places, Eco admits that before he starts writing, he draws many sketches of the spaces in which his characters are supposed to be moving. He then gives these to the translators. In the case of *Baudolino*, these are the maps of countries where *Baudolino* and his friends travel, and they are also included in the book. This proves that space description forms a significant part of Eco's novels, and this part belongs to the objective narrator. Eco takes stock in his narrator, he identifies with him, which requires his presence in the radio adaptation. One aspect of the narrator is, therefore, related to the means of hypotyposis, through which the author achieves the effect of space vision. Hypotyposis is a rhetorical device, thanks to which visual phenomena can become evident. The effect of hypotyposis can be elicited by denotation (of a distance between two places), detailed description, enumeration (a classic example is Homer's catalogue of the armies before the gates of Troy), or the accumulation of events or characters, producing a vision of space where the events occur. Hypotyposis is one of the basic characteristics, the preservation of which is demanded by the original text. At the same time, the original text contains signals which indicate how suitable the individual parts are for transposition into the medium of radio. One kind of signal is the various forms of hypotyposis as a rhetorical device. In the text of *Baudolino* (the novel), we can find examples of almost all kinds of hypotyposis:

I spent weeks in endless deserts, on plains that stretched as far as the eye could see, and I always felt like a prisoner of something that surpassed the powers of my imagination. In my parts, when you walk through the woods in the fog, you

feel like you're still inside your mother's belly, you're not afraid of anything, and you feel free."⁶ (p. 28)

The fog and darkness play an important role in the novel and they are used several times. They also form a semantic element of interpretation, because, in the same way as space, the story and its veracity are foggy.

Another time, they were crossing, for a week, an ocean of sand, which rose like the great waves of the sea, and it seemed that everything moved beneath their feet and beneath the horses' hoofs.⁷ (p. 329)

At the beginning they advanced easily, because it really did seem they were in the fog of their home country, but after a few hours it was pitch black. The guides pricked up their ears to hear a sound of boughs, and when they could hear it no longer they surmised they had entered a clearing. The villagers had said that in those lands a strong wind blew always from south towards north.⁸ (p. 346)

They passed through the fog and once more saw the light of the sun.⁹ (p. 349)

An example of hypotyposis by enumeration and accumulation is the accumulation of abuse Baudolino throws upon Priest Zosimos:

That worm story was told to me by Zosimos! And it was Zosimos who also told me that, according to Cosmas Indicopleustes, in India horses don't exist! And it was Zosimos who told me of methagallinarii and those other beasts! Son of a whore, pot of excrement, liar, thief, hypocrite trimmer and counterfeiter, adulterer, glutton, coward, voluptuary, sodomite, usurer, simoniac, necromancer, sower of discord, cheat!¹⁰ (p. 222)

Another instance of accumulation occurs in the process of recounting all the different people and animals of the countries Baudolino and his friends travel in: skiapods, satyrs, Nubians, pygmies, and ponces.

While transferring the work to the medium of radio, we do not have the opportunity to preserve all the details, but we are trying to keep the rhythm of the story. However, radio offers sounds that can "display" space, so hypotyposis does not necessarily have to be verbal; it can transform and translate into sounds or an accumulation of sounds.

Sound sample: a picture of war

Another device is double reading, or intertextual irony, which needs to be adhered to while transcribing the novel, since it is an irreplaceable part of interpretation. In the novel, it is accomplished with a precise strategy, which produces inexplicit allusions to preceding works, producing hyper-textual irony. A quote is set into a different context and its register changes. In *Baudolino*, intertextual irony is centred on the level of the narrator and in the dialogue between Baudolino and Niketas Choniates.

An inexperienced reader may appreciate the rhythm and action of the text, but he will miss the discomfiting tremble induced by the literary character names, alluding to situations in other literary works and the entire treasure of European literature. The name Baudolino alludes to Marco Polo and his journey to China described in *The Million*, but also to the host of the funny television show Pipa Bauda, which is a television feuilleton about contemporary events. It points to the presence of feuilleton inserts in the text, which the narrator occasionally cannot help making; for example, the phantasmagorical Aladdin is the contemporary Bin Laden, but he also resembles Aladdin and his magical lamp that is hiding a Jinn. Again, the narrator proves his irreplaceable position in the text. He has several layers and several registers. There is an objective narrator possessing the key to hypotyposis by means of description and accumulation.

Another kind of narrator is the ironic narrator, the feuilletonist, who cannot resist the temptation to ironize or gloss ironically. This layer of the narrator should stay in the verbal form, it is impossible to transfer it into the accompanying sound. On the other hand, the role of the narrator is slightly expanded to include the attitudes of a few episodic characters, whose occurrence in the novel is only marginal.

The role of Baudolino in the radio version became duplex, just like the duplex role of the narrator in the original text. There is Baudolino living his story and Baudolino writing his story, ironically questioning and glossing himself at the same time. In fact, this duplex role of Baudolino was present in the novel itself, but it was in a slightly different, smaller dimension, suppressed by the character of Niketas. In the radio version, Baudolino rises a little from Niketas's shadow. We had to sacrifice the character of Niketas as the audience of Baudolino's story. However, we surmised that in the radio version, Niketas as an audience of one will be substituted by an audience of many.

As a conclusion – these are the means of remediation in the case of the radio remediation of Baudolino’s story:

<i>Baudolino</i> the novel	Radio remediation
History	Music
Niketas as an audience	Radio audience of multiple members
Niketas’s chronicle	Baudolino’s chronicle
Episodic and fantastical characters	Sounds – the acoustic depiction of characters

The written word expressing the entire historical layer in the novel – the historical plan, the wars, and campaigns of the German Emperor Barbarossa – was reduced to a frame and transformed into period music (Gregorian chant) and sounds.

When we allowed Baudolino to conduct dialogue directly with the audience and write his own chronicle (Baudolini), we lost the chronicler Niketas as an audience, but the duplex role of Baudolino, writing and living his story, shed some light on the more human side of his character. In the novel, Baudolino has many human traits which the author wanted to stress in multiple situations: the cunning of a simpleton, the confabulation of lies, the refusal of war, cruelty, and brutality. It is this very human and intimate picture that is stressed in the sound portrayal of Baudolino, perhaps at the cost of his literary allusions.

Several episodic characters were lost because the medium of radio is unable to play so many voices while still allowing the audience to discriminate between them. When we sacrificed the chronicler Niketas as an audience, we gained multiple radio listeners (more than one for sure), achieving the goal of mass media availability and of acquainting the audience with an artistic text. The book became widely accessible in the radio version.

As a conclusion, we will try to answer the question on the relation between semiotic recoding and remediation. The analysis we followed in this article suggests that remediation could be an umbrella term for recoding.

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- 1 Guillory, J.: Genesis of the Media Concept.
- 2 Eco, U.: *Dire quasi la stessa cosa (Saying Almost the Same Thing)*. Milan: Bompiani.
- 3 *Ibid.*, p. 11.
- 4 McLuhan, M.: *Understanding Media*, 1964, pp. 23–24.
- 5 Merminod, M (director at Radio Lausanne): *Struttura del radiodramma*. In: *Radiodramma*, Nos. 9–10, 1950, p. 131.
- 6 Eco, U.: *Baudolino*, Boston, Houghton Mifflin Harcourt, 2003, p. 28
- 7 *Ibid.*, p. 329.
- 8 *Ibid.*, p. 346.
- 9 *Ibid.*, p. 349.
- 10 *Ibid.*, p. 222.

**5. Cooking *Obvia Gaude* and *Talis Quadra*:
On the Creative Cannibalism
of the Slovak Baroque Wedding Wish**

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Abstract: This chapter studies the principles of creative cannibalism as proposed in the field of digital poetry by the American literary scholar Chris T. Funkhouser. Its focus is on the research of processes occurring in the transfer of a Slovak Baroque pattern poem from a print format into a digital medium, specifically in the format of a touch application. The *Obvia Gaude* and *Talis Quadra* touch applications, created by Lubomír Panák and Zuzana Husárová, have several other functions that were added to the original visual form like reader interactivity and playfulness, music, changes in shape, virtual 3D dimensionality, and the possibility to intervene in the text. The term “anthropophagy” and the practice-led research/research-led practice methodologies are applied in order to research the appropriation of the original work and its creative transformation into a new digital literary piece. The chapter also provides a contextualization of Slovak Baroque poetry and mentions some cases of appropriation in electronic literature and other digital reworkings of Baroque pattern poems.

Introduction

Digital writers have, for more than five decades, constantly found lively ways to present poetic expression through computers by employing methods inaccessible to print-based writers. The use of constraint and visualization in innovative processed writing certainly occurred before the digital age, but these procedures and techniques, in that prehistoric age, so to speak, only partially correspond to the groundwork laid out and employed by digital poets thus far.

Funkhouser, 2012, p.212

The American literary scholar Chris T. Funkhouser suggests in his book *New Directions in Digital Poetry* that digital literature is created and read in different ways than print literature, even in cases when the textual content would be the same. In digital literature, the use and rendering of digital processes “makes an inherently distinctive impression on its viewers, inducing varied and atypical effects” (Funkhouser, 2012, p. 213). In his argumentation, Funkhouser primarily refers to the innovative process of the experimental literary genres: visual/figural poetry, Dadaism, and concrete poetry and literature that is based on constraints. Funkhouser proposes that hybrid, inter/multimedial, programmed literary works “typi-

cally encompass more than a singular aspect of historical forms and typological qualities” (Funkhouser, 2012, p. 224) and are based on exploiting “elements of mathematics, computer science and art, but many other conceptual approaches are applicable” (Funkhouser, 2012, p. 227). According to Funkhouser, some authors in the field of digital poetry follow the methods typical already for the historical avant-garde, while others implement or invent the approaches known only from the digital era (See Funkhouser, 2012, p. 232).

Funkhouser is definitely not the only author who leans on his relationship with the older innovative forms of writing when defining and analysing digital literature. A publication by Giovanna Rosario called *Electronic Poetry: Understanding Poetry in the Digital Environment* begins with a chapter focusing on the relationship between writing and visual imagery, starting with the Western tradition of visual poetry from Ancient Greece; then the Middle Ages; the Renaissance; the seventeenth, eighteenth, and nineteenth centuries; and finally the avant-garde and video-poetry. The Norwegian author Espen Aarseth writes about examples of *ergodic literature* (literature that requires non-trivial work by the reader) in his well-known publication *Cybertext* from 1997. Aarseth documents the history of ergodic literature using the Book of Changes, *I Ching* from the Western Zhou Dynasty, from which he moves on to Apollinaire’s *Calligrammes*. The connection of digital literature with older experiments – an effort to search for what links it to these older practices and what distinguishes it from them – has been quite frequent in the process of defining the field of digital literature. This is proven by relatively well-known works by scholars of digital literature, including Roberto Simanowski, who documented such a connection in his text *Concrete Poetry in Digital Media: Its Predecessors, its Presence and its Future**** (2004); Jörgen Schäfer, who wrote about it in his publication *Literary Machines Made in Germany: German Proto-Cybertexts from the Baroque Era to the Present* (2006); Florian Cramer, who focused on the common links between older innovative forms and digital literature in his work *Exe.cut[up]able statements: Poetische Kalküle und Phantasmen des selbstausführenden Texts* (2011); and Andrzej Pająk, who presented such tendencies in Polish literature in his paper *Polish I: The Polish Way to E-Literature from the Baroque to the 21st Century* (2010).

When conducting research about the oldest “predecessors” of digital literature in the Slovak geo-cultural region, I found the work *Enneas diversi generi epithalamiorum, solennitati Nuptiarum (Nine different types of epithalamia, to a wedding celebration)*, a work written by the Slovak author Matej Gažúr, who self-published this piece in Trenčín in 1649. This

work is now archived in a National Szechenyi Library in Budapest. Due to its restricted access (its scan is accessible only from a dedicated terminal) and when thinking about the ways how to make this Baroque work public, the programmer Lubomír Panák and I decided to use the principle of a creative reworking of the original through contemporary technology with multimedia content. We chose the method of practice-led research/research-led practice, where the basic idea is the thesis that creative practice and research feed on each other, are melded, and exist in a reciprocal relationship. This method proposes the idea that creative practices can lead to propositions and even to solutions of some research questions and, vice versa, states that research is important for the creation of art. Hazel Smith and Roger T. Dean define this approach as follows:

The term practice-led research and its affiliates (practice-based research, practice as research) are employed to make two arguments about practice which are often overlapping and interlinked: firstly, as just indicated, that creative work in itself is a form of research and generates detectable research outputs; secondly, to suggest that creative practice – the training and specialised knowledge that creative practitioners have and the processes they engage in when they are making art – can lead to specialised research insights which can then be generalised and written up as research. [...] Research-led practice is a terminology which we use to complement practice-led research, and which suggests more clearly than practice-led research that scholarly research can lead to creative work. (Smith – Dean, 2009, pp. 5, 7)

In our approach, we employed both practice-led research and research-led practice, according to the phase of the work's creation and the research state. The methodological background for defining the specifics of particular works was provided by media-specific analysis, proposed by the American scholar N. Katherine Hayles (2002). Media-specific analysis has been described as “a mode of critical attention which recognizes that all texts are instantiated and that the nature of the medium in which they are instantiated matters” (Hayles 2004, p. 67).

In this chapter, the problematics of differences between the print and digital versions of a particular work will be the focus of research. For that, the following questions will be answered: “What theoretical material can be suitably used in the discourse of literary studies and media studies for the description of the processes of appropriation and repurposing in digital literature?”, “How can a new media work be created with the use of an original work's elements so that the new work can represent the poetics

of the original piece?”, and “Do the ways of reading a work change if the work is not only remediated but extra media elements are also added to the original print form?”

Creative Cannibalism

This chapter is based on an analytical approach to the study of digital literature that was proposed by Chris Funkhouser and is called *anthropophagy* or *creative cannibalism*. Through the perspective of anthropophagy in his book *New Directions in Digital Poetry*, Funkhouser offers a theoretical instrument for dealing with those digital literary works that use appropriated material in different forms. Funkhouser’s position is quite close to the theory of remediation, but thanks to its specification he offers a more suitable instrument for the naming and categorization of the processes that we used when initializing the work.

The theory of remediation by Bolter and Grusin (1999) is founded on media theory, and as a broadly used term it defines the process of mutual influence and information takeover between old and new media. This defining characteristic of new digital media, as Bolter and Grusin write, is so widespread that “we can identify a spectrum of different ways in which digital media remediate their predecessors, a spectrum depending on the degree of perceived competition or rivalry between the new media and the old” (1999, p. 45). From Bolter and Grusin’s perspective, the focus lies more on the introduction of common intersections between the formal characteristics of the media rather than on the creative process of the work’s formation. Above this, according to Roberto Simanowski, anthropophagy, rather than remediation, “allows us to link inter-media relationships to an instructive example of appreciating and appropriating the Other in post-colonial history” (Simanowski, 2010, p. 159).

Funkhouser bases his propositions of the use of anthropophagy in digital poetry research on the words of the Brazilian founder of concrete poetry, Augusto de Campos, who understands anthropophagy as an anthropological metaphor. In their understanding of cultural anthropophagy, both Chris Funkhouser and de Campos, as well as other Brazilian concrete poets, refer to Oswald de Andrade’s *Manifesto Antropófago* from 1928. In his manifesto, de Andrade, a Brazilian poet and polemicist, differentiated between cannibalism in the literal sense and ritual anthropophagy, during

which the cannibal eats his enemy to gain his qualities (de Andrade, 1928, online). According to de Campos, the cultural anthropophagy proposed by de Andrade describes the case of cultural cannibalism of Western European culture in Brazil. As a consequence of such cultural cannibalism – a “devouring” of the dominant culture – the creation of something new was supposed to happen.

De Andrade’s manifesto refers to the arrival in Brazil of the Portuguese priest and missionary Pero Afonso de Sardinha in the middle of the sixteenth century so he could become the Bishop of Bahia. Natives from the Aimorés tribe ritually ate him as a form of protest against the invasions of Western culture and Christian religion. This historical event, cannibalism as a form of protest against colonization, became a symbolic model which several Brazilian artistic movements in the twentieth century identified with. De Andrade’s manifesto served as a model for the movement of Concrete Poetry; its influence on his work was proclaimed by de Campos in one interview (1995). At the same time, the manifesto served as a foundation for the Brazilian cultural movement of “tropicalismo”. One of its members, Gilberto Gil, who was later also the Minister of Culture, said that their approach was defined as a “cannibalistic response of swallowing what they gave us, processing it, and making it something new and different. We saw the cultivating of new habits and manners from the outside as a way of nourishing ourselves, not just intoxicating ourselves” (Dibbell, 2004, online).

The term *cultural cannibalism*, as a symbolic strategy of dealing with the other culture through its “digesting” and a reference to de Andrade’s manifesto, was also used in the study *Mobile Technology Appropriation in a Distant Mirror: Baroque Infiltration, Creolization, and Cannibalism*, which deals with the appropriation of technologies in Brazil. The authors of the chapter understand cannibalism as the creative use or subversion of technology for the user’s own needs and for reaching her own goals. (Bar-Pisani-Weber, 2007, online). Cultural cannibalism as described by Oswald de Andrade provides three important slogans for the tendencies in digital literature:

“I am only interested in what is not mine. Law of human. Law of the antropophagus”;

“We had justice as codification of vengeance. Science as codification of Magic. Anthropophagy. The permanent transformation of Taboo into totem”;

“We are concretists. Ideas take hold, react, burn people in public squares. Let us suppress ideas and other paralyses. For scripts. To believe in signs, to believe in instruments and stars.”

The first slogan refers to the appropriation of the found material. Appropriation is a widespread technique in digital literature, where it follows other literary movements like Dadaism, Concretism, and conceptualisms. In the second slogan, the sentence relevant for the discourse of digital literature seems to be: “The permanent transformation of Taboo into totem”. Funkhouser refers to this slogan in the sense of presenting the ideas of transformation of thinking about digital technologies in literary discourse. In the contemporary era, one does not treat digital technologies as “taboo” for poetic expression; they have become used for the creation and remediation of poems (electronic literature) and have become crucial to the process of spreading poems on the Internet in textual form (on servers, blogs, and social networks) as well as for the pragmatic reasons like communication with readers, marketing, and information about events.

The third slogan, “We are concretists”, serves as the grounds for the interconnection of a particular sign in concrete poetry and a particular sign in digital literature. In the 1980s, de Campos started to use in his works the digital technologies that supported thinking about the sign as “always tied to the semantics of the material in order to achieve what the poets would call an ‘isomorphism’” (Clúver, online). But whereas in concrete poems we can talk about the interconnection between the textual expression and the visual or spatial construction so that “no part of the text could be moved without having the poem collapse – which is, after all, the goal of every poet” (Clúver, online), the changes of sign positions and changes of the visual structure in digital poetry are often considered crucial for building the poetics, semantics, and aesthetics of the piece.

According to Funkhouser, the discourse of electronic literature offers a substantiation of why we can consider the practices of authors of electronic literature through the prism of anthropophagy. Regarding the dualism of cultures (stated in the manifesto), in this chapter we can think about the culture of printed text (the Gutenberg Galaxy) and digital culture. Simultaneously, it is possible to apply this dualism to the difference between several semiotic systems and the resulting digital intermedia piece. Funkhouser thinks about three types of anthropophagy in digital literature: (1) transcreation, which uses and newly defines the language of the “original” texts; (2) the direct inclusion of external elements, including several languages, images, and symbols, when creating an original work; and (3) in

the technical presentation of the work, in searching for new technological/navigational structures and when appropriating the code language (See Funkhouser, 2012, p. 230).

The external material appropriated from other sources gains a new identity in all three types of anthropophagic processes; it becomes a part of the digital work. The first two types represent the practices introduced by Dadaists, Concretists, and authors of conceptual literature. The last type is specific only for the works created with the use of technologies. This third type is the type we used in the creation of the *Obvia Gaude* and *Talis Quadra* mobile applications that are available on the Android mobile platform and freely downloadable through Google Play. In these mobile apps, we creatively cannibalize Baroque poems by Matej Gažúr and thus create works that contain the text and visual of the original wedding wish; however, we also add other functions and media and thus create a new intermedia, an interactive work. It is therefore not a remediation in the sense of the translocation of the work from one medium (printed page) to another (a digital medium, in our case a tablet), which would correspond to the practice of the digitalization of literature. The applications create, also with the inclusion of the content and form of the Baroque poem, a new digital work that contains functions and media contents that could not exist in the printed medium. In the context of digital literature, anthropophagy is not perceived as the cannibalism of other culture in the sense of foreign culture. Gažúr's piece was created in Slovakia and refers to the Slovak folklore context. The other culture is here understood mostly as the culture of the printed text, so a formal criterion of the textual materiality is applied. Above this, the culture from which *Enneas* stems is a culture that is historically distant; the work is written in a foreign language (Latin) with a relationship to folklore, and it has an occasional, celebratory character. The process of the adoption of the other culture is understood as the acceptance, understanding, and reworking of the printed text (or other medium) and its use as a model for the initialization of a new piece.

E-Literary Cannibals

The approach that is termed here as “cultural cannibalism” has been interconnected with electronic literature since its very beginning (although this term was not applied), specifically in the second historically

known work of electronic literature. In 1959, Theo Lutz, a German student of computer science at the Technical University in Stuttgart, programmed a generative poem on a ZUSE Z 22 computer whose main source text was Kafka's novel *The Castle*. The final outcome, named by Lutz in his eponymous essay as *Stochastic Texts*, was created by the programmed algorithmic operations. The random generator created simple sentences out of sixteen nouns and sixteen predicates (texts from *The Castle*) and added the following sentence particles: the verb "to be" (in German "ist"), grammar articles, some pronouns (each, none, no, and so on), and negative forms. Lutz's project was transformed in 2005 by the German digital artist Johannes Auer into an Internet-based version. In his project *Free Lutz*, besides coding the project into a similar form as the original, Auer added other functions as well. In addition to reading the version with Lutz's text, the user can continue to the version where she can directly write her text into the empty spaces for a noun and adjective and choose the gender (male, female, neutral) based on the language (there is no gender choice in the English version). At the moment, the *Free Lutz* project is available in five language versions: German, Polish, Portuguese, French and English. Lutz's generative poem changed Kafka's words to keywords that in this appropriated version gained a new status based on the syntactic context in which they appeared. Based on the generative essence of *Stochastic Texts*, there is a constant formation of new sentences, which means that we are dealing with new recontextualisations of Kafka's words. In Auer's project, the user gains a new function; besides the reader and user of generative process, she also becomes the interactive user, inserting new keywords and participating in the work. However, we cannot talk about the participant as if she were an author because the authorship belongs to Auer, who stands behind the concept of this Internet work.

In addition to the cannibalistic relationship between the printed and digital text (text as the only sign), in electronic literature there exist examples of the use of other media; either in the form of building the work thanks to the appropriation of several semantic signs (text, image, sound) or in the transformation of the originally printed text into a "post-alphabetic object" (Simanowski, 2010, p. 160), when the visual design of the text changes so that new visual-textual connections come into being. One example of this is *The Sweet Old Etcetera* by Alison Clifford from 2006. Here Clifford adapts the poetry of the American poet E. E. Cummings. As a response to the reader's interaction with the visual poem on the screen, initially a tree "is drawn" from the textual material and then a whole landscape is gradually portrayed. Cummings's oeuvre is based on the perception of textual layout

as a semantic element, but Clifford's work sets the text as if it were paint. The red background of *The Sweet Old Etcetera* reminds one of a background painted with watercolours and the gradual inclusion of the images of the tree, hills, and clouds, all formed out of letters, invokes child's play. The sound layer corresponding with moments of the reader's interactivity even highlights this experience of play with the text as if it were the material for intermedia construction. The aim of the author was to respond to print poetry in a fresh way in order to "release it [the printed page] from the confines of the physical page and bring it into a digital environment in a playful way" (Clifford, 2006, online). While the digital intermedia piece *The Sweet Old Etcetera* cannibalizes the poetic world of only one author, the generative piece *Sea and Spar Between* by Nick Montfort and Stephanie Strickland appropriates text from the works of two American authors of the nineteenth century: poems by Emily Dickinson and the novel *Moby Dick* by Herman Melville. This poetic generator produces around 225 trillion stanzas, arranged on a toroidal surface. This generator produces text from the appropriated lexicons that comprise the works by Dickinson and Melville. Due to its light-blue background and dark-blue text, the visual side reminds one of the wide sea, where the movement on the interface rolls and variates the text. The mutually generated relationships between the words coming from both authors' works open the space for a new poetics based on the results of what was formed in the process of generation as well as in the concept of generativeness itself. The principle of a generative art in general is closely related to the idea of information aesthetics proposed by Max Bense (the teacher of Theo Lutz). He writes in *Text und Kontext* that iteration as a basic aesthetic process reveals the fact that "the fragment, torso, ruin and decomposition in general can mediate more aesthetic information than the whole work, since these fragments and ruins are signs of signs, information of information, so they are creations of iteration" (Bense 1967, pp. 34–35, trans. Husárová).

The constantly created new combinations of texts, iterations of relationships of textual materials in *Sea and Spar Between* that are formed as results of the programmed algorithms, force the reader of this digital work to think about the text as a constantly regrouping entity that is not only in a constant process of flux but also in constant transformation. Constant transformation is a principle not only of the final work but also of the whole concept on which the work is based. This work is explicitly offered under a free software licence and its authors explicitly invite others to various sorts of reusing and modification. Thanks to the publicizing of the code and the glossing, the authors support the initialization of new cannibalistic

projects. Here the printed texts and the authors' code are both appropriated. These reuses have been done so far: the translation of *Sea and Spar Between* into Polish, called *Między Reją a Morzem* (by Monika Górską-Olesińska and Mariusz Pisarski), and the work *House of Leaves of Grass*. In *House of Leaves of Grass*, Mark Sample connected the phrases from the experimental novel *House of Leaves* by the American author Mark Z. Danielewski with Walt Whitman's cult collection of poems *Leaves of Grass*. The authors of the new versions also worked with changes in the code layer; they replaced something from the original code, and in the case of Sample's reworking, the lexicons of Dickinson and Melville were replaced with the lexicons of Whitman and Danielewski.

Baroque Literature on the Menu

The works of Baroque poetry served in particular for several contemporary literary researchers as examples of the demonstration of the widespread tradition of concrete, visual, and combinatory literature, or as examples of some of the principles on which electronic literature is based, such as permutation and other combinatorial methods. Despite the fact that Aarseth does not directly deal with Baroque literature, his conceptions of ergodic literature and cybertext served as a perspective for several examples of a Baroque literature analysis even in Poland (Andrzej Pająk, 2010; Mariusz Pisarski, 2010). The Baroque literature influenced by Kabbalah (*ars combinatoria* by Athanasius Kircher; *Maria Stella* by Juan Caramuel y Lobkowitz; *Coelvm Liliveldense* by anonymous; *Coelum Carmelaem* by Paschasius à S. Ioanne Evangelista; and *Systema Infinitum* by anonymous) is depicted by Florian Cramer (2011) in research on algorithmic and stochastic poetry. Roberto Simanowski (2004) used the examples of works by Baroque authors ("labyrinth poem" by Johannes Kankel from Stockholm, a "figurative poem" devoted to the wedding celebration in Bremen in 1637) to demonstrate the existence of predecessors of concrete poetry several hundred years ago. Jörgen Schäfer (2006) understands combinatory literature as a predecessor of text generators. He writes about two approaches: on the one hand about the tradition of language games, puns and anagrams, palindromes and "protean verses" (e.g. Quirinus Kuhlmann), and on the other hand about the mechanic "machines" generating the text (*Fünffacher Denckring der Teutschen Sprache* by Georg

Philipp Harsdörffer from 1651 was supposed to mechanically reproduce the creation of German words thanks to a mechanical apparatus consisting of five moving rings containing various word-construction particles.). Schäfer says that many Baroque authors in the German-speaking parts of Europe “were experimenting with literary forms that did not only consider a literary text a symbolic expression of a person’s subjectivity but also considered a text as determined by the level of programming and processing of signs” (Schäfer, 2006, p. 5).

Rudolf Brtáň, a Slovak literary researcher specializing in the Baroque era, connected the literary approaches of Slovak poets with European tendencies in saying that “even Slovak poets, whether at home or abroad, built such Latin poems according to the examples of other European poets” (Brtáň, 1971, p. 75). Based on Brtáň’s statement about the inspirational tendencies of the Slovak Baroque authors by other European trends (many of them were influenced mostly by the German tradition), Schäfer’s declaration about the Baroque authors can even be applied to the Slovak cultural environment. Baroque poems in Slovakia contained the richness of poetic figures (e.g. chronograms, topograms, anagrams, acrostichs, etc.), and the poets also worked with the visual layout of stanzas and formed the textual material into various visual objects. They created verses with a graphic layout connected, for instance, with the theme of food and eating (the shape of an egg or table); *Petatus* (the shape of a hat) by Michal Sinapius Szokolczensis and *Turricula Poëtica* (a shape of sea snail) by Elias Telconius Neczpallensis were also discovered. Poems in the shape of pyramids were devoted to the rulers as *Inscriptio Pyramidalis*, and later on in the Romantic period the famous Slovak author Samo Chalupka created a poem in the form of an inkstand called *Atramentarium Poëticum* (See Brtáň, 1971, pp. 90–91). In her book *Zabúdané súvislosti (Štúdie o slovenskej literatúre 17. – 18. storočia)* (Forgotten connections: studies of Slovak literature of the seventeenth and eighteenth centuries), the Slovak researcher Gizela Gáfriková analyses two figural poems from the manuscript of the Révay family from Sklabina Castle in northwestern Slovakia. In this case, which is rather unique, all the texts in the manuscript are written in the pre-codified Slovak language with the exceptions of two poems in Hungarian and several in Latin. All of the more than thirty occasional texts, among which two figural poems appear, were written between 1686 and 1699 on the occasions of Christian holidays and Révay family celebrations. The text of one figural poem is formed into the shape of a lily, the text of the other figural poem creates a visual representation of a rose. Most of this figural poetry has an occasional character (and can be considered to be occasional po-

etry), which means that it was composed for a specific occasion and often devoted to the nobility or rulers of a particular geographical area.

The American artist Dick Higgins defined the term *pattern poetry* as “the commonest term for visual poems before 1900 in which the letters, words or lines are arrayed to make up visual images” (Higgins, 1987, p. 232). The term “pattern poetry” is an analogue of the term “figural poetry”, which is used more often in the Slovak cultural context. In his publication entitled *Pattern Poetry*, Higgins documented and classified more than two thousand works from various language areas, mentioning three Slovak authors – Juraj Buchholtz, Juraj Lány, and Martin Mudroň. Some of the Baroque and Mannerist pattern poems, or *poems-images*, as Gáfriková calls them (2006, p. 160) in the Slovak cultural context, also contained *letter games* (in Slovak: *literové “hračky”*, see Brtáň, 1971, p. 73).

Gáfriková writes that the European Baroque poetics followed the tendencies of the Renaissance and Mannerist poetry in formal artistic approaches, focusing on the visual and graphic layout of the text. She continues, stating that “the symbiotic connection of the visual and verbal principles (whose roots can be traced back through Mannerism and Middle Ages to antiquity) became, in the most poetically sovereign cases, an exciting search for the magical symbolical relationship between the word and the image; however, in common writing practice, it often only had a descriptive form” (Gáfriková, 2006, p. 159, trans. Husárová). Gáfriková also stresses the fact that during the Baroque era, more artistic expressive means were connected almost exclusively with occasional poetic works written in Latin (rather than in the pre-codified Slovak), since Latin poetry had a more elaborated theory and practice due to its long-lasting humanistic tradition (2006, p. 159).

Devour Your *Enneas*...

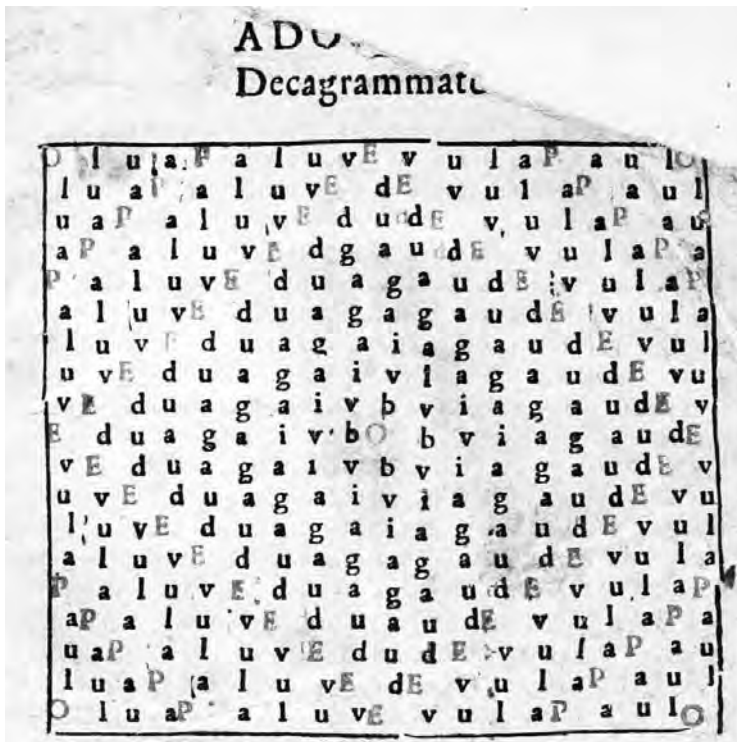
Enneas diversi generi epithalamiorum, solennitati Nuptiarum (Nine different types of epithalamia, to a wedding celebration) was written by the Slovak Baroque author Matej Gažúr and self-published in the town of Trenčín in 1649. As the title says, it is an “epithalamium” – a celebratory, congratulatory, occasional lyric, or a song, or a poem written for a wedding celebration to honour the bride and groom. In this work, we can talk about a mannerist wedding wish, the individual nine poems celebrate the

positive characteristics of the newlyweds and the collection itself is written in a cheerful tone. *Enneas diversi generi epithalamiorum* was supposed to celebrate the wedding of Paul Ostrosith (Pavol Ostrošič) and Eva Uifalusi (Eva Ujfalusiová). According to the journal *Slovenské pohľady* (No. 5 from 1888, p. 109), Gažúr was the tutor and teacher of Paul Ostrosith and his two brothers living in the town of Ilava. Their father Štefan Ostrosith not only gave a house to Gažúr, he also secured a yeoman's status for him.

Enneas diversi generi epithalamiorum is a collection that consists of nine wedding lyrics and offers a wide spectrum of formalistic principles, both in the form of "letter games" and "pattern poetry". Most of the letters are in black, but sometimes the special characters are in red. In many cases, the poem titles cannot be read in full, due to the book being damaged in its upper part, so I use the titles based on what remained of them. The first two poems – *Distichon (Couplet)* and *Tetrastichon (Quatrain)* – use the figure of "topostich" (the incorporation of Latin numeric characters into the words of verses and their marking in red). When the red numerals in *Distichon* are counted together, they form the year of the wedding – 1649. When the red numerals in *Tetrastichon* are counted together, the resulting number is 5598. According to the calendar reform of the French religious leader and scholar J. J. Scaliger in his book *Opus de emendatione temporum* (1583), the year of world creation was 3949 B.C. The year 5598 is the total sum of the numbers 1649 and 3949, which means that Gažúr was probably influenced by Scaliger's scholarship. In the poem *Hexameter*, Gažúr wishes many gifts for the young Ostrosith, the last verse of the poem goes like this: "As many stars there are in the sky, as many gifts should you, nobleman, get." The fourth poem, *Correlativum panegyricum*, offers the possibility to read the text not only horizontally but also vertically by joining four words under each other into verses. The first pair of words describes Eva, the second pair of words describes Paul (e.g. "exceptional by opinion / to the magnificent by lineage"). The poem *Pertextum votiuum* is built on the same principle of the vertical pairing of words in verses. The sixth poem, *Decagrammaton* (Ten letters), consists of a pattern poem in the shape of a square, built from the letters of the phrase "Obvia Gaude Evula Paulo" (in a non-literal meaning: "Be happy from what comes your way, Evula Paulo"), where the initial letters O, E, and P are in red. After this pattern poem follows the whole poem, in which the phrase "Obvia Gaude, Evula! Paulo" forms the last verse. The seventh poem, *Sponsum alloquens* (The intercession to the groom), contains another pattern poem, in this case a rectangle where each line consists of the sentence "Talis Quadra pii sit tibi norma Tori" ("This Square should be your model of a Sacred

marriage/marriage bed”). This sentence is the last verse of the intercession. The poem *Heroicum* is in honour to the good wife – its central part is formed by one question and answer in each verse and the general idea is similar to old sayings (e.g., “Are you worried with sorrow? Open up, your wife gives you advice. / Are you sick? The doctor leaves, your wife sits next to you”). The ninth poem, *Ad Nuptias inuitans*, is the wishing of the best to Paulo and Evula. The last verse finalizes the epithalamium: “Mars should not obstruct, Eros should help, and Eris should restrain.”

The playful character of the poems with a focus on the formalistic principles forces the reader to involve the combinatorics and search for the hidden, encrypted meanings. Jozef Minárik, a Slovak literary researcher specializing in Baroque literature, writes that in the atmosphere of Baroque art the aim was to “attract, intrigue, excite, disturb, seize, impress, shock, and attack the human imagination, feelings, and senses” (Minárik 1971, p. 123, trans. Husárová). Minárik continues, stating that the “normal state of Baroque was movement, dynamics” (Minárik 1971, p. 124, trans. Husárová),



Matej Gažúr – from *Decagrammaton*, 1649

which manifests itself mainly in two pattern poems – *Decagrammaton* and *Sponsum alloquens*. The Baroque artists had a tendency to express dynamics, energy, “the conflict of powers, the rhythm of movement, and the course of time” (Černý, *Barokní divadlo v Evropě*, p. 516, in Minárik 1971, trans. Husárová), which some of them managed to capture thanks to the use of the visual dimension and the creation of the *poem-images*.

Even though Gažúr’s approach in the poem *Decagrammaton* shows an imagination of the “physical”, not only (semantic) textual dynamics, the author could not have had the chance to liberate the text from the two-dimensional paper layer. Under the pattern poetry follows the poem:

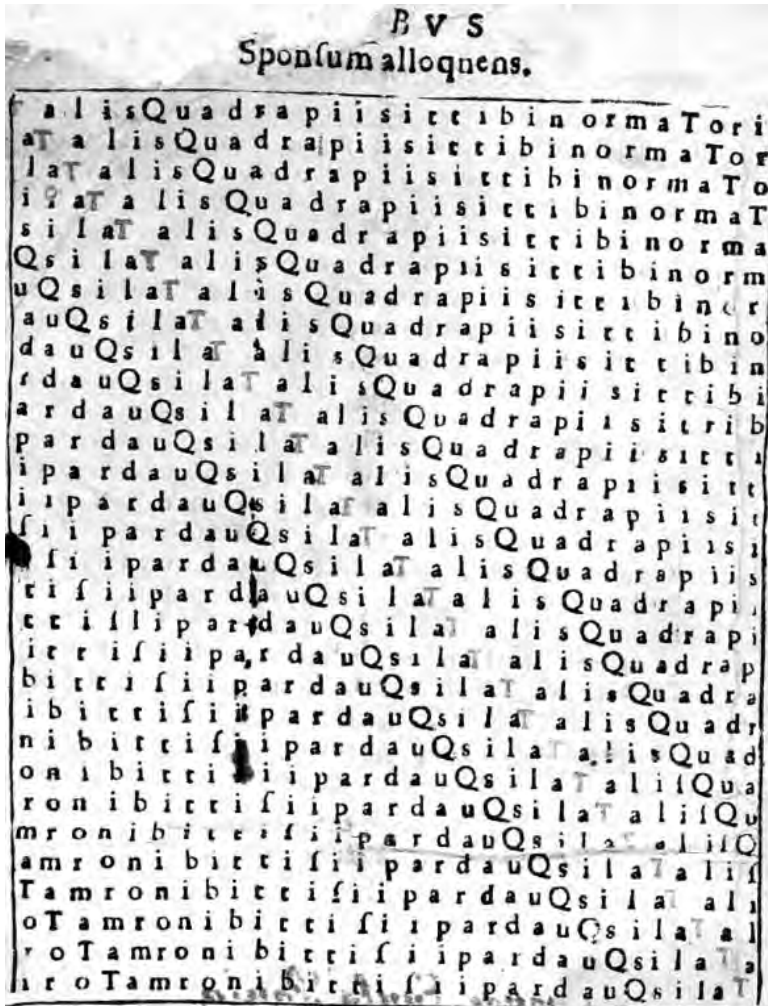
Si maus Lectoramico, retine hoc Dodecagrammaton¹:
 Sin bona Fatá
 Almán: Sponsis.
 Aut hoc Tetradecagrammaton²:
 Tritia Sponsus
 Sponsaq, pellant.

ie. Obvia gaude, Evula! Paulo.

A translation into English based on a translation from the Latin into Slovak by Laura Pachterová could be the following:

If you wish, dear reader, seize these twelve letters:
 That the married
 Have a good fate.
 Or seize these fourteen letters:
 Bride and groom
 Must rout misery.

That is: Be happy from what comes your way, Eva! Paul.



Matej Gazúr – from *Sponsum alloquens*, 1649

Under the pattern poem in *Sponsum alloquens*, this text appears:

[Cubo Vereres Virum bonum, atq; sic etiam eius
 Thalamum, compararunt, quòd undiquaq; sibi
 constet, & quæcunq; inciderit Fortna, non
 mutat animum. Sic in hoc Cubo incipiendo
 à litera magna T, lege dextrorsum, sinistrorsum,
 sursum, deorsum, semper habebis hunc Pëtametrũ;
 Talis Quadra p̄st̄ tibi norma Tori.

A translation into English based on a translation from the Latin into Slovak by Laura Pacherová could be the following:

In the square respect a good man, they should also
 compare his marriage/marriage bed, since whichever
 Fate meets him, he does not change his spirit.
 So in this square you have to begin with the capital letter T,
 read from the right, from the left, from above, from below,
 you always get this pentameter:
 This Square should be your model of a Sacred marriage/marriage bed.

Digest Your *Enneas*...

There were several reasons for choosing this Baroque work as a proto-text for the creation of freely available digital pieces:

1. It is one of the oldest experimental works in the Slovak literary tradition.
2. From today's perspective, this work can be perceived as being similar to the experimental expressiveness in the literary tradition.
3. It is kept in a Hungarian library and almost nobody in Slovakia knows about this work.
4. Only very few literary researchers have mentioned in their texts that this work exists, and they always mentioned it just marginally (like other figurative poems, it is not part of the Slovak Baroque canon).
5. It has not been reproduced in any previous publication, which is necessarily due to its visual form.
6. Due to its aesthetics, this work is suitable as a pretext for a digital work.

For its publication and accessibility and its recontextualization in relation to historical experimental tendencies, and in an effort to see how the text can behave as a really “physical” dynamic, *Lubomír Panák* and I decided to “creatively cannibalize” this pattern poem. Our creative approach was based on the idea of movement, rhythm, and the inclusion of the senses on which Baroque art is established. We wanted to use pattern poems from *Enneas* in such a way that this idea transforms from the layer of textual construction and its semantics into a “tangible” layer. Our approach consisted of an effort to “really experience” the dynamics and movement and “read” the piece through sensual experience; Maribeth Back in such

a context writes about “multisensory reading” (2003), and Janez Strehovec writes about “not-just-reading” (2012). Panák programmed the *Obvia Gaude* and *Talis Quadra* touch applications on the Android mobile platform and both are online for free from Google Play in the Entertainment section.

Create Your Own *Obvia Gaude*

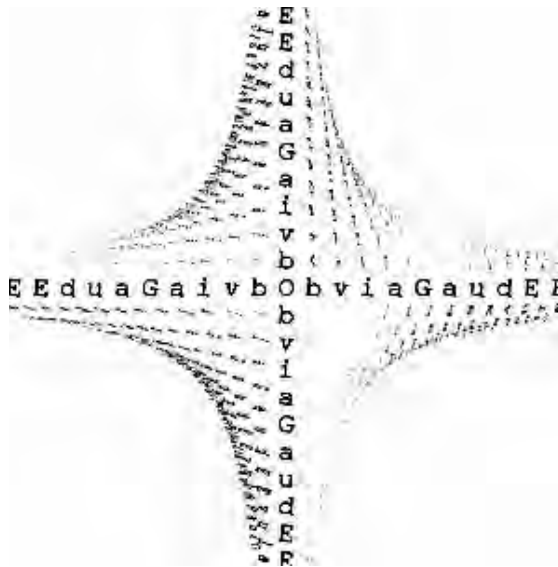
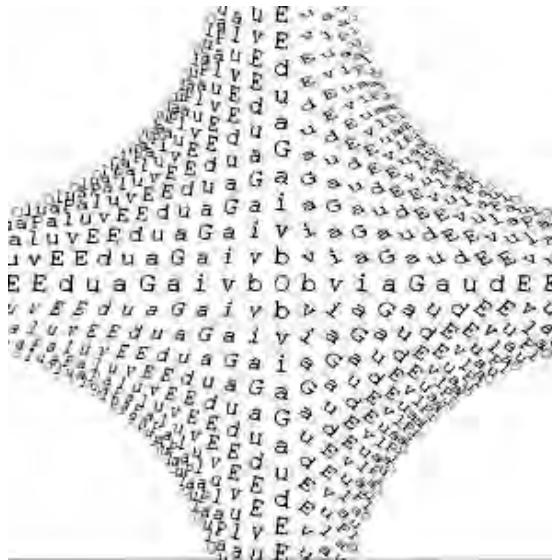
In *Obvia Gaude*, we rewrote/rebuilt the visual pattern of *Decagrammaton* so that both look alike when *Obvia Gaude* is in its static form. The poem is visually structured as a square consisting of equally spread letters that form the Latin expression “*Obvia Gaude*” (in a non-literal meaning: “Be happy from what comes your way”) and the names *Evula* and *Paulo*. All the letters are in black, except for the initial letters O, P, and E, which are in red. The red Es visually divide the square into a central square (formed by letters building the phrase *Obvia Gaude* that comes from the central O) and four triangles in the corners (creating the names). The dividing letter E belongs both to the name *Evula* and to the phrase “*Obvia Gaude*”. The expression “*Obvia Gaude*” appears in its fullness only in the vertical and

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O l u a P a l u v E v u l a P a u l O
O l u a P a l u v E E E v u l a P a u l O
l u a P a l u v E E d E E v u l a P a u l
u a P a l u v E E d u d E E v u l a P a u
a P a l u v E E d u a u d E E v u l a P a
P a l u v E E d u a G a u d E E v u l a P
a l u v E E d u a G a G a u d E E v u l a
l u v E E d u a G a i a G a u d E E v u l
u v E E d u a G a i v i a G a u d E E v u
v E E d u a G a i v b v i a G a u d E E v
E E d u a G a i v b O b v i a G a u d E E
v E E d u a G a i v b v i a G a u d E E v
u v E E d u a G a i v i a G a u d E E v u
l u v E E d u a G a i a G a u d E E v u l
a l u v E E d u a G a G a u d E E v u l a
P a l u v E E d u a G a u d E E v u l a P
a P a l u v E E d u a u d E E v u l a P a
u a P a l u v E E d u d E E v u l a P a u
l u a P a l u v E E d E E v u l a P a u l
O l u a P a l u v E E E v u l a P a u l O
O l u a P a l u v E v u l a P a u l O

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Image from the *Obvia Gaude* application before the interaction



Images from the *Obvia Gaude* application after the interaction

horizontal central lines. The full names “Evula” and “Paulo” appear only in the first and in the last line. The rest of the lines present incomplete expressions. The pattern is constructed in such a way that it forms a symmetrical image around the central point - the initial O.

We wanted to repurpose the pattern of the visual element so that it would gain a new spark thanks to digital kineticism, a realization of the moves. Our application is based on 3D dynamics, so that when the screen is touched the visuals start to bend in the digital space according to the user's hand gestures, thus creating a kinetic text. The central letter O functions as the point zero that divides the area into four equal quadrants. For each of them, there are X-, Y-, and Z-axes assigned in the virtual 3D space. Touching on any point in a given quadrant bends and twists the text; it modifies the text in a way that is specific for each quadrant (the parameters of the point are in relation to the X-, Y-, and Z-axes and are calculated differently in each quadrant). When touching the display, the text seems to shrink or rise, the letters curl in each quadrant in a different direction and create the impression of movement in 3D space. The work also reacts to the physical handling of the electronic device. If one shakes the tablet/smartphone, the letters get bigger and fly upfront.

By trying to reach a wide audience (digitally and beyond the borders of Slovakia), we wanted to spread information about the existence of this particular Baroque piece. The original framework of a wedding occasion was expanded; one does not have to be invited to a wedding ceremony to read or listen to it as had been the case in the original work. This app is not restricted to a wedding context; the reader does not have to send it to the newlyweds, but this possibility does exist. After the app is loaded, the user has an option (Set Names) to write two names (Her/His Name and Her/His Name) into the specified squares. If she does so, these names replace the original names, Evula and Paulo, in the poem. In this way, a personalized/customized version appears on the screen. Then it is a matter of preference what is done with it - whether it is playing with the kinetic text or taking a screenshot and sending it as a wedding wish (as the app's description suggests).

Obvia Gaude also differs from *Decagrammaton* due to the recipient's engagement. While the Baroque poem required the recipient to read or listen and interpret the given information, the app also requires the user's interaction with what is happening. We can say that without the user's manipulation, the *Obvia Gaude* is not fully realized because only the initial stage appears on the screen (and even this is preceded by downloading the app). Since it is an interactive work, its reception requires a physical user's involvement.

Behind the concept of working with an old poetic form and content, there is also an effort to highlight the idea of Baroque art, its poetics and aesthetics. We decided to present a tiny piece of Slovak Baroque culture

not only through visual poetics but also through a musical element. In *Obvia Gaude*, one can hear a reinterpretation of “Intrada” from “Codex Vietoris” (a collection of around 300 songs dated to 1670–1680 in the Habsburg Monarchy, where today’s Slovakia was located). The mix of several slightly different reinterpretations of the music is responsive to touch, similarly as the kinetic text, in different places (a particular quadrant area) which then determines a different blending of the versions of music. The piece as a whole tries to trigger a multisensory stimulation (using sight and sound) in contrast to the Baroque poem, which only works on the level of sight. It is possible that during the reading/singing of this wedding lyric, some music could have accompanied the poet. However, the music was probably not intended as an inclusive part of the poem itself (as it is with our app).

Create Your Own *Talis Quadra*

The second application *Talis Quadra*, is also visually based on Gažúr’s pretext pattern poem, specifically on the one related to *Sponsum alloquens*. In this case, we decided to diverge from the topic of the wedding ceremony and create a playful interactive application that would be based on the principle of getting things into their right order. At the beginning of the app, the text rolls, and its visual pattern is very similar to Gažúr’s original poem. There is a square shape with some letters forming the sentence “Talis Quadra pii sit tibi norma Tori” (“This Square should be your model of a Sacred marriage/marriage bed”). Based on the original layout, all the letters are black except the initial letter T, which marks the beginning of the sentence. In the same style as in *Decagrammaton*, the reader can read the text in four directions: from right, from left, from above, and from below – always starting with the letter T. The whole poem consists of a multiplicity of these sentences, variously shifted, so that the text repeats itself but reminds the reader of the continuous movement always just one space forward.

After this initial stage, the lines start to move and shift in all four directions in order to visualize the kineticism of the letters that Gažúr probably had in mind. The reader is then left with a different version of sentences, one where the letters are moved more than by one space. Her task is to then place the sentences into their original positions so that they can be read. The interaction is based on “pulling” the sentences with fingers on the touch screen to reach their initial positions. The principle here is simi-

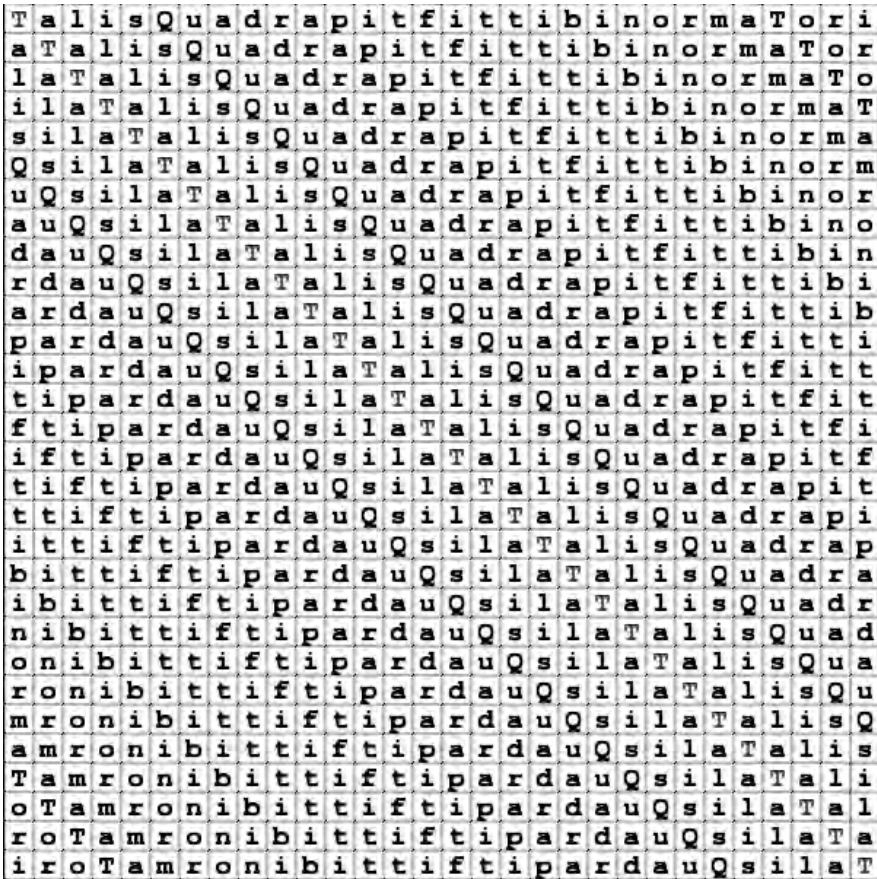


Image from the *Talis Quadra* application before the interaction

lar to the principle of playing with a Rubik's Cube, but instead of having a 3D Rubik's Cube in her hands the reader has to solve the problem just in a two-dimensional space.

When the player manages to reach the desired state, celebratory Baroque music, a reinterpretation of "Štěstí jest nestálé" ("Happiness is volatile") from "Codex Vietoris", starts playing on the app to provide the player with a fanfare reminiscent of Baroque art. "This Square should be your model of a Sacred marriage"; if things get screwed up, you need patience and wisdom to fix them.

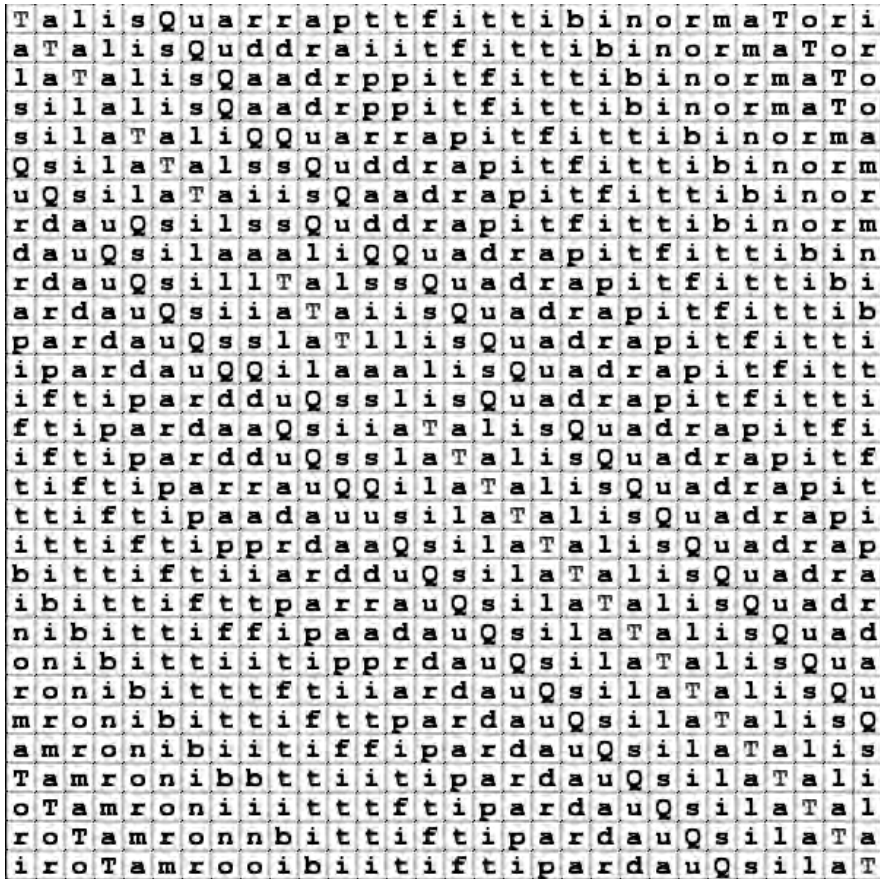


Image from the *Talis Quadra* application after the interaction

Conclusion

Creative cannibalism offers a perspective for the creation of new works thanks to the “devouring” of the original elements. In de Andrade’s manifesto, these other, original elements are the elements from foreign, dominant, and mostly Western culture. Relating to Funkhouser’s approach, the dominant culture is the culture of the printed text. The marginal culture, the one that eats off the main one, is the digital culture. Even though the contemporary situation seems to underline the digital experience rather than the reading of printed books, the print medium is still prevalent in

terms of institutionalized culture. As was mentioned, the history of digital literature contains examples where the appropriated medium is not only the text but also other media (such as image, visuals, and sound). In the approach that we chose when creating *Obvia Gaude* and *Talis Quadra*, while the focus is not on the cannibalization of the foreign, dominant culture in the geographical sense, it does deal with the process of devouring the other culture: a culture that is historically distant, in a foreign language, related to folklore and occasionality, and existing in the print medium.

The pattern poems *Decagrammaton* and *Sponsum alloquens* were written in 1649 in a collection of poems that Gažúr devoted to the newlyweds, and they were written in Latin. Writing in Latin meant erudition in expression, and Latin prevailed in poetic forms. By accepting the Latin language, Slovak Baroque poets followed the wave of intellectual dominance from Western culture. Since many men of letters studied at German universities, they brought pattern poems from Germany to Slovakia, then part of the Habsburg Monarchy.

Decagrammaton and *Sponsum alloquens* are also interesting when thinking about cultural cannibalism in digital culture in relation to the context of its publication as a print medium. In the Baroque era, many of the formally intriguing poems were self-published by the authors. This was also the case with Gažúr's work. In contemporary culture, we can find a parallel in the practices of self-publishing of "books printed on demand". Most of the time, this category consists of the artists' books or various literary experiments where the authors want to get rid of the publishing houses as the middlemen (and thus keep their authorial rights) and be in direct contact with their readers/customers, who order their copies directly from them. Thanks to the simplification and acceleration of communication, digital culture has influenced the relationship between authors and readers (communication via email, social networks, various collaborative projects, fanfiction, and so on), and it has transcribed itself into the thinking and practices of print literature (process of remediation). Even though the establishment of print on demand is older than digital culture, the spreading of this model is connected with digital and post-digital culture.

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Notes

1 Both verses contain 12 letters behind the colon.

2 Both verses contain 14 letters behind the colon.

**6. Remediating the Grotesque and Uncanny:
The Cinematic/Television Art of David Lynch
in *Twin Peaks: The Return***

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Abstract: David Lynch's cinematography – frequently described as grotesque, surrealist, and irrationally mesmerizing – has earned itself the position of artistic work that often escapes analytical or academic scrutiny. Because of the structure of Lynch's films and television productions, his art has been likened to “a Mobius strip” (Moine, 2006) – constantly revolving, yet never merging worlds – and to the seemingly illogical work of M. C. Escher and its consciously controlled planning (Arp & Brace, 2011). Lynch's art may not be directly or explicitly post-digital, and it only rarely employs technology as a vital element of its expression or philosophy. Nonetheless, scholars have recognized the need to apply new models of analysis to Lynch's works – proposing Bolter and Grusin's now notoriously known concept of remediation as a tool to examine the shifts and “oscillations” between different media in Lynch's artwork (Sheen & Davidson, 2004). This article endeavours to demonstrate how the concept of remediation can be applied to David Lynch's approach to his cinematic and television material, with a focus on the intermediality of music videos, television series, horror, and drama (including performance), and traditional technology like electricity and electrical devices. The article attempts to discuss most of Lynch's work, though particular attention will be paid to the Twin Peaks series, specifically *Twin Peaks: The Return* (2017), with its multiple uses of remediated art forms whose oscillating nature is what the aesthetic and narrative power of the series is based on.

Introduction

David Lynch's cinema and television art has entertained, intrigued, and perplexed audiences all over the world for almost half a century. His approach to the medium of film and television has been unusual, innovative, and frequently mesmerizing, to the point of causing his viewers to misunderstand or question their ability to come to terms with the visual and narrative instruments he likes to employ. Alex Pavey summarizes the frustration of audiences when he proposes that the works of David Lynch, “[i]n their ambiguity [...] simultaneously invite and frustrate attempts to rationalise their plots; to establish what really happened, and separate fantasy from reality” (Pavey 51). Regardless of the specific type of approach he uses to work with his material, Lynch's use of freakish and grotesque characters, settings, and situations, as well as his engagement with the uncanny, is a typical feature of most of his work: from the claustrophobic spaces and surrealist creatures of *Eraserhead* (1977), through linear story-

telling in the examination of the grotesque in *The Elephant Man* (1980), the fascination with the freakishness of violence in *Blue Velvet* (1986) and *Wild at Heart* (1990), all the way to the fragmentation of plot and elimination of causality in *Lost Highway* (1997) and *Mulholland Drive* (2001), as well as the ultimate television achievement in the original two seasons of *Twin Peaks* (1990–1991) and the most recent *Twin Peaks: The Return* (2017).

In this chapter, I would like to attempt to demonstrate how *Twin Peaks: The Return*, the latest part of the series, becomes a manifestation of David Lynch's awareness and manipulation of the remediation concept. In the series, Lynch focuses on the intermedial nature of television series, music (and music videos), crime stories, horror, drama, and science-fiction, as well as of traditional (old) technology, e.g., electricity and landline telephones. *Twin Peaks: The Return* does not directly remediate its own predecessors (the original two seasons of the series) but rather assumes that an awareness of remediation as a process will shape the viewers' perception and interpretation of the new series. I would like to employ a model of analysing Lynch's film and television aesthetic drawing on an idea voiced by Erica Sheen, who proposed that it is difficult to study and scrutinize Lynch's art solely "in terms of the idea of 'merging' media" and that a different approach is necessary to study what is "a far more complex dynamic of continuity and discontinuity" (Sheen 42). Sheen argues that such an approach is offered by Jay David Bolter and Richard Grusin in their discussion about remediation, particularly when they comment on the process of media borrowing each other's resources and oscillating between the two stages rather than supplanting each other (Bolter and Grusin 19). While, according to Sheen, "David Lynch's work is strongly marked by such an oscillation" (Sheen 42), Bolter and Grusin's study provides a theoretical platform to surmise that David Lynch's art might go against what they call "transparent immediacy"; the world of *Twin Peaks* is evocative of the hypermediacy of the World Wide Web with its windows, references, fragmentation, and random access (Bolter and Grusin 31).

Just like Flannery O'Connor in her modern gothic narratives of the American South, David Lynch portrays freakishness (e.g., the one-armed man in *Twin Peaks*, Joseph Merrick in *The Elephant Man*, and even the rabbits in *Inland Empire*) as something that is aesthetically extraordinary and a disturbing feature in the story, an element that may or may not carry symbolic value. Lynch's visual narration nods to his fascination with visual art; some of the urban and domestic scenes in *Blue Velvet*, for example, are reminiscent of the realist work of Edward Hopper, the dreamlike sequences in *Eraserhead* owe a great deal to the surrealist art of Salvador Dali

and René Magritte, and the expressionism of Francis Bacon is probably the strongest influence in Lynch's visual creations in *The Elephant Man*. All of the abovementioned influences, or sources for Lynch's remediation, converge in all three seasons of *Twin Peaks*.

The way Lynch as a director remediates the visuals as well as the stories of the paintings becomes his authorial style in most of his films and establishes a foundation for his typical irregular storytelling, character confusion, and parallel structures:

The interpenetration of space and time, the substitution of characters, the structure in the form of a Möbius strip where different worlds revolve in a loop without ever fully overlapping, the "schizophrenia," where it is impossible to decide whether it is that of the heroes or that of the story, allow one, from the television series *Twin Peaks* to *Mulholland Drive* and *Lost Highway*, to read these films as surrealist films and eventually as original works. (Moine and Taminiaux 111)

Parallel with a Möbius strip, which defies logic, or rather our rational visual perception, and offers an infinite loop of action, plot, flow, ideas, and images, is what constructs the aesthetic world in *Twin Peaks: The Return*. Characters travel in time and space and appear in two places at once; this quantum-like existence of doppelgängers is, in fact, a prominent feature of Lynch's storytelling in the series. This, of course, is evocative of déjà-vu-like, uncanny impressions discussed in psychology and psychoanalysis: for example, Sigmund Freud's concept of the uncanny which is then presented in literature and other visual arts as a kind of "ghostly feeling" (Mactaggart 120-21). Francis Bacon's 1935 *Portrait of a Man* is remediated into the mysterious glass box that channels Agent Cooper from another dimension in *Twin Peaks: The Return* as an empty, transparent container, devoid of any substance.

Following the remediation path from literature and painting to film, Allister Mactaggart argues that "[w]hen we come to film we have also to attend to the visual and the aural in our readings; to the specifics of the medium in relation to this ghostly feeling" (Mactaggart 120-21), i.e., to the uncanny. As Lynch's artistic territory centres around grotesque characters and situations, as well as around eerie and mysterious moments, the use of visuals and sounds that facilitate the creation of such situations and events requires adequate "sound design, masks, camera work, special effects, and so forth" (Cremonini). But it is the "ontologically uncanny nature of film and Lynch's exploitation of the potential of the medium to make strange its familiarity and to make familiar its strangeness" that ultimately infers that "cinema and psychoanalysis are inextricably intertwined" (Mactag-

gart 165). Following this assumption, Lynch's aesthetic approach relies on the viewers' ability to employ their subconscious, or even unconscious, to experience his artistic product.

Lynch uses his reconstructions (remediations?) carefully, creating a world in which repetition and copying of previous designs, plots, and characters may seem haphazard and bewildering. Nonetheless, it is a world designed with a sense of detail, where all of the elements are put to work towards a purpose. Robert Arp and Patricia Brace liken the microcosm of Lynch's films to the prints of Dutch graphic artist M. C. Escher, in which "reality is carefully planned and controlled for maximum effect, even when it seems uncontrolled and illogical to the viewer" (Arp and Brace 7). In other words, the surrealist and seemingly uncontrolled (and uncontrollable) world of Lynch's art rests on solid foundations and only makes the impression of being random and inconsistent. This is evident in *Twin Peaks: The Return*, where the final episode merges all of the parallel storylines and connects the parallel worlds to lead the protagonists to a conclusive point, which, in an unexpected twist, only returns to the infinite Möbius strip of events and character stories. But this is the nature of *The Return*, namely that it is not only a return to the world of *Twin Peaks* from the early 1990s but also a constant return to different places in time over and over again.

This is due to Lynch's strong reliance on working with allusions and remediations of more traditional material – just like the famous opening scene in *Blue Velvet* being a visual representation of suburban life – that helps him move the medium he is using forward, as if he could, by paying tribute to traditional forms and ideas, develop the medium further and use it innovatively and progressively. What Jay Bolter and David Grusin importantly pointed out in their now famous treatise *Remediation: Understanding New Media*, namely that newer, mostly digital "visual media can best be understood through the ways in which they honor, rival, and revise linear-perspective painting, photography, film, television, and print" is key to understanding Lynch's attitude to film-making, as his work only affirms that "[n]o medium today, and certainly no single media event, seems to do its cultural work in isolation from other media, any more than it works in isolation from other social and economic forces" (Bolter and Grusin 15). It is a big step between the origination of an entirely new medium and the remediated form and content of Lynch's art; however, André Gaudreault and Philippe Marion's proposition that there is "[a] 'double birth' of every (new) medium, which presumes in the first stage of birth an 'initial intermediality' and in the second a 'subjugated' or 'negotiated intermediality'" (Gaud-

reault and Marion 16) can be applied here. The initial intermediality stage can be related to Lynch's repeated mediation of film-making elements and his use thereof in different contexts, for example, using sounds, recordings, music, genre-play, and archetypal characterization to disrupt the narratives that defined the media of film and television in the first place and thus effect their progressive change.

For instance, David Lynch uses technological devices to communicate narrative developments instead of visuals, acting, or dialogue; this results in "a profound disruption of the archive and hence of history itself, which ceases to be linear and rational, and is instead prone to the montage and looping of films, tapes and record grooves" (Goddard). In Lynch's cinema and television, "audio-visual media, particularly the telephone, demonstrate the fragility of any rigid, rationalised conception of distance and proximity" and challenge the viewers' belief that there might be any "stable knowledge by which the detective might solve the case, and the accused might defend himself against incrimination" (Pavey 50), a concept particularly visible in *Lost Highway* and *Mulholland Drive*. In a way, Lynch's directorial focus on the use and importance of such devices (e.g., Agent Cooper's tape recorder in *Twin Peaks* that becomes his conversational partner in place of an actress playing the role, or the sinister significance of a land-line telephone in *Lost Highway* suggesting the existence of a character in two places at the same time) results in the disintegration of linear narratives which then become "not [so much] an abandonment of chronological structure as an insistence that this structure is prone to repetitions, gaps and cycles" (Goddard). This, in turn, allows Lynch to create the circular or rather "Möbius strip-like structures" of his movies (Goddard).

In *Twin Peaks: The Return*, electricity – in the form of conventional sockets and electrical circuits – plays an important role, as it comes to represent a link between the parallel worlds. One example is Dougie Jones, who is "made" through an electrical circuit; another is Richard Horne, who explodes in a flash of static electricity. But there are numerous other situations when electricity not only forebodes a change and the presence of another force but also brings in the dark men and initiates their mysterious and violent activity. Lynch's insistence on pre-digital technologies is a sign of his "creative engagement with older technological methods" in order to demonstrate "how all technology [can be] uncanny if used creatively", for example, through the switch to digital video as used in *Inland Empire* (Mactaggart 142). *Twin Peaks: The Return* reverses on this journey even farther back when the devices (or vessels) containing characters from the previous storylines (e.g., Phillip Jeffries) are ordinary household objects

like a kettle or teapot. The fact that Agent Jeffries communicates to Agent Cooper using steam from a teapot to form letters and numbers is both uncanny and grotesque.

David Lynch's take on genre remediation or archetype reproduction is most visible in all seasons of *Twin Peaks*, which is a montage of a whole variety of genres from soap opera and crime story, through mystery, fantasy, and comedy all the way to horror and outright drama. As John Richardson argues, in presenting the central character of Laura Palmer as an archetypal *femme fatale* (attracting an entire range of men of all ages, social backgrounds, and characters), Lynch successfully introduces his own version of the traditional *film noir* genre, thus creating "[a] bitextual parodic dialogue between source and new texts" (Richardson). This cross-genre conversation or dialogue becomes the source of Lynch's creativity and innovation; his Laura is the central character, but the series opens with her death, thus reversing her role as the most influential figure of the story to becoming a vehicle necessary for the development of all of the other characters and ultimately also of the story. Richardson's argument that *Twin Peaks* is fundamentally a parody of Otto Preminger's 1944 film *Laura* corroborates the assumption that Lynch consciously rehashes traditional genres and artistic approaches to suit his much more complex needs. This approach is very similar to what Bogumiła Suwara discusses in her article about remediation in the form of manipulating photographic images, particularly in how such manipulation can provide original and inventive solutions for artistic creation (Suwara 55). Using a different example, it is also the use of typography in his movies and television series that illuminates David Lynch's design strategy in painting complex pictures in his art (Gosling).

In the 2017 season of *Twin Peaks*, Laura Palmer is remediated – first as an older version of herself in the Black Lodge, the extra-dimensional place where evil resides, and at the end as Carrie Page, Laura's doppelganger who is taken back to Twin Peaks by Agent Cooper 25 years after the events of the first and second seasons. Lynch does this consistently in *Twin Peaks: The Return*; there are remediations of Agent Cooper as his "good" and "bad" selves, as well as his existence as the insurance agent Dougie Jones, the double existence of Naido and Diane Evans (only referred to in Seasons One and Two through Cooper's Dictaphone), and the abovementioned double Laura Palmer/Carrie Page. *Twin Peaks: The Return* weaves the Möbius strip or paints the infinite staircase in an Escher picture to suggest the existence of parallel worlds/universes/timelines and highlight their importance for the story of *Twin Peaks*. The remediation is subtle here, but it is

still observable and functional; while the good Agent Cooper constantly uses his voice recorder in the original seasons, in Season Three he communicates through a mobile phone. Both devices maintain their mysterious significance throughout each of the series. The importance of sonic devices is elaborated on by Michael Goddard, who argues that the use of the so-called media archaeological method to narrate the stories in *Twin Peaks* allows one “to account for the multiply mediated and remediating world of *Twin Peaks*” (Goddard). Goddard further posits that Lynch’s approach transcends “a strictly materialist attention to technological inventions and arrangements” and aims to shift our attention also to “cultural practices or techniques and the mediated production of subjectivity” (Goddard).

This kind of mediated subjectivity echoes what Ebrahim Barzegar calls “[the] illusion in postmodernism” – an instrument that enables David Lynch to establish a “disbalance” between what is real and what is an illusion, “defining the secondary world as primary and unbalancing the reader’s well-defined levels of mind and understanding and consciousness” (Barzegar 171–72). However, in Lynch, particularly in *Twin Peaks: The Return*, this is not just a tool to express the complexity and mysticism of the subconscious and/or the unconscious, creating one visual layer after another in a manner similar to Jackson Pollock’s drip painting, but rather a storytelling device based on the remediation of previous stories, characters, ideas, and concepts. In other words, Lynch’s imagined worlds, people, and stories have become part of the processes of producing, shaping, and re-shaping collective memory, processes that are both “performative and reproductive” (Rankov 17). In *Twin Peaks: The Return*, for instance, Dougie Jones is a physical version of Agent Cooper, but is deprived of any consciousness of the fact, or even of the fact that he is an adult human. In performing the role of Dougie Jones, a tedious insurance salesman living in suburban Las Vegas, he is reproduced into Agent Cooper by the forces that Lynch indicates are responsible for much of the “otherworldly” action – originating in the Black/White Lodge (or elsewhere?).

Mediated subjectivity is also apparent in Lynch’s film-making through the constant use of and reference to dreams. Dreamlike sequences are abundant and sometimes entire narratives are structured like labyrinths, or randomly constructed spaces that remind audiences of dreams: “[a]s viewers of Lynch’s work, we are frequently invited to decipher plot through coded messages delivered in the form of characters’ dreams (or dreamlike experiences)” (Riches 29). Characters in *Lost Highway*, *Mulholland Drive*, and *Twin Peaks* all experience states when the distinction between dream and reality is blurred. Agent Cooper in *Twin Peaks* has

a dream in which he meets both the victim and the criminal. Kelly Bulkeley provides a comprehensive examination of the role of dreams in which she posits that for Lynch movie-making is “a means of conveying the moods, mysteries, and carnivalesque wildness of our dreams” (Bulkeley 49). For other critics, the artwork of David Lynch, with its haunting immediacy, as well as its violence and immorality seeping from under the comely visible surface, is rather indicative of “a nightmare behind the seemingly idyllic surface of a dream”, assuming that “[if] films act like dreamwork, the displacements and condensations of Lynch’s films attest to the dream-like nature of the medium itself” (Mactaggart 122).

The employment of dreams in Lynch’s film art can be likened to the use of magic like the work of an illusionist who carefully chooses what to show the audience and who, just like Lynch himself, “wants to see things that are hidden and, through his artistic conjuring, show them to us. For Lynch, one who makes magic is a metaphor for one who makes art” (Olson 353). This revelation of sorts is strongly present in *Twin Peaks: The Return*, which is an 18-part series which revisits the old charm of the original two seasons of the series after 25 years and provides a bittersweet social commentary upon the return to old America that might have only been dreamed up, imagined, or conceived as an illusion. Lynch’s most compelling social critique has always been presented through the suggestion that there is so much underneath the visible surface: that there is pain under the beautifully constructed and picturesque suburban life of *Blue Velvet*, that there is corruption and crime beneath the glitz and glamour of Hollywood, and that there are multiple lives behind Laura Palmer’s public image in *Twin Peaks*. Often Lynch’s films express the disturbing realization about the uncanny aspects of romantic relationships (Cremonini) – a concept that culminates in *Twin Peaks*, where all relationships are put to the test by the existence of the dark and evil forces originating in the Black Lodge.

The return to *Twin Peaks* after 25 years draws on Laura Palmer’s statement in the original story line addressed to Cooper as well as the audience’s demand for a revisit to the now cult story, characters, and setting. But Agent Cooper only “dreams of meeting Laura [in the Black Lodge] twenty-five years in the future”, so the audience is left wondering about whether to assign this information any significance (Suter 185). Also, while the 2017 season only partly re-creates the old reality of *Twin Peaks*, it gets closer to the Baudrillardian notion of “profound reality”, one that exists in a parallel structure with the reality we perceive as viewers as well as with the reality perceived by the characters in the story (Baudrillard and Glaser 6). So the audience’s nostalgia and desire to see the original characters

again, perhaps just for old times' sake, is rejected by Lynch, who brings some of the characters back (Audrey Horne or James Hurley) but leaves them stranded in the complexity of the plot. The numerous loose ends in *Twin Peaks: The Return*, however, indicate that Lynch is constructing an intricate system of parallel worlds with a purpose; the unfinished strands of the story and plot question our traditional approach to interpret narratives and suggest we take a different approach. This approach may follow Marshall McLuhan's supposition that human "knowledge and the process of obtaining knowledge are of equal magnitude", which is more aptly put by a quote from W. B. Yeats: "The visible world is no longer a reality and the unseen world is no longer a dream" (cited in McLuhan 54). That is exactly how Lynch wants us to perceive the world of *Twin Peaks*, if not all of his movies: namely, as a space where remediated images of dark figures acting on behalf of evil forces are shot in old-fashioned special effects as if to suggest an older parallel universe.

Some of the scenes in *Twin Peaks: The Return*, most notably the long sequence showing how evil came to being – a series of shots with visual aesthetics reminiscent of Stanley Kubrick's *2001: A Space Odyssey* – communicate their message through effects that are rather remediated representations of works of visual art than state-of-the-art computer-generated images that would be used in movies today. The graphic representation of how nuclear technology both catalysed civilizational progress and threatened its existence is overwhelming, immediate, and visually resplendent. The scene in Episode 8 shows the explosion of an atomic bomb and pulls the viewer into the cloud and dust generated by the blast, revealing the smallest particles that are part of it. The visual narrative suggests that this explosion not only gives rise to evil but also feeds its existence throughout the decades that follow – as if the half-life of the radioactive material was long enough to affect people and their environment in the early decades of the 21st century.

On the whole, however, Lynch's use of unassuming effects all plays into the system of a typically Lynchian world that is a copy of its older self, just like some of his characters are copies of their older selves or rather remediations of their predecessors. Lynch pays homage to his own creations and their mediations in his older works, using this kind of "referencing" as a creative tool. In other words, for Lynch, "the choice of medium makes a difference as to what stories can be told, how they are told, and why they are told" (Ryan 25). *Twin Peaks: The Return* thus becomes a medium in itself that allows Lynch to conclude his original story, to entertain audiences worldwide, to exploit the possibilities of uncanny narratives and grotesque characters

to its fullest potential, and primarily to provide the viewers with an important commentary on social change in the United States – a strategy he successfully employed back in the 1990s in *Blue Velvet* and *Wild at Heart*.

Lynch's fascination with rural and suburban America has shaped much of his cinema and television art; the first season of *Twin Peaks*, for example, became a complex interplay between form and content, whereby the director managed to challenge the superficiality of the audience's perception of life in America. By producing an entire series with numerous soap opera elements, playing on the backdrop of a dark and violent crime, Lynch juxtaposed the triviality of the soap opera genre with the complexity of human behaviour, particularly as far as its potentially evil side is concerned. Season Three of *Twin Peaks*, though mostly just referred to as *Twin Peaks: The Return*, not appending the sequel number to the title, became a picture of disintegrating rural America – a remediation of portrayals of advancing poverty, violence, dysfunctional familial units, and a reformatted depiction of crime, ignorance, and egoism. The personality split between the good and bad Agent Cooper is a source of tension throughout the series; we follow Cooper's evil doppelganger in his journey from evil, through evil to more evil, holding our breath in desperate expectation of what he might do next and what violent means he might use. At the same time, we see his double, the empty and innocent vessel in the body of Dougie Jones, doing only good in a naïve and simplistic narrative of his professional and domestic life. Suburban America is depicted here as a hopeless void where gangs feed on the apathy of the citizens, where junkies let their babies grow up with no guidance, and where insurance salesmen like Dougie Jones hire prostitutes before they return home to their beautiful yet shallow and ignorant wives. The character of Janey-E, Dougie's wife, is played by Naomi Watts with the gusto of a 1950s housewife unaware of her emancipation potential but simultaneously with the 21st-century sense of independence and individualism.

While this all plays into Lynch's concept of the invisible soaking through surface, and his portrayal of America in 2017 is also one of visible decay and hopelessness; characters live in trailer parks, war veterans go to sell their blood to earn money for food, and bloodied drunks insanely growl in the jail of the Twin Peaks Police Department. Other examples include the working class (like Shelley Briggs and her daughter Rebecca), who are deprived of humanity and are apparently unable to escape their utter dependence on dominant (and violent) males, and small town teachers who when fatally injured cannot afford adequate medical treatment because they do not have sufficient health insurance. Lynch repaints the original picture of

the 1990s in an American small town with much bleaker colours. His America is disintegrating and its citizens are swallowed by apathy; when Richard Horne hits a child with his truck and drives away, the people who witness the crime stand paralysed and are unable to help the shocked mother. When someone shoots at Norma's diner from a passing car, it takes a few minutes for Bobby Briggs, now a policeman, to realize that the shots were fired from the car by a small boy who got hold of his parents' gun. Most characters, when faced with such events, never utter a word, just as we are often left speechless when trying to make sense of Lynch's surrealism. But these little details demonstrate Lynch's preoccupation with showing us that "to live means to live with the unspeakable" (Dargis and Poniewozik).

The ghostly feeling that Sigmund Freud would define as uncanny is thus transferred (can I say remediated?) onto what *Twin Peaks: The Return* translates into its circular story, which fits so well into 21st-century America. The atomic bomb as an invention that gave rise to the evil forces that would take residence in the Black Lodge and the existence of doppelgängers created from little balls in the same place, the "arm" that is now a tree with a head of sorts, are all surrealist elements reminding us that there are parallel horrors in the visible world. What Lynch remediates from his earlier work into the new medium of *Twin Peaks: The Return* transcends the kind of "general 'indebtedness'" to other media and becomes a "meaning-constitutional strategy", indeed "a genre-defining process" (Rajewski 61). It is the reliance on the medium of the original series that gives *Twin Peaks: The Return* its momentum, as one of the famous lines from the original series suggests, "The past dictates the future". Or, in the words of James Poniewozik, while "'Twin Peaks' used a crime mystery to lure viewers onto the road to the unconscious, 'The Return' [...] takes the express lane", and while "[i]n 'Twin Peaks,' the hook was Laura Palmer; in 'The Return,' the hook is 'Twin Peaks'" (Dargis and Poniewozik).

In conclusion, the structure of Lynch's creation, evocative of the above-mentioned Möbius strip, is carefully planned and controlled in its use of the uncanny and grotesque remediations of the formal and contextual features of *Twin Peaks*. The oscillations between different media, artistic approaches, and visual representations highlight the shift in Lynch's aesthetic as far as the medium of the television is concerned. Conceived as a television series, *Twin Peaks: The Return* reaches the quality of an 18-hour epic, expressionist, and surrealist journey that transcends the boundaries of the medium and redefines its features. Lynch's use of music sequences – in the form of live performances in the Roadhouse that almost always feature a full-length song accompanied by the fragment of a social story –

is an evident remediation of MTV-style music videos with postmodern storytelling and deep audience immersion. Lynch's awareness of how a Baudrillardian simulacrum emerges because it is "never exchanged for the real, but exchanged for itself, in an uninterrupted circuit without reference or circumference" (Baudrillard and Glaser 6) culminates in *Twin Peaks: The Return*, where the story emphasizes the need to overcome the continuous simulation of a given medium (e.g., television) and extend it to a more complex medium that will allow audiences to experience chaos, confusion, bewilderment, and eventually perhaps even an unconscious catharsis.

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