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**STORYTELLING IN THE AGE OF DIGITAL MEDIA. ANALYSIS OF "NETWARS /
OUT OF Control" TRANSMEDIA NARRATIVE PROJECT**

DISCLAIMER

This draft of the paper should be considered as a first version of the argument. I hope to improve it and / or concentrate on a certain aspect of the argument due to fruitful discussions and feedback received at the workshop in April. In this take, emphasis was put on presenting the case study that the argument is based on while limiting the theory-based assessment. Several other theoretical approach (Bolter, Grusin; Theo van den Leeuwen; David Berry) are expected to be implemented in the final version of the paper according to insight gained at the workshop.

Paper presentation at the workshop will be enhanced by visual materials (videos, screenshots, graphs) illustrating particularly interesting elements of the transmedia project (aesthetics, story design, models of interaction with its content).

introduction

"Netwars - out of control" is a trans-media narrative project which. Its theme is focused on technology-based phenomena which are crucial for contemporary civilization: user privacy, cybercrime, hacking and digital data management. The project, through various media channels, deals with these phenomena both from the perspective of the individual (reader / player / user — according to medium) and from the perspective of a society as such. Its producers describe "Netwars - out of control" as a comprehensive narrative on wars raged in the cyberspace which would have tremendous consequences on our physical world and everyday life of millions of people. It is composed of different media - TV Documentary, Interactive Web Doc, Interactive Graphic Novel Application, E-book, Audio-book and TV Series - which are used to present various storylines within a fact-inspired, however mostly fictional narrative.

In the paper I am going to focus particularly on these elements of the project which are based on hypermedia content and interactive storytelling — an Interactive Web Doc, and an Interactive Graphic Novel App. They were designed and produced thanks to the latest computational technologies and digital content distribution platforms. As a result, they influence not only their narrative as such but also their aesthetics, interaction and accessing models. However, other elements of the "Netwars - out of control" will be briefly described as well in order to illustrate the business model behind the project and intermedia connections providing the coherency for the narrative spread across various media: TV Documentary, E-book, Audio-book and TV Series.

According to Lena Thiele, director of the Miiqo Studios which was responsible for designing interactive parts of the project, the narrative of the whole project is composed on two essential modules: fact-based module (TV Documentary, Interactive Web Documentary and Informative web portal) and fact-inspired but fictional module (Graphic Novel App, Audio/ E-book series, and Netwars/out of CTRL – The TV Series). All elements of the whole project were produced by independent studios / artists /

developers under the supervision of FilmTank a German production company for documentary films and cross-media content based in Hamburg, Berlin and Stuttgart

"Netwars - out of control" could not have been brought into existence without the latest computational technologies that enable to create, transform and remix various digital media. Therefore, the computational as such should be considered as a very condition of existence of this project. Digital media, software and device, being a backbone of a kind, enabled to design and produce a coherent multimedia narrative (text, audio, video, computer-generated imagery) spread across various channels of distribution — traditional television, web portals, applications, electronic books and digital content stores. This issues will be discussed and analyzed as well.

Digital media — a software and media studies perspective

In New Media Reader edited by Noah Wardrip and Nick Montfort, Lev Manovich summarizes as much as eight approaches describing the concept of new media which are all situated at the intersection of art, communication and computing. Two of them are particularly interesting from our perspective as they are focused on the interconnectedness of software ecosystems, digital communication and data distribution for emerging of new digital media and new media genres. (Wardrip-Fruin, Montfort 2003) In the first definition new media are understood as computer technology used as a distributed platform. In the second definition new media are considered as digital data controlled by software.

Both definitions correspond with the general approach that Manovich presents in his Language of New Media and Software Takes Command. He emphasizes the computational nature of new media and their dependance on software and hardware ecosystems. Therefore, in the first book, Manovich argues that media consist of two distinct and at the same time intertwined layers: the „cultural layer” (characterizes the

way new media interact with other cultural artifacts) and the computer layer (describes all managing and constituting properties of the digital medium: discretization, modularity, variability, automation, compression) (Manovich 2001). He even argues that the computer (understood broadly as a computational artifact equipped with media editing software) is an umbrella or a "metamedium" for all existing digital media. (Manovich 2013).

Therefore, I would argue that the "Netwars - out of control" is based on a broader transformation that our contemporary culture is undergoing — datafication through computational technologies. The process of datafication should be understood as an increasing dependence on computational tools and technologies both at the stage of creation of various cultural works and at the stage of their consumption. Today's videos, photos, games even comic books are created due to creative software ecosystems and various types of digital equipment. Consequently they are distributed and accessed thanks to computational devices and internet-based stores and services. Movies, music albums, books, comics have recently become available mostly not as physical entities with their own storage medium (magnetic tape, optical disc, paper) but rather as digital files or even as streamed content. At its fundamental level, works of contemporary culture are chunks of digital data which are governed by algorithms (Manovich 2013). According to David Berry, we live in computability, an era when our cultural and social practices are both rooted in and bound by digital technology — e.g. various types of hardware and software (Berry 2011). Computability provides a foundation for the real-time transformation of our society and culture; according to Lev Manovich, contemporary society should be characterized as software society. We rely on software and hardware to create, transform and distribute data to such extent that media becomes software. (Manovich 2013. "Netwars - out of control" is founded on the logic of software media ecology and computability as various technologies and tools allowed to create a comprehensive and coherent narrative on the phenomena which themselves are deeply rooted in the digital — cybercrime, cybersecurity hacking and digital privacy.

Narrative in Digital Transmedia Storytelling

However digital technologies were crucial for designing different elements of "Netwars - out of control" project and were equally important for distributing them through various media channels, the narrative itself lies behind the long-term market success or failure of the project. Even diversified and the most easy-accessible distribution platforms cannot guarantee public interest in such a broad project.

Marie Laure Ryan argues that there are there are two approaches to designing a transmedia narrative.

The first pole is what could be called the "snowball" effect: a certain story enjoys so much popularity, or becomes culturally so prominent, that it spontaneously generates a variety of prequels, sequels, fan fiction and transmedial adaptations. (Ryan 2013)

This is clearly the case of these transmedia narratives which were developed due to popularity of single-medium works of culture which gained a very positive response among consumers. Movies such as "Star Wars" or computer games such as "The Tomb Rider" are classic examples of this type of transmedia narratives. Ryan also writes about "Harry Potter" or "The Lord of the Rings" which started out in the medium of the novel, created by a single author, and they expanded to film and computer games by popular demand.

The other approach to transmedia storytelling, which is represented by "Netwars - out of control" is based on narrative designed from the very beginning to be spread across various media and distribution platforms. These enabled its designers to customize each part of the narrative in the way that made the best use of each medium — whether it was visual communication and interaction in the Graphic Novel Application or non-linear narration and user-interaction in the Interactive Web Documentary or a linear text-

based story in the book. "Netwars - out of control" may be close to the ideal form of transmedia storytelling that Henry Jenkins writes about:

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)

"Netwars - out of control" has been developed from the beginning as a transmedia narrative which can be targeted to reach many audiences - readers, players, internet users of different age and social status through different media - TV, web page, interactive app, e-book. A significant part of the narrative is freely accessible to any interested parties on "Netwars - out of control" web portal. This approach considered as a business model can be described as a "freemium" model which has been widely used in the software industry in the last decades. Venture capitalist Fred Wilson summarized it in 2006:

Give your service away for free, possibly ad supported but maybe not, acquire a lot of customers very efficiently through word of mouth, referral networks, organic search marketing, etc., then offer premium priced value added services or an enhanced version of your service to your customer base. (Wilson 2006)

The project, by offering a free interactive documentary and an informative web portal, aims to attract a wider audience. Furthermore, by placing various parts of the narrative in different media, its designers hope to persuade readers / users / players to engage with other products of the universe. It is also hardly accidental that "paid" parts of the narrative are designed in a form of TV documentary, e-book or audiobook. These media are still associated with more traditional business models and accessing practices. Consequently, it is less likely that web portal or app users would pay anything for

accessing this content, therefore this part of the narrative is available for free. As Laurel Ptak argues the key business strategy behind a good transmedia project is to attract as many clients with as many products based on different media / platforms as possible.

Storyworlds become commercial franchises, and the purpose of the developers is to get the public to consume as many different media as possible. (...) This notion of storyworld is central to the phenomenon of transmedial storytelling, since it is what holds together the various texts of the system. The ability to create a world, or more precisely, the ability to inspire the mental representation of a world, is the primary condition for a text to be considered a narrative. (Ryan 2013)

"Netwars - out of control" — elements of the transmedia narrative

This section of the article provides a brief description of all elements of the project's narrative spread across various media and distribution platforms. Each product within the "Netwars - out of control" universe uses a specific medium and distribution channel to address a particular topic within the general theme of the project — digital privacy, cyber-crime, hacking. Therefore, due to medium-specific storytelling models and interactive features, different audiences can be engaged, and general public awareness of the project and its theme can be greatly expanded.

Significant parts of description of each sub-projects provided by their creators are cited in this part of the paper in order to illustrate how a concrete medium was used to emphasize a particular aspect of the narrative and how it enabled to introduce various models of interaction with its content. Story development mechanisms, as well as user / viewer / player interaction models with the multimedia content of each medium are

result of certain computational technologies which are offered by the digital medium itself or its distribution platforms.

Tv Documentary

Netwars / War on the Web demonstrates that we are all affected by the digital war, and that it's already happening as we speak. At the heart of the documentary is an exclusive hack on a German energy supplier. For the first time ever, an energy company is accompanied by a camera team as high-profile hackers attempt to break into its infrastructure." (<http://vimeo.com/91401409>)

In co-production with ZDF/Arte, funded by the MFG Medien-und Filmgesellschaft MFG. Developed within Documentary Masterschool 2011. *netwars / war on the Web* premiered on ARTE on April 15th, 2014.

This TV documentary is a traditional fact-based motion picture which was aired on TV. It is focused on potential dangers coming from cyber-crimes and on showing the vulnerability for hacking of crucial infrastructural facility — a power plant. However, in terms of its theme, it is strongly connected with the Interactive App - its user takes part in a fictional story centered around a digital hack on Norway's infrastructure performed by two teams of hackers hired by the government.

Being a traditional TV documentary this part of the "Netwars - out of control" project has a highly limited target group, especially since it is not available on on-demand streaming services. TV in general is a "hot medium" (McLuhan), therefore its interactive potential is also very low.

Interactive Web Doc

Imagine: A war is raging, and you're right in the middle of it — without even knowing! Meet the cyberweapons dealer and watch how you and your computer become part of the digital war. This specially tailored interactive experience will make one thing clear: THERE'S NOTHING VIRTUAL ABOUT THIS REALITY!
<http://netwars-project.com/project/>

Hackers, Warlords, Governments and you: They can steal more than your information, and the INTERACTIVE WEB DOCUMENTARY demonstrates just that by taking its viewers on a customised journey through various scenarios of a cyber attack. Enter your data, and be prepared to be confronted with just how vulnerable our high-tech society really is. You will become part of the documentary, your life intertwined with interviews and insights from cyberwar experts, politicians, military personnel and first class hackers. There's nothing virtual about this reality.
(<http://www.filmtank.de/p/netwars-out-of-ctrl-web-documentary-2/>)

The Interactive Web Doc is an integrated part of the "Netwars - out of control" web portal. The narrative of this part is designed in a form of 5 short interactive video chapters which cover different aspects of cyber warfare both from the perspective of the individual (internet user) as well as at the civilizational level (hacking of critical infrastructure, government and private sector surveillance). This part of the whole narrative is a unique combination of fiction and facts. Lena Thiele, chief designer of the Miiqo Studios which was responsible for this part of the project explains this approach:

The whole narrative is based on tension between facts and fiction —the fiction is an emotional introduction to the facts —the main character is like the technology itself —catchy but scary at the same time. (Thiele 2014)

The main character (portrayed as a guru of cybercrime), together with visual and textual communication designed with high level of interactivity provides a unique experience to document's viewer / user. Each chapter is filled with interactive visualizations, additional video materials (diversified expert opinions or real-life footage). There are also many sections where user is invited to directly interact with the content (quizzes, mini-games) as well as sections where user-related information are gathered in real time (on user's devices, internet provider, her geolocation and involvement in social media / online retail services) in order to prove some points of the narrative. The narrative of the Interactive Web Portal is intertwined with other parts of the narrative, available in different media, particularly with the informational-based web portal and fact-based though fictional story told in the Graphic Novel App.

As any other element of the web portal "Netwars - out of control" web portal, the Interactive Web Doc follows the logic of WEB 2.0. Users can comment on each episode, engage in discussion with others, share information on social media. However, it should be clearly stated that the Web Doc is also fully functional as a self contained informative narrative on various aspects of cyber-crime, hacking and user tracking practices. It is designed using state of the art web tools and technologies (HTML5), therefore it can be viewed on any computational device equipped with an internet browser (desktop, mobiles). Thanks to interactive storytelling techniques, visual materials, portal's users can be easily immersed in the fact-based story on cyber-crimes. Furthermore, unlike other elements of the universe (e-books, TV documentary, TV series), the Interactive Web Doc it is freely available (in English and German) to anyone with a computational device and Internet connection.

Graphic Novel App

The year 2017: Europe's top military officers employ a team of elite hackers. By order of the EU, they conduct a secret cross-border cyberwar exercise. But what started out as a simulation,

suddenly becomes deadly serious. The story is anything but science fiction. The scenario is alarmingly realistic.

This part of "Netwars - out of control" narrative is available as an application for a mobile device. The Graphic Novel App is designed in a form of an interactive comic and is based on comic-like aesthetics (involving textual and visual communications). The narrative is focused on a particular story that is mentioned also in Interactive Web Documentary and in TV Documentary - consequences of a security breach in computer systems of vital infrastructure — power plants, water supply and transportation systems. The hack is taking place in Norway. The narrative itself has been divided into 3 chapters that use simple dialogues as well as 2D and 3D graphics. The app also offers various camera views due to unique capabilities of the mobile device (gyroscope, accelerometer) which together with suspenseful music, comic-like aesthetics, offer an immersive experience to the player. Furthermore, in the process, the player can be engaged in various mini-games and interactions as the story develops.

This element of the "Netwars - out of control" universe is strongly correlated with the Interactive Web Documents, both in terms of the level of interactivity it offers as well as in terms of building its narrative on tension between facts and fiction that the story is build upon.

The mobile app, considered as a medium for a transmedia narrative has a relative short history (no more that 5 years). It offers a unique possibility for designing a highly interactive and immersive storyline, however its potential target group is much more limited than a browser-based narrative. At this moment this part of "Netwars - out of control" is available only one of the three dominant platforms — iOS by Apple (both the iPhone and the iPad).

Audio and e-book series - The Code

A high-tech thriller from the dark side of the web.

Scott Mitchell is a reformed criminal hacker, now working for a government agency to prevent cyber crime. Under cover as Strider, he stalks the Deep Web –those parts of the internet no search engine explores.

A place where anonymity is (almost) guaranteed. Where you can browse and buy drugs, pornography, weapons —even death. Anyone can do it. Most can get away with it. Unless they breach The Code.

A serial novel in six weekly installments by M. Sean Coleman.

Available as an eBook (German, English, Chinese), audiobook (German) and paper book (German)

This part of the project's narrative is told in a series of short novels. They are available in German, English and Chinese in various electronic versions and as an audiobook and paperback in German. The first series is composed of 6 short episodes (no more than a hundred pages) priced from 1.99 to \$2.45 each. The Code series 2 debuted in early 2015. The model of short stories published every few weeks being a part of series is hardly accidental and is based on the same approach TV series producers often use. It guarantees that a long-term readership community will be gradually build not only around the books, but around the whole "Netwars - out of control" as well, by integrating its storyline with the general theme of the whole project. The e-book series has a very large potential target group, mainly due to its low price and low competence barrier — any computer or mobile device is capable of displaying a simple text-based file.

The TV Series - Netwars/out of CTRL

A FICTIONAL STORY, BASED ON A REALISTIC SCENARIO

The netwars TV SERIES dramatizes the fact based cyberwar scenarios by four interlocking stories all connected by a single keyboard, converging at the end, and revealing a complex and surprising story of revenge and humanity.

Embedded in a series of suspicious accidents, we focus on the youngest and newest recruit of the Federal German Cyber Safety HQ, who finds himself in a race against the clock and up against some lethal hackers to stop a politically motivated cyber attack which could destroy Germany. (in development)

The race is on when a talented team of international specialists is commissioned by the German government to pursue the cyber terrorists. Who backed the operation? And what are they after? The suspenseful journey involves sophisticated traps, unexpected twists, and exciting characters.

“netwars/out of CTRL –The Series”: We follow the hunters and the hunted. Six episodes à52 minutes are planned.

According to FilmTank (main project developer) this part of "Netwars - out of control" has not been produced yet. However, we can suspect that its target audience and channels of distribution may be similar to those of the TV Documentary. TV Series may be available later for buying on streaming services or as a digital bundle in digital and traditional stores.

Summary

"Netwars - out of control" is an impressive transmedia narrative project which has been developed for several years. Its narrative is spread across various digital media that offer different models of reading / participating / co-creating the storyline. Through that it

can target different audiences, also in the Internet. We can conclude that the perspective behind this project is fact-based, however most of its elements are work of fictions, inspired by similar real-life events or are based on hypothetical situations that could take place in the context of cyber-crime, hacking and digital data. The narrative uses gamification, edutainment as well as various image-based interactive mechanisms to enable the audience to experience a highly immersive narrative — particularly in case of the Interactive Web Documentary and the Graphic Novel App. It seems that apart from obvious business-driven strategy behind the project of this scale, "Netwars - out of control" as a whole offers both entertaining and educational narrative composed of several storylines focused on dangers that our civilization faces due to increased datafication and digitalization. The project also illustrates how the physical and the digital world are now intertwined and interdependent — we live in a reality not only augmented but also shaped by the computational.

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(<http://www.filmtank.de/p/netwars-out-of-ctrl-web-documentary-2/>)

The Matrix is entertainment for the age of media convergence, integrating multiple texts to create a narrative so large that it cannot be contained within a single medium (Jenkins, 2006b, p. 95). Key bits of information are conveyed through three live action films, a series of animated shorts, two collections of comic book stories, and several video games.Â

2.2 Semiotics of transmedia storytelling

The analysis starts with a hypothesis that is quite accepted in the semiotic and narratology. academic environments: texts are not necessarily linguistic (or visual) but narratively structured. In other words, narrative is the basic structure-creating device for meaning production. Digital storytelling combines the art of telling stories with a mixture of digital media, including text, pictures, recorded audio narration, music and video. These multimedia elements are blended together using computer software, to tell a story that usually revolves around a specific theme or topic and often contains a particular point of view.Â

Digital Storytelling can be a powerful educational tool for students at all ages and grade levels who are tasked with creating their own stories.Â

Analysis Phase: Educators help students identify an instructional goal and analyze aspects of the digital. story related to the topic and script, as well as consider the potential audience for the story. Distinguish the characteristics of an educational digital story.