About the identity of immersion.
Reader in the 'post paper' age

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Immersion has always been related to art and it greatly determinate work's reception. According to Marie-Laure Ryan immersion is "common and historical attribute of art, present above all in literature, mostly in prose"[1]. In this wide definition immersion means: art influence understood as recipient's interpretation and experience. While communing with cultural products, the recipient using his/her imagination has an opportunity to create an area alternative to the reality. According to Ryan imagination is the factor which causes that when we compare a traditional literary work to an electronic, interactive work, this traditional one has more immersive character. Literature forces a reader to engage because without this engagement the text could not exist. Virtual woks, on the other hand, give their recipients a complete reality with a set of rules and tips regarding getting around this alternative world which causes that they do not engage imagination as much as traditional literature.

Commonly, immersion is an attribute of video games and, generally speaking, virtual reality. According to Jakub Krogulec:

> Immersja nie ogranicza się wyłącznie do gier komputerowych. Proces ten obecny jest także w innych mediach: filmie, muzyce, literaturze czy nawet sztukach plastycznych. Jednakże immersja wynikająca z zaangażowania w świat gry będzie na swój sposób intensywniejsza, bardziej fizyczna[2].

Above statement is based on the Espen Aarseth's theory regarding ergodic literature. Aarseth has divided literary works to ergodic — those which

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1 Ryan M. L., *Narrative As Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*, John Hopkins University Press 2001, p. 352–353.

2 ² Krogulec J., *Immersja i tworzenie podmiotowości w grach*, "CreatioFantastica" 2015, no. 1 (48), p. 1, https://creatiofantastica.filep.wordpresp.com/2015/03/art-jakub-krogulec-immersja-i-tworzenie-tozsamosci-w-grach.pdf, [access: 13.05.2016].

requires from the reader "nontrivial effort" and nonergodic — those "with no extranoematic responsibilities placed on the reader except (for example) eye movement and the periodic or arbitrary turning of pages"[3]. According to Aarseth ergodic literature includes only cybertexts and hypertext fiction, a traditional printed codex is considered nonergodic. If accept such position we need to agree with Krogulec that video games (and e-literature) are more immersive than traditional literature. However, there is also Ryan and her alternative statement.

Immersion in the literature can be associated with Ingarden's concept of concretisation[4] which assumes that a literary work is only a kind of a frame and it needs to be filled by the reader during the reading. Concretisation is the effect of reader's and book collaboration, and specifically it is the whole operation taking place during the reading.

> Konkretyzacje są właśnie tym, co się konstytuuje w czasie lektury i co stanowi niejako sposób przejawiania się dzieła, tę konkretną postać, pod którą samo dzieło zostaje przez nas uchwycone[5].

The reader is filling so called places of indeterminacy of the literary work, he becomes a co-author who creates his own system of determinacy using his imagination, preferences and sensitivity.

> Można powiedzieć, że jedno i to samo dzieło literackie przejawia się w różnych zmiennych wyglądach. Mnogość wyglądów przynależnych do jednej i tej samej lektury pewnego dzieła, posiada zarazem zasadniczą wagę dla konstytuowania się określonej konkretyzacji właśnie czytanego dzieła. Ponieważ te mnogości są na ogół różne przy dwóch różnych lekturach, otwiera się więc przed nami droga do odróżnienia poszczególnych konkretyzacji dzieła od niego samego[6].

The mechanism of immersion in video games, where the gamer is creating avatars or fictional spaces, is working much alike the mechanism of Ingarden's concretisation.

Umberto Eco has brought up the matter of immersion is his semiotic concept of analysing art works based on the relation between the work and its recipient[7]. Like Roman Ingarden before, Eco assigns to the reader gre-

3 Aarseth E., *Cybertekst: Perspektywy literatury ergodycznej*, trans. Sikora D., Pisarski M., "Techsty" 2006, no. 2, http://www.techsty.art.pl/magazyn2/artykuly/aarseth_cybertekst.html, [access: 12.05.2016].
4 Ingarden R., *Z teorii dzieła literackiego*, [in:] *Problemy teorii literatury*, ed. Markiewicz H., Wroclaw 1987, p. 7–54.
5 Idem, *O dziele literackim*, trans. Turowicz M., Warsaw 1988, p. 410.
6 Ibidem, p. 412.
7 Eco U., *Dzieło otwarte: Forma i nieokreśloność w poetykach współczesnych*, trans. Eustachiewicz L., Gałuszka J., Kreisberg A., Żaboklicki K., Warsaw 2008.

ater role than to the author of the work. While reading, the recipient creates the book using his sensitivity. Each woks is full of elements of indeterminacy which are completed again and again during the further readings. There are no two identical readings of the same work. Each collaboration between the reader and the text will evoke new meanings. But, of course, we need to remember that there are some limitations here — each reading need to fit in the frame created by the author of the work. Each work has many recipients and each of this recipient will never read the same work in the exact same way — basing on these facts we can state that each work is polysemic and it is a subject of an endless number of outreadings. Literature and art could not exist without their recipients. Literature also could not exist without the authors whose aim is to shape the work in the way which would stimulate the reader to fill the work during the reading.

Ryan distinguished three categories within the immersion of literature[8]. All of them are strictly connected with the role of the reader in the work creation:

1) spatial immersion — becoming a part of a fictional world of the book, partial identifying with fictional characters; filling the frame of characters and fictional reality;
2) temporal immersion — the reader experiences a work in the real world; the reader becomes a part of a fictional world; the reader is creating the fictional reality and its characters basing on the aesthetics experience of work's perception;
3) emotional immersion — the literary identity of the fictional character becomes a part of the reader's reality as the pattern of values, ideas or behaviour.

Such attributes of immersion can be found in many art works, in books but also in works from different art fields. Each reader creates images of the characters (by assigning to them some psychical and mental features) basing on the description given by the author. The reader also fills the fictional reality and even if it has been described in detail by the author, each of recipient readings would bring a slightly different image of this fictional world. It happens that we identify ourselves with the fictional characters we are reading of. We start to compare their situation to our life and then the world of a literary fiction somehow becomes a part of our reality. Nevertheless, we need to answer two questions: 1) is every art product immersive?, and 2) is the immersion of traditional art really stronger than the immersion of virtual art as Ryan claims or is the situation opposite (Aarseth)?

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8 Ryan M. L., op. cit., p. 122–152.

To answer the firm question we need to refer to the concept of prostage art which has been opposed to the virtual art by Antoni Porczak[9]. The concept of prostage art assumes, firstly, polarity, understood as creating an intransgressible border between the work and its recipient (for example in the museum), secondly, recipient's lack of ability to influence the form of the work of art which includes lack of ability to influence the visual and audio as well as the plot course. In such case immersion is not present or, at least, its level is significantly reduced. Virtual art, on the other hand, requires from its recipient to be an active participant the work's life, to infiltrate the interactive space of the work, to take part in its (work's) creation. Virtual art requires influencing the work's shape as a book does in concepts of Roman Ingarden and Umberto Eco regarding the literature.

The other vital aspect of immersion is its connection to illusion. To find an answer to the second question asked above and also to better understand how the concept of immersion has been by the New Media, we need to show the difference between immersion and illusion:

> Iluzja pozostaje po stronie przedmiotu, immersja jest przestrzenią, iluzja to efekt zastosowanej techniki, zabiegów, np. istnienia w dziele wartości artystycznych, immersja to zaangażowany odbiór, w którym dzieło przybliża się i ogarnia odbiorcę, oddziałując w sposób pełny na władze poznawcze[10].

Unlike traditional art, the contemporary digital art can use many illusion techniques which allow it to increase immersion of works by creating almost perfect illusion of the reality. The speed of new technologies development caused that immersion has started to be perceived as an ability to produce as many sensual trustworthy stimulants as possible (such strategy is very common in case of video games). If we assume that immersion is the general attribute of art, it achieves its significant meaning only in the New Media. The digitisation has allowed art to influence the recipient using many channels — the virtual reality gives an opportunity of creating a sensual, responsive space in which the recipient in not only the one who receives but he also becomes a creator of the interactive piece of art.

Changes in understanding the concept of immersion can be shown on the example of the Screen project which bases on the CAVE[11] (Cave Automatic Virtual Environment) technology. The CAVE initiative has started on the Brown University in 1992. It consists of using an advanced multimedia installation art which is a space (usually of a cube's shape) adapted

9 Porczak A., *Instalacje interaktywne*, [in:] *Estetyka sensu largo*, ed. Chmielowski A., Cracow 1998, p. 113.
10 Ostrowicki M., *Wirtualne realip. Estetyka w epoce elektroniki*, Cracow 2006, p. 204.
11 Cave Writing website, http://cavewriting.sourceforge.net [access: 04.05.2018].

for screening the content and being a suitable place for interaction between the recipient and the virtual reality (VR). The walls of such space are the screen for high-resolution images which are rendered online, basing on the recipient's moves or other actions.

Communication between the human and the computer passes through a VR/3D helmet which allows to track each move of a user. The helmet overlaps additional objects on the images displayed on the walls in a way which makes the illusion of those objects levitating between the user and the walls (there is also possible to get the illusion that the walls are not even present!). Nowadays we can find equivalents of the CAVE technology like OculusRift[12] with the Virtuix Omni[13] tracking pods. Both products are available on the market for an average consumer and their price is significantly lower than creating the CAVE installation. OculusRift video glasses consist of two screens which displays images from the computer. The device is also equipped with the system of sensors enabling orientation in space. The signal from sensors is directed to the computer where the image is processed according to our head's position. Then, the image comes back to the device to let us see it right behind our eyes. Technically, it means that while playing a video game we can move our head around and see the fictional reality in the exact same way as it is seen by the character we personate. We can turn around, lean down, look down and the virtual reality in which we are currently immersed will follow the movement of our eyeballs. OculusRrift has been supplemented with Virtuix Omni tracking pods, the project founded via Kickstarter.com[14] portal by the Internet users who desired the deeper experience of VR. Virtuix Omni is an active virtual reality motion platform used for simulation of movement in video games. The device consists of forty move sensors so it could read all user's activities — it is able to distinguish march, walk, run, going back and jumping from side to side. It is also equipped with the special harness protecting the gamer from falling down. To use this equipment in a safe way the gamer needs also a special pair of shoes which prevents from slipping. Both, OculusRift and Virtuix Omni, let their users experience incredible level of immersion at home.

In 2002 CAVE technology was adopted for the pioneering project, the Screen, which used the virtual reality as the place of a reader and literature meeting. The project based on the Cave Writing, the way of presenting the content initiated by the professor Robert Coover, an American writer and researcher who was studying the possibilities of exploring the potential of

12 Oculus Rift website, http://www.oculup.com/dk2/ [access: 04.05.2018].
13 Virtuix Omni website, http://www.virtuix.com/ [access: 04.05.2018].
14 Kickstarter website, https://www.kickstarter.com/ [access: 04.05.2018].

literary texts. This technology has enabled the new way of collaborating with the word and the literary work. It has delivered many new channels of perception and many new ways of interaction with the work. Apart from a text the Cave Writing offers additional elements such as: sounds (comments or narration), music, realistic sounds of the surroundings, narrative moves bringing the user directly inside the plot and the elements of gamification produced using the additional controller of a hand movement.

The author of the project uses all those features to invite the user to an interactive literary performance about memories which get deformed during the process of recalling them. At first the recipient experiences three different memories in CAVE, they are displayed on the three separate walls. Then, the memories starts to fall into pieces and the user has to decide what to do with the words which has already got separated from their original text. They can be ignored what would bring them to the fast "degradation" — in such case the recipient would get only a bunch of incomprehensible signs floating around him or her. The user can also try to bounce falling words and make them come back their initial place. Unfortunately, words do not always reach their destination and if the "hit" is too strong they fall apart what causes that the initial texts get more and more deformed. While the text is falling apart faster and faster the possibility of fixing the initial memories decreases and eventually the memories recede.

Even though the text is the main part of the Screen project, it is mostly the tool, the way of reception, not the root of the work (like in traditional literature). The Screen project brings some second thoughts about the nature of immersion which is here not only the mimetic simulation of reality which aim is to create illusion of experiencing real objects like in the instance of video games. Basing on literary reference Cave Writing causes illusion of emotions, an image of immaterial elements of the reality such as memories receding. Such experiment enables its user to understand and somehow experience the complicated memory processes.

Except the Screen project we can find examples of digital art which are closer to the traditional literature, audio books and e-books[15]. They are equipped with the various features which increase their immersive potential. In case of audio books such potential can be found in their audio sphere and its artistic value. *Niezwyciężony* by Stanisław Lem is a good example of the audio book using additional features which influence the work's meaning. This audio book was created in 2013 under the directorship of Grzegorz

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15 E-books understood In the "traditional" way as electronic books which can be read Rusing e--book readers.

Pawlak[16]. The text of the novel read by the Polish actors has been enriched by the surround sounds and the sound track composed by Ścianka band. Even though the reception of this audio book still requires the work of one's imagination, described features make immersion easier and more intensive as well as they increase the level of aesthetics experience of the recipient.

In case of an electronic books we face the technical immersion which source can be found in the increasing technical possibilities. Contemporary e-book readers use e-ink technology which brings illusion of reading the book printed on paper. Additionally, many devices include features such as animation of turning pages and its sound so the illusion of reading a paper book is even stronger. Such features, however, do not seem to influence the reception of the book's meaning. If we wish to find some signs of immersion in the e-books reading using the e-book reader, we need to pay attention the feature which enables automatic scrolling of the text — in such case the book loses its page-based structure and the speed of scrolling depends on one's speed of reading. In such situation the recipient can better "immerse" into the work because his or her attention is no longer distracted by turning of pages (recognized by Aarseth as "trivial").

The next element of e-book's immersive potential is using hyperlinks. The system of internal (included in the book) and external (the Internet sources) references brings a literary work closer to a hypertext which enables the user to find the deeper layers. Such structure of a literary work can be associated with *Biblioteka Babel*[17] by Borges and the term of intertextuality. Continuous discovering the deeper layers of the literary work and switching from one work to another can make us feel like we are experiencing The Book which has no end and like the whole literature is eventually the one work, developed and recycled in many ways and turns.

The books created by Festina Lente[18] foundation can be an excellent example of combining possibilities of audio books and e-books together. *O Stole, który uciekł do lasu*[19] by Stefan Themerson (illustrated by his wife, Franciszka Themerson) is an instance of a hybrid book. Original illustrations, a lector whose speed of reading is adapted to the turning of pages, a creative typography, sounds and animations of turning pages — all these elements make the recipient falling deeper into the book's reality. But even

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16 *Niezwyciężony* by Stanisław Lem, audio book, http://audioteka.com/pl/audiobook/niezwyciezony [access: 04.05.2018].

17 Borges J. L., *Biblioteka Babel*, [in:] idem, *Fikcje*, trans. Piekarec K., Warsaw 1972, p. 65–73.

18 FestinaLente Foundation website, http://festina-lente.pl/, [access: 04.05.2018].

19 The new version of *O stole, który uciekł do lasu* by Stefan Themerson, http://iczytam.pl/prod237, [access: 04.05.2018].

in such situation the reader has no immunity of using imagination which helps him or her to see the table "is moving" even though the illustration stays still. Basing on this example we can conclude that the increasing immersion does not decrease the strength of human mind and imagination, far from, in fact — immersion can support imagination by stimulating many perception channels simultaneously.

If we ask if the increasing level of books immersion reduces the level of using imagination, we need to answer: yes and no. In fact, it depends on the intention of electronic works creators and the way they develop their work — have they leave the space for using reader's imagination among the features which aim is to influence humans senses? I believe that we need to agree with Espen Aarseth that the electronic literature is more immersive than the traditional one. However, we should not forget about the vital role of imagination (Marie-Laure Ryan's conception) and the fact that all electronic literary works draw inspiration from traditional books which are able to cause immersion only by narration and concretisation.

The Screen project showsS that the elements which can increase immersion can also influence human ability of imaging. The visualization of memory processes becomes possible but the recipient has to use his or her mind to understand it fully. In the culture we can also meet works which do not require using imagination such as 3D movies. Although the recipient watching 3D movie immerses deeper than the recipient of 2D movie, he or her is not expected to use imagination in the process of cognition. This is an example of prostage art, impossible to be "overcreated" by its recipient. Moreover, despite of the intense development of technology and virtual reality we are still not able to mimic feelings connected to the touch. Even if we are immersed in the cyberspace which influences senses such as sight, hearing, taste and smell and in which we can talk and move, we still do not experience realistic touch, it can only be felt in our imagination. It can be observed that there is no one, clear answer for the question asked at the beginning of this summarize. The analysis of examples of the modern immersive works gives us hope that imagination will still remain the vital part of human-art relations.

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