Our era is characterized by technologies focused on the computer, but at the same time technology adapts to the social structures and needs and is determined by them. Without doubt communication which takes place with the participation of computer games is an important part of contemporary human experience. Culture-fun theme - the concept presented in 1938 by the Dutch historian Johan Huizinga’s book *Homo Ludens: A Study of the Play Element in Culture*, in which he discussed the possibility that play is the primary formative element in human culture, still gets on the news. Huizinga could not imagine then that the concept of culture-games, will be decades later adapted for use in the description of virtual games which are games. What is often quoted by *ludo-specialists* is his thesis that science, literature and art, all take their origins in play, and that *play* has an important role in culture. I think that games presented in this article will be an excellent example promoting this idea.

Serious games a relatively new trend in computer games, whose goal goes beyond entertainment, although it does not exclude it. Within the scope of these games important social issues like education, health and management are dealt with. This domain also includes training games and simulations. The very term *serious games* was first used in 1970 by Clark C. Abt in the book by the same title. Although originally Abt used the term to describe the board games and card games, the definition formulated by him has later been used to describe computer games. Currently, *serious games* is the name of a broad sense, which brings together many species of games. They themselves do not represent separate species, because unlike other games they have been classified on the basis of content and not the mechanism of the game. In some Polish publications on this topic, researchers are using a Polish equivalent of the English term, i.e. "poważne gry", which is often met with criticism, because it is a term that seems to be unfortunate and not reflecting fully the nature of these games. This group was supported in doctoral thesis of

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Gonzalo Frasca – a designer, theorist of computer games (especially those with a social message), and what is interesting - the creator of the term “ludology”, which was first used in 1999. Frasca, on one side, believes the concept of serious games is extremely useful as it stresses the intent of this type of game, on the other hand he notes that it can lead to confusion, because it suggests that other games are not serious. These considerations shall be accompanied by another ludologist - Ian Bogost, game developer and one of the founders of the service "Persuasive Games" who in his book Persuasive Games: The expressive power of videogames indicates the problem with the nomenclature for this type of game. Huizinga in Homo Ludens points to an opposition existing in our consciousness, in which we juxtapose play against seriousness. A little further, however, he indicates that the contrast between these two phenomena appears to be neither unique nor permanent, because fun can be serious, as shown for example, in the case of chess players. Ian Bogost believes the term serious is confusing and is inadequate to describe these games that is why he proposes to replace it with the term persuasive games, which will be explained later in the article. In the Polish texts, I found the opinions indicating that the term "serious games" sounds like an oxymoron, and enclosed in quotation marks looks cynical. However, it seems that the lack of acceptance is often a consequence of the rough borrowing of the term from the English: language, and as with many other terms, it needs time to establish itself in the language. Therefore, later in this article I will use alternating English and Polish versions.

Among the most serious games are flash games, browser, single player or multiplayer, but we can also find examples of MMORPG games and Facebook applications. These games also benefit from many other species that easily blend together, from adventure through arcade, strategy, puzzle, racing to the so-called “brawls”. Based on the above description one can easily assume that there are rather special restrictions on their types. A significant advantage of all the games is that they are often available online, and they can be used freely. Most of the free games feature, however, poor graphics, and there is no immersion in this case. Obstructive 'immersion in the game "simplified and schematic symbols are typically caused by a desire to reduce production costs (these games usually do not generate income, or it is extremely low), increase the speed of transmission and reception of

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6 Computer or video game for one player only.
7 Computer or video game for many players at the same time.
8 Massively Multiplayer Online Role Playing Game.
9 The term comes from Latin. immersio, used in many different areas. The games used to describe the state's "submerged" totally in the game world, at this ceases to be aware of itself and the actual "here and now.".
information, which in turn improves further communicativeness in the game. Of course, the reason for their visual unattractiveness may also stem from the fact that the developers want to shift player's attention from the form to content. Moreover, as mentioned earlier, a "serious game" is characterized by the schematic character and repeatability, drawing on games that have already been recognized. However, as Dominika Urbańska states in Homo-Player, diversity and originality in the game is not the main advantage for all players and the increasing homogeneity of cultural phenomena - "more strings", sequels, and sometimes quite accurate carbon copies – rather delights than saddens the audiences 10.

There are still ongoing attempts to classify serious games. Researchers at the Laboratory for Entertainment and Educational Games at the University of Michigan offered a breakdown 11 of those games into persuasive games, games of health, educational games (Learning game - learning to use theoretical knowledge in practice or Edutainment - caused by a combination English words "education" [education] and "entertainment" [entertainment]), military games / simulators (e.g., simulations of different vehicles, business activities, strategic thinking, etc.), government / non-governmental, game information (News Games - Games journalism, journalistic, commenting on current events in the world) as well as corporate-game advertising.

Polish versus Western market

It seems necessary to compare the domestic market with American and Western European markets, which will help to realize the complexity of the phenomenon. Abroad, there are many research centers that deal with "serious games". In the United States, Great Britain, the Netherlands there are institutes with academic units. Universities in Michigan (United States), Utrecht (Netherlands), Salford (England), Skövde (Sweden) offer studies in the design of this type of games and the opportunity to obtain the title of the Master of Arts, Master of Science or just a certificate of a designer of serious games. In addition, several major publications have been devoted to them. "Serious games" are ordered by organizations, companies, individuals, and even governments. And actually there is no theme, issue, social issues, which do not fall into categories of these games. On many web pages devoted only to serious games, we can find organic, medical, economic, military, psychological, but also - and this can hardly be imagined - even existential and queer games. Many theorists and practitioners are involved in creating them. Many companies are proposing their own games, as well as offering custom games.

And contrary to the accepted beliefs, these are not only flash games with poor graphics and uninteresting story. One of the best examples is the America's Army – a free video game, whose first version was established in 2002, and since then has already had three editions (recent in 2009). Funded by the U.S. Army, the game had already been downloaded from the network by over eight million people. Not a bad outcome for a propaganda tool, which openly encourages players to join the ranks of the army. Leaving aside the disturbing fact of overt manipulation, in the West there are also promoted games, in which players themselves can create a simulation game, educational, etc. The Polish market is only beginning to develop in this field. Most of the more interesting games, surprising with their graphics and storyline, turn out to be Polish translations of foreign editions, such as the popular series of Emergency, through which players can learn, among other things - first aid, how to act in emergencies, manage emergency services and security. Games made in Poland are quite rare, but it is notable that there is a revival of the discussion about these games; game theorists sometimes even unwittingly fall into the "serious games". There appear companies that offer their games created as elements that can be used in the classroom with students, in a training, or which would complement the advertising campaign, help in strengthening and better anchoring in the consciousness of the recipient.

The owners of gaming portals often lack awareness of the distinctness of this type of games. I guess everyone is surprised at the sight of a tab of a game called "serious". During my research it appeared that if the vortals included, among many, some serious games, they were placed under the branches of educational games, political, funny, strategic, and many, many others. Among the Polish "serious games" we will not find many examples, which were given in the classification of the University of Michigan. There are usually educational games and simulations. For several years, considerable interest has been paid to political games, and among them, less numerous, those commenting on events in Poland and abroad. I shall subsequently try to give a split due to the most common serious games on the Polish market and try to describe them briefly.

**Educational Games**

It would seem that we do not have to devote too much attention to educational games as there are numerous publications about them. Almost everyone has heard of or seen play games designed for children, teaching them to count, use a foreign language, explaining the laws of physics, etc. All these, of course, may be entered in the current of serious games, and I think it is difficult to deny them a positive impact on children's learning. In the description of educational games this type has been

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limited to one, quite an unusual example, which, in addition to educational benefits, brings with it a presentation of the technological capabilities that can be used by teachers communicating knowledge.

The game *Magritte*\(^{13}\) was created in 2007 by Martin Drews as a complementary part of his thesis devoted to computer games - fighting illiteracy and functional information, and opportunities to create such games by teachers using free software like Adventure Maker\(^{14}\). Drews - without knowing any programming language, using the graphical user interface, ready to paste pictures, typing recommendations - made a fictional game. Its main character is caught in a mysterious game unfolding in the streets of Wroclaw. The game uses characters and items and well known paintings by the Belgian surrealist painter - René Magritte. You can learn through it, to some extent, about Wroclaw, but also become familiar with the works of surrealist, hence the dual educational dimensions of the game.

**Economic Games**

One can find relatively large networks of economic simulators. I think we can count among them even micro-nation phenomenon, which deals with the simulation of a virtual state and the ordinance creating the necessary structures ranging from law, education, infrastructure, and culture. In their structure they resemble role-playing games because participants assume the roles of fictional characters. Although micro-nations are not like the games discussed here, they are to me rather a "game of the state", played along the rules. This phenomenon can be observed in Poland since mid 90s of the previous century. One can notice educational function in them, namely management science. From 2011 we have also had an opportunity to study the management of EU projects using a computer game. The business simulation was created by EXER Coaching Game\(^{15}\) and was premiered on 9 June. There is a demo available on the project site and it is possible to purchase/access the game then. Meanwhile, the game was put to test in the classes, within the "European funds" by the students of the Faculty of International and Political Studies at University of Lodz. The impact of the game on the students has been explained by the co-author - Dr. Thomas Kaminski, assistant professor at the University of Łódź in such a way: "If you ask me how to call the students' effect> wow < is the answer: give them a computer game instead of a lecture"\(^{16}\). In the application of simulation the player takes the role of a project manager and learns how to manage it efficiently in

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\(^{13}\) Available on: www.magritte.oicom.pl (access: 8.01.12).

\(^{14}\) M. Drews, Gry komputerowe w walce z analfabetyzmem funkcjonalnym i informacyjnym – darmowe programy do tworzenia gier i możliwość wykorzystania ich w edukacji na przykładzie programu Adventure Maker: http://project2.art.pl/magritte/praca.pdf (access: 8.01.12).


accordance with the requirements of the European Union On the Economic Education Portal, maintained by the Polish National Bank, you will find several games which are divided into simple and decisive, whose subject matter is closely related to economic issues. These include simple games such as showing what inflation is, or involving the recognition of banknotes. But we find among them a more complex game, such as Rich Pensioner, whose aim is to show the possibilities and consequences of investment for those who are thinking about their financial future. In the game, From buns to the Company the user is to get the most revenue from the sale of sandwiches, which affect not only the tastes of customers, but also the investments made. As shown in the above example, to encourage players to play the game, quite a humorous approach to the subject is also needed, making it easy and nice to start their own business.

Persuasive Games

The ambitious targets are also set forth by the developers of persuasive games. According to the founders of the service "Persuasive Games", this kind of games "affects the players, encouraging them to take action through gameplay." Although this definition can be successfully applied to any type of electronic entertainment, a major theme of persuasive games gives it a special character. Mentioned earlier, a researcher and game designer - Ian Bogost, proposes to replace the term serious games with a persuasive definition (persuasive games), stressing that many games bring the message and it is not necessarily readily available.

In Poland, the most popular games among adult players are the political games, which fit with their character into the stream of serious games. A substantial collection of this type of games is available on the vortal GRYzonie.pl. One of the games in 2006 entitled The Mass was so popular in its time that generated daily from 2 to 3 thousand visits of unique visitors. The other game, Nerwowy rzut, has now 90 thousand impressions on the site and, according to Michael Cieslak, the owner of the site, attracted many new users to the vortal in 2007. It gained popularity after it was presented on TVN television in Fakty. With this promotion during the same evening, the number of users of the game reached 414 people. In an exchange, Michael Cieslak admitted:

"But I regret to say that the more offensive or controversial (and not necessarily the best quality) the game is, the largest popularity it gains. When the game is less worrisome to its heroes, it does not usually gained such popularity in the network, as its counterpart of a sharper character. I also noticed the correlation in the case of political games that the more "controversial" the behavior of

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government and politicians is, the larger the group of players is eager to play it. When politicians are not making as many problems and all sorts of blunders, it is difficult to make a game that will find its audience, and that results in the game being popular.\textsuperscript{20}

This vortal also has other games that can be included in the mainstream of persuasive type. Among others is the game \textit{Szkolny mundurek}, where the game hero - a student, must go through the board and perform several tasks to "earn" the mandatory school uniform introduced to schools in 2007. On the same webpage one can also find games whose action takes place during major events, commented live in the media. The game of \textit{Strajk}, introduced after: a protest of nurses, belongs to this type of games, together with \textit{Chińska ucieczka}, associated with the Olympics in Beijing and the problems of freedom for Tibet. Political games are an interesting subject for a separate article, but it is worth adding that in this year's election campaign, political parties and politicians, conforming to the ban placed on radio and television, began to seek new forms of advertising. It created an opportunity for new games, mostly trying to make fun of the opposition party politicians, to be created on demand. Some of them deserve special attention because of their uniqueness, such as the game \textit{Kolej-przyspieszenie} made by Sojusz Lewicy Demokratycznej, in which the participants are trying to do the impossible, for example to cram 100 people in a 80-passenger car with a clear hint that the perpetrators of all this are Donald Tusk and Cezary Grabarczyk. Platforma, as a response to the blow, released their own game \textit{Platformuła}, modeled on the old cartoon \textit{Wacky Races}. The purpose of the combined application with Facebook is to travel to the finish and the destruction of any obstacles on the way. Prawo i Sprawiedliwość, in turn, referring to the popular game at that time - \textit{Angry Birds}, presented their own titled \textit{ANGRY PIS}. In the course of the game, using PiS politicians, one is trying to "knock out" the ruling party members from the Parliament.

\textbf{Advertising Games}

Increasingly, advantages of computer games in advertising campaigns have been recognized. One of the websites offering this type of marketing tools informs: "Promotional games are an extremely effective tool for building your corporate image and attracting new customers. By engaging a user in a multimedia entertainment you are convincing him that your company is open to new ideas and new solutions. The player associates positive feelings (joy of winning, the pleasure of the game, the desire of activity) with the advertised in-game services, products or a company logo that appears, making it clear that the marketing message arrives with a double force.\textsuperscript{21}"

\textsuperscript{20} Own mail correspondence with Michał Cieślak on 17 October 2011.
\textsuperscript{21} http://www.jot-er.pl/multimedia.html (access: 9.01.12).
So far many big brands have used computer games to promote their products. Some of them use them constantly. However, the examples shown here playing with both the persuasive function, as well as informative one; they were not created for financial gain. They focus more on customer interest in specific subjects.

At the end of May and June 2011, a game ordered by the Silesian Museum and "Gazeta Wyborcza" in Katowice was released, which was part of a jointly prepared project. Trzy Dęby is an animated board game, referring to the historical name of the "three oaks," connected with the beginning of the first Silesian uprising. Moving a figure of a Silesian insurrectionist around the board, we learn a great deal about the uprisings in Silesia, but also our historical knowledge is verified. The game was the addition of information in the memory of celebrations of the year devoted to Silesian uprisings. An interesting example is the game Catch Papilloma, launched and available on the Facebook profile, "Kobiecy sekret" since November 2011. This simple game, aimed at women, is a part of the social campaign "protect life against cervical cancer." The game begins with a selection of avatars, its clothing, make-up, and jewelry, with the final stage allegedly being the most attractive to women. However, it appears that shortly after leaving the avatar in a virtual city, one’s task is implied in title "grabbing Papilloma". Once we are able to do this, information appears on the screen which reminds us that what was apparently a nice-looking monster, is actually a hoax. The inscription says: "The end of the virtual game - the real battle begins for you now" and it turns out that we just caught a Human Papillomavirus, which is the virus responsible for cervical cancer. This simple game is very popular among women - proof of which is more than 45 thousand fans on the profile awareness campaign and number of organized competitions, mostly connected with the created avatars.

In summary, Polish serious gaming, whatever alternative names we use to call it, is growing up constantly to meet the level of the western standards. You will notice that the strongest group of "serious games" are the educational ones. Increasingly, teachers note that the generation who grow up with computers as part of their reality is hard to be taught by old, proven methods. But unfortunately what characterizes them is the ignorance of new media, because it causes pathology in teaching as children rather than look up to their teachers in search of education try to educate themselves. However, often they cannot choose the most valuable games and programs.

"However, children living in the era of information technology are more demanding than previous generations, so the training of future teachers and those

currently working with children, should emphasize the knowledge of the use of computer technology, application of specific software in working with children. 

Games are still not adequately used in teaching. A better situation is in training, where employers increasingly recognize the attractive nature of simulation games, which allow to increase employee skills and motivate him/her to take action. Educational games rather easily indicate who their target users are. A more interesting question seems to be who the users of other types of serious games are — games of persuasion or political advertising. In order to describe them we certainly cannot apply the more usual criterion for classification, created on the basis of the time spent playing, which divides players into the "occasional", "intense" and "compulsive" groups. However, I assume that they are users who, if they are not researchers, often come across these games by accident. Many "serious games" are placed on social networking sites like Facebook or Nasza Klasa, which continues to strongly affect the network society, and their extended "referral system" helps you to quickly promote different phenomena. Unfortunately, due to the absence in Poland of separate pages devoted to games, it is hard to follow the conscious seeking of the users. Many people see in "serious games" a new medium through which to analyze important socio-political issues. However, if we accept the idea of Ian Bogosta, for whom serious games are a limited persuasive variety of games, it is easy to arrive at the conclusion that in case of many commercial games that have meaning, their mechanics will dictate how to ignore the layers of meaning for the sake of enjoyment of a simple system of rewarding for the player. When we play, we are accustomed to competition, even when we compete with the computer. We think more about the points we earn by doing the job and eliminating the enemy, than about cultural analysis. Serious games, games created primarily for the message, do not give us the possibility of "immersion in the game", not only because of their poor graphics and storyline. "Serious games" carry a message that they are not actually the types of games which we are accustomed to. Such is the case of of a game called September 12th, created by Gonzalo Frasca, which is a response to the terrorist attacks of September 11, 2001, which upon entering displays such a notice:

"This is not a game. You can not win or lose. This is a simulation. There is no end, but just the beginning. The rules are trivial. You can shoot or not. This is a simple model that you can use to explore some aspects of the fight against terrorism."

You can come to the conclusion that although these games often resemble standard games, where at the end you lose or win, when relevant information is provided, the act itself of starting the game is a winning situation for both the user and the user...
(awareness, a desire to understand), and the creator, inspirer of the game (reaching the user and interest in the topic). Whatever way to look at the "serious games", they are an interesting subject for observation of the reception styles of players, as well as the increasing awareness of companies, institutions and organizations, noticing the extraordinary potential of computer games in the transfer of knowledge, awareness, and even inducting the change of their thinking.

"Serious games", play as science and education - a Polish perspective

Summary

For several years we could observe the existence of a fairly experimental stream of games, the so-called serious games. Their main function is not entertainment, but education and drawing attention to important social issues. Serious games show, for instance, how to give first aid, comment on political events, or convince to run an organic farm, as well as teach how to cope with the EU projects. The concept of these games was presented in several publications in America. In Poland they are still getting more and more popular. In the article the author tries to analyze the Polish market of serious games and present in a close-up the opportunities created by them in changing not only the educational system, but also the society's way of thinking.