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War in Ukraine through the lens of interactive media: A typological study of video games

Wojna w Ukrainie w obiektywie mediów interaktywnych: studium typologiczne gier wideo

Abstract: The objective of the research was to assess video games related to the Russian-Ukrainian war and categorise them as media tools. The study revealed that computer games are a distinctive and practical medium for journalism. They help to dismantle the opposing side's narratives and disseminate information globally about the situation in Ukraine. Video games can help Ukrainian society convey to the world the consequences of Russian aggression.
Keywords: video games; deep media; Ukrainian society; Russian aggression; journalism; deconstruction; emotional aesthetics; folk culture of laughter; information warfare; media challenges; the convergence of journalism and the gaming industry
Streszczenie: Celem badania była ocena gier wideo związanych z wojną rosyjsko-ukraińską i sklasyfikowanie ich jako narzędzi medialnych. Badanie wykazało, że gry komputerowe są charakterystycznym i praktycznym medium dziennikarskim. Pomagają rozbijać narracje strony przeciwnej i rozpowszechniają globalnie informacje o sytuacji w Ukrainie. Gry wideo mogą pomóc społeczeństwu ukraińskiemu w przekazywaniu światu informacji o konsekwencjach rosyjskiej agresji.
Słowa kluczowe: gry wideo; głębokie media; społeczeństwo ukraińskie; rosyjska agresja; dziennikarstwo; dekonstrukcja; estetyka emocjonalna; ludowa kultura śmiechu; wojna informacyjna; wyzwania medialne; dziennikarstwo i konwergencja przemysłu gier

Introduction

Being at the epicentre of events and practising work with "live" data, Ukrainian media resort to various creative means of broadcasting true

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information. One of these tools is computer games. Their relevance is strengthened by the worldwide popularisation of the game industry because the 21st century generation cannot imagine its life without video games. According to the Statista website, as of 2021, there were almost 3.21 billion video game players in the world[1]. According to Peter Susic, the number of players is expected to increase to 3.26 billion by 2023 and is predicted to reach 3.46 billion by 2024[2]. The gaming market is constantly evolving, and technological advancements are opening new possibilities for game developers to create more immersive and engaging experiences through emerging technologies like cloud and VR gaming[3].

War-themed video games have become widely popular in Ukraine since Russia's invasion. These games offer players the chance to combat the invaders and defeat the enemy himself in various ways. A large number of these games incorporate real-life events and sources, making them emotionally impactful and resonant with players. It is evident that computer games have become a significant component of the mass media landscape.

Under the conditions of media convergence, video games can be evaluated as alternative media tools for informing the community, and for their emotional impact on public consciousness to oppose militarism, racism, and totalitarianism. In the future, such creative media strategies will contribute to the speedy recovery, digital transformation, and consolidation of society in building a new [more] humane world. With the ongoing development of the digital society, the information explosion, the widespread adoption of online education because of the pandemic, and the threats of war, video games are showing great potential as journalistic tools and a means of professional training for journalists and other professionals.

1   J. Clement, *Number of video gamers worldwide in 2021, by region*, Statista, October 2022, https://www.statista.com/statistics/293304/number-video-gamers/ [6.06.2023].
2   P. Susic, *Headphones addict*, February 2023, https://headphonesaddict.com/gamer-demographics-statistics/?nowprocket=1#:~:text=Around%203.2%20billion%20people%20played%20video%20games%20in,In%202021%2C%20the%20percentage%20was%20higher%20at%2040.96%25 [6.06.2023].
3   J. Clement, *Video game market revenue worldwide 2017-2027*, Statista, Juny 2023, https://www.statista.com/statistics/1344668/revenue-video-game-worldwide/ [6.06.2023].

The analysis of video games as part of information warfare is based on theoretical works on propaganda during the war[4], "deep media"[5], "deepfakes"[6], and "interactive media"[7].

The source base of the theoretical study was composed from the scientific literature on media functions[8],[9], game theory[10], and cultural works[11]; online game resources (STEAM, itch.io, Google Play), and various reviews of games about events in Ukraine[12],[13]. Although it is traditionally accepted to consider serious games as a means of learning and education in spirituality and morality, scientists see video games as new media[14] and social media[15]. Further research is needed to explore how video games function as media tools that can teach, influence emotions, and shape public opinion. The first step in understanding video games as media tools is to create a games typology based on media functions.

4   P. Pomerantsev, *This is not propaganda: Adventures in the war against reality*, Faber and Faber Limited, London 2019.
5   S. Mattern, *Deep time of media infrastructure*, [in:] *Signal traffic: Critical studies of media infrastructures*, 2015, pp. 94-112.
6   A.M. Walorska, *Deepfakes and disinformation*, Friedrich Naumann Foundation for Freedom, Potsdam 2020, p. 9.
7   R. Rada, *Interactive media*, Springer Science & Business Media, New York 2012.
8   G.A. Donohue, P.J. Tichenor, C.N. Olien, *Mass media functions, knowledge and social control*, "Journalism Quarterly" 1973, vol. 50, no. 4, pp. 652-659, https://journals.sagepub.com/doi/pdf/10.1177/107769907305000404.
9   A. Sharma, D. Uniyal, *Development communication: Role of mass media and its approach*, "Imperial Journal of Interdisciplinary Research" 2016, vol. 2, no. 11, pp. 906-913.
10 D. Djaouti, J. Alvarez, J.P. Jessel, G. Methel, P. Molinier, *A gameplay definition through videogame classification*, "International Journal of Computer Games Technology" 2008, pp. 1-6, http://dx.doi.org/10.1155/2008/470350.
11 M.M. Bakhtin, *Rabelais and his world*, Indiana University Press, Bloomington 1984, https://monoskop.org/images/7/70/Bakhtin_Mikhail_Rabelais_and_His_World_1984.pdf.
12 *Війна-2022: дев'ять найкращих ігор для ПК за мотивами російського вторгнення в Україну* [*Viina-2022: deviat naikrashchykh ihor dlia PK za motyvamy rosiiskoho vtorhnennia v Ukrainu*], Priamyi, 21 June 2022, https://prm.ua/viyna-2022-ta-videoihry-dlya-pk/ [1.06.2023].
13 О. Трикіша. *Шість ігор про війну в Україні: рятуй Чорнобаївку та збивай Путіна з гармати*, Сьогодні, 25 квітня 2022 [O. Trykisha, *Shist ihor pro viinu v Ukraini: riatui Chornobaivku ta zbyvai Putina z harmaty*, Sohodni, 25 kvitnia 2022], https://tech.segodnya.ua/ua/tech/shest-igr-o-voyne-v-ukraine-spasay-chernoaevku-i-sbivay-putina-iz-pushki-1617201.html [1.06.2023].
14 J. Dovey, H.W. Kennedy, *Game cultures: Computer games as new media*, McGraw-Hill Education, UK, 2006.
15 S.L. Thorne, I. Fischer, *Online gaming as sociable media*, "Alsic. Apprentissage des Langues et Systèmes d'Information et de Communication" 2012, vol. 15, no. 1, https://journals.openedition.org/alsic/2450.

This study analyses video games related to the war in Ukraine to propose a typology based on their media functions. The study involves comparing the games' features with those of media and then analysing their typology. Classification differentiates objects based on significant features, while typology groups them based on their similarity to a generalised model. The most significant features-forming types include purpose, reader address, nature of information, and presentation style. The cultural analysis will also examine the perception of video games as a traditional laughing culture phenomenon. The results will be summarised using a theoretical generalisation.

1. Video games about the war in Ukraine and their typology based on media functions

The functions of mass media are commonly referred to as informational, social, educational, and entertainment purposes. As it was done in the studies of G.A. Donohue, P.J. Tichenor, and C.N. Olien[16]; A. Sharma and D. Uniyal[17]. Investigating the most well-known video games about military happenings in Ukraine since 2022 enabled the proposal of their typology based on media functions.

Games-jokes-memes

Games-jokes-memes are effective deconstruction tools for enemy narratives and fakes. It is a type of game designed to expose and mock the false information being spread by Russian propagandists.

These games are similar to memes, jokes, and folk jokes because they use satire and humour to emphasise the absurdity of fake facts. They change the way people think and act, make old beliefs less important, show things that are hidden, and make the outside world look like a text that can be used in different ways. Anecdotes, like deconstruction, do not need legitimisation, status, or commission from the art market, science, or society. The finale of joke games is consistent

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16   G.A. Donohue, P.J. Tichenor, C.N. Olien, *Mass media functions, knowledge and social control*, "Journalism Quarterly" 1973, vol. 50, no. 4, pp. 652-659, https://journals.sagepub.com/doi/pdf/10.1177/107769907305000404.

17   A. Sharma, D. Uniyal, *Development communication: Role of mass media and its approach*, "Imperial Journal of Interdisciplinary Research" 2016, vol. 2, no. 11, pp. 906-913.

with the deconstruction of the game event, as its functions become limited due to the loss of the primary support for the object. As a result, it acquires a new quality, which consists of the uniqueness of its secondary function[18]. Therefore, through such games, which are a certain reflection of ideas about the picture of the world, the very picture of the world is deconstructed. Such games fulfil the cultural role of deconstructing the grand narratives broadcast by the Russian Federation during the information war against Ukraine: "the greatness of Russia", "the invincibility of the Russian army and navy", "Russian peace", "good Russian", "biological laboratories", etc. These are the games "Putinist Slayer", "Ukrainian fArmy"[19] or "Farmers stealing tanks"[20], and "Russian warship, go f**k yourself". The genre of such games is determined by the developers as action, comedy, satire, and memes.

Some video games use irony to mock the Russian army, portraying them as orcs[21], marauders[22], and garbage. For instance, the mini-game "Russian warship, go f**k yourself"[23] shows Russian ships as trash that must be cleared from the Ukrainian island called "Zmiiny".

The obscene vocabulary often used in these games serves the deconstruction of outdated cultural stereotypes. This phenomenon is commonly linked to the "carnival mechanism" as explained by M.M. Bakhtin[24]. The culture of laughter involves reduction and profanation, role reversal, clowning, and dethroning. This mechanism replaces regulated norms with their opposite, resulting in the polarity of accepted norms of behaviour. It also replaces seriousness with humour

18   Т. Зінов'єва, *Анекдот в ситуації постмодерну та масової культури*, "Культура і сучасність: альманах. Київ: Міленіум" [T. Zinovieva, *Anekdot v sytuatsii postmodernu ta masovoi kultury*, "Kultura i suchasnist: almanakh. Kyiv: Milenium"], 2008, vol. 1, pp. 63-69.

19   "Ukrainian fArmy", Video game, 2022, https://ukrainian.itch.io/ukrainian-farmy [1.06.2023].

20   "Farmers stealing tanks", Video game. Pixelforest (dev), 2022, https://pixelforest.itch.io/farmers-stealing-tanks [1.06.2023].

21   "Putin orcs defender", Video game. Pacifism (dev), July 2022, https://store.steampowered.com/app/2005070/Putin_Orcs_Defender [1.06.2023].

22   "Ukraine defender". Video game. Devrifter (dev), May 2022, https://store.steampowered.com/app/1973090/Ukraine_Defender/ [1.06.2023].

23   "Russian warship, go f**k yourself", Video game. Teapots Martian (dev), 2022, https://martiant-eapots.itch.io/russian-warship-go-fck-yourself [1.06.2023].

24   M.M. Bakhtin, *Rabelais and His World*, Indiana University Press, Bloomington 1984, https://monoskop.org/images/7/70/Bakhtin_Mikhail_Rabelais_and_His_World_1984.pdf.

and humans with animals[25]. This carnival mechanism is also embodied in Games-jokes-memes, where the enemy's narratives (a Russian political myth) are brought down to the body level. In such games, the negative sides of the legitimised object are hyperbolized, resulting in a grotesque image of an idea or person. Examples are the video games "Sunflower Slap"[26] and "F**K PUTIN"[27], "Putler stress relief game"[28], and "Putler is dead"[29]. These games rely on bodily aesthetics; in the first game, gamers can virtually "punish the Russian dictator with a sunflower", in a very short time, giving as many slaps as possible. In another game, the dictator is a virtual puppet for beating and torture. The third game uses clicker mechanics; when players click on the screen, they get a reward that can be used in the store. Players buy items that are thrown at the character or skins to decorate him. This form of play has age restrictions due to the level of violence. Video games that depict violence often create ethical dilemmas and so, this issue deserves a separate study in the context of media influences and learning.

Submission games

Submission games are games with an aesthetic of passing the time, connecting to the game as such despite the limitations[30]. These are different life simulators ("Sims FreePlay", "Homescapes"), psychedelic games, and carnage games or "shoot 'em up" games (SHMUP, STG). The final category includes computer games where the main character battles multiple enemies by shooting at them while avoiding their incoming fire. An example is the game "Chornobaivka. The Day of the Groundhog", which shows how the occupiers stand on the same rake,

25 T. Зінов'єва, *Анекдот як сучасний мінікарнавал* [T. Zinovieva, *Anekdot yak suchasnyi minikarnaval*], "Doxa" 2008, vol. 13, pp. 150-155, http://doxa.onu.edu.ua/Doxa13/150-155.pdf.
26 "Sunflower Slap", Video game. Native Games Studio (dev). Itch.io, April 2022, https://native-games-studio.itch.io/sunflowerslap [1.06.2023].
27 "F**K PUTIN". Video game. Tornado Games (dev), April 2022, https://store.steampowered.com/app/1926680/FUCK_PUTIN/ [1.06.2023].
28 "Putler stress relief game", Video game, 2022, https://russkiy-korabily.idi-nahuy.click/ [1.06.2023].
29 "Putler is dead", Video game. MasterCodeCSharpGameStudio (dev), April 2023, https://play.google.com/store/apps/details?id=com.Master_Code_C_Game_Studio.Putler_is_dead_2023 [1.06.2023].
30 D. Djaouti, J. Alvarez, J.P. Jessel, G. Methel, P. Molinier, *A gameplay definition through videogame classification*, "International Journal of Computer Games Technology" 2008, pp. 1-6, http://dx.doi.org/10.1155/2008/470350.

trying again and again to seize Ukrainian territories. To prevent this, the player can shoot, blow up, or tear to pieces the Russian invaders. For this, players have several types of weapons that can be improved. The developers' objective was not to generate profits but to provide Ukrainians a chance to enjoy themselves during challenging times. The game has an age restriction of 16 years due to excessive violence[31].

The example of the rhythm game "In Ukrainian Soil" from a Ukrainian developer[32] illustrates submission games. Players can experience a transcendental journey and lead wandering souls to the gates of heaven in this psychedelic racing game driven by rhythm.

"Zero Losses" is a short open-world driving adventure game set in a post-apocalyptic environment inspired by the events of the Russo-Ukrainian War. Players assume the role of a driver in the Russian occupation army in Ukraine, specifically part of the security battalion. The objective is to ensure the success of special operations with no casualties. The protagonist is tasked with various missions such as transporting and cremating fallen soldiers, delivering supplies, and locating a missing battalion. The game primarily focuses on the desolate atmosphere and horror elements rather than depicting violence against civilians or Ukrainian soldiers. The developer emphasises the concept that those who bring fear are ultimately trapped by it. "Zero Losses" provides a slow-paced and surreal experience, showcasing the consequences of violence without directly showing it[33].

Documentary games

The next group of video games can be combined under the name documentary games. These are games that are based on documentary facts and involve real photos. The main purpose of such games is to increase the community's awareness of the events in Ukraine during the Russian aggression. Documentary games are the closest to the journalistic product according to the principles of journalism.

31　"Чорнобаївка. День бабака" ["Chornobaivka. Den babaka"], Video game. Team "39-40" (dev), May 2022, https://play.google.com/store/apps/details?id=com.thirtynineeighty.chornobaivka [1.06.2023].

32　"In Ukrainian Soil", Video game. Bunker 22 (dev), 2023, https://store.steampowered.com/app/2317120/In_Ukrainian_Soil/ [1.06.2023].

33　"ZERO LOSSES", Video game. Marevo Collective (dev), 2023, https://store.steampowered.com/app/1485920/Zero_Losses/ [1.06.2023].

The main feature of such games is the involvement of the audience in the gaming experience based on real events. There are such games as "Ukraine War Stories" or "Glory to the Heroes".

"Ukraine War Stories" is a documentary visual, novel, interactive prose, adventure role-playing game-simulator. It shows the events of the first months of the war. The scenes of the game are based on real events and the experiences of eyewitnesses (civilians) who found themselves in the territory occupied by the Russians in Gostomel, Bucha, and Mariupol. In this game, the player's goal is to survive and escape with their loved ones from occupation. The interface uses real photos from cities and the gameplay consists of text, music, and illustrations. The developers have stated that their focus is not on making money from the game. Instead, it is important to tell the world about the horrors of the war in Ukraine[34].

"Glory to the Heroes" is a military tactical first-person shooter. Stories about the full-scale invasion by Russia into Ukraine are told through the eyes of different characters. It is a multiplayer battle featuring a variety of unit types including infantry, artillery, jets, drones, and even civilians. Events unfold in the fields of real battles[35].

Strategic learning games

Strategic learning games are educational military simulators, e.g., "Power & Revolution 2022 Edition"[36] is a political simulation game that addresses the Ukraine conflict, allowing players to play as Ukraine, NATO countries, or Russia. Players make decisions on military action, sanctions, and diplomacy. The game reflects complex issues like refugees, war costs, and global challenges like COVID-19 and climate change. It offers insights into international affairs and acknowledges the complexities of solving Ukraine's problems. "Slava Ukraini!"[37] is a shooter game with strategic and tactical modes. Players engage Rus-

34 "Ukraine War Stories", Video game. Starni Games: Ukrainian studio (dev), 2022, https://store.steampowered.com/app/1985510/Ukraine_War_Stories/ [1.06.2023].
35 "Glory to the Heroes", Video game. Spacedev Games (dev), 2023, https://glorytoheroes.spacedev.team/ [1.06.2023].
36 "Power & revolution 2022 edition", Video game. EverSim (dev), April 2022, http://www.power-and-revolution.com/news.php [1.06.2023].
37 "SLAVA UKRAINI!", Video game. Thor Gaming (dev). May 2022, https://store.steampowered.com/app/1974090/Slava_Ukraini/? [1.06.2023].

sian troops on a schematic map, targeting enemies with small arms or grenade launchers. The game focuses on rational targeting and careful unit moves. "Ukraine Defense Force Tactics"[38] is a turn-based military strategy where players defend against Russian forces with calculated moves. The game teaches rational decision-making and adapting to changing circumstances. In the Tower Defense game "E-Bayraktar"[39], players defend against enemy equipment from different directions using the Turkish drone Bayraktar TB2, popular in Ukraine. "Rebuild Ukraine"[40] is an educational strategy game encouraging players to restore Ukrainian cities and monuments. It promotes positive activities and planning for Ukraine's recovery.

Data journalism games

An interesting type of Ukrainian war strategy game is built on the map of the "Air Alarm" app[41]. It is very close to the practice of data journalism offered by the Ukrainian independent online internet media channel "Texty.org.ua", for example, the game "Battle for Ukraine"[42]. In this online strategy game, players have to move units of the Armed Forces across the territory of Ukraine in such a way as to expel the Russian invaders abroad. In one step, the player can either move troops or attack the enemy. The game pushes players to defend because the game losses in defence are smaller than in attack. The game also includes training videos on tactics, weapons use, destruction of enemy equipment, and military reality.

Games built on open data are a link between the game industry and journalism. It is noteworthy that "Texty.org.ua", founded by A. Bond-

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38 "Ukraine defense force tactics", Video game. Spacewalkers (dev), June 2022, https://store.steam-powered.com/app/2005660/Ukraine_Defense_Force_Tactics/ [1.06.2023].

39 О. Трикіша, *Шість ігор про війну в Україні: рятуй Чорнобаївку та збивай Путіна з гармати*, Сьогодні, 25 квітня 2022 [O. Trykisha, *Shist ihor pro viinu v Ukraini: riatui Chornobaivku ta zbyvai Putina z harmaty*, Sohodni, 25 kvitnia 2022], https://tech.segodnya.ua/ua/tech/shest-igr-o-voyne-v-ukraine-spasay-chernobaevku-i-sbivay-putina-iz-pushki-1617201.html [1.06.2023].

40 "Rebuild Ukraine". Video game. P. Izotov (dev), March 2022, https://play.google.com/store/apps/details?id=com.pubrevplus.rebuildukraine&hl=uk&gl=US [1.06.2023].

41 *Завантажуйте застосунок Повітряна тривога*, Міністерство цифрової трансформації України, Ajax Systems Inc (dev) [*Zavantazhuite zastosunok Povitriana tryvoha*, Ministerstvo tsyfrovo transformatsii Ukrainy. AjaxSystemsInc (dev)], 2022, https://www.ukrainealarm.com/ [6.06.2023].

42 *Битва за Україну* [*Bytva za Ukrainu*], Відеогра, MaxDmax (dev), 2022, https://demo.devs.mx/ukraine/ [1.06.2023].

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arenko and R. Kulchynskyi back in 2010, has experience in developing such games. In particular, a gamified infographic; an arcade game based on collecting money in the form of bribes while avoiding danger in the form of electronic tax declarations, and a quest game about guessing employees' salaries[43]. In 2018, "Texty" collaborated with the Institute of Mass Information to create the game "Manipulator" against fake and disinformation in the media. The player's task is to "create the worst media and become popular"[44]. According to the Annual Report of the IMI (Ukraine) in 2018, over 20 thousand users played the game. Although this game was created before the full-scale invasion by the Russian army into the territory of Ukraine, we consider it part of this war. After all, the media literacy of the population of Ukraine played a significant role at the time of the invasion, creating an information front and consolidating society[45].

In response to the onset of the Russian-Ukrainian war in 2022, "Texty.org.ua" generated a variety of user-friendly infographics suitable for gamification purposes. The journalists created the simulator game "Whose tank is this?"[46], which aimed to teach players how to distinguish Ukrainian tanks from enemy tanks. The game not only provides information about the models of tanks used in the Russian-Ukrainian war but also teaches an algorithm for recognizing military equipment based on Peter Makel's guidance. The visual basis of the game is infographics.

Mapping is the basis for monitoring and analysing many issues in journalism including the progress of the war since February 24, 2022, the advancement of Ukrainian troops, the order of deployment of action on the front during a certain period, and changes in the borders of the occupied territories. The "Texty.org.ua" portal contains the infographic section "#SCHEDULE OF THE DAY" and infographic inter-

43 *Гроші, метри, два авта*, Відеогра. Журналістика даних [*Hroshi, metry, dvaavta*, Zhurnalistyka danykh], TEXTY.ORG.UA, 2016, https://texty.org.ua/d/static/decl_game/ [1.06.2023].

**44** Маніпулятор", Відеогра. Інститут Масової інформації (IMI) ["Manipulator". IMI], TEXTY.ORG.UA, 2018, https://texty.org.ua/d/manipulator-game/index.html [1.06.2023]

45 *Річний звіт 2018*, IMI [*Richnyizvit 2018*, IMI], 2018, https://imi.org.ua/upload/media/2019/09/02/5d6ca90a20a94-zvit-imi-2018-2.pdf [6.06.2023].

46 Ye. Drozdova, N. Kelm, A. Bondarenko, *Upiznaisvoikh. Hra-trenazher: Chyi tse tank?!*, Data journalism, TEXTY.ORG.UA, February 2022, https://texty.org.ua/projects/105597/upiznaj-svoyih-gra-trenazher-chij-ce-tank/ [6.06.2023].

active projects (https://texty.org.ua/projects/) about events in wartime Ukraine. The database of the games portal, based on open data and journalistic infographics, is constantly updated in a separate section "#ГРА" (https://texty.org.ua/tag/hra/). This suggests the convergence of journalism and the gaming industry.

Figures 1-3 show screenshots illustrating the Battle for Ukraine game, the Airborne Alert app, and the Year of All-Out War interactive map, united by the map of Ukraine and the dynamics of changes on it, as seen on Texty.org.ua.

Figure 1. "Battle for Ukraine" interface game
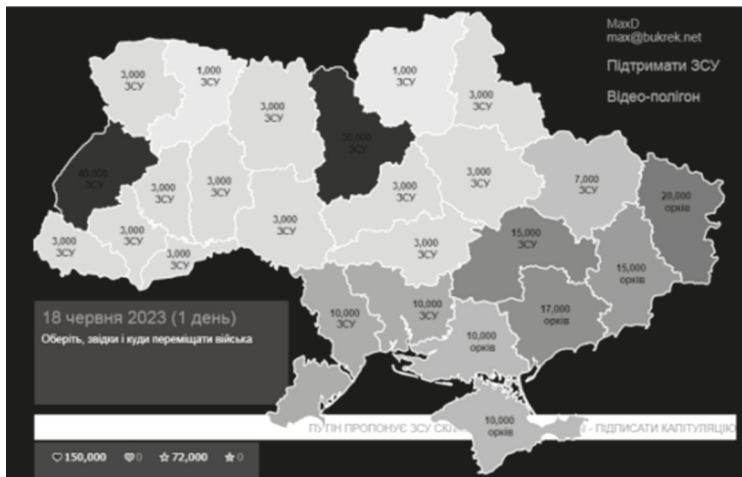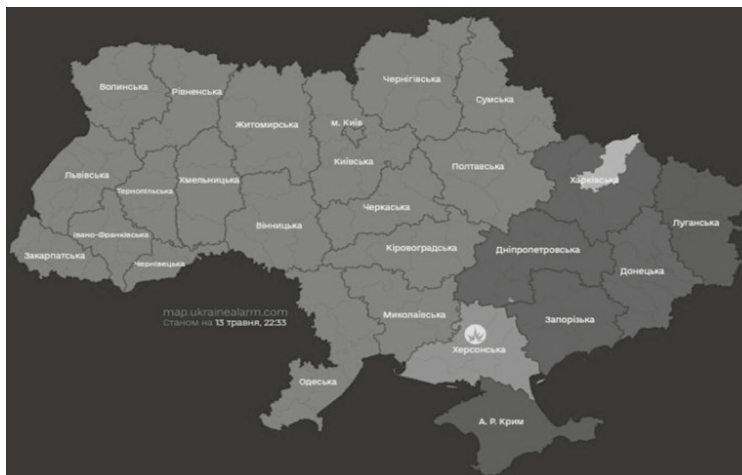

Figure 2. Ukraine Air Alarm map app

Figure 3. Interactive map "Year of full-scale war. How they changed" by "Texty.org.ua"[47]

Games with DLC

Another important category is *games with DLC* to support Ukraine. A separate class of games is those that are not related to the war events in Ukraine, but their developers expressed their support by giving the main characters Ukrainian colours, including Ukrainian architectural monuments, cities, etc. in the graphics. However, despite positive support for Ukraine (moral and financial), sometimes such signs of support have the opposite connotation. So, for example, the scandalous game for adults "Succubus" from the Polish developer "admind Studio" depicted the main character in Ukrainian colours. The game simulator of the Soviet economy "Workers & Resources: Soviet Republic"[48] by the Slovak developers in "DLC Help for Ukraine" adds elements from Ukraine into the game. The buildings include the Zaporizhia Nuclear Power Plant, the Ukraina Concert Hall, the Lviv State Circus, and the Ukraina Hotel. Monuments include the Independence

47 Н. Кельм, Ю. Дукач, Є. Дроздова, М. Тимошенко, М. Гогун, Д. Губашов, І. Гадзинська, *Рік повномаштабної війни: Як змінювались межі окупованих територій*, Інтерактивна мапа [N. Kelm, Yu. Dukach, Ye. Drozdova, M. Tymoshenko, M. Hohun, D. Hubashov, I. Hadzynska, *Rik povnomashtabnoi viiny: Yak zminiuvalys mezhi okupovanykh terytorii*, Interaktyvna mapa], TEXTY.ORG.UA. Data journalism, 24 February 2023, https://texty.org.ua/projects/109018/rik-vijny/ [6.06.2023].

48 "Workers & Resources: Soviet Republic - Help for Ukraine", Video game. 3Division (dev). *Steam*, May 2022, https://store.steampowered.com/app/1948180/Workers__Resources_Soviet_Republic__Help_for_Ukraine/ [1.06.2023].

Monument in Kyiv and the monument to Taras Shevchenko in Lviv. Among the vehicles are the An-70 plane, the modern K-1 tram, ZAZ Lanos, and others. In addition, the scenery of Voronovitsa town in the Vinnytsia region was added to the game. Under the conditions of the forcible introduction of the neo-Soviet regime into the occupied territories of Ukraine by the Russian invaders, the figurative series of the game looks doubtful[49].

Undoubtedly, games perform the traditional functions of mass media. The games shed light on subjects pertinent to society. The informational function of mass media is embodied in games through the trend of producing serious games for learning and development, especially those based on sets of open (true) data. Games, even if they are not classified as serious, encourage learning and self-learning. Thus, the educational function of mass media is implemented in games. Games always contribute to relaxation and cultural recreation. Highlighting socially important topics, games shape public opinion[50].

Table 1 provides a summary of the findings from a typological study on the use of games as media tools.

Table 1. Typology of games as media tools

Type of game	Function as media	Cultural role	Game purpose	Reader address or Stakeholder	Nature of information, style (genre) of work
Games-jokes--memes	Entertainment. Deconstruction tools for enemy narratives and fakes	Ridicule, reduction, devaluation of grand narratives, official authority, etc.	Entertainment	Ukrainian society, international community	Action, comedy, satire, memes, jokes
Submission games	Entertainment	Psychological compensation, reassessment of reality events	Passing the time	Victims of war	Life simulators, psychedelic games, carnage games, "shoot 'em up" games

49 *Війна-2022: дев'ять найкращих ігор для ПК за мотивами російського вторгнення в Україну* [*Viina-2022: deviat naikrashchykh ihor dlia PK za motyvamy rosiiskoho vtorhnennia v Ukrainu*], Priamyi, 21 June 2022, https://prm.ua/viyna-2022-ta-videoihry-dlya-pk/ [1.06.2023].
50 J. Dovey, H.W. Kennedy, *Game cultures: Computer games as new media: computer games as new media*, McGraw-Hill Education, UK, 2006.

Type of game	Function as media	Cultural role	Game purpose	Reader address or Stakeholder	Nature of information, style (genre) of work
Documentary games	Information and influence functions. To increase the community's awareness. The process of shaping public opinion	Fixation of events as facts of history and culture	Entertainment. Information	International community. Ukrainian society	A documentary visual novel, interactive prose, adventure role-playing game-simulator
Strategic learning games	Educational. Entertainment	Developing a framework of cultural values, and future principles	Entertainment. Educational	Ukrainian military. Civilians who will restore the country. Schoolchildren, students	Strategy
Data journalism games	Information and influence functions	Fixation of events as facts of history and culture	Entertainment. Educational	Journalists and consumers of information	Strategy. Infographics. Journalistic investigations and analytics
Games with DLC	Entertainment. Branding. Advertising	Cultural communication. Cultural diffusion	Entertainment	Gamers. Representatives of the game business industry. Political circles	Any genre

This table summarises different types of games, highlighting their diverse functions as media, cultural roles, game purposes, reader addresses or stakeholders, and the informational nature and styles associated with each. From entertainment to education and information dissemination, these games cater to a wide audience and serve various societal needs. The versatility of gaming underscores its potential to be a dynamic convergence tool for cultural communication, education, and combating fake news.

Conclusions

Video games serve as a powerful deep media tool for Ukrainian society to resist Russian aggression.

After analysing video games depicting a full-scale invasion of the Russian army into Ukraine, they can be classified into the following typology groups: Games-jokes-memes, Submission games, Documentary games, Strategic learning games, Data journalism, and DLC games to support Ukraine.

A carnival nature is the typological feature of Ukrainian games, i.e., the inversion of roles, ridicule of everything, appeal to bodily aesthetics, obscene vocabulary, will as the central value, reduction of pathos, deconstruction of grand narratives, etc. Emotional aesthetics (the presence of various types of "fun") define a computer game as one of the more effective means of influencing and shaping public opinion. The deep involvement of the player in the game's processes creates a personal experience of partaking in the game's events. That is why we call video games a deep media tool.

It is important to use video games to deconstruct fake news and not deliberately spread disinformation.

Considering the development standards in the game industry, computer games cannot be used as a means of journalism because they do not correspond to the main principles of journalism. But they can be a means of fighting fake news, deconstructing the narratives of enemy politics, and as a means of information warfare.

Acknowledgment

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