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Civic Games: Video Games as Instruments for Human Autonomy in the Digital Era

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Juliana Valentim

up201700031@edu.fe.up.pt

Faculty of Engineering
University of Porto, PhD
Program in Digital Media,
Portugal

Societies have faced common issues regarding modern technology's impact on civic life, such as rising populism regimes and information disorder, which have shaken the global democratic order. The media technology, especially the social networks, have facilitated extensive monitoring of the population and control of communication infrastructures. This research embraces media literacy and civic competence knowledge to strengthen human autonomy in the digital era. This study aims to gather qualitative data from a participatory design process with citizens, journalists, and designers and offers an opportunity to explore civic potentialities by integrating their demands into video games driven to positive social change impact. In the end, this project will provide a conceptual framework that articulates design principles and guidelines and an exploratory game kit to support future-based research in civic media, digital literacy, and game design. Its current work is focused on a literature review and co-design sessions to validate the first version of the framework and develop a video game prototype.

Context

This research explores alternative practices to strengthen human autonomy in the digital age. It embraces the argument from the Critical Theory of Technology in which advocates for radical democratization of technological societies to create a sustainable new order (Feenberg 2002). Thereby, the Critical Theory depends on democratic participation to integrate public demands into a technical sphere. It means that social actors should take action to redesign the modern technology to create social change in the world. So, one possibility to support that idea is to enhance individuals with knowledges to engage in civic life. It might lead social structures to reconcile broader freedom with more meaningful forms of interconnection. Moreover, the other possibility is to boost citizens with media literacy skills and competence. The new technology, especially the Internet and social media, have allowed individuals to get loads of information at an unprecedented rate and enable social control, despite a range of innovative and dynamic initiatives that have leveraged these technologies. Thus, this research embraces the Critical Theory to explore how to strengthen human autonomy by exploring a participatory design process to translate civic potentialities into video games and foster positive social change in the technological society.

Goals and Research Questions

As previously mentioned, civic competence and media literacy are essential interrelated dimensions to strengthen human autonomy. Therefore, this research aims to foster agency with civic media literacy by using a qualitative intervention to support civic engagement. With scientific rigour, it seeks to support existing game design and technologies with its core principles for broadening skills and competencies of autonomy. Finally, this study proposes mapping the interplay between Democracy, Design, and the Critical Theory of Technology, supporting scholars in future-oriented research in these fields. Thus, this study possesses two main research questions:

1. How can video games promote skills and competencies of autonomy to support civic engagement?
2. What core design principles and guidelines are required for this intervention to foster autonomy in players?

Also, secondary questions lead the research in the following topics:

- » How will this intervention promote social cohesion?
- » How will players formulate ethical values from video games?
- » Which civic media literacy will video games embedded to support human autonomy (critical consciousness, tolerance, creativity, interdependence)?
- » What types of gameplay can be most effective for human autonomy?

Relevance

This exploratory research will provide a conceptual framework for designing video games, including the core principles of autonomy and can support both industry and education institutions. It may also enhance research in computer ethics and participatory design with collaborative epistemologies related to community values and pluralism.

Moreover, this research provides a straightforward pathway for involving academics and designers in the contemporary debate around the radical changes to build the future condensing technical and social functions. The findings may provide evidence to increase conversation between scientists and citizens and elucidate how to better communicate scientific knowledge in an approach that makes sense to a layperson to learn about science.

The following section provides a brief background regarding media literacy, civic competencies, and possibilities to use video games to explore both knowledge pieces. The Section 'Methodology' describes the integrated methodology used, and Section 'Contributions and Future Work' presents the expected results and contributions. Finally, the Section 'Progress Towards Goals' gives the stage the research is.

Brief Background

Societies have faced common issues regarding modern technology' impact on civic life, such as rising populism regimes and information disorder (Wardle and Derakhshan 2017), which have shaken the global democratic order (Mihailidis 2019). The media technology, especially the social networks, have facilitated extensive monitoring of population and control of communication infrastruc-

tures (Buolamwini and Gebru 2018; Zuboff 2019). The trust in politicians, institutions, and media has vanished in contemporary society (Castells 2015; O'Connor and Weatherall 2019), so have the sense of freedom to build and prune the own social network, it seems a great form to individuals protect themselves and survive together (Pariser 2011; Rushkoff 2019).

This paper provides a brief background to enlighten how to strengthen human autonomy in the digital era. So, there are two types of interrelated knowledge, which aim to foster agency and encourage civic engagement. The first knowledge is media literacy. Misleading communication and falsehoods are thriving more than accurate information, so people need skills and competencies to critically interpret news and information and produce civic responsibility contents (Hobbs 2020). So, citizens can be informed agents to play a crucial role in the public sphere (Afshar and Asadpour 2010).

Renee Hobbs, an internationally recognised authority on media literacy education, claims that media education should focus less on journalism practices and more on propaganda education (Hobbs 2010).

Her perspective is incredibly singular because disinformation strategies come along whether in an ad, meme, political discourse, or news to influence people's hopes, fears, and dreams.

The second knowledge is civic competence. It is a central concern to bridge political tolerance, activate civic participation, and support citizens to make informed decisions (Delli Carpini and Keeter 1996; Shah et al. 2009; Lupia 2002). As aforementioned, social media platforms have mediated public debate and facilitated nationalist politicians to control the population by their communicational infrastructure (Mihailidis 2019). Thus, it is also a case for the technological society to enhance civic competence whether the lack of transparency and accountability of the digital technology and social media platforms remains enabling the democratic destabilization.

1. <http://www.gamesforchange.org/>

2. <https://tiltfactor.org/>

Some initiatives, such as Games for *Change*¹ and *Tiltfactor*², have used video games to support ethical values, critical thinking, decision-making, and creativity (Gee 2004; Bogost 2008; Flanagan 2009). Besides, scholars have explored video games in psychological intervention to confer cognitive immunity against misinformation (Roozenbeek and van der Linden 2019) and offer new opportunities to engage with young audiences, delivering other forms of new consumption (Sicart 2008; Bogost et al. 2010; Grace et al. 2016; Grace and Hone 2019).

Although this paper has shown the new technology's impact on civic society, it also enlightens new opportunities to explore digital media, such as video games, to create novel models of communication and positively impact technological society.

Methodology

The project began by observing the digital environment's challenges in contemporary societies and identifying the patterns across different cultures, especially in Western democracies. The rise of neo populism, the spread of disinformation, and the interplay between politics and conspiracy theory are some phenomena identified that emerge from cyberspaces.

During the Master in Multimedia at the Faculty of Engineering, University of Porto, Portugal, in the 2018/2019 academic year, the author developed an experiment and conducted interviews to explore the problem. The study designed a "fake news" video game prototype, entitled Lado B (2019). This study provided initial insights into the potential of critical game design in producing arguments for players through a playable system and fostering critical thinking and communication skills in the context of media literacy.

Phase 1: Literature Review

Since then, this project has focused on the literature review to provide a theoretical board and formulate hypothesis to address the research problem. Essentially, the literature review grounds the first version of the conceptual framework, which articulates design principles and guides to support co-design sessions. In the following bullet points, this paper highlights details of the study fields:

1. Philosophy of Technology: Critical Theory of Technology.
2. Social Sciences: Critical Theory, Communication Studies, Theory of Social Movements.
3. Design: Critical Design, Critical Game Design, Human-Centred Design, Participatory Design.
4. Computer Science: Human-Computer Interaction, Game-Computer Interaction, Networks.

Phase 2: Conception and Development

This study will gather empirical data by using models of co-design to validate the conceptual framework and develop an exploratory game kit. So, this research agenda purposes an exploratory and experiential technical public sphere (Feenberg 2002) with designers, journalists, and citizens, meaning an exploratory model to integrate their demands into video games for social change. It might lead researchers learn from small communities how to design technology for their needs in terms of cultural, communicational, and ethical aspects. Also, this intervention employs workshops and interviews to gather qualitative data using video games prototypes as research instruments. After the prototype's tests, this study will take the following phase to organise the data and explore insights to might answer the research questions.

Phase 3: Analysis and Conclusions

This research will organise and analyse the data gathered using the Thematic Analysis (TA) method by Braun and Clarke (2012). This method allows the researcher to see and make sense of collective meanings and experiences. So, the approach to TA offers a meaningful interpretation of the data set by applying a six-phase process to TA: (1) Familiarisation with the Data; (2) Coding; (3) Searching for Themes; (4) Reviewing Potential Themes; (5) Defining and Naming Themes; and (6) Producing the Report. After that, it will review the research goals and hypothesis to possible answer the research questions. The study will proceed with the evaluation of the guidelines, design principles, and the iteration of prototypes. The exploratory game kit (conceptual framework and games) will be available to open access on the Web and may be used in different contexts, across cultures, and extended in future works.

Phase 4: Dissemination

The dissemination of this study takes place into following potentials publications: 1) Phase 1: a review paper to address the systematic literature review of the field; 2) Phase 2: a short paper to publish initial findings and preliminary analysis; 3) Phase 3: a long paper with data analysis and concrete results; and 4) Phase 4: a long paper to publish the complete study and results of the framework. These publications are mainly aimed at the following conferences for scientific dissemination: Revista Estudos de Jornalismo,³ Culture and Games Sage Journal,⁴ SOPCOM,⁵ spcVideojogos,⁶ ECREA,⁷ EDUCON,⁸ and xCoAx.⁹

3. <http://www.revistaej.sopcom.pt/>

4. <https://journals.sagepub.com/home/gac>

5. <https://www.sopcom.pt>

6. <http://www.spcvideojogos.org>

7. <https://www.ecrea2020braga.eu/>

8. <http://educon-conference.org/current/>

9. <https://xcoax.org/>

Contributions and Future Work

The contribution of this research is to provide a framework for designing civic media artefacts, which incorporates core design principles and guidelines of human agency and civic engagement. These may be useful to support designers to create for collective empowerment and social justice. It also extends to the cultural industry by encouraging media producers in developing products that can include communities rather than reproduce structural inequalities. It will also provide a package that includes some games to support educators who wish to use them in the classroom during media literacy training. It intends to continue an essential conversation about collective challenges to conduct more social cohesion and discuss these principles in terms of their implications for future-based research through critical design. Finally, it aims to serve as a potential roadmap for media producers, considering building a new communication ecosystem.

Progress Towards Goals

This research is focused on the literature review to set the core principles for autonomy and address hypothesis (Phase 1). In March of 2021, it has started co-design sessions (Phase 2) with a group of students from .iX.2021, a post-graduation in *Design, Web and Games* of the University of Porto. This collaboration appears as an opportunity to validate the theoretical board and develop a game prototype, which will support the data gathering in the following steps. The preliminary findings will result in a short paper to publish it in the next semester of 2021.

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