

A critical game for collective interactions around money

Pınar Apaydın, Özge Subaşı

Futurewell: CoCreation and Wellbeing Lab, CSSH, Koc University, İstanbul, TR, papaydin@ku.edu.tr, ozsubasi@ku.edu.tr

Abstract

This paper introduces a critical play experience, *Survival of the Fittest?*^{*}, that challenges people to economically survive by generating alternative ideas on how and when to cooperate. Games set a definite environment to achieve, compete, socialize and exchange ideas. Play adds to the game environment by allowing players to generate their terms and critically evaluate the designated rules for them. In this work, benefiting from an unfinished co-play setting, we aim to learn from players' experiences on collectively arranging and organizing their resources around a similar cause. This setting allows for an exploration of moral boundaries of economic interactions and the role of technologies. We further reflect on how players manage their shared resources, form relationships, re-interpret existing systems and examine analog and digital technologies.

Keywords

critical play , game, collective monetary interactions, sharing

1. Introduction

Critical play is a genre of play that objects to stereotypes of social life and power relations. The play environment allows an exploration of personal, interpersonal, and systemic relations[1]. Moreover, the "play" element can alter the way of thinking by encouraging a change in perspective[2]. Scholars investigated the critical aspect of play in academic spheres[2, 3, 4, 5, 6, 7] and for participatory interventions in communal spaces[8, 9]. In this paper, we introduce a critical play that challenges people to economically survive by cooperating and generating alternative ideas on how and when to cooperate.

Commons are the resources used in a shared form. Ostrom discusses how some people are capable of coordinating themselves to organize and arrange common pool resources[10]. We use the term common to consider people and objects that are part of a self-managed exchange and as self-formed relationships and creation of living systems[11]. Previous work showed the diversity of usage of the commons such as women initiated commons to reclaim the production of food[12], or for open-source software[11]. Studies showed the value of commons

^{*}Inspired by the original game, and the question mark is the critical reflection on it.

CHIItaly 2021 Joint Proceedings of Interactive Experiences and Doctoral Consortium, July 11-13, 2021, Bolzano, Italy

✉ papaydin@ku.edu.tr (P. Apaydın); ozsubasi@ku.edu.tr (Subaşı)

🌐 <https://futurewell.ku.edu.tr/> (P. Apaydın); <https://futurewell.ku.edu.tr/> (Subaşı)

🆔 0000-0002-0123-3661 (P. Apaydın); 0000-0001-6094-1361 (Subaşı)



© 2021 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

📄 CEUR Workshop Proceedings (CEUR-WS.org)

as social cooperation rather than revenue-based models[13]. The relationship of commons to the institutions [11] and the importance of the invisible labor [12] are examples to the nuances to explore for the designs of collaborative technologies.

Game designers already benefited from the commons theory. Commonspoly - an alternative to Monopoly- uses concepts such as allocation of private, public and, commons and challenges to encourage collectivity among the distribution of common goods[14]. In Commonpoly, a prototype from Commonfare project, players aim to form a condition that will save each player from economic hardship[15]. Another work, String Figures, which is a digital mapping of networks, aims to encourage cooperation of local and trans-local communities via technology and explore new ways of collaboration[16]. Following up with the current work, we are interested in the potentials of critical play for unfolding the nuances such as moral boundaries of technologies while people form relationships and systems to manage resources. Throughout the paper, we use the term morality to describe the creation of an individual or negotiation of a group value rather than defining or imposing an ultimate right or wrong[17]. Within a game environment, we would like to explore how people will build or re-arrange their local institutions and how technologies will be situated around such systems to support moral or immoral decisions. In the following section, we introduce the game development process of the critical game, "Survival of the Fittest?".

2. Design Process of a Critical Play

This section describes our method, rationale, co-play experience, and decisions.

2.1. The Method

In this paper, we take a participatory approach based on giving users/people power to decide, change and shape the design of the game[18]. Players' interaction and storytelling with the unfinished game is part of the design process[18]. Explorative design games encourage people to question their normative ideas, explore unconventional thoughts and get familiar with the different[18].

2.2. Objectives and Initial Rules

Our objective in the first version was to accelerate further thinking[18] on the topics and tensions around emerging collaborative economic practices, by giving players the power to adjust the game. Players were asked to elaborate on moral, personal, and cooperative aspects of their economic interactions to overcome a challenge. The game included multiple card decks: the main board, pins, a persona, a map of the world, a set of unexpected individual life events, unexpected collective life events, and several inspiration cards. There were two parts of the world to sharpen the contrasts between individual and collective exchanges. Cards that are about the first part of the world described the rules of a collectivity-oriented world, while individuality related cards were used in the other part. While co-ownership (everything belongs to everyone) was motivated by the theory[10], we found it interesting to add a no-ownership (nothing belongs to no one) rule to our game to increase tensions. People used a fictional monetary

value, players designated and assigned this imaginary value themselves. After receiving world cards, players received one persona card (generated based on diversity of incomes, job types, age, gender) or an unfinished persona cards (that only revealed a job name). To proceed, a

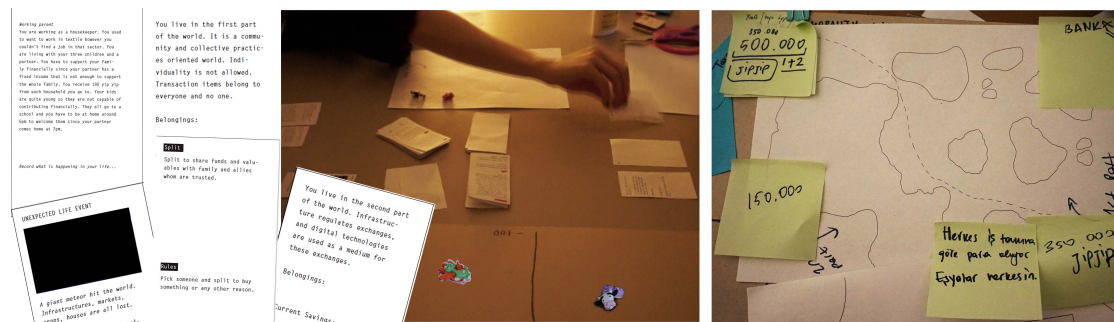


Figure 1: First play documentation and cards.

player picked an unexpected collective life event card, and all players then worked together to overcome that challenge collectively. Each player also took one unexpected individual life event card, and they needed to work on that card too. We created the unexpected individual life event cards (being fired, receiving money and supporting a friend financially) to disturb and challenge people's economic intentions. Collective unexpected life event cards consisted of an earthquake, pandemic, and so on, consisting of monetary challenges. To achieve the collective purpose, players might need to sacrifice individual goals. This provoked people to question their economic priorities.

Throughout the turns, players could pick from the inspiration card deck. Inspiration cards were descriptions of collective possibilities, a set of cards that reflect diverse possibilities, from culturally embedded rituals to emerging coin-based technologies. Each turn, players tried to generate an idea to help them achieve the collective and individual challenge.

2.3. Winning Conditions

There was an achievement area in the middle of the game board, where people track their progress throughout the game. There are individual pins for players and also a collective pin for tracking achievements on the achievement board. We defined or left open conditions to learn from players' reactions, their reasoning while playing the game. These conditions are designated for players to explore rituals, the role of infrastructures and technologies, and reflect their moral condition while trying to individually and collectively survive economically. However, rather than individual winnings, the game is designed to encourage winning together, and encourages individual sacrifices. On the achievement board, there are two spectra; (1) morality to immorality and (2) collectivity to individuality. Players record and discuss each economic interaction on the progress/achievement board to designate the winning player or players.

Table 1

World and persona card allocation among players.

Players	World Card	Persona Card
Participant 1	Collectivity oriented part of the world	Detailed persona of a working parent
Participant 2	Collectivity oriented part of the world	Unfinished persona of a chief executive officer
1st author	Individuality oriented part of the world	Unfinished persona card of an social media influencer

2.4. First Play and Iteration of the Game

Two players and the first author played the unfinished version of the game during a 2-hour long session. Below we describe what is defined, suggested by players throughout the game, and what we learned from the play experience. Table 1 represents the random allocation of the world and persona cards.

First, players’ defined how much fictitious money exists in both parts of the world and discussed whether they will own an amount of money. Further on, players questioned the bank’s role in the collective world and defined it as a pool that arranges properties, discussed the role of bills for their community and how they would allocate. The individual and collective part of the world separation was not valuable to learn about the allocation and management of common-pool resources since all the communication around cooperation was encouraged through unexpected life events and winning conditions. Being forced to consider collectivity made players reflect on each other’s economic suggestions and question whether they have a collective or individual intention behind it. For instance, one suggestion was about moving together to cut costs. This discussion contained several details with moral and immoral consequences. After discussing how to survive in a collaboration-oriented part of the world, they decided to live together, cooperate financially and share a flat. Participant 1 explained that as “No, we created a balance. I pay for the electricity, and in exchange, she cleans the house, or her husband fixes things at home.”. We further observed that distributed personas to the participants lead to stereotypical and biased thoughts and consequently restricted the idea generation process while creating a mutual solution for themselves. While getting familiar with their personas, they expected a chief executive officer to be wealthy and a working parent to be poor (independent of it is a given persona or a persona to be created). Only then players questioned personas’ role and economic condition in a collective world. While detailed persona cards revealed biased views of players immediately, unfinished persona cards allowed us to understand the role and value of designating an explicit point of view for the players, whether it will encourage internalization or prejudicial thoughts. Lastly, participants were quite involved with building their collective world and system, creating numerous ideas, and collectively evaluating them.



Figure 2: Updated boards, unexpected life event cards and inspiration cards.

2.5. Updated Game

Considering the insights gathered from the play trial, we updated the game logic, values, goals. We removed the two world parts and money from the game. The current version of the game is based on today’s world and economic interactions that exist to understand the moral limits of existing and emerging technologies. We observed that the personas’ stories led to stereotypical thoughts during the game without much reflection of possible bias. To avoid the over-interpretation regarding personas’, we chose to replace persona cards with income-expense cycle boards, as this was the most frequently discussed issue without much censorship. People have income-expense patterns in their life and, we try to overcome unexpected challenges based on those cycles. For players to track their position in their economic cycle, we visualized the turns of individual unexpected life events and income- expense cycles as each board has one outer cycle (expense) and one inner cycle (income). Players define an individual challenge with dice, and they roll the dice after overcoming that challenge.

Rather than using imaginary collective unexpected events with colossal impact, such as an earthquake, we updated the selection of unforeseen events close to one’s reality. These events consist of matters that players can easily associate with moral decisions they face today. In some unexpected collective life event cards, people decide how much money to allocate themselves. Players will be prioritizing such events while allocating money, and such allocation can be another point to unfold the existing biases. We concealed the "name" of the practices, rituals, and technologies to avoid prejudgements on the context on the updated inspiration cards. Idea bank is added to the new version. One player acts as the “idea bank” to encourage players to ideate on unexpected life events and inspiration cards. Idea bank rewards players’ who contribute to the challenge by suggesting a way or an idea. Based on this, the collectivity to individuality spectrum on the achievement board was updated with the idea complexity matrix. Idea complexity spectra relies on players’ generation of an idea or solution to the challenges and their consideration of the technologies, rituals, their integration, and evaluation of opposing sides of digital and physical technologies while creating a solution. The relation of ideas and morality on the achievement board will allow players to consider technologies’ roles in terms of their effect on each other’s lives. Such negotiation and realization of their biases will unfold alternative ways to commoning and situatedness of technologies.

2.6. Design-related iterations

In terms of the game's physical design, participant interactions showed that rectangle-shaped cards could be seen only by one player while holding. Thus, the shape of the cards was limiting the engagement between players. Participants also suggested the use of larger card sizes and visible font sizes. To create a more collective playing experience (people can check each other's board quickly), we changed the structure to four circular smaller boards and one sizable circular board for tracking achievements. The color scheme, font size, font type, and size of the board also updated considering readability.

3. Discussion and Conclusion

In our critical co-play intervention, we expected people to overcome individual and collective life events by collaborating and morally evaluating their economic actions. Therefore, we updated the critical game design based on understanding how people manage commons, situate technologies, people's moral limits, and their decision-making process. Our process revealed insights to push the borders of interaction design for economic collaborations, setting new limits and therefore aligns with the Frontiers of HCI. Briefly, our learnings concerning the existing research are:

1. During the play, players questioned and constantly adjusted their solutions and decisions, which gave cues to the dynamic decision-making process of commons. This learning reflects back to [11], as describing commons as a living system.
2. Living in a collectivist society, considering the rule of "everything belongs to everyone" inspired by common theories[10], challenged people to question their ownership mentality. Still, they discussed this more on an individualistic level, such as what kind of a person should own more and how to allocate money. Future artifacts need to place collective and individualistic perspectives more closely instead of ignoring individualistic part.
3. On the use of personas, players projected their own biases and stereotypical thinking. This aligns with[12]. Future game mechanics and materials can be updated to help unfold or realize such biases (e.g., idea complexity can include a bias checklist).
4. For collective resource allocation, players re-purposed banks to local infrastructures. This interpretation aligns with unfolding potentials of local institutions[11], and future versions of the game can help us to deconstruct the role of such infrastructures.

Emerging technologies for economic cooperation can benefit from our critical game design study. Within HCI, play is discussed in critical contexts such as a mediator for cross-cultural interaction[5], or to reduce stereotypical thoughts around gender[19]. Critical play is further portrayed as the creation of a play environment that allows people to interrogate or critically examine different conditions, experiences surrounding life[20] and reflection on socio-technical systems[2]. Our results would be helpful to understand what are the moral decisions people make and how individual and collective goals are negotiated. In our future work, we aim to further reflect on the possible bias of the gamers and adapt our game for the nuances of individual moral decisions vs. socio-ethical outcomes of such systems.

References

- [1] K. Ryding, Affective critical play, in: Extended Abstracts of the Annual Symposium on Computer-Human Interaction in Play Companion Extended Abstracts, CHI PLAY '19 Extended Abstracts, Association for Computing Machinery, New York, NY, USA, 2019, p. 63–67. URL: <https://doi.org/10.1145/3341215.3356337>. doi:10.1145/3341215.3356337.
- [2] J. Dumit, Game design as sts research, *Engaging Science, Technology, and Society* 3 (2017) 603–612. URL: <https://estsjournal.org/index.php/ests/article/view/132>. doi:10.17351/ests2017.132.
- [3] M. Flanagan, D. C. Howe, H. Nissenbaum, Values at play: Design tradeoffs in socially-oriented game design, in: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI '05, Association for Computing Machinery, New York, NY, USA, 2005, p. 751–760. URL: <https://doi.org/10.1145/1054972.1055076>. doi:10.1145/1054972.1055076.
- [4] M. Flanagan, H. Nissenbaum, A game design methodology to incorporate social activist themes, CHI '07, Association for Computing Machinery, New York, NY, USA, 2007, p. 181–190. URL: <https://doi.org/10.1145/1240624.1240654>. doi:10.1145/1240624.1240654.
- [5] C. Chen, An innovative board game design based on cross-cultural communication, *Design and Culture* 10 (2018) 209–217. URL: <https://doi.org/10.1080/17547075.2018.1467723>. doi:10.1080/17547075.2018.1467723. arXiv:<https://doi.org/10.1080/17547075.2018.1467723>.
- [6] N. Ducheneaut, R. J. Moore, The social side of gaming: A study of interaction patterns in a massively multiplayer online game, in: Proceedings of the 2004 ACM Conference on Computer Supported Cooperative Work, CSCW '04, Association for Computing Machinery, New York, NY, USA, 2004, p. 360–369. URL: <https://doi.org/10.1145/1031607.1031667>. doi:10.1145/1031607.1031667.
- [7] J. Nguyen, B. Ruberg, Challenges of designing consent: Consent mechanics in video games as models for interactive user agency, in: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems, CHI '20, Association for Computing Machinery, New York, NY, USA, 2020, p. 1–13. URL: <https://doi.org/10.1145/3313831.3376827>. doi:10.1145/3313831.3376827.
- [8] S. B. Smith, Come flux with us, 2017. URL: <https://www.stephaniebickfordsmith.co.uk/Come-Flux-With-Us>.
- [9] M. Flanagan, Play your place, 2014. URL: <https://studio.maryflanagan.com/play-your-place/>.
- [10] E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Political Economy of Institutions and Decisions, Cambridge University Press, 1990. doi:10.1017/CBO9780511807763.
- [11] D. Bollier, S. Helfrich, *Free, fair, and alive : The insurgent power of the commons* (2019). URL: <https://www.freefairandalive.org/read-it/>.
- [12] S. Federici, *Feminism and the Politics of the Commons, Uses of a World-Wind, Movement, Movements, and Contemporary Radical Currents in the United States* (2010) 283–294. URL: <http://www.commoner.org.uk/wp-content/uploads/2011/01/>

- federici-feminism-and-the-politics-of-commons.pdf.
- [13] C. Bassetti, M. Sciannamblo, P. Lyle, M. Teli, S. D. Paoli, A. D. Angeli, Co-designing for common values: creating hybrid spaces to nurture autonomous cooperation, *CoDesign* 15 (2019) 256–271. URL: <https://doi.org/10.1080/15710882.2019.1637897>. doi:10.1080/15710882.2019.1637897.
 - [14] Commonspoly, 2020. URL: <https://commonspoly.cc/>.
 - [15] M. da Crise, Commonpoly: Commonfare, 2018. URL: https://commonfare.net/nl/stories/commonpoly?story_locale=en.
 - [16] A. Ruther, String figures, 2020. URL: <https://economythologies.network/scrap/string-figures-by-ailie-rutherford/>.
 - [17] B. Friedman, P. H. Kahn, *Human Values, Ethics and Design*, CRC Press, 2007, p. 1177–1201.
 - [18] E. Brandt, Designing exploratory design games: A framework for participation in participatory design?, *PDC '06*, Association for Computing Machinery, New York, NY, USA, 2006, p. 57–66. URL: <https://doi.org/10.1145/1147261.1147271>. doi:10.1145/1147261.1147271.
 - [19] G. Kaufman, M. Flanagan, G. Freedman, Not just for girls: Encouraging cross-gender role play and reducing gender stereotypes with a strategy game, in: *Proceedings of the Annual Symposium on Computer-Human Interaction in Play, CHI PLAY '19*, Association for Computing Machinery, New York, NY, USA, 2019, p. 481–493. URL: <https://doi.org/10.1145/3311350.3347177>.
 - [20] M. Flanagan, *Critical Computer Games*, in: *Critical Play: Radical Game Design*, The MIT Press, 2009. URL: <https://doi.org/10.7551/mitpress/7678.003.0008>. doi:10.7551/mitpress/7678.003.0008.