

Mechanics-as-Metaphor: dwelling with video game mechanics as emergent language of experience in the gaming socio-cultural ecosystem

Jenn Rickert

This preliminary work offers a nuanced gamer-driven understanding of what constitutes a video game mechanic, and how this insight offers new perspectives on gaming communities, game development, and academic discourse on gaming. I suggest that a more holistic understanding of video game mechanics will lead us to build more inclusive and safe gaming spaces starting from their foundational role in the gameplay experience, where traditionally game mechanics may be conceived as, "...[the] methods invoked by agents, [that are] designed for interaction with the game state" (Sicart). Utilizing Dr. Briana Wiens (2024) 'dwelling' methodology for this purpose "...enables [us] to pay attention to...a digital space to understand how humans are embodied in intricate affective and material relationships,..." and signaling "...how digital artifacts circulate at the structural level of entanglement, considering the systemic factors that are present across the individual and the collective" (5, 7-8). Rather than focusing on creating a uniform definition of what comprises a 'mechanic,' I instead offer guidelines and fuzzy set (Zadeh) categories of sub-types of mechanics which facilitate greater depth of engagement with the topic.

To this end, I have collected and analyzed over 2000 different examples of what 'gamers' have labelled as mechanics in self-reported public posts on social media. I identify examples of common mechanics which both adhere to and diverge from common academic and cultural definitions. Testing the boundaries of the sub-categories/archetypes of game mechanics I have established from this data, I explore what these fuzzy sets can uniquely tell us about the underlying epistemological and ontological capabilities of game mechanics in the larger video game socio-cultural ecosystem. Our relationship with video game mechanics as rhetorical tools goes beyond the procedural (Bogost) or functional (Sicart). Instead, they're evolving into a type of referential language which aids gamers to not only understand and interpret video games, but also places them outside of the traditional magic circle (Suter et al.).

My research suggests that video game mechanics offer a language-like metaphorical common ground for players to express relatable complex experiences quickly to others who can understand them. Following my analysis of this dataset, I end having demonstrated how this metaphorical model of interpreting mechanics occurs within the

gaming ecosystem—its fan communities, game developers, and game commentators—as well as what the implications of this view have for harnessing this knowledge for deeper mechanical analysis, more inclusive and accessible gaming communities, as well as more comprehensive approach to game design.

This essay serves as the foundation for further case study exploration of specific video games and their communities, analyzed through the lens of dwelling and mechanics-as-metaphor. It also will help to orient and ground my ongoing research before I explore deeper questions resulting from this initial analysis—namely exploring paratextual ecologies of meaning-making and systems of influence which blur the line between the game state of the magic circle and that which lies beyond it.

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Author Statement

My name is Jennifer Rickert and I am a PhD candidate in the English Language and Literature program at the University of Waterloo. Prior to entering the field of English, I studied my BA in Classical History and Anthology (Hons), continuing to Public Issues Anthropology for MA, where I wrote my thesis on 3D Printing and Artifact preservation.

Previously, I have given talks and written about cheating and modding in video games, as well as the gender and social power dynamics of competitive gameplay spheres. My PhD dissertation (of which this submission draws), is dedicated to a redefining and reimagining of video game mechanics and their role in the socio-cultural, ontological, and epistemological ecosystems of gaming and game development.

Intuition vs. Deliberation: Understanding Players' Appreciation of Interactive Video Game Narratives with Moral Intuition Conflicts

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Intuition vs. Deliberation: Understanding Players' Appreciation of Interactive Video Game Narratives with Moral Intuition Conflicts

Keywords: narrative appraisal, moral intuitions, eudaimonia

At least one of the many features of video games that enhances their entertainment value is that they allow players to make "interesting decisions" while gaming (Meier, 2012). While all games feature decisions of some type, those related to morality are especially compelling and increasing in popularity (Chesler, 2021). Drawing from theorizing on narrative enjoyment and appreciation (Tamborini et al., 2021), this work-in-progress study tries to understand if players respond automatically or deliberately when a video game narrative introduces conflicting moral intuitions. Players' response to such narratives could tell us about the nature of entertainment outcome they derive from games involving moral conflicts. The narrative content of entertainment media is cognitively appraised in different ways that provide hedonic pleasure and eudaimonic gratification for media users (Lewis, Tamborini & Weber, 2014; Oliver & Bartsch, 2010). The former is understood as enjoyment, a pleasurable response to media consumption, and the latter is considered appreciation, a meaningful response to media, characterized by mixed emotions (Lewis, Tamborini & Weber, 2014). Games as narratives have the potential to elicit profoundly affective and cognitive reactions associated with the eudaimonic appreciation of media (Daneels et al., 2021; Oliver et al., 2016; Possler 2024). The appreciation and enjoyment of entertainment content involve distinct cognitive processing systems, according to the narrative enjoyment and appreciation rationale (NEAR) proposed by Tamborini and colleagues (2021), based on a dual-process model of narrative appraisal (Tamborini, 2011, 2013). Enjoyment stems from the positive evaluation of content through fast, automatic processing by the *intuitive system*

(Tamborini et al., 2021). Conversely, appreciation is produced by slower, contemplative processing by the *deliberative system*. It occurs when moral intuitions made salient by the narrative are satisfied or thwarted by the plot (Tamborini et al., 2021). Narratives can vary the comparative salience of intuitions which can be socially oriented (e.g. care, fairness, ingroup loyalty, etc.) and self-oriented (e.g. hedonism, security, power, etc.) (Tamborini et al., 2021). A narrative can make multiple, conflicting moral intuitions salient in the plot and satisfy only the *overridingly salient* intuition in the story resolution (Tamborini et al., 2021). The NEAR explains that media users' deliberation on the narrative satisfying the overridingly salient intuition leads to their appreciation of the narrative. The current study explores the nature of cognitive processing of a game narrative, with conflicting salient moral intuitions, when players operate on the premise that they have the choice in making a moral intuition overridingly salient by controlling the narrative.

The NEAR's functional approach to understanding narrative response is built on media content that is observable (like films), rather than interactive. However, games can be understood as co-created experiences in which players have some degree of control of the narrative unfolding (Juul, 2011; Wellenreiter, 2015)). Such processes can be especially deliberative and demanding of players (Bowman, 2018; Lee et al., 2021), which could result in *increased* levels of eudaimonic appreciation. However, empirical literature based on moral foundations theory suggests that players exhibit automatic "gut reactions" to moral decision-making while engaging with fast-paced interactive media like video games (Joeckel, Bowman, & Dogruel, 2012). The NEAR would suggest that in such situations where decisions are immediate, participants would be acting without the deliberative processing necessary for appreciation to occur. Given the

mixed evidence in existing literature, the current study explores a focal research question, RQ1: Will players have increased or decreased appreciation for fulfilling the overridingly salient moral intuition in video game narratives (as compared to non-interactive narrative media)?

The study will use a between-subjects experimental design with random assignment, having participants either watch footage of or actively play a video game based on the scenario used by Tamborini and colleagues (2021) to explicate the NEAR model. This entails the scene of a badly injured soldier rescuing a wounded civilian. Here, the soldier's injury violates self-oriented intuitions of security and hedonism, but the soldier's act of saving a wounded person makes the socially-oriented care intuition overridingly salient. In the video game condition, players have the choice to engage in an "optional" mission to save a wounded civilian, lying on the side of the road but in plain sight of the player (who is progressing up a road toward a mission objective). Scores on eudaimonic appreciation for all players who choose to save the wounded civilian will be compared to those participants who watch pre-recorded footage of the same mission (in which the player does save the civilian). As an additional check, eudaimonic appreciation between players who save or ignore the wounded civilian will also be compared. The study results will show how players process the upholding of a certain moral intuition by choice and its influence on appreciation derived from playing the video game. The study has implications for game design, suggesting the extent to which games involving moral decisions can offer narrative control to players in order to achieve specific entertainment outcomes.

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Learning with Video Games: The Relationship Between Voting Behavior and Civics Games

Eligible voters hold power to address the social and political issues they want to see resolved; yet surveys consistently find that youths between the ages of 18-24 don't believe their participation would make any difference (Elections Canada, 2016) which led to a significant voter turnout decline in several countries including Canada (Blais & Rubenson, 2013; Fox, 2024; St-Jean, 2023). Studies on democracy and citizenship education have highlighted the role of civics education among youths under the age of 18 to encourage them to undertake civic engagement practices such as casting a vote (May & Ross, 2018; Oberle & Leunig, 2016). Some non-profits have turned to educational games to supplement traditional civics education in formal learning environments to address low voter turnouts. Gee's (2007) work established video games can be a powerful medium for learning which initiated the integration of video games into civics education. To bridge this gap between material and learners, the last decade has seen a rise in video games for civic education intended to teach players political and legislative knowledge while supporting them in constructing a lifelong politically active civic identity (Kahne et al., 2009; Lawrence & Sherry, 2021; Neundorf et al., 2016; Ohme et al., 2020; Pontes et al., 2019).

The literature on educational technology provides information on what instructional design theories are and why they are effective in learning experiences. However, there is a gap in the literature on how playing a *voting simulation game* can improve knowledge and/or change behavior. Further, there is a gap in the literature on what are the needs of a higher education student in a digital game environment. To address these gaps, I asked these research questions:

- RQ 1: How do participants describe their change in civic knowledge after playing CYV?
- RQ 2: How do participants describe their change in civic attitudes after playing CYV?
- RQ 3: How do participants describe the features they need for effective learning to take place after playing CYV?

To answer my research questions, I interviewed university students aged 18-24 about their experiences playing *Cast Your Vote*, an educational civics game produced by the American non-profit *iCivics*, to see if playing CYV may change their knowledge about and attitudes towards voting. I chose to conduct semi-structured interviews as my data collection method. Then, I conducted a qualitative analysis of the transcribed interview texts to detect the themes that emerged in several interviews. By focusing on the users' experiences of playing this game, I provided some preliminary data that can inform the design of a Canadian voting simulation game. With my analysis, I aimed to guide game designers on how every player can effectively

engage with the educational material without facing issues related to the scaffolding of the game.

The first research question I asked was if there was any change in knowledge about voting after playing *CYV*. After the gameplay, participants became more aware of societal problems and will be more conscious about socially marginalized groups' problems such as minimum wage. Secondly, I asked if there was any change in attitude about voting after playing *CYV*. Playing this game opened participants' eyes to what kind of problems a community can face and how those impact especially the socially marginalized members of the community. Finally, I asked what design features users expect for effective learning to take place. Players expected clear instructions for tasks, provide immediate feedback after tasks, and provide hands-on learner-focused activities. Overall, educational games on voting can promote voting action and improve knowledge and consciousness. However, there are certain conditions for an effective learning experience to take place. Drawing on these findings, I discussed the implications for game developers seeking to create educational yet entertaining games.

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Elif Memis Bio

Elif Memis is a doctoral student in the York University Science & Technology Studies graduate program with a BSc (Hons) background in computer and educational technologies. Elif's research interests revolve around social justice and civic engagement, grounded in critical digital literacies and feminist media studies. Her research focuses on teaching civic knowledge and behavior to Canadian youths through digital technologies such as video games. Previously, she conducted research with a GTA-based youth group to understand how playing a voting simulation game informs their civic knowledge and behavior. Her current project examines how game designers and educators collaborate to create civic education game content and mechanics. Exploring why and how different parties collaborate to create and distribute civic education games, Elif aims to contribute to achieving inclusive and accessible civic education curriculum to promote lifelong engaged citizenship habits for different social groups.

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Laura Wallace Jarvis is a Bachelor of Social Work student completing her practicum with Veen Wong as a Research Assistant. Laura brings diverse experiences in community engagement and social justice advocacy skills to this research project. She is an experienced peer-support worker, group facilitator for caregivers of vulnerable populations, and a community advocate for IPV/GBV initiatives and mental health education.

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Chris M^cNab is a Master of Social Work (MSW) student completing his MSW practicum as a Research Assistant with Veen Wong. Chris brings rich interdisciplinary team expertise as well as training and facilitation skills to the project. He has coordinated prison in-reach programs for men in Federal correctional institutions across Ontario and developed workshops and training modules for the Community-based Research Centre project, *Queering the Compass: Pathways to 2S/LGBTQIA+ Sexual and Reproductive Health*.

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Abstract

Bold Sky: An Interdisciplinary Approach to Game Design for Intimate Partner Violence Prevention

Intimate Partner Violence (IPV) is a preventable societal and public health issue that disproportionately impacts women and girls, driven by structural gender inequality and harmful social norms (Dawson et al., 2021; Lausi et al., 2021). In Canada, women account for roughly 80% of reported victims, while men account for nearly 85% of accused perpetrators of homicides (Statistics Canada, 2024). Specifically, men between the ages of 25 to 34 constitute the largest group of perpetrators (Dawson et al., 2021). Despite recommendations from the World Health Organization to prioritize IPV prevention by addressing root causes like gender inequality and lack of education about healthy relationships (Dawson et al., 2021; UN Women, 2020), there remains a significant gap in resources targeted toward young men. This project addresses this gap by leveraging an interdisciplinary and community-driven approach to co-design “Bold Sky”, an innovative digital game as a scalable IPV prevention tool targeted to young men ages 18-25.

Bold Sky integrates expertise from public health, social work, behavioral design, game development, and human-computer interaction (HCI) to create a culturally responsive and evidence-informed game for young men. Central to the project is a commitment to community co-design, involving young men, IPV survivors, IPV prevention experts, game development experts, user experience experts, and other community stakeholders in shaping the game’s content, narrative and mechanics. This collaborative approach ensures that the game reflects lived/living experiences and resonates with young men, fostering meaningful engagement with topics like healthy relationships, gender equity, and the consequences of harmful social norms.

Digital games provide a unique opportunity to engage young men in IPV prevention, meeting them “where they are” with an estimated 70% of men aged 18 to 29 regularly playing video games (Brown, 2017). Games can address many of the barriers associated with traditional IPV prevention workshops, such as resource constraints and the stigma of group settings, by offering a private, non-judgmental, and accessible environment for learning. Additionally, games have demonstrated efficacy in fostering empathy, moral reasoning, and prosocial behaviour (Boduszek et al., 2018). Global examples of digital games as health interventions—including efforts to prevent gender-based violence in countries like Brazil, Colombia, Indonesia and Uganda —highlight their potential as

transformative tools for social change (Felix et al., 2023; Pabón-Guerrero et al., 2019; Pratama et al., 2021; Sharratt et al., 2023).

Bold Sky advances this potential by integrating storytelling and mechanics designed to shift social norms and promote critical reflection on harmful behaviours. This narrative-driven approach is informed by interdisciplinary insights, including trauma-informed practices from social work, user-centred design principles from HCI, and behavioural strategies to encourage positive change. The resulting experience is not only immersive and engaging but also firmly rooted in evidence-based prevention practices.

The game's development process prioritizes accessibility and scalability. Unlike traditional IPV prevention programs, which often require trained facilitators, physical spaces, and extensive resources, a digital game is cost-effective, easily distributed, and adaptable for diverse contexts. By leveraging interdisciplinary collaboration and co-design, this project aims to create a sustainable tool that can be implemented widely across communities and institutions, making primary IPV prevention more accessible and impactful.

Bold Sky showcases how interdisciplinary co-design approaches to game design can address complex societal challenges by combining innovative storytelling with collaborative, community-focused methodologies. By bridging narrative, gameplay, and social impact, it contributes to both the academic discourse on game design and the real-world need for effective IPV prevention strategies.

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