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Analog Game Studies, Vol. IV

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Foreward

Without being too immodest, we can call this volume of Analog Game Studies a treasure trove. In 2017, we hit our stride with a series of essays that placed us at the forefront of academic games scholarship. As thousands of protests flooded the streets following the inauguration of Donald Trump, the analog game studies community set pen to the page and a thousand flowers bloomed. These are essays written with compassion, humility, purpose, and with fire.

In 2017, we published our most popular piece to date, Shelly Jones' "The Psychological Abuse of Curse of Strahd" (with 18,000+ unique views and counting), a deep dive into the psychological consequences of a popular Dungeons and Dragons module. We published a disability studies special issue, with articles by Michael Stokes, Kathryn E. Ringland, and David Parisi. It was the year that sociologist Steven Dashiell called out the rules lawyers in his piece "Rules Lawyering as Symbolic and Linguistic Capital," and the year that visual designer Ian Bellomy questioned the essentialist nature of platform studies with his monumental essay "What Counts." One of our past authors, Cole Wehrle, who had published on asymmetrical, emotional boardgame design in AGS Volume III, put his theories into practice with his wildly popular power parable boardgame Root

(2018). With firm roots, we could now watch which wonders would grow.

For all of the great steps forward we took in 2017, the year ended on a sad note for the editorial board, as co-founder Emma Leigh Waldron stepped down from full-time editorial duties. Emma had been responsible for shaping the journal's vision as a home for research on role-playing games that intersected with contemporary performance studies research. She was responsible for developing some of our strongest essays as her skill as an editor was impressive. If not for Emma, *Analog Game Studies* would not be the journal it is today. We thank Emma for all the many hours and all the hard work she put into the journal in its first four years.

2017 was a year of fantastic, consistent, and poignant content. And although Emma's departure concluded the year, many fantastic and exciting developments lay just around the corner in 2018. We hope the treasure hunt through Volume IV delivers the research and insights you are looking for.

The Editors
February 2019

Cards and Cardboard

Can Friendship Be Stronger Than War?

Mechanics of Trauma in The Grizzled

GREG LORING-ALBRIGHT

The Grizzled (2015) sits on my shelf, usually at the top of a stack of games in small boxes. Whenever we decide what game to play, its evocative cover art[1] draws us towards it. The game's tagline, visible on all four sides and the top of the box, asks "Can friendship be stronger than war?" Inevitably, someone picks it up, and inevitably, I warn them, "This game will make you have feelings. Usually despair and sadness." This gives them pause, as these are not feelings that games usually evoke in us. Challenge, struggle, chagrin? All of these are common, especially in cooperative games, but *The Grizzled* is not most cooperative games.

The Grizzled is a fully cooperative card game by Fabien Riffaud and Juan Rodríguez, first published in France by Sweet Games, and republished in the United States by Cool Mini Or Not (now CMON Limited). While an expansion set, *The Grizzled: At Your Orders*, was published in 2016, this analysis will focus primarily on the base game.

1. The game's art is by French cartoon artist Tignous, who was killed in the attack on the magazine *Charlie Hebdo* in January of 2015, only one month before the game's publication in France.

As I warned my fellow players, *The Grizzled* is notable because it encourages its players to feel things other than the joy, challenge, and pleasure people often seek from games. It sets itself apart from many cooperative games by insisting that injuries and traumas to one's character are unavoidable, and by centering its core game mechanics on facing the effects of trauma, rather than attempting to escape or evade its causes. *The Grizzled* tackles a difficult subject, placing players into the shoes of French soldiers mired in the trenches of the First World War. It does not make light of its theme. The game's insistence that players identify with their characters, its handling of injury and trauma to players' in-game representations, and its willingness to abstract the tactical considerations of war while dealing with its human effects all combine to create a game that sets itself apart from both wargames and cooperative games in terms of its degree of affective gameplay.

Gameplay Overview

In *The Grizzled*, each player takes on the role of a French soldier in the trenches of WWI. Players play cards from their hands, attempting to deplete one draw deck (the Trials deck) before a second draw deck (the Morale Reserve) is depleted. Most of the cards in these decks are "Threats." When played into a central tableau, these cards represent the dangers that characters encounter on their missions. Snow, shelling, rain, gas masks, nightfall, and "the whistle" (the signal to begin an attack) are represented in varying combinations on the Threat cards. The game proceeds as a series of "missions," in which players attempt to play as many Threat cards as they can, one card per player per turn. If three of the same symbol are visible in the tableau, the mission fails, and all the cards in the tableau are shuffled back into the Trials deck, delaying victory. If all players "withdraw" before

the failure condition is met, the cards from the tableau are discarded.[2] Shuffled in with the Threat cards in both decks are "Hard Knocks" cards. Instead of being played to the central tableau, players attach these Hard Knocks to their character cards. While the Threats come and go with each mission, the Hard Knocks are persistent, remaining attached to a single player-character until the group is able to remove them (see below). 20 of the game's 59 cards are Hard Knocks (the remaining 39 are Threats), so players have a good chance of having both Threats and Hard Knocks in hand.

There are two night, two rain, one snow, and one gas mask symbols in this sample tableau (the deck is to the far left). If the players play another card with night or rain into the tableau, they will fail the mission. Photo used with permission of the author and used for purposes of critique.

The central tension of each player's turn consists of deciding whether to play a Threat card, which has a lesser impact, but impacts the

2. For a fuller gameplay overview, consider this video from "The Dice Tower." https://www.youtube.com/watch?v=AJryX-_x1EQ

group as a whole, or a Hard Knocks card, which has a greater impact on that player only. This sort of tension is common in cooperative board games, as players seek to mitigate the unavoidable negative consequences generated by the game's systems while simultaneously focusing on advancing another goal that leads to their victory. What makes *The Grizzled* unique among cooperative board games is that the unavoidable consequences accrue directly to the players' characters. By contrast, in *Pandemic* (2008), the unavoidable consequences impact the board state, not the characters. Diseases erupt around the board, forcing players to react and change their plans, but characters in a city during an outbreak, for example, are not infected with the disease. In cooperative games like *Forbidden Island* (2010) and *Forbidden Desert* (2013), players' characters can suffer consequences (death by drowning or thirst, respectively), but such outcomes are not unavoidable — indeed, if any character in either *Forbidden* game dies, the game ends in an immediate loss. A game like Reiner Knizia's *The Lord of the Rings: The Board Game* (2001) is closer to *The Grizzled,* in that, unlike the games described above, both have unavoidable negative consequences that accrue directly to players' in-game representations of themselves. In *The Lord of the Rings*, hobbits (players' characters) suffer the deleterious effects of carrying the Ring and confronting enemies. This causes them to move towards Sauron's marker, and their eventual elimination from the game, on a "corruption track." In both games, instead of seeking to protect their in-game representations from all harm, players work to distribute the harm across multiple player-characters in a way that makes achieving the win condition possible. The difference is that moving on the corruption track (in *The Lord of the Rings*) does not impede players' in-game actions, whereas accruing Hard Knocks (in *The Grizzled*) imposes limiting conditions on the character. These

limiting conditions therefore shift the player focus toward the effect of trauma, rather than its cause, a point which will be explored further below.

Consider the text of one of the Hard Knocks cards: "Mute: You can no longer speak or communicate with other players in any way. You may not use a Speech." Having played this Hard Knock on herself, a player removes her voice from the collaborative gameplay. Other Hard Knocks force players to interact with Threats differently, limit choices they can make when entering the game's interstitial phase, or place more cards onto the deck that stands between players and their victory.

"Mute" card from the game. Photo used with permission of the author and used for purposes of critique.

Identification

The Mute card suggests an important detour from a further mechanical investigation of how *The Grizzled* handles injury and trauma to players' characters. *The Grizzled*'s insistence that players identify with their in-game representation is epitomized in this card's effect. A Hard Knock like "Clumsy" (which forces a player to draw and play a random Trial for the group to deal with, increasing their collective chances of failing the mission) represents the trauma in the abstract, by tying it to a game mechanic. The newly-clumsy character is understood to have encountered a diegetic obstacle, such as stumbling into barbed wire or falling in the snow. "Mute," however, creates both diegetic and extra-diegetic consequences by forcing the player to embody the effect of the trauma. The character is mute, and so is the player.

The Grizzled encourages this type of identification with one's character in its rulebook, as well as in its gameplay. The introduction states: "The Grizzled *offers each player the chance to feel* some of the difficulties suffered by the soldier in the trenches."[3] Additionally, this section invites players to connect their in-game characters to real-world events, noting that "some of the characters in this game were real people."[4] The rulebook includes recreations of actual letters from French soldiers as graphical elements interspersed throughout the rulebook. These are extra-diegetic cues; that is, the rulebook text is not part of "playing the game," strictly defined. Nonetheless, the game's rules tell us how to play the game, both in terms of their content and their form. Rather than suggesting that these cues encourage the players to identify themselves with real-world French WWI soldiers, I believe that this move on the game's part serves

3. Fabien Riffaud and Juan Rodríguez. *The Grizzled.* Châteaudun, France: Sweet November, 2015. Rulebook, p. 2, emphasis added.
4. Riffaud and Rodríguez, p. 2.

to strengthen players' identification of their in-game representation with themselves. The reality of the French soldiers, their presence as figures outside of the game, connects to the players, who are also figures outside of the game. By bringing real, historical personas into the game's magic circle, *The Grizzled* collapses the inside-the-game/outside-the-game dichotomy, strengthening players' identification with their characters.

The in-game site of this identification is the player's character card (in the recent expansion pack, these are replaced by cardboard standees). These six cards each have the image of one of the "grizzled":[5] white men of varying heights, builds, and facial hair in military uniform. As an able-bodied white man, these images are easy sites of identification for me. However, it is important to acknowledge that not everyone will find these sites of identification so simple. Antonnet Johnson's essay "Positionality and Performance"[6] serves as a reminder that players may not always choose to follow the game's hegemonic suggestions regarding how they identify themselves within a game. Playing *The Grizzled* subversively (perhaps by refusing to follow its cues for identification in resistance to its overwhelming whiteness and maleness) may unlock other ways in which this game further expands the range of games as a whole, or it may expose the game's inherent biases. For the purposes of this analysis, however, the fact that the game suggests that players identify with soldiers in the trenches is itself a subversive move. By placing players into the shoes

5. The game's somewhat awkward use of "grizzled" in its title as a category of people, instead of its more common English-language usage as an adjective, stems from a translation of the game's French title, "Les Poilus."
6. Antonnet Johnson. "Positionality and Performance: A Player's Encounter with the Lost Tribes of *Small World*." *Analog Game Studies* 3.5 (2016). http://analoggamestudies.org/2016/09/positionality-and-performance-a-players-encounter-with-the-lost-tribes-of-small-world/.

of " a group of inseparable friends" in "the village square," the game engages in subtle but effective class criticism. Instead of playing as generals and field marshals causing impersonal military units to accrue damage counters, *The Grizzled* asks players to play as lowly soldier Charles Sauliére, who will accrue Hard Knocks like "Fearful," "Fragile," and "Panicked."

Charles Saulière's character card. Photo used with permission of the author and used for purposes of critique.

Mechanical Representations of Trauma

In many cooperative games, the negative consequence is often a trauma or injury to the player's in-game representation, and in many of these games, the focus (both mechanically and narratively) is on the way that this trauma occurs. *The Grizzled* upholds the first, but, as we have seen, inverts the second. In T*he Grizzled*, the focus of injury to the player's character is on its effect. This difference is at the core of what sets *The Grizzled* apart from other cooperative games.

The Hard Knocks cards have already been discussed: Players play cards from their hands that attach to their character, giving their character a limiting condition that represents the effect of that character's experience in the mission. As characters receive multiple Hard Knocks, the synergies between these cards force the players as a group to adjust and adapt their gameplay. Some cooperative games share this sort of gameplay: In *Forbidden Desert,* player-characters start with full water, and, as the game goes on, consume their water. If any character runs out of water, that character dies, and the game ends in a loss. While construing drinking water as injury or trauma is a stretch in terms of meaning, the game's mechanics encourage players to think of it as such. Thus, group gameplay in *Forbidden Desert* changes in reaction to individual characters' water levels, as characters can carry and distribute water, bringing some characters back from the brink of death, but at the expense of making progress towards the game's other goals.

The Grizzled has an analogous game structure: Giving support. As each player leaves the "mission" phase of the game, they secretly set down a support tile. These tiles have an image of a cup of coffee on one side, and an arrow (superimposed over a soldier drinking the coffee) pointing left, right, two places left, or two places right. After the mission ends, players reveal these arrows. Whichever player

has the most arrows pointing at them (whichever character received the most care, as symbolized by cups of coffee, from his comrades) may discard two Hard Knocks cards. Importantly, if there is a tie in support, no player receives the benefit.

Players assign support facedown (coffee side up), then reveal one arrow. Double-left and double-right tiles also exist. Photo used with permission of the author and used for purposes of critique.

While the narrative core of the game (especially in the "At Your Orders" expansion) is in the mission phase, this phase is structurally simple: In a sort of negative spin on the classic set-collection

mechanic,[7] if the tableau contains three or more of any "threat" symbol, the mission fails. The support phase, which occurs between the missions, is more complex. It is simple to count threat symbols and decide which should not be played. It is more complicated to assess whether "Clumsy" or "Mute" is a bigger problem for the group, and even more complicated to decide how to point the arrow on your support tile when you are prohibited from communicating about this during the mission. Maybe your group of players has decided that one player's Hard Knocks need to be dealt with at the start of the mission. Then, as the mission progresses, another player plays more dire Hard Knocks onto their character. Do you change your support assignment, hoping that your fellow players will follow your lead, or do you stick to the plan, hoping that the new Hard Knocks can be dealt with in future rounds? If the "mission" phase is like a negative-outcome set-collection game, then the "support" phase is like a social deduction game[8] where, instead of trying to conceal your intentions, you are trying to get (or keep) the group on track, while being expressly prohibited from communicating.

The support mechanic creates a dynamic described by David Phelps and his co-authors as "an in-game dilemma of two competing goods, one of which we must sacrifice (at a costly loss) to the other."[9] Phelps, et. al. describe games that are neither fully cooperative nor fully competitive as embodying this tension, yet *The Grizzled*, a fully

7. Games like Rummy, where players are rewarded for playing cards in particular combinations, are referred to as "set collection" games.
8. Mafia/Werewolf is the ur-social-deduction-game, wherein lying and manipulating, coupled with deducing player motives from limited information, form the core of the gameplay.
9. David Phelps, Tom Fennewald, et. al. "No Game's Land: The Space Between Competition and Collaboration." *Analog Game Studies* 3.3 (2016). http://analoggamestudies.org/2016/05/no-games-land-the-space-between-competition-and-collaboration/.

cooperative game, also contains moments of tension and sacrifice. While all players are working together toward the same goal, the game's limits on communication, the limiting impacts of the Hard Knocks cards, and the players' strong identification with their in-game representations all lend depth and tension to such sacrifices. By preventing players from communicating about where support is being directed, the game's rules force a semi-cooperative state where players all acting in the best interests of the group can create an outcome that is detrimental to the group.

Selection of Hard Knocks cards from the game. Photo used with permission of the author and used for purposes of critique.

There are (many) moments in *The Grizzled* when defeat seems inevitable, or when the choice is between two options that seem equally bad. In "The Allure of Struggle and Failure in Cooperative Games," Douglas Maynard and Joanna Herron eloquently describe

these moments in other cooperative games.[10] While much of their work focuses on in-game communication, which, in *The Grizzled*, is severely limited, one of their conclusions describes the experience of playing *The Grizzled* to a tee: "When experienced together, both the process of losing and loss as a final result carry with them opportunities for camaraderie, humor, memory-making, and storytelling. In addition, the collaborative nature of the activity reduces the sting of failure through a shifting of focus from the self to the group."

Whether winning or (more often than not) losing, players in *The Grizzled* must engage with sacrificing for the better of the group and dealing play-limiting Hard Knocks to themselves. While I have not done the sort of extensive and documented experiential playing that Maynard and Herron use to reach conclusions about their plays of other cooperative games, I have played *The Grizzled* often enough to generalize about losing it: It always feels like a trial suffered through together. While my playing groups have not focused on humor as a reaction to *The Grizzled*, the "camaraderie… memory-making, and storytelling" that Maynard and Herron describe characterize this game's outcome, regardless of winning or losing.

10. Douglas Maynard and Joanna Herron. "The Allure of Struggle and Failure in Cooperative Board Games." *Analog Game Studies* 3.3 (2016). http://analoggamestudies.org/2016/05/the-allure-of-struggle-and-failure-in-cooperative-board-games/.

Revealing the Monument card (right) ends the game in a loss. If the Peace card is revealed, all players must empty their hands before the game is won. Photo used with permission of the author and used for purposes of critique.

War & Abstraction

In "Orientalism and Abstraction in Eurogames," Will Robinson highlights the tendency of European-designed games to abstract violence; that is, to hide their violence in obtuse mechanisms, or to entirely ignore violence that was historically present in the era that the game represents.[11] In writing about GMT's COIN series of wargames,[12] Cole Wehrle says: "Though all wargames concern

11. Will Robinson. "Orientalism and Abstraction in Eurogames." In *Analog Game Studies: Volume I.* Edited by Aaron Trammell, Evan Torner, and Emma Leigh Waldron. Pittsburgh, PA: ETC Press, 2016, pp. 55-63.
12. "COIN," adopting the military abbreviation for "counterinsurgency," is a product line from wargame publisher GMT, whose games focus on the shifting political alliances

violence, many find ways of burying the gruesome details of war… Wargames are not so much about war as they are about a specific part of war."[13] *The Grizzled*, while burying some of the gruesome physical details of war, faces the psychological traumas of war head-on. The game abstracts the causes of those traumas in order to focus on their effects. Narratively, of course, it is understood that the players' characters receive these Hard Knocks because they are soldiers in WWI. The game, however, does not have a mechanic for players to decide to enlist, join the French army, march to the front, or even make any warlike tactical decisions, aside from "Should I remain in the mission, or should I withdraw?"

The Grizzled abstracts those elements that so many wargames foreground, while not abstracting war entirely. The abstraction of violence is common in strategy games, and in Eurogames in particular. Players in *Catan* (1995) and *Ticket to Ride* (2008) never choose to fight, roll dice to resolve combat, or move troops. Nor do players in *The Grizzled*. Additionally, like a wargame, *The Grizzled* delivers a thematic experience set in the midst of combat. What *The Grizzled* does differently than many wargames, however, is to focus on the effects of war and violence, rather than on the procedural concerns (supply lines, troop positions, weapons ranges). Rather than ignoring the harsh impact of war upon humanity, *The Grizzled* tackles it head-on. What is remarkable about this feat is not that it is accomplished skillfully. Games can tackle many difficult subjects

in both modern and historical wars, rather than wargames' traditionally tight focus on battlefield tactics and strategies.

13. Cole Wehrle. "Affective Networks at Play: *Catan*, COIN, and *The Quiet Year*." *Analog Game Studies* 3.3 (2016). http://analoggamestudies.org/2016/05/affective-networks-at-play-catan-coin-and-the-quiet-year/.

with care. What is truly remarkable is that *The Grizzled* manages this pointed critique while also creating a fun, playable game experience.

Character cards from the game. Photo used with permission of the author and used for purposes of critique.

Conclusion

After playing *The Grizzled*, the game seems to hope that you have felt something. The rules introduction text ends with this injunction: "The path to victory may seem difficult, but don't get discouraged

– persist and survive the Great War!"[14] By highlighting discouragement and persistence, the rules are focused on the game's effect on its players' emotional states. This focus is not unique among all games, but *The Grizzled* is unique in how well it achieves the monumental task it sets for itself. The game's insistence on player identification with their character, coupled with its focus on the effects (rather than the causes) of trauma, set this game apart from both wargames (where it has thematic resonance) and cooperative games (where it has formal resonance). The unique feeling of playing *The Grizzled* is heightened by its willingness to tackle an uncomfortable topic. While games that celebrate, abstract, or painstakingly re-create violence and wars are common, games that critically reflect on a particular war or the concept of violence in general are rare. Yet *The Grizzled* does just that. From its tagline ("Can friendship be stronger than war?") to its immersive gameplay, wherein characters must care for their psychologically damaged comrades, *The Grizzled* seems committed to a stance that is, if not anti-war, at least critical of war's impact on the individuals most caught up in it. To play *The Grizzled* is to enact, and (if you draw the "Mute" card) embody this critique. Such messaging could become didactic, if it were not nestled into effective systems of identification (with one's character) and representation (of the devastating effects of injury and trauma). By creating a game that plays well, *The Grizzled*'s designers have created an effective vector for their criticism of war.

Such social awareness must be the future for board games if the form is to move beyond the realm of the mere commercial, and game designers whose work overlaps with the worlds of academia

14. Riffaud and Rodríguez, p. 2.

and performance art are beginning this movement.[15] *The Grizzled* is undoubtedly a game with a social message, yet it is also a game that has found commercial[16] and critical[17] success. Such reception of a game that is so uniquely focused on a message that is, in modern, militaristic culture, unpopular, is encouraging, both to those invested in ending war, and to those invested in creating innovative and socially-conscious games.

15. See, for example, Brenda Romero's infamous game, Train (2009).
16. The 2016 publication of an expansion set seems to indicate that U.S. publisher CMON considers *The Grizzled* to be commercially viable.
17. As of the publication of this essay, rankings from reviewers and players have placed this game as the 270th most popular game among Board Game Geek's list of thousands of published games.

Legacy's Legacy

Irreversibility and Permadeath in Legacy Games

IVAN MOSCA

Rob Daviau's LEGACY system—first implemented within *Risk Legacy* (2011) and *Pandemic Legacy* (2015)[1]—is changing eurogames and its consequences are as impactful as the mechanics that revolutionized the field in the 90s, such as "deckbuilding", "cooperation", "instant poolbuilding", and "card drafting."[2] The huge success of Daviau's LEGACY games has led other designers to implement it in their projects,[3] a point that seems to anticipate that this trend will only increase with time. This article shows how the LEGACY format affects game design and play theory by introducing a series of features that reorient the gameplay experience from a focus on winning and solving and toward an experience aligned instead

1. See Rob Daviau and Chris Dupuis. *Risk Legacy*. Pawtucket: Hasbro, 2011 and Rob Daviau and Matt Leacock. *Pandemic Legacy: Season 1*. Mahopac: Z-Man Games, 2015; Rob Daviau. *Seafall*. Longmeadow: IronWall Games, 2016; and Rob Daviau and Dirk Knemeyer. *Chronicles 1: Origins*. Artana, 2016.
2. See Richard Garfield. *Magic: The Gathering*. Renton: Wizards of the Coast, 1993; Reiner Knizia. *The Herr der Ringe*. Stuttgart: Kosmos, 2000; Donald X. Vaccarino. *Dominion*. Rio Rancho: Rio Grande Games, 2008; and Miguel Coimbra. 7 *Wonders*. Bruxelles: Repos Production, 2010.
3. See Isaac Childres. *Gloomhaven*. Lafayette: Cephaloir Games, 2016 and Jaime Barriga. *Quickfight: a Legacy Game*. Self-Published, 2016.

with narrative and reflection. This reorientation is epitomized by the LEGACY system's embrace of permanent change and permanent death.

Since its origin, game studies has considered reversibility[4] and nonlinearity[5] key formal elements of games. As play elements, reversability and nonlinearity imply possibility. Despite the prevalence of these common game mechanics, the LEGACY system produces playfulness through irreversibility and lasting consequence. This sense of consequence relies on a particular type of *permanent death* that transforms the game environment into one which appears more similar to reality than to fiction (one where actions have permanent consequence). Hence, irreversibility affects not only the surface design of LEGACY games, but also the deep structures through which people assign meaning to play and time experiences.

The LEGACY system is similar to the "campaign" modes of tabletop RPGs.[6] As players advance in the game they trigger certain plot points which then instruct them to open new sealed boxes of custom components. The customization cannot be reduced to that of

4. According to Caillois, one of the most important features of games is the fact that they can be re-played forever. Caillois ties playfulness to repeatability, exploration, and the freedom of trying and erring: this allows players to feel they have a free experience, detached from the other experiences of the real world. Roger Caillois. *Les Jeux et les Hommes. La Masque et la Vertige*. Paris: Gallimard, 1958.
5. According to Aarseth, games are structures which introduce interaction into media, letting the players to change their way of using texts. Normally the non-interactive media require a linear reading, but games allow a non-linear user experience, where players can choose the sequence of contents. Espen Aarseth. *Cybertext: Persectives on Ergodic Literature*. Baltimore: Hopkins University Press, 1997.
6. See Stephen Baker. *HeroQuest*. Springfield: Milton Bradley, 1989; Kevin Wilson. *Descent: Journey in the Dark*. Roseville: Fantasy Flight Games, 2005; and Justin Kemppainen, Corey Konieczka, and Jonathan Ying. *Star Wars: Imperial Assault*. Roseville: Fantasy Flight Games, 2014.

collectible or living card games,[7] because in a typical game session new components are discovered and the existing ones are modified permanently or even materially destroyed. Daviau explains:"We [the hardcore gamers] sleeve cards and preserve blister packs. We wipe our hands fastidiously and ban soda from the table. Some will find this game liberating. Others a horror. Many will sit on the sidelines. Of course, you can fake it and give yourself the way back. The undo. The temporary work around. It's not hard to do that. What is hard is to put that first sticker on the board and realize that it'll be there forever."[8]

In this passage, Daviau has noticed how the attention of the players has shifted from the active experience of exploration/identification to that of the irreversibility of events. If the essential property of games is a *magic circle* around the players, aimed at allowing repetition, then the permanence of the LEGACY format is certainly a compromise. Huizinga himself stated that "to dare, to take risks, to bear uncertainty, to endure tension – these are the essence of the play spirit. Tension adds to the importance of the game, and as it increases, enables the player to forget that he is only playing."[9] Daviau tries to explain the genesis of his work:

> "The design started with an attempt to make a game decision matter, to up the ante, to maybe make you sweat a bit before you do something. We all make plenty of decisions every day. Many are meaningless. Some stay with us forever. […] Some decisions just make you who you are.

7. See Nate French and Eric M. Lang. *Call of Chtulhu: the Card Game*. Roseville: Fantasy Flight Games, 2008; Nate French. *The Lord of the Rings*. Roseville: Fantasy Flight Games, 2011; and Richard Garfield and Lukas Litzsinger. *Android: Netrunner*. Roseville: Fantasy Flight Games, 2012.
8. Rob Daviau. *Designer notes*. 2011. Online at https://www.boardgamegeek.com/thread/690270/designer-notes
9. Johann Huizinga. *Homo Ludens*. London: Routledge, 2008 [1938], p. 51.

> This led us to wondering why games always have to reset. […] Games, by nature, demand that the user create the experience. We wanted to push that boundary to have lasting effects."[10]

LEGACY extends the experience of irreversibility far beyond the *magic circle* that binds the actions and the thoughts of the players inside the game. In Daviau's games there is a combination of narrative and material irreversibility that influences the players experience. During the course of a campaign the storyline evolves through spectacular revelations such as the introduction or the death of the characters and the discovery of new data and subplots. Apart from these narrative elements, there is a series of syntactical changes: new rules are introduced and old rules are eliminated (for example by pasting stickers to the booklet paper) and a consequence is that the strategies have to be adapted in every match. Moreover, new material components are extracted from sealed boxes, and the existing tokens, cards, and board can be modified and even destroyed.

In order to understand the impact of these features we must establish a definition of games inferred by what I call a "minimal ontology". Games are conceptual structures that players use in order to refer (mainly during communication) to certain play behaviors,[11] which many researchers relate to particular psychological states related to interaction and fiction.[12] The conceptual nature of games should

10. Daviau.
11. See John Searle. "The Logical Status of Fictional Discourse". *New Literary History*, 6. 2. (1975); Michael Tomasello and Hannes Rakoczy. *The Ontogeny of Social Ontology: Steps to Shared Intentionality and Status Functions*. In *Intentional Acts and Institutional Facts: Essays on John Searle's Social Ontology*. Edited by S.L. Tsohatzidis . Berlin: Springer Verlag, 2007; Kendall L. Walton. *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge: Harvard University Press, 1990; and Stephen Yablo. "Does Ontology Rest on a Mistake?" *Proceedings of the Aristotelian Society*, 72.1 (1998), pp. 229–262.
12. See Jerome S. Bruner, Alison Jolly, and Kathy Silva. *Play*. Harmondsworth: Penguin,

not be confused with the material nature of toys, which I define as tools used for playing. Some games make use of toys like balls, dolls, boards, or electronic hardware, but others are completely toysless (puns, traditional games like hide-and-seek, and many forms of roleplay, for instance). In order to play, one must feel that their play is a reversible activity with no negative external effects. Games are organized to reassure the player that they will not have a negative experience when playing.

The LEGACY system maintains the *magic circle* by transgressing some fictional markers normally used in games, the most important of which is reversibility. LEGACY systems are designed to be board games, which stimulate forms of play slightly different from those stimulated by computer games. The latter ask players to interact with a set of affordances offered by the graphics on screen and by the interface, whereas board games require players to maintain the game's rules themselves.[13] Tabletop players can also cheat and modify the game without a material intervention. By compelling players to destroy game components, LEGACY produces a conflict between rules and metagame that is absent in most other games.[14]

This conflict between the ludic (game rules) and extraludic (the metagame) dimensions is strictly related to irreversibility. But how to define irreversibility? Its concept is related to the events that constitute time, which is relentlessly irreversible. One model, the

1976; Brian Sutton-Smith. *Play and Learning*. New York: Gardner Press, 1979; Donald W. Winnicott. *Playing and Reality*. London: Tavistock, 1971; and Lev S. Vygotskij. "Play and its Role in the Mental Development of the Child." Reprinted in *Voprosy Psikhologii*, 6, (1966).

13. Ivan Mosca. "What is it like to be a player? The qualia revolution in game studies." *Games and Culture*, 11.6 (2016).
14. Except in those Living Action Role Play adventures that have been expressly designed for recreating this kind of feeling.

extensional model of time,[15] argues that events are irreducible to objects, facts, or properties,[16] because "they don't exist but they happen."[17] As long as they happen in a real environment, events cannot be reversed; but the adoption of the *magic circle*—which is an entity that depends on the subjective point of view of players—constitutes gaming events as pure experience, thus introducing the potential of reversibility. A distinction between the in-game *progress-time* and the real *world-time*[18] allows players to restart a game free to explore all the possibilities offered by the system, returning back and experiencing content more than once. Instead, the irreversibility of LEGACY changes what game scholars A. Tychen and M. Hitchens consider fundamental *internal times*,[19] *temporal layers*[20] and *temporal frames*[21] of the play experience. The normal possibility of players to make choices, for instance by returning back to an earlier point of the game, in LEGACY is inhibited: therefore, unlike the majority of games, the time model of LEGACY games can be defined as linear.

15. Barry Dainton. "Temporal Consciousness." In *The Stanford Encyclopedia of Philosophy*, 2014. Edited by E. N. Zalta.
16. See Nelson Goodman. *The Structure of Appearance*. Cambridge, MA: Harvard University Press, 1951 and Peter F. Strawson. *Individuals: An Essay in Descriptive Metaphysics*. London: Methuen, 1959.
17. Roberto Casati and Achille Varzi. "Events." In *The Stanford Encyclopedia of Philosophy*, 2015. Edited by E.N. Zalta.
18. Michael Hitchens. "Time and computer games or 'No, that's not what happened.'" In *CGIE conference 2006*. Edited by K. K. Wong et al. Perth: Murdoch University, 2006.
19. Christian Elverdam and Espen Aarseth. "Game classification and game design: Construction through critical analysis". *Games and Culture* 2.1 (2007), pp. 3–22.
20. See Anders Tychsen and Michael Hitchens. "Interesting times: Modeling time in multi player and massively multiplayer role playing games." 2007. and Anders Tychsen and Michael Hitchens. "Game time: Modeling and analyzing time in multiplayer and massively multiplayer games". *Games and Culture* 4.2 (2009), pp. 170–201.
21. José P. Zagal and Michael Mateas. "Time in video games: A survey and analysis." *Simulation & Gaming: An Interdisciplinary Journal* 41 (2010), pp. 844–868.

Linear time affects our notion of game progress. According to Tychsen and Hitchens, in every game there is a sense of mechanic progress that "changes the game state in terms of the rules", and a sense of task progress "related to the requirement of the players having to complete certain tasks (objectives, quests, etc.) to advance in a game."[22] LEGACY binds mechanic and task progress in a new way, so that the events which impact mechanic progress happen without the direct influence of task progress. In computer games, the consequences of the in-game actions are experienced as narrative events, passively, but in board games the freedom to *not* apply the requested consequences emphasizes the necessity of actions such as the elimination of a character and the modifications of the cards. Thus, in LEGACY the actions are strictly related to the staging of the events, as in theater. In a sense, the linearity of LEGACY makes the interactivity more narrative.

In order to be meaningful, event and variation have to stand out against a background of regularity: in LEGACY the focus is primarily on event and variation, and only peripherally on how to manage them. For example, *Pandemic Legacy* has a very deep managerial background, but its strength is the irruption of irreversibility. Variation of a game's core rules drives many board game systems. For example, the modern folk-game *Nomic* has a rule-state that shifts over time through parliamentary vote, and *Magic: The Gathering* (*M:TG*) (1993) instructs players that the core rules may be superseded by rules printed on its various cards.[23] In this sense, the variation in *Nomic* depends on the interaction between the players while the variation in *M:TG* is discreet and modular—players have the option to decide

22. Tychsen and Hitchens.
23. See Peter Suber. *Nomic*. In "Metamagical Themas". *Scientific American*, June 1982. Edited by D. Hofstadter and Garfield, 1993.

some of the rules which may shift when building their deck and choosing the cards they will play with. In LEGACY the variation is mandatory and essential, and players must implement scripted rule-changes.

LEGACY games cannot be replayed because of the extreme approach to variation they take. The uniqueness of every campaign is tied to the irreversibility of the storyline, due to the particular relation between the *fictive* and the *gameworld* time frames.[24] The irreversibility of storyline has a digital analogy in the concept of permadeath (i.e. "permanent death"), which Lisbeth Klastrup defines as a property of games, mainly computer games,[25] where characters can die forever, and all their characteristics are irremediably lost.[26] Tommy Rousse[27] argues that there is also a social component, that true permadeath occurs when a unique character's death becomes meaningful for a player. Permadeath evokes echoes of Benjamin's aura[28] for interactive mass media, where users focus their artistic veneration not to the objects offered by games but rather on the

24. Zagal and Mateas.
25. See Shouzou Kaga, S. *Fire Emblem: Shadow Dragon and the Blade of Light*. Kyoto: Nintendo, 1990. [NES]; Jon Hare. *Cannon Fodder*. Chelmsford: Sensible Software, 1993. [AMIGA]; Julian Gollop, Nick Gollop, and Steve Hand. *Ufo: Enemy Unknown*. Harlow: Mythos Games, 1994. [AMIGA]; Tarn Adams and Zach Adams. *Dwarf Fortress*. Self-Published, 2006. [PC]; Justin Ma and Matthew Davis. *FTL: Faster Than Light*. Shangai: Subset Games, 2012. [PC]; and Dean Hall. *DayZ*. Prague: Bohemia Interactive, 2013. [PC].
26. See Lisbeth Klastrup. "Why Death Matters: Understanding Gameworld Experience." *Journal of Virtual Reality and Broadcasting* 4.3 (2007) and Lisbeth Klastrup. "What Makes World of Warcraft a World? A Note on Death and Dying." In *Digital Culture, Play, and Identity: A World of Warcraft Reader*. Edited by H.G. Corneliussen and J. Walker Rettberg. New York: MIT Press, 2011.
27. Tommy Rousse. *On "*Permadeath: The State of Death in the Age of Electronic Resurrection." *Ludist,* 2011. ludist.com.
28. Walter Benjamin. *The Work of Art in the Age of Mechanical Reproduction*. Edited by H. Zohn. New York: Schocken - Random House, 1998 [1936].

experiences that such objects allow to the subjects themselves. As Debord has noticed, in a cultural environment where the artistic objects are easy reproducible, the holy importance of art does not disappear, but it is shifted towards the participation of the user.[29] Because they are interactive, games allow users to participate in the construction of meaning: LEGACY expands this property by driving the attention of the users towards their subjective participation.

Although LEGACY implements permadeath well, there are some properties of permadeath that LEGACY overcomes or denies. Andrew Doull argues that in permadeath games the only "resource accumulated from game to game is player skill."[30] Klastrup has noticed that "dying is an activity similar to a number of other repeatable activities [in games]."[31] And Ben Griffin has written that "games with a strong narrative element frequently avoid permanent death."[32] None of these features are present in LEGACY games: their extreme variation inhibits the accumulation of player skill, the death cannot be repeated, and permanent death is implemented in a strong storyline.

Above all, in LEGACY there is not only *character* permadeath, but also *non-playable-character* permadeath, *world* permadeath, and the permadeath of the *player* themselves (LEGACY games are spoiled if players take part in them more than once, hence player permadeath). The shift in meaning of permadeath from one which privileges character to one which applies the term more broadly (to the player

29. Guy Debord. *La Société du spectacle*. Paris: Buchet-Chastel, 1967.
30. Andrew Doull. "Analysis: The Game Design Lessons Of Permadeath." *Gamasutra.* 2008. http://www.gamasutra.com/view/news/115412/Analysis_The_Game_Design_Lessons_Of_Permadeath.php
31. Klastrup ,2007.
32. Ben Griffin. "Why permadeath is alive and well in video games." *GamesRadar*. 2014. http://www.gamesradar.com/why-permadeath-just-wont-die-video-games/

or world) can be understood as one which offers the player significantly less control over the game. This lack of perceived control over the game, paradoxically leads players toward an approach to play that values experience and reflection. To Brendan Keogh, "a playable character's death is typically a non-event in videogame play", and "the game can be started again, of course, but that particular instance of the game is lost permanently": LEGACY lacks properly that possibility to restart. So, if "the true effect of perma-death is not simply in the character's death, but in how it drastically alters the player's lived experience of the character's life",[33] then LEGACY's alteration is bound to the lived experience of the player's role. This, as Keogh puts it, weighs "every act with a sense of significance."[34] Framed in Heideggerian terms, the world of LEGACY games stops to be present-at-hand (knowable) or ready-to-hand (usable), and the sense of estrangement induced by the awareness of the temporal limits of the game leads the players to shift their attention towards their experience.

33. Griffin.
34. Brendan Keogh. *When Game Over Means Game Over: Using Permanent Death to Craft Living Stories in Minecraft*. IE'2013, September – October. Melbourne: VIC, 2013.

Screenshot from an early roguelike game. Image by Horst JENS @Flickr CC BY-SA.

In order to understand how the reflective and existential qualities of permadeath in LEGACY emerge, we must compare classic permadeath with that implemented by LEGACY. Normally permadeath (like that of the "roguelike" computer games genre) is related with identity that the player projects into the game. In contrast, players encounter LEGACY's irrecersable permadeath simply by playing the game. In LEGACY games there are no second chances and players cannot really learn a strategy. They can only participate in events where change affects the semantic representations inside the game and the syntactic rules that shape the game itself. A double irreversibility–the player permadeath and

the impossibility to reiterate–drives LEGACY players to abandon the classic, progressive model of knowledge in favor of an "openness to vulnerability,"[35] which expands the magic circle to a horizon magnitude. The double irreversibility of LEGACY makes players aware that they don't simply play, but they *are played* by the events.[36] Nevertheless, the LEGACY time of expectancy is not a passive waiting, a dead time,[37] but rather a dense perception of the fact that "time goes by", towards an end of the game that has been inexorably announced. Moreover, the end doesn't allow for a new try and its certitude pushes the players to record the game events as traces (in form of stickers placed onto the map, the cards, and the rules booklet), or as *trashes* (the destroyed game components).

The "historical" flavor of the play feelings of LEGACY affects the notion of destiny, which is rarely present in gaming. Differently from what happens in normal permadeath games,[38] in LEGACY irreversibility is a destiny that does not depend on the players. Moreover, it is progressive: the player is not pushed to prevent every possible risk, but to live every single moment, action or event, recording all the phases of the game in order to keep them alive in the form of memories. This "existential" approach affects the cognitive

35. "In a collision of fixed affordances and player-imposed rules, the tone of the game's conventional gameplay shifts from one of experimentation to one of vulnerability.". *Ibidem*.
36. Hans G. Gadamer. *Wahrheit und Methode. Grundzüge Einer Philosophischen Hermeneutik*. Tübingen: Unveränd, 1960.
37. Jesper Juul. "Introduction to game time." In *First person: New media as story, performance, and game*. Edited by N. Wardrip-Fruin and P. Harrigan. Cambridge, MA: MIT Press, 2004.
38. See Ben Abraham. "Permanent Death." Unpublished paper. 2009. Retrieved 15 may 2015 from http://www.mediafire.com/?4gjrmjio2wq and Ben Abraham. "Imposed Rules and 'Expansive Gameplay': A Close Reading of the Far Cry 2 Permadeath Experiment." In *Proceedings of Digital Games Research Association 2013 Conference*. Atlanta, 2013.

model adopted by the players. While in the vast majority of games the "death is related to the idea of risk, payoff and punishment,"[39] in LEGACY death is sure—even programmed. Abraham and Keogh analyze permadeath in *Far Cry 2* (2008) and *Towards Dawn* (a particular way of playing *Minecraft* (2011)),[40] but the double irreversibility of LEGACY forces players to play the game only once, thus encouraging conscientious reflection in their one playthrough. The reaction of the player is not to prevent every possible risk, but rather to experience fully every moment that happens. The existential experience of *Pandemic Legacy* is shared also by some avant-garde computer games, which encrypt themselves after a single use (for example *Agrippa* and *One Single Life).* The classic trial-and-error cognitive model of gaming experience is focused on knowledge accumulation and skill improvement (e.g. Mario uses three lives for discovering the trap, learning how it works, and overcoming the obstacle). On the contrary, in games that implement double irreversibility the players do not "structure their own time,"[41] but rather they are framed within a *being-towards-death* experience.[42]

According to Heidegger, only by understanding and accepting the fact that a subject's life is limited can they live "entirely" and authentically. *Being-towards-death* has some precise properties, which we can find also in the LEGACY games. The first property is that

39. Dan Dixon. "Death; A minor annoyance or an invitation to play?" In *Proceedings of Breaking the Magic Circle Conference*. Tampere: University of Tampere, 2008. http://eprints.uwe.ac.uk/12780
40. See Pierre Rivest. *Far Cry 2*. Montreal: Ubisoft Montreal, 2008. [XBox 360] and Markus Persson and Jens Bergensten. *Minecraft*. Stockholm: Mojang, 2011.
41. Dixon. 2013.
42. The Heideggerian philosophy reformulates some Augustinian statements. Martin Heidegger. *Beiträge zur Philosophie (Vom Ereignis)*. In *Contributions to Philosophy (From Enowning)*. Translated by R. Rojcewicz and D. Vallega-Neu. Bloomington: Indiana University Press, 2012 [1936-1938].

death is experienced as a personal account, which is exemplified by the fact that LEGACY encourages players to feel that they will have not the possibility of re-playing the game. Secondly, death is both certain and uncertain: the anxious subject is aware of their sure end, but they do not know when it will come. This is also an important feature of LEGACY as players are never quite sure when the campaign will end (even *Pandemic Legacy* tempts players with the potential of a new season lurking around the corner). Finally just as death is the fundamental issue of life, the irreversibility of the LEGACY experience makes the singularity of its play the fundamental issue of the genre. LEGACY inverts the normal aware and cathartic illusion of play, in which normal reversibility is directed to satisfy impossible human desires, including immortality. Normally games encourage a *being-towards-life* experience, much more mundane and much less dramatic than the *being-towards-death* provoked by LEGACY games.

Character cards in Pandemic Legacy. Image by yoppy @Flickr CC BY.

Is the LEGACY system destined to change the way games are designed? Can this have an impact outside the game system's worlds? Today, mobile and pervasive games are reorganizing play-time and this dovetails with some social trends. The current digital culture, innervated by the syntax and semantics of computer gaming, is permeated by a new grand narrative according to which technology can provide infinite progress,[43] free domains,[44] and even the hope of eternal life.[45] Although there are some aspects of digitalization that are irreversible (Facebook, for example, requires users to register with their true identity), there is a hidden conflict between the practical and total involvement of the individual identity in the digital. Irreversible processes now mark boundaries between the realities of life today and the promise of eternal life and freedom that some technologists hope to find within the singularity. LEGACY games can help us reconcile this conflict, showing how life is tenuous, precious, and fleeting. For even in games we can introduce irreversibility and therefore even in the gamification of life we cannot ensure happiness and freedom.[46]

43. Ray Kurzweil. *The Singularity Is Near: When Humans Transcend Biology*. New York: Viking Books, 2006.
44. Jeremy Rifkin. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. New York: Putnam Publishing Group, 1995.
45. Aubrey De Grey and Michael Rae. *Ending Aging: The Rejuvenation Breakthroughs that Could Reverse Human Aging in Our Lifetime*. New York: St. Martin's Press, 2007.
46. Jane McGonigal. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. Westminster: Penguin Group, 2011.

Capitalism and Unfairness in Catan: Oil Springs

JONATHAN REY LEE

Before the first turn was over, I knew I had won—a circumstance typically only achievable through overwhelming skill, prognostication, or cheating. In this case, however, the game itself gave me an insurmountable advantage via my starting position. It's tempting to label this as poor game design[1] since it certainly violates the principle of fairness almost universally assumed in competitive gaming. Yet in a world where the myth of a 'level playing field' obscures and authorizes ongoing social inequalities, problematizing the notion of 'fairness' in gameplay may provide unique insight into the 'fairness' of capitalist culture. This insight is possible because contemporary games are cultural phenomena that have also become *media* phenomena. Games, that is, need not merely reflect culture, but have critical potential for reflecting *on* culture. The following

1. In "How *Settlers of Catan* Created an American Board Game Revolution," Ian Schreiber lists "uneven starting positions" and "a positive feedback" loop—two of the mechanisms this paper explores as representations of capitalism—as "flaws."

reflections work toward developing such a critical paradigm by showing how the *Oil Springs* scenario for *The Settlers of Catan* plays out ethical dilemmas raised by the emergent and systemic inequalities generated by capitalist systems.

In order to analyze these inequalities, this paper first explores game *balance* as the interplay between *emergent inequality* (how games determine winners and losers through the inputs of skill and chance) and *systemic inequality* (how an asymmetrical game state may privilege certain players).[2] This paper then analyzes how the *Oil Springs* scenario for Catan links resource generation to land ownership, the runaway leader problem to the tendency of capital to accrue capital, and industrialization to market destabilization and ecological catastrophe. Finally, I reflect on the experience of enacting inequality within an unbalanced game system. Throughout, I suggest that while competitive games are typically designed to produce emergent inequality from within a level playing field (systemic equality), the rules that govern such emergent inequality are systemic in ways that allow for critically engaging systemic *in*equality.

Fair and Balanced

While not all games are competitive,[3] the history of games is thoroughly intertwined with *agon* (or 'contestation') as an organizing principle of Western culture. According to French sociologist Roger Caillois, agonistic games play out agonistic culture "like a combat

2. The term 'emergent' is meant to evoke theories of play as a dynamic unfolding of events that incorporates player input. The term 'systemic' is meant to evoke social theories about how particular social organizations privilege certain individuals or groups while systematically marginalizing others.
3. For the sake of simplicity, this analysis is restricted to multiplayer, competitive games as paradigms of capitalist play even though single-player and cooperative games certainly have ways of modeling capitalism.

in which equality of chances is artificially created, in order that adversaries should confront each other under ideal conditions, susceptible of giving precise and incontestable value to the winner's triumph."[4] With mathematical precision, agonistic games create balanced contests that reflect the ideal of agonistic culture: a perfectly level playing field that produces a genuine meritocracy. Yet, even while reflecting this agonistic ideal, the complicated balancing act performed by actual games demonstrates the limits of this ideal. Recognizing that fairness is problematic even within the carefully-controlled medium of games should also call into question the very possibility of a level playing field in arenas as complex as global capitalism.

Fairness, like beauty, is left to the eye of the beholder. What standards determine which is most fair: that everyone gets the same amount of pie (equality), that everyone gets pie according to their need for pie (equity),[5] or that everyone gets pie in proportion to how much money or labor they invested in the pie (meritocracy)? There are similarly divergent ways of considering fairness in games. Caillois is adamant about the fundamentality of fairness, arguing that games of both skill and chance (*agon* and *alea*) "require absolute equity, an equality of mathematical chances of most absolute precision. Admirably precise rules, meticulous measures, and scientific calculations are evident."[6] Taken together, however, skill and chance presuppose contradictory paradigms of equality, making it difficult to determine what counts as fair for games that incorporate both (as most contemporary tabletop games do). Similarly, although Caillois

4. Roger Caillois. *Man, Play, and Games*. New York: The Free Press of Glencoe, Inc., 1961, p. 14.
5. This phrasing alludes to a slogan for socialist redistribution economies popularized by Karl Marx: *From each according to his ability, to each according to his need*.
6. Caillois, p. 74.

argues that "The search for equality is so obviously essential to the rivalry that it is re-established by a handicap for players of different classes,"[7] notion of fairness behind the handicap does not reinforce but rather undermines the agonistic ideal. Such contradictory messages suggest that fairness is a highly subjective notion. That is: standards of fairness vary not only according to individual preferences, but also by context (casual gaming vs. tournaments), game genre (wargames vs. party games), and even circumstance (games are generally only 'unfair' when one is losing).

Unsurprisingly, this variability amongst subjective standards yields a spectrum of paradigms for promoting *balance*, a somewhat vague negative term that presents fairness as 'not unbalanced.' Most commonly, games that tend towards symmetry tolerate emergent inequality but very little systemic inequality: symmetrical games allow skill and chance to separate players as the game progresses, but provide roughly parallel pathways to victory. In such games, the inevitable asymmetries are typically either minimized (playing first often confers an advantage, but usually a minimal one) or counterbalanced by other asymmetries of relatively equal value (the *komi* in *Go* compensates black's advantage in going first with a point bonus given to the white player). Asymmetrical games extend this latter technique by counterbalancing different ways of playing (via differing pieces, abilities, rules, goals, etc.) to create a more or less equal game balance. Thus, asymmetrical game design provides two possibilities for exploring systemic inequalities. Balanced asymmetrical games can explore themes of inequity while maintaining an environment of fair play that adopts a perspective of critical distance—the player observes the interplay of differences

7. Caillois, p. 14.

that contribute to inequity without being immersed in the experience of inequity itself. By contrast, deliberately unbalanced asymmetrical games can explore inequity both thematically and procedurally, immersing players in a fundamentally inequitable world.

To advocate critical play with and against capitalist systems, there are good reasons to challenge any standard of competitive balance that supports the myth of capitalism as a level playing field. Insisting on perfectly balanced games is not just an impossible ideal; it is a problematic one. Balanced games imagine idealized worlds that may reinforce the deep cultural assumption that contestation is a practical and ethical way of organizing society. Yet, there is a substantial disconnect between the fair and balanced worlds of gameplay and the many systemic inequalities that emerge in everyday societies. In practice, major genres of competitive game design—such as wargames, race games, betting games, and economic strategy games—often uncritically invoke and thereby reinforce broader forms of cultural contestation. Strategic wargames, for example, may intellectualize war tactics while glossing over the cost of violence. Similarly, economic strategy games may glamorize profiteering while failing to represent exploitation. For instance, *Monopoly* depicts rents as an arena for capitalist competition but ignores the consequences for tenants, worker placement games often reinforce the dehumanizing representation of laborers as human resources,[8] and *Catan* fails to represent the violence of settler colonialism.[9] And even as these games ignore disenfranchised populations, they ask

8. See Will Robinson. Orientalism and Abstraction in Eurogames. *Analog Game Studies* 1.5 (2014) and Nancy Foasberg. The Problematic Pleasures of Productivity and Efficiency in *Goa* and *Navegador*. *Analog Game Studies* 3.1 (2016).
9. See Greg Loring-Albright. The First Nations of Catan. *Analog Game Studies* 2.7 (2015) and Lorenzo Veracini. "Settlers of Catan." *Settler Colonial Studies* 3.1 (2013).

players to become complicit in the systems that produce such disenfranchisement: the participatory medium of games often entangles player agency with the logic of capitalism by promoting a particularly capitalist model of agency—a self-interested agonistic impulse that plays out within a quantifiable, rule-governed system of exchange.

There is perhaps no clearer example of the intersection of games and capitalism than Monopoly, of which Caillois writes, "The game of Monopoly does not follow but rather reproduces the function of Capitalism."[footnote]Caillois, p. 61.[/footnote] Ironically, the game industry appropriated Monopoly from a game explicitly designed to demonstrate social inequality—The Landlord's Game (patented 1904; this image from 1906) by Elizabeth Magie. Originally designed to demonstrate Henry George's notion that the infrastructure of renting properties consolidated wealth in the hands of landowners at the expense of their tenants, The Landlord's Game has resonances with the issue of land ownership discussed in the next section. (CC Wikimedia Commons)

Although the way that games are more generally implicated in

capitalism[10] (and vice versa)[11] deserves more critique, this parallelism may also provide games like *Catan* with a special critical potential to expose systemic inequality. For instance, in The First Nations of Catan, game designer and scholar Greg Loring-Albright describes how he developed "a balanced, asymmetrical strategy game" that "creates a narrative for Catan wherein indigenous peoples exist, interact with settlers, and have a fair chance of surviving the encounter by winning the game."[12] As discussed above, this type of game represents a critical intervention into historical inequalities while minimizing systemic gameplay inequalities, such as ones that might give the indigenous peoples a less than "fair chance." By contrast, *Catan* and its *Oil Springs* scenario are mostly symmetrical and, if not actually unbalanced, certainly balanced unstably. With respect to *Catan*, *Oil Springs* makes more explicit the thematic connection to capitalism and, in a related move, makes the game

10. For instance, as outlined in *Games of Empire*, the history of the industry, technologies, markets, and designs of videogames is inextricably tied to global capitalism. Albeit in somewhat different ways, the history of contemporary tabletop gaming—especially Eurogames—is likewise linked with the flow of capital based on quantifiable optimization. There are, of course, significant differences between videogames and board games, both in terms of how the respective industries operate (the focus of Part I of *Games of Empire*, "Game Engine") and their medium-specific affordances (the focus of Part II, "Gameplay"). Parallels do emerge, however, when one considers how contemporary culture has constructed 'gaming' as a mass-market entertainment industry, as a male-dominated subculture, as a means for organizing and measuring competition, etc. Similar questions, therefore, must be asked of videogames and board games even though a singular answer will not likely account for their respective complexities.
11. Capitalism exhibits some game-like characteristics. Not only have contemporary corporations appropriated game design elements to pursue 'gamification' both in corporate management and in marketing, capitalism itself is a self-regulating system that can be understood in terms of game balance. Both at the level of policy (when governments regulate capitalist enterprises) and practice (when companies self-regulate their pursuit of profits to maintain a strong public image), capitalist systems use balancing mechanisms that rein in the latent asymmetry of the free market, preserving the capitalist system and whatever degree of social inequality it maintains.
12. Greg Loring-Albright. The First Nations of Catan. *Analog Game Studies* 2.7 (2015).

balance even less stable "to draw attention to important challenges humanity faces, in relation to the resources that modern society depends on."[13] It accomplishes this by adding to the five original pastoral resources in Catan the modern resource of Oil, which is simultaneously more powerful (it counts as two standard resources), more flexible (it can be used as two of *any* resource), and more dangerous (its use triggers ecological catastrophes). By raising the stakes in these ways, *Oil Springs* further unbalances Catan to make a point about emergent social inequality tied to the unequal distribution of resources.

Playing Capitalism

Capitalism is far too multifaceted for any game—even one with as many variants and expansions as *Catan*—to model fully. Yet, games can indeed critically play with capitalism by condensing capitalist principles into their game systems through the systemic constraints and affordances that structure game interactions. Rather than describing capitalism, many agonistic games are themselves simple capitalist systems in which self-interested players engage in more or less free market competition with each other. Certain game designs, therefore, are not only tied to the agonistic logic behind capitalism, but are unique microcosmic economies that can represent specific facets of capitalism. The abstraction of *Catan*, for instance, obscures the history of settler colonialism and the exploitation of labor to focus instead on portraying land ownership as a lynchpin of modern capitalism, both in relation to resource generation and the tendency of capital to accrue capital. Similarly, the mechanics in *Oil Springs* focus on the role of the natural resource of oil as fuel for industrial

13. Erik Assadourian and Ty Hansen. *Catan: Oil Springs*. Mayfair Games, 2011. Rulebook, p. 4.

capitalism by showing how industrialization accelerates resource production and exploits the environment.

For Karl Marx, ownership of private property[14] precludes fair compensation of workers by granting the capitalist (the holder of *capital*[15]) legal 'rights' the value generated by production without requiring that they contribute any labor towards generating that value. Land in *Catan* reflects this model by automatically generating resources which are given directly to the player/landowner, completely bypassing the question of labor. Instead, the emergent inequality is between rival capitalists played by the game participants. Although class differences are not represented, these emergent inequalities are structurally linked with class differentiation. Indeed, private property is problematic for Marx primarily because it forms the conditions for emergent inequalities to become systemic inequalities through wealth consolidation. Thus, private property parallels an emergent asymmetry known in game design as the *runaway leader problem*, in which it becomes increasingly difficult to catch the lead player as the game progresses. This occurs in any game design—such as *Catan*—that links point accumulation and resource generation, creating a feedback loop such that the further one is towards achieving victory the more resources one gains to reinvest in that progress. In contrast to a game like *Dominion*, in which

14. In the *Communist Manifesto*, Marx and Engels write "In this sense, the theory of the Communists may be summed up in the single sentence: Abolition of private property." See Robert C. Tucker, ed. *The Marx-Engels Reader*. 2nd ed. New York: W.W. Norton & Company, 1978, p. 484.
15. Marx defines capital thusly: "Capital consists of raw materials, instruments of labor and means of subsistence of all kinds, which are utilized in order to produce new raw materials, new instruments of labor and new means of subsistence. All these component parts of capital are creation of labor, products of labor, *accumulated labor*. Accumulated labor which serves as a means of new production is capital." See Robert C. Tucker, ed. *The Marx-Engels Reader*. 2nd ed. New York: W.W. Norton & Company, 1978, p. 207.

accumulating victory points can actually reduce the effectiveness of one's resource-generating engine, in *Catan* the closer one is to victory the faster one should move toward victory.[16] The idiom *it takes money to make money* captures this fact about capitalism, which Marx describes as "the necessary result of competition" being "the accumulation of capital in a few hands, and thus the restoration of monopoly in a more terrible form" (70). In fact, emergent and systemic inequalities often do synergize in this way as the material consequences of emergent inequalities become concretized as systemic as they are passed down from generation to generation, maintaining fairly resilient wealth disparities between different social and ethnic groups.

For Marx, these problems with land ownership are only intensified in industrial capitalism, in which ownership over the machinery of production further disenfranchises the industrial worker. This is precisely the shift in emphasis behind *Oil Springs*, which introduces Oil not just as one more roughly equivalent commodity, but one which radically unbalances *Catan*'s market economy. Representing the increasing pace of production from pre-industrial to industrial societies, one unit of Oil is worth *two* resources. In fact, it is worth two of *any* resource, which means that the strategic value of a single Oil resource ranges from two to *eight* resources (since it can take up to 4 resources to trade for a resource of one's choice), making Oil so much more valuable than other resources that it seriously unbalances the game. In addition, Oil is required for building a Metropolis, the most powerful building in the game. Depicting how new industrial processes destabilize existing economic relationships,

16. In practice, this is not always the case, as an overcrowded game board and a group of opponents all united against the leader can slow down this progress and make the end game drag out.

Oil Springs shows how the problems of capitalist land ownership are compounded when such land contains scarce resource reserves that are essential to industry. Such resources encourage relationships of dependence not only over renters and laborers (who are nowhere represented in *Catan*), but also over other industrialists who require these resources. Thus, the game makes the inequality between different starting positions more dramatic to depict a shift in modern geopolitics away from territory being valued primarily for it land, population, and location to being valued primarily for its strategic resources.

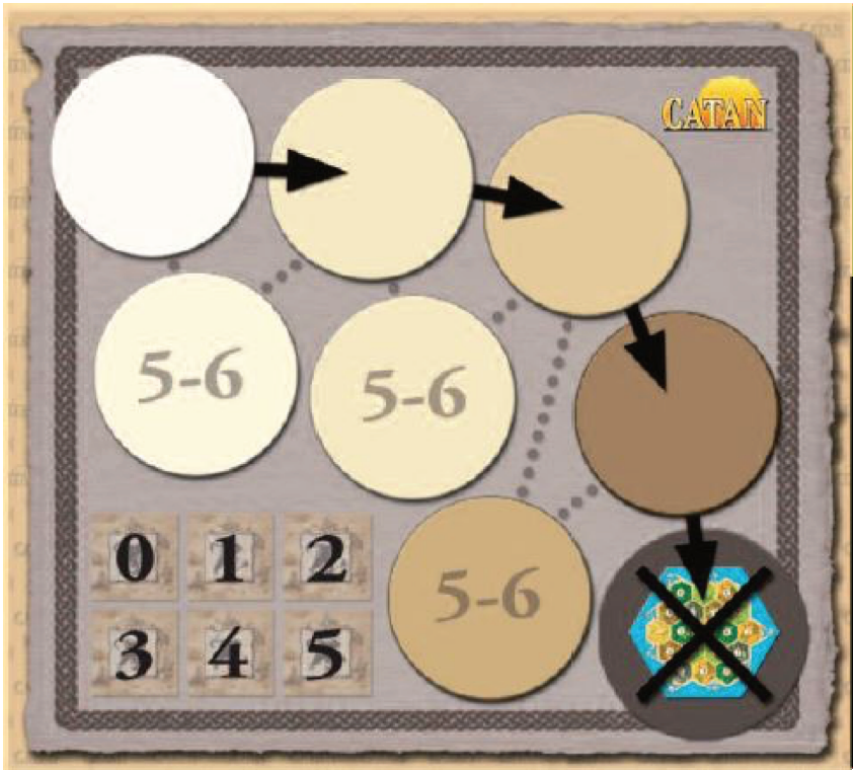
While *Oil Springs* does have mechanisms that restore some balance, such as keeping Oil off the highest-probability hexes and capping the amount of Oil a player may hold at one time,[17] its primary mechanisms for balancing Oil ironically further unbalance the game. By making Oil use precipitate ecological disasters, *Oil Springs* highlights the costs of industrial capitalism and makes an implicit ecocritical statement about how environmental consequences affect us all. They affect us, that is, randomly but not equally. Demonstrating that even negative consequences can be exploited by the industrial capitalist, the game's two forms of environmental disaster turned out to be *less* damaging to me than to other players. The first environmental disaster, in which rising water levels destroy coastal settlements, played in my favor because I planned to exploit Oil and therefore avoided building coastal settlements.[18] The second

17. These mechanisms run explicitly counter to the game's thematic presentation, as demonstrated by the "Wide Open Game" variant at the end of the rulebook, which reverses these limiters while warning that "These rules make the scenario more true to life, but they also make it less balanced, which can be less fun" (*Oil Springs* 3).
18. The game design also privileges this strategy. In general, coastal positions are weaker positions in *Catan* because they are adjacent to only one or two resource-generating hexes, whereas all landlocked positions are adjacent to three. To counteract this, some

disaster, representing 'industrial pollution,' randomly strikes individual hexes, causing them to permanently cease to produce resources. More precisely, it does this to the 'natural' resources—affecting all hexes except for Oil Springs, which continue to produce after a reduction in the shared Oil reserves. Thus, because I was disproportionally less accountable for the consequences of my actions, I was able to safely initiate risky behavior that the risk-averse players suffered from. As risk and accountability can become unhinged in a free-market society that pushes for deregulation, *Oil Springs* speaks to the fact that those most responsible for climate change—be they individuals, corporations, or nations—do not generally bear the brunt of the consequences.[19]

coastal positions are designated as 'ports,' which allow players to trade resources at a more advantageous rate. In short, coastal positions provide fewer resources but greater resource flexibility. However, in *Oil Springs*, Oil resources provide greater flexibility than ports (trading at a 1:2 rather than 2:1 or 3:1 ratio). To add insult to injury, the only resource-generating structures capable of withstanding this disaster require Oil to build. My positioning was therefore a triple threat: my landlocked spaces generated more resources, my oil gave me greater resource flexibility, and I was immune to the negative effects of the coastal disasters.

19. Quite to the contrary, it is the poor who feel such consequences most strongly. Studies, such as one cited in this Guardian article, suggest that poorer countries are more likely to be affected by climate change. Similarly, an article at TheDailyClimate.org, shows how the poor and minorities are disproportionately affected by climate change within the United States.



The Disaster Track from the Oil Springs Scenario. Every time an Oil resources is used, it moves a marker along this track, triggering an ecological disaster if it reaches the final space (this takes 5 Oil in the 3-4 player game and 8 Oil in the 5-6 player game). If this occurs 5 times in total, the game immediately ends and no one wins. Image used for purposes of critique.

In all the aforementioned ways, the game systems of *Catan* and *Oil Springs* use emergent inequalities to reflect on various systemic inequalities. This conflation, however, raises another question of fairness, namely how systemic inequalities emerge. In the case of *Catan*, this question becomes how to distribute land that has such intrinsically unequal value that it is sometimes possible to accurately predict the winner based on the starting positions (as in my case). The game attempts to solve this by using a snake draft to organize

how players select their starting positions. Fairness is achieved not by creating equal spaces, but by assigning fundamentally unequal spaces using the mechanisms of emergent inequality: skill and chance (*agon* and *alea*). There is a fundamental difference, however, in the role these two forms of emergent inequality play in the deep interpenetration of games and culture. For Caillois, whereas agonistic games reflect the meritocratic ideal of cultural contestation, aleatory games play with the fundamental uncertainty of life—they are ludic, even carnivalesque experiments in fatalism. Unlike the triumphalism of *agon*, therefore, the aleatory elements of games explore consequentiality beyond the limits of human agency. This explains, for Caillois, how aleatory social institutions such as gambling and lotteries counterbalance the fundamentally agonistic structure of society by providing a faint hope that any individual may leap out of a condition of systemic inequality through an emergent (but rare) inequality. This demonstrates how capitalism balances itself by using the *possibility* of upward mobility to obscure its systemic conditions for economic *im*mobility.

This also reveals a way in which game design struggles to represent systemic social inequality: games often achieve balance by using aleatory elements to subsume systemic inequality within emergent inequality, sacrificing the critical experience of systemic inequality in order to maintain the ideal of balance. Thus, the emergent inequalities in *Catan* fail to represent how historical inequalities are invariably systemic as race, gender, class, and nationality play prominent roles—how in America, for example, the original occupants were dispossessed by force of arms and land was

redistributed according to explicitly discriminatory laws.[20] It also fails to represent how even after more recent legislation has eroded many of these practices, their legacy[21] necessarily lingers within a capitalist system where ownership is passed down from generation to generation. There are limitations, therefore, to representing social inequality exclusively through emergent mechanisms—when games create a genuinely level playing field, they become incompatible with capitalism, which perpetuates the myth of a level playing field while in fact perpetuating systemic inequalities.

Playing with Privilege

It was only upon further reflection that I began to tie my play experiences to the preceding forms of social inequality. In the moment, however, my focus was more narrowly focused on executing my strategy—or, to put it bluntly, on *winning*. At the same time, this was tinged with a growing sense of discomfort that can only be described by an even more uncomfortable word: *privilege*. Certainly, my ability to win the way I did was due to a privileged starting position, which tilted the balance of power in my favor. Yet, privilege is an attitude as well as a condition: being able to focus exclusively on strategy and winning is itself a form of privilege. Games (even so-called *serious games*) are not theories of social inequality—as embodied, performative spaces, games express a *procedural rhetoric*[22] in which players develop perspectives by exploring the consequences of their decisions and actions as they play

20. This without even considering the more difficult to quantify but undeniably consequential biases which influence economic transactions and social relationships.
21. Legacy games may have an unusual potential to represent this kind of inequality as they allow for permanent changes to the game state that accrue over multiple games.
22. See Ian Bogost, *Persuasive Games: The Expressive Power of Videogames*. Cambridge: The MIT Press, 2007.

out within the game system. To play certain games in certain ways, therefore, is to *play as* capitalists and *play out* capitalism.

As mentioned above, the procedural rhetoric of *Oil Springs* is paradoxically predicated on privileging the very strategies of industrial capitalism that this ecocritical game otherwise censures. This presents players with a dilemma, in which playing to win may require performing actions that are thematically represented as ethically problematic. Thus, the primary reason I received such advantageous placement in my case study is that I ruthlessly pursued Oil from the start, whereas several of my opponents hesitated to do so (possibly due to their ecological consciousness). Sometimes gamers attempt to justify a win-at-all-costs mentality by claiming they are merely following the dictates of the game (indirectly valorizing the cultural ideology of *agon*), or that they are merely solving an abstract puzzle without regard to thematic considerations. While these are valid ways to play a game, they nonetheless represent an active choice on the part of the player rather than some 'objective' or 'default' position. Indeed, the phrase "win at all costs" itself admits that such play necessitates a cost. While I can understand why some players would choose to play in this way, this position is not viable for game scholarship. To properly study a game, one must account for the interplay of its many facets. Theme, which can evoke representational content and complex psychological and affective[23] responses, is an essential facet of a game as text. When players respond to a game's theme, they are performing a genuine textual engagement worthy of analysis. Thus, this section draws on my own

23. For further analysis of the affective design of *Catan*, see Cole Wehrle. Affective Networks at Play: *Catan*, *COIN*, and *The Quiet Year*. *Analog Game Studies* 3.3 (2016).

play experience to reflect on possible consequences of systemically privileging certain positions.

If I had to sum up my experience, I would say that playing and subsequently winning this particular game was no fun at all. And, although I cannot speak for the other players, I imagine it was not much fun them either. Working from an advantaged position altered the game experience in ways that counteracted much of the enjoyment I typically derive from gameplay. I say 'working from' rather than 'playing from' because rather than playfully exploring new strategies, I found myself merely implementing the most obviously advantageous strategy. My narrow focus on winning imposed an inappropriately results-driven framework on play, something I typically value more for the experience than the results. This focus was driven, moreover, less by the rewards of victory than by the fear of failure[24]—even while my privileged position robbed winning of much of its merit, losing would have been still worse. Although the game was unbalanced in my favor, an increased probability of winning did not, in my case, lead to an enriched game experience. This is because the value of a game experience cannot be reduced to winning, which is why games—even agonistic ones—are distinct from non-playful tests or contests. This is surprisingly analogous to Marx's argument that capitalism not only inequitably distributes resources, but also reduces human experience to something instrumental and transactional. Indeed, Marx suggests that even while the capitalist is materially advantaged over the laborer, both are equally alienated by being reduced to their respective roles

24. This fear of failure differed from the productive failure that Jesper Juul describes in *The Art of Failure* or the transgressive failure that Jack Halberstam describes in *The Queer Art of Failure*. Rather than a ludic tension with the possibility of personal growth or a counternarrative to restrictive identity politics, the failure I feared was simply that I would botch a relatively easy victory, thereby demonstrating an appalling lack of skill.

within the capitalist system. Systemic inequality, that is, is dehumanizing for *all* its participants—whether privileged or marginalized.

Systemic inequality in games is, of course, less consequential and more voluntary than social inequalities,[25] but it can alienate players in similar ways. In fact, most games eschew systemic inequality because it tends to be unpleasant for everyone involved. Players in privileged positions may find their roles overdetermined by the game structure, resulting in a narrowing of strategic, exploratory, or playful possibilities (for example, I had no reason to trade with other players when I could acquire all the resources I needed on my own). Similarly, players in less privileged positions may find their choices narrowed by their limited resources as the runaway leader problem renders their choices increasingly inconsequential. Systemically unequal game design, that is, looks like a lose-lose situation. Yet, it is not that inequality deprives play of choice, but rather that it overdetermines the consequences or relative viability of various choices. In the right conditions, therefore, such unbalanced play may add a unique dimension to the play experience. Rather than playing as an industrial capitalist, for instance, I could have chosen to play as an environmentalist. Instead of using Oil, I could have chosen to 'Sequester' Oil by permanently removing one of my Oil resources from the game each turn, gaining 1 Victory Point (VP) for every three Sequestered Oil, and an additional VP for sequestering the most Oil. Simple mathematics suggests that this is a terrible strategy: 1 VP is a paltry reward for the relative value of three Oil.[26]

25. In Caillois' terminology, games are *unproductive* and *free*.
26. Three Oil can generate 6 resources, enough to build either a settlement or a city (thereby scoring the same 1 VP as Sequestering) while having resources left over *and* generating additional resources for the remainder of the game. Furthermore, a player may only sequester a single Oil per turn, far less than my Oil Springs were producing.

This discrepancy underlies a model in which industrial capitalism is systematically more viable than environmentalism. Yet, what counts 'viable' can be called into question. Precisely because sequestering is 'bad' strategy, it offers an interesting thematic possibility: role-playing as an environmentalist knowing that one is not likely to win. From a thematic perspective, this strategy could be quite rewarding. Whereas my privileged play would lead either to failure or a victory deprived of merit, pursuing sequestering could offer either an impressive victory or a loss offset by the satisfaction of maintaining a moral position.

These benefits, however, are psychological rather than ethical. While environmentalism is certainly much needed, *playing* environmentalism in a game is no more intrinsically beneficial than playing industrial capitalism. Critical gameplay requires more than importing real-world values into games; it requires interrogating the assumptions players bring to the game and the positions they adopt within the game. To sequester Oil solely for the sake of feeling morally superior is not a *critical* position (although it could certainly be an attractive one). Precisely because environmentalism matters, it deserves critical attention and critical gameplay. After all, activism can be problematic in, for example, replicating colonial attitudes towards the developing world or performing a kind of 'conscience

This is not to say that there is never any strategic value to sequestering Oil. If one was heavily invested in trading at ports, one might sequester Oil to decrease the probability of having the port cities hit by an ecological disaster. Or, if one player is clearly advantaged in using Oil, the other players could commit to sequestering Oil to deplete the Oil reserve. However, these benefits are heavily context-dependent, whereas in normal circumstances using Oil is more beneficial.

laundering.'[27] Critical play,[28] that is, is not an outcome but a method. Or, as Marx puts it, "I am therefore not in favor of setting up any dogmatic flag. On the contrary, we must try to help the *dogmatics* to clarify themselves the meaning of their own positions" (13). The potential consequences of such reflection are not just two, but many. Beyond simply stating that one way of playing (environmentalism) is superior to another (industrial capitalism), critical play provides an opportunity for players to self-reflectively engage the decisions and feelings of occupying different subject positions within inequitable systems.

Critical play encourages reflection. Image by Kristina Alexanderson CC BY-NC-ND.

27. I take this phrase from Peter Buffet's scathing critique of the 'charitable industrial complex' in the New York Times. His accusations are too sweeping and vague at times, but do encourage an important critical reflection.
28. See Mary Flanagan, *Critical Play: Radical Game Design*. Cambridge: The MIT Press, 2009.

Coda

Games have not historically been on the forefront of discussions on social inequality.[29] This is partially because the fundamentality of *agon* in games reinforces certain cultural logics, partially because the carnivalesque nature of play tends not to revolutionize prevailing systems,[30] and partially because social inequality presents a special challenge for game design. To reverse this trend will require a critical perspective that pushes the limits of the game medium, such as the imperative toward balance at the heart of competitive game design—especially in a world where 'fairness' alternatively means 'light-skinned,' and the myth of a level playing field is used to justify a clearly uneven one. As *Oil Springs* demonstrates, experimenting with the interplay between emergent and systemic inequality is one way games can explore capitalism as similarly rule-governed, self-interested systems. In deconstructing the myth of the level playing field, it becomes clear that emergent inequalities in capitalism are develop systemic qualities. As a rule-governed agonistic system, capitalism legally positions the capitalist to leverage the rights of ownership to exploit the worker's labor. Similarly, capitalism promotes the runaway leader problem by passing down capital via inheritance rather than need or merit. Furthermore, despite all claims to neutrality, economic hierarchies in capitalism are historically intertwined with other social hierarchies, such as race and gender.

29. There are exceptions like Brenda Romero's series of games representing historical oppressions such as the Middle Passage and the Holocaust.
30. There is some debate over the revolutionary potential of the carnivalesque, both in Bakhtin and following, due to the fact that the carnival seems to subvert the established order only for the duration of the carnival. In much the same way, the ludic experience of games may subvert the prevailing order within the magic circle of the game without changing anything outside the game.

The problems of social inequality, therefore, are necessarily multiple and intersectional.

Games have historically also lacked nuance with respect to intersectional analysis.[31] If they represent categories like race and gender at all, most games do so either via problematic stereotypes or via visual and narrative means that bypass the procedural rhetoric that makes games so distinctive. I suspect that most game design avoids systemic unfairness at the level of identity politics to avoid alienating players who identify in diverse ways. At least on the surface, class—an *extrinsic* marker of social identity—seems easier to dissociate from sensitive identity politics and, thereby, more implementable in games like *Catan*.[32] However, critical play must resist the ways that games by their nature simplify and abstract what they represent. Instead, critical play draws upon but moves beyond such simplification and abstraction to respond to complex social realities. And the reality of capitalism, as discussed above, is that class is intertwined with race and gender. Indeed, an intersectional perspective on critical play may provide a way of exploring the paradoxical unity and disunity of player and role that complicates the gameplay experience. After all, despite the common association between criticism and distance, critical play is still an *experience*—an embodied calling into question of certain social systems.

31. Unfortunately, Caillois also lacks nuance in this respect. When he writes, for example, that "The intrusions of physical and social advantages of heredity (honors, wealth, beauty, or refinement) upon triumphs of the will, patience, competence, and work (the prerogatives of merit) are complex and innumerable" (p. 113), he paints a picture of inequality based on the chance of birth that ignores the systemic ways race and gender influence economic conditions.
32. For similar reasons, John Scalzi excludes wealth and class from his metaphor of privilege as a 'difficulty level' in his controversial blog post Straight White Male: The Lowest Difficulty Setting There Is.

The Experience of Flow in Hobby Board Games

MARCO ARNAUDO

Much has been written about the role of the state of *flow* in the experience of playing video games and exploring electronic hypertexts.[1] Flow, first defined by Mihaly Csikszentmihalyi as a deeply pleasurable state of heightened focus on a challenging activity,

1. See Katherine Isbister.*How Games Move Us: Emotion by Design*. Cambridge, MA: MIT Press, 2016, pp. 4-9; Katie Salen and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT Press, 2003, pp. 336-339; Raph Koster. *A Theory of Fun for Game Design.* Sebastopol, CA: O'Reilly Press, 2013, pp. 98-100; Douglas J. Yellowlees and Andrew Hargadon. "The Pleasures of Immersion and Interaction: Schemas, Scripts, and The Fifth Business." *First Person: New Media as Story, Performance, and Games.* Noah Wardrip-Fruin and Pat Harrigan. Cambridge, MA: MIT Press, 2004, pp. 192-206, here pp. 202-204; Michael Nitsche. *Video Game Spaces: Image, Play, and Structure in 3D Worlds*. Cambridge, MA: MIT Press, 2008, pp. 204-205; Brian Upton. *The Aesthetic of Play.* Cambridge, MA: MIT Press, 2015, pp. 97-100; More generally, see: Alasdair G. Thin. "Flow experience and mood states while playing body movement-controlled video games." *Games and Culture* 6. (September 2011), pp. 414-428; David Ciccoricco. "Narrative, cognition, and the flow of *Mirror's Edge*." *Games and Culture* 7 (July 2012), pp. 263-280; Sean Baron. "Cognitive Flow: The Psychology of Great Game Design." (2012); Jenova Chen. *Flow in Games*. MFA Thesis.

seems to perfectly capture the almost hypnotic sense of immersion that high quality video games can arouse in their players.

And while flow certainly is not the key to interpreting all types of gratification that can be derived from video games, it still offers a credible description of at least part of the video gaming experience,[2] justifying the large application of the concept in game studies of the last two decades. Yet the time has come for an extension of the study of flow states to the world of analog board games, and of hobby board games in particular.

We certainly live in an age of Renaissance for the modern board game community and industry. Although these are thriving, game studies as a field has not nearly caught up yet, with critical essays specifically devoted to analog games still few and far between.[3] Video games certainly still lead the world of gaming at large and will continue to do so. They do not, however, monolithically dominate game practices and culture as they did in the 1990s and early 2000s. This new state of things makes it desirable to integrate video game studies with a serious consideration of analog gaming,

2. Jesper Juul. *Half-Real: Video Games between Real Rules and Fictional Worlds.* Cambridge, MA: MIT Press, 2005, pg. 113.
3. I am not talking here about manuals of game design, which routinely cover both mechanics of analog and digital games. What I am describing is the dearth of applied scholarly reflections on the unique characteristics of modern tabletop gaming. Notable exceptions are texts devoted to board games only like Drew Davidson and Greg Costikyan, eds. *Tabletop: Analog Game Design.* Pittsburgh, PA: ETC Press, 2011; Mike Selinker, ed. *Kobold Guide to Board Game Design.* Boulder, CO: Kobold Press, 2011; Stewart Woods. *Eurogames.* Jefferson, NC: McFarland, 2012; and Paul Booth. *Game Play: Paratextuality in Contemporary Board Games.* New York: Bloomsbury, 2015. Considerable attention to analog gaming can also be found in Mary Flanagan. *Critical Play: Radical Game Design.* Cambridge, MA: MIT Press, 2009; Miguel Sicart. *Play Matters.* Cambridge, MA: MIT Press, 2014; Greg Costikyan. *Uncertainty in Games.* Cambridge, MA: MIT Press, 2013; John Sharp. *Works of Game: On the Aesthetics of Games and Art.* Cambridge, MA: MIT Press, 2015.

in an attempt to better describe the varied and multifaceted cultural landscape of gaming of the present.

Studying the presence of flow in hobby board games enriches our understanding of recent game practices and helps us explain the expansion of the hobby by giving us a more detailed picture of board games becoming of ever higher quality. Board games are indeed increasing in quality, partially because modern hobby board games more and more often succeed at stimulating flow states of optimal experience in their players.

Flow in Chess

That board games create flow should come as no surprise. Among activities that Csikszentmihalyi mentioned as particularly prone to inducing flow states, board games figure often and prominently, usually through the privileged example of chess. Playing games is somehow ranked higher than other activities such as rock climbing or motorbike riding. For Csikszentmihalyi, "games are obvious flow activities, and play is the flow activity *par excellence*."[4] Games become not just one case among many, but an *ideal* model for flow activities. The intrinsic component of "fun" in games also gives them a privileged place among flow-inducing activities, because "the key element of an optimal experience is that it is an end in itself,"[5] and games are often played solely for the pleasure of playing.[6] Obviously

4. Mihaly Csikszentmihalyi. *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play*. Hoboken, NJ: Jossey-Bass, 2000, pp. 36-37
5. Mihaly Csikszentmihalyi. *Flow: The Psychology of Optimal Experience*. New York: Harper, 2008, p. 67.
6. For this reason, Csikszentmihalyi mentions games to explain the difference between his crucial concepts of autotelic and exotelic motivation. Mihaly Csikszentmihalyi. *Finding Flow: The Psychology of Engagement with Everyday Life*. New York: Basic Books, 1998, p. 117.

not all games have the same potential to generate flow in the consciousness of the players. In Csikszentmihalyi's opinion, chess is a game that works well for this purpose, mainly due to a long tradition that has honed each element of the design through innumerable confrontations over the centuries. Countless players of chess have all contributed to make the game a flow-machine of superb terseness, to the point that the design can now be used to understand *all* flow activities:

> The example of chess is instructive because it begins to show the potential for structuring flow into other activities. Chess itself has evolved over a period of well over a thousand years. During this time, it has been given a form which provides a variety of challenges, and hence of enjoyment.[7]

Consequently, "the structure of chess is well-adapted to induce the flow experience. The rules, equipment, and organization of the game provide a clear-cut separation between 'normal life' and the activity,"[8] and "although the *content* of chess experiences is unique to that game, the *modality* of experience is shared with other intrinsically rewarding experiences."[9] My study expands the flow model of chess to include modern hobby games.

My own experience as a committed hobby board gamer inspired such an investigation. As soon as I became familiar with Csikszentmihalyi's concept of flow, I recognized how it perfectly captured a state I had experienced countless times. Looking for independent confirmation, I started a discussion thread on the topic in a forum of the website BoardGameGeek (BGG), where I linked an article containing a brief

7. Csikszentmihalyi, *Beyond Boredom,* p. 57
8. Csikszentmihalyi, *Beyond Boredom*, p. 65.
9. Csikszentmihalyi, *Beyond Boredom*, p. 72.

overview of the concept of flow and asked if other players of modern board games had ever experienced it. Respondents confirmed that the experience of flow does indeed occur among hobby board gamers, and that it can be of great intensity. BGG user Candace Mercer (candio) has even reported having used board games consistently to achieve flow as a form of self-medication for chronic pain:

> I have severe chronic fibromyalgia pain and games can definitely take me away from my pain state. This also involves gateway theory of pain control, where you substitute a "larger" more "important" stimulus than the pain signal … I can be in huge pain before and after a game, but if it is a good, engrossing game w[ith] little downtime, my pain will lose its dominance.[10]

Hobby Board Games / Hobby Board Gamers

To understand why there may be a special predisposition to flow in modern hobby board gaming, we should clarify what a *hobby board game* and a *hobby board gamer* are. With the expression "hobby board gamer," I describe a person who considers playing board games as a hobby of major importance in their life. This is someone who actively pursues opportunities to play games, organizes and/or attends events specifically devoted to board games, has one or more regular groups of equally committed friends to play games with, stays informed about the developments in the industry, and has the feeling of belonging to a community of peers. The hobby board gamer visits BGG at least once every couple of days; knows the creative philosophies of board game publishers and designers; reads, watches, or listens to reviews of board games with some regularity; travels to board game conventions or –– equally important –– regrets not being able to.

10. https://boardgamegeek.com/article/22195504#22195504

A general profile of the hobby gamer is key to defining what "hobby games" are. Rarely would a hobby gamer of the kind described above commit much time, energy, or money to commercial games like *Jenga* (1983), *Operation* (1965), or *Clue* (1950). In contrast, I define hobby board games pragmatically as *the type of game that hobby board gamers mainly play and enjoy*. This community-defined standard is confirmed by user rankings on BGG, itself a community for hobby board gamers rather than traditional or casual board gamers. Games that receive the highest rankings from the regular users of the site include *Pandemic: Legacy* (2015), *Twilight Struggle* (2005), *Terra Mystica* (2012), *Caverna* (2013), *Through the Ages* (2006), *Agricola* (2007), *Puerto Rico* (2002), *Mage Knight Board Game* (2011), *Android: Netrunner* (2012), *Star Wars: Imperial Assault* (2014), *The Castles of Burgundy* (2011), *War of the Ring* (2004), and *Eclipse* (2011) – none of which are casual or party games that non-hobby board gamers tend to play. A visit to the board game shelves of any large retail store would confirm how little overlap exists between games such as the ones mentioned above –– mainly enjoyed by hobby board gamers –– and casual board games for the mass market. The overlap is also minimal between games for hobby gamers and traditional games. A game as widely played as poker is only ranked 749th on BGG as of this writing, and even chess, possibly the most famous game of all time, ranks merely 361st.[11] These rankings show that taste and practices among hobby board gamers differ considerably from those of the general population. In this sense, we can confirm that hobby board games define hobby board gamers, and vice versa.

11. These rankings are constantly updated based on the input provided by the users of the site. By the time you read this essay, poker and chess will almost certainly have shifted to somewhere else in the rankings, but not, I believe, to the point of contradicting my general point.

But why study these games and gamers and not others? The reason is two-fold. First, it is of interest to take a look at the recent and unexplored environment of hobby board gaming to see if it has retained the potential for flow that chess –– the only game consistently mentioned by Csikszentmihalyi –– clearly has. Second, it is precisely in the deep connection between hobby board games and hobby board gamers that we can find the maximum potential for experiences of flow in modern analog gaming.

Hobby board gamers are, in a sense, a self-selected group that immerses itself in self-selected activities. As a group, they already tend to have the kind of psychological traits that we find in people who experience flow easily. To reach flow, a person must be willing to engage in an activity where one's "body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile." [12] Playing any sort of game against evenly matched opponents gravitates toward such a situation; the thrill of testing one's ability in a competitive contest is at the core of many games. Most hobby board gamers, however, also show a further preference for challenges through their tendency to constantly play new games. Hobby board gamers switch the games they play more often than casual players do – a tendency which the community nicknames "the cult of the new." They enjoy the challenge that comes from absorbing often complex new sets of rules that require time and energy to memorize, let alone to implement effectively. This factor alone means that the 'stretching' of one's mind in the play of a new hobby game is more likely to occur.

But it is not just a matter of hobby board gamers being the kind of person who is more likely to experience flow states. Hobby board

12. Csikszentmihalyi, *Flow*, p. 3

games themselves play a role, too. Modern hobby board games are often much more complex than casual games, and in this they present motivated players with opportunities to invest all of their attention in the game. As a BGG user wrote (Thi Nguyen – rorschah):

> The problems have to be *hard* … The games that induce flow-state in me are ones in which the decision tree is vast, beyond parsing simply. *Go* does it most of all … Recently, in boardgames, it's been this hyper-interactive, hyper-fluctuating, hard-to-parse games of markets and investments: *Food Chain Magnate*, *Imperial*, *Chicago Express*, *Greed Incorporated*, *Clippers*, *Brass*. It takes everything my mind has and more, and I lose myself in it.[13]

Hobby board games often come with sets of optional rules that increase the complexity of the design for experienced players desiring more variables or sophisticated decision trees. Hobby games that can be played in specific scenarios –– rather than according to a single, fixed script –– also can be easily adjusted in this sense, especially when the level of difficulty is explicitly given in the set-up instructions for the scenario. This way, the players can increase the challenge at the same rate of their growing mastery of the strategies of the game, preserving the gratifying correspondence between player skills and demands of the activity, which is a key element in the achievement of flow states.

Another factor that may lead to flow is that hobby board games can be accurately tailored to the taste of their very specific audience. Contemporary media allow the community to vocally participate in the shaping of their hobby board games both before and after they are published, making it more likely that the products will closely respond to the tastes of the intended audience. Csikszentmihalyi

13. https://boardgamegeek.com/article/22452255#22452255

explained that, over centuries of refinement, chess "has been given a form which provides a variety of challenges, and hence of enjoyment" to its players. That kind of polishing nowadays takes only years, or even months or weeks thanks to the immediate information exchange made possible by the Internet.

If a hobby board game comes out today and some of its mechanics appear to be weak, in a matter of weeks players notice, exchange ideas online, propose hypotheses, test alternative solutions, and, if the design can be salvaged, share effective 'fixes' online. In very little time, a flawed design can be 'debugged' by the community, and the new variants may even receive official endorsement from the publisher and designer.

In other cases, players create variants for games that are perfectly good in themselves. Players commonly share variants to increase or decrease the difficulty of cooperative games, to increase or reduce the complexity and realism of a design, to make it more appealing to a certain age group, and so on. Early drafts of a game can be shared online for playtesting, and producers may receive massive feedback prior to the publication, allowing the game to come out in a solid form from its very first printing.

For all these reasons, hobby board games closely reflect the desires of hobby board gamers. And if they enjoy the type of challenge that tends to trigger flow states, then hobby board games shaped by their intended audience rapidly become well-honed 'flow machines,' in a madly accelerated version of the process of refinement chess underwent over the centuries.

Flow and Hobby Board Games

How do hobby board games contribute to creating flow states? In answering this, we will also note the challenges hobby board gamers may encounter that would prevent them from experiencing optimal engagement with a design.

A good way to structure such analysis is to start from one of Csikszentmihalyi's most detailed descriptions of the various elements that contribute to an experience of flow, and to see how they relate to important features of contemporary hobby board gaming culture. In the quotation below, I emphasize these key elements , to use them as pointers in the following discussion.

> First, the experience usually occurs when we confront tasks ***we have a chance of completing***. Second, we must be ***able to concentrate*** on what we are doing. Third and fourth, the concentration is usually possible because the task undertaken has ***clear goals*** and provides ***immediate feedback***. Fifth, one acts with a ***deep but effortless involvement*** that removes from awareness the worries and frustrations of everyday life. Sixth, enjoyable experiences allow people to exercise ***a sense of control*** over their actions. Seven, ***concern for the self disappears***, yet paradoxically the sense of self emerges stronger after the flow experience is over. Finally, the ***sense of duration of time is altered***; hours pass by in minutes, and minutes can stretch out to seem like hours.[14]

This is certainly not a list of absolute requirements, but a description of frequently occurring factors that appear to be at play during activities that generate flow. An activity does not need to have all of these characteristics, but activities that do have all or most of them are more likely to generate flow states in people who seriously commit to them.[15]

14. Csikszentmihalyi, *Flow,* p. 49
15. Salen and Zimmerman, pp. 337-338.

A chance of completing: When applied to hobby board gaming, this refers to designs not too complex for a certain group of players to play. By definition, a game must be playable by *someone* for it to be a game at all, so the idea of excessive complexity is always a relative concept depending on the group. Board games do exist, however, of such complexity that all but the most committed players would be discouraged from even learning all the rules and playing a full game, let alone attempting to master the design in any significant way. *Advanced Squad Leader* (1985), *Star Fleet Battles* (1979), *A World at War* (2003), and *The Campaign for North Africa* (1979) are notorious designs of this kind, with extremely detailed rulebooks of over 100 pages. Yet several of these games have communities of highly dedicated players who even prefer them over other games. For those who have the patience and inclination, these supremely complicated games can represent a mental challenge like no other.

To be fully engaged with a design we must, of course, also have a chance of victory. Winning may not be the most important factor, but to fully experience a design we must structure our moves to progress toward an achievable victory. We must play to win or *as if* a realistic desire to win were the main motivation. If we are learning a new game and playing against a master, either we have no chance of winning, or the teacher may give us such advantages that victory, even when achieved, will lead to small satisfaction.

Able to concentrate: In flow activities,

> no excess psychic energy is left over to process any information beyond what the activity offers. All attention is concentrated on the relevant stimuli … This growth of the self occurs only if the interaction is an

> enjoyable one, that is, if it offers nontrivial opportunities for action and requires a constant perfection of skills.[16]

In everyday life, many distractions and concerns entering our consciousness prevent a state of flow. To experience flow, often we must willingly abandon our usual frame of mind and devote ourselves to an artificially constructed activity: one specifically designed to transport us away from the drudgery of our daily routines. Hobby games are a perfect example of such 'cognitive teleporters,' and hobby gamers are enthusiastic travelers who enjoy beaming their consciousness to entirely different worlds, where they can concentrate all of their psychic energy on the task at hand:

> Enjoyment often occurs in games, sports, and other leisure activities that are distinct from ordinary life, where any number of bad things may happen. If a person loses a chess game or botches his hobby he need not worry; in 'real' life, however, a person who mishandles a business deal may get fired, lose the mortgage on the house, and end up on public assistance.[17]

The idea of games as separated from regular life is well-known and goes back to Huizinga's discussion of the gaming experience as a magic circle. Jesper Juul describes the self-contained nature of games by explaining that the rules of a game "add meaning and enable actions by setting up differences between potential moves and events … [They] set up potential actions, actions that are meaningful inside the game."[18] High quality hobby game designs both encourage and facilitate the transition from our usual state of disperse consciousness into the heightened focus of rewarding gameplay. *Puerto Rico* (2002),

16. Csikszentmihalyi, *Flow*, p. 53, 65
17. Csikszentmihalyi, Flow, p. 59
18. Juul, p. 19.

Race for the Galaxy (2007), *Agricola* (2007), and *Dominant Species* (2010) are just some of the countless hobby games whose interwoven mechanics draw the committed player into a separate, engrossing experience.

To enter the magic circle projected by hobby board games, one embraces the inner logic of the proportions, interconnections, and rhythms within the design, which requires concentration. To fully concentrate on gameplay, hobby gamers set up specifically designated events where play supersedes other forms of social interaction. Game nights are arranged in advance and eagerly anticipated. Areas of the house are temporarily devoted to the game session. Those with sufficient resources may have a permanent game room in their house. Preparations are made to reduce distractions and focus the gathering on gameplay.

Serious players also travel to faraway board game conventions not only to try new games and meet people in the industry, but to be able to concentrate on gameplay in a physically and psychologically distant position from their daily routines. The BGG user philreh gave a very insightful description of this phenomenon in the above-mentioned discussion thread about flow:

> I ran into something similar to this [flow] when playing *World in Flames* (1985) at a convention setting. You really don't have anything else to do for days on end, and you begin to understand yourself as the leader of the country. You focus so much on the board and pieces that you know where they are, even when there are hundreds of them to keep track of. And you completely lose yourself for those couple (well, eight, really) days.

Highly thematic board games establish a sense of deep immersion

in a parallel reality, in turn increasing the sense of psychological separation from ordinary life and encouraging concentration on the requirements of gameplay.

We most certainly owe the discovery of *theme* in board games to wargaming: a designer selects a military topic and then translates its significant elements into rules and procedures that will be then combined into a playable model. Serious players rarely focus on the elegance of a wargame engine *per se*, but appreciate games whose inner workings mirror the theme in an organic and realistic way. The idea that games could depict detailed and consistent worlds in time inspired wargamers Dave Arneson and Gary Gygax to adapt wargame conventions into a narrative system for adventure and exploration, creating in turn *Dungeons and Dragons* (1974) and kickstarting the entire genre of role-playing games (RPGs). Then designers of board games took notice of the narrative potential of gaming revealed by RPGs and brought ideas of immersion, identification and narrativity back to board games. This resulted in a tradition of board games with strong themes, a fictional setting filled with detail, and a sense of story that emerges from gameplay. Examples of heavily thematic games stemming from the immersive tradition of *D&D* include *White Bear & Red Moon* (1975 – later re-implemented in *Dragon Pass*), *Sorcerer's Cave* (1978), *Magic Realm* (1979), *Dragonhunt* (1982), *DungeonQuest* (1985), *HeroQuest* (1989), *Dark World* (1992), *Dragon Strike* (1993), *Descent* (2005), *Castle Ravenloft* (2010), *Lord of the Rings the Card Game* (2011), *Shadows of Brimstone* (2014), *Temple of Elemental Evil* (2015), among many others. Games like these provide a virtual experience akin to that of RPGs, but entirely constructed through the affordances of board gaming. As a result, games of this kind can create a psychological

sense of separation from conventional reality, and encourage the type of strong commitment to a task that is typical of flow-inducing activities.

On the other hand, some aspects of hobby board games may dampen their ability to create flow states. One such factor is social interaction. The more people are involved in an experience, the greater the likelihood of the event being disturbed by players with differing play philosophies or who are socially disruptive.

For a hobby board game to be an effective flow machine, the social interaction must be mediated by clear and straightforward game mechanics, with little or no possibilities for the players to make deals, bluff, or deceive each other. The ambiguity and blurriness of conventional human interaction must be replaced by a reliable system of clear-cut options. Understanding what the opponents may be trying to do still matters, but only insofar as that can be interpreted in terms of quantifiable positional advantages within the game system. This does not deprive the other players of their humanity, but simply ensures that all participants focus on the analysis of a specific set of abilities in their opponents and of the formalized ways in which those abilities will be expressed in a discrete range of game options.

Another factor that may prevent flow is downtime. Having to wait for too long before one can perform their next action in the game leads the mind of the player to wander, and pulls one out of the mental connection with the challenges of the game. Downtime may occur at the level of the design, with games that take a long time between turns even when played optimally, and that do not give anything to do to the non-active players between turns.

Downtime of this kind can be prevented by selecting games that

proceed at a good pace, with short turns and a small range of options. Games with longer turns may also give the non-active players reasons to be engaged while the active player is taking their turn. In *Tower of Babel* (2005), for example, every time the active player intends to acquire a new resource, the resource must be preliminarily offered for auction to all players. In *Runebound* (2005), when the active player's hero must fight an enemy, one of the opponents takes control of the enemy and makes decisions for that character, becoming another active player for all intents and purposes. Downtime in games of this type is therefore limited, because the design assigns tasks to the players outside of their main turn, allowing them to remain constantly involved.

Even games in which one does not actively do anything during the other players' turn can still allow participants to preserve a state of concentration as long as the game provides interesting information to process. A typical example would be a wargame where a player's turn may be divided in a movement phase for all units controlled by a player, followed by a combat phase involving units of the two sides that are adjacent to each other after this player has completed their movement. As the opponent moves one piece after the other, one may see a side of the enemy line retreating, or another one advancing; one may see units concentrating around a certain location, possibly planning an attack; one may see a group of enemies dashing to cut supply lines, and so on. Every time the opponent performs an action, the non-active player is given a non-trivial new bit of information that must be factored into their ever developing strategy. As a result, the players can remain focused on the design thanks to the constant stream of material to analyze that the opponent's actions generate.

There are also games in which downtime is virtually eliminated by the fact that all players perform many of the in-game actions at the same time, like 7 *Wonders* (2010), *Karuba* (2015), *Stellar Conflict* (2015), or *Piratoons* (2015). Solitaire games, finally, have no downtime, because the single player is the only human agent in the design and is therefore involved in all operations of the game at all times.

In sum, downtime can definitely prevent players from experiencing states of cognitive flow, but design remedies are abundant and easily accessible.

Clear goals:

> Flow tends to occur when a person faces a clear set of goals that require appropriate responses. It is easy to enter flow in games such as chess, tennis, or poker, because they have goals and rules for action that make it possible for the player to act without questioning what should be done, and how. For the duration of the game the player lives in a self-contained universe where everything is black and white. [19]

Clear goals are certainly a key element of most games in general and all board games. In the sense of the victory conditions that the players strive to meet, clear goals are in fact part of most definitions of games elaborated by scholars interested in the topic. Salen and Zimmerman, for example, define a game as "an activity among two or more independent decision-makers seeking to *achieve their objectives* in some limiting context."[20]

19. Csikszentmihalyi, *Finding Flow,* p. 28
20. Salen & Zimmerman, p. 6, emphasis mine. This is an elaboration of a similar definition that was proposed in Clark C. Abt. *Serious Games*. New York: Viking Press, 1970. See Salen and Zimmerman also for a useful examination of the most influential definitions of games in the 20th century, pp. 71-82.

The long-term goal of achieving victory is of course not the only one in a game, and it always works in conjunction with multiple smaller goals throughout a game session. Each turn, the players give themselves the goal of moving as close as possible to victory within the affordances allowed by the design in that specific segment of the session. Optimizing one's resources, completing intermediate steps toward victory, denying opportunities to others, preventing disadvantages that the opponents may be planning to inflict, are all minor goals that constantly emerge during gameplay and keep the players focused by giving motivation for one's psychological involvement with the game.

Immediate feedback: "Another characteristic of flow activities is that they provide immediate feedback. They make it clear how well you are doing. After each move of a game you can tell whether you have improved your position or not." [21] Immediate feedback seems to be, indeed, one of the characteristics of games, as Clark Abt also pointed out: "Game-playing provides an immediate reward to the individual who makes a correct decision."[22] Yet not all games –– especially not all hobby board games –– generate feedback in the same manner or amount.

In many cases, a player obtains immediate and direct feedback, like when the player makes a move that impacts the game, and the game system actively produces a response: by rolling dice, for example. In this case, numbers rolled both alter the state of the game and at the same time inform the player of the result and consequences of the move. With this kind of feedback, the game constantly provides the

21. Csikszentmihalyi, *Finding Flow*, p. 29.
22. Abt, p. 66.

players' consciousness with new material to process, helping one to stay engaged with the game.

What may not be immediately apparent is that a game can produce flow-inducing effects even in cases in which it does not accurately inform the player. Let's say that in a Napoleonic wargame my cavalry is charging an enemy infantry unit; I roll the dice and the result informs me that the enemy infantry piece has been obliterated. This is immediate feedback, and it also appears to tell me that my position in the game has improved. However, maybe the rules of the game now force my charging cavalry to keep moving because of the momentum of the charge, and as a result the enemy may later surround and destroy that now isolated unit, or exploit the gap caused by the advancing unit and trigger a devastating breakthrough. The feedback the player received when the enemy infantry was eliminated may turn out to be, in the aggregate, completely misleading – a short-term victory leading to a massive defeat.

The situation is even more nebulous in games with asymmetrical and secret victory conditions, such as *Ticket to Ride* (2004). Each move in these games still informs you of how well you are doing in comparison to where you were just before taking an action – as in "now I have more gold coins than I had a moment ago." With secret victory conditions, it is however hard to determine if a certain amount of progress is sufficient to truly alter one's position in the game at all. And yet, even in this type of situation, players will still study other players' moves and behavior, make hypotheses about what their goals may be, and attempt to gauge in some form what everyone's present standing in the contest may be.

Acknowledging the slippery nature of feedback in games does not

contradict the idea that games give feedback keeping participants engaged. In practice, hobby board gamers are quite proficient at handling reliable immediate feedback ("my attack succeeded" / "my move gave me gold coins") while also dealing with the uncertainties surrounding the long-term impact of each bit of feedback ("will this action *truly* help me win?"). The ambiguities of feedback in board games do not detract from gameplay, but simply encourage players to formulate hypotheses and create alternate mental scenarios in response to possible future developments. In so doing, feedback establishes an intriguing balance between certainty and uncertainty,[23] giving us enough of the former that we want to commit to the task of identifying desirable moves, and also enough of the latter to keep our attention sharply focused and to preserve a pleasurable sense of suspense.

Deep but effortless involvement: That depth is a vital element of modern hobby board games should be clear by now. Most such games tend to be more challenging to learn and play than casual or mass-market games, and are appreciated by their fans when the increased level of complexity represents a means to allow nuanced, multilayered, and in a word deep gameplay. In turn, hobby board gamers are likely more willing to invest time and energy to learn a deep design than casual gamers would be, and since they do so on a regular basis, they end up developing conceptual tools and mental stamina that makes it easier to embrace new games. The almost symbiotic relationship between hobby board gamers and hobby board games affords the possibility for flow-inducing deep and effortless involvement. Hobby board gamers are the best-trained people to actuate complex procedures effortlessly and experience

23. On the importance of uncertainty in games, see Costikyan.

them as an organic and seamless stream of gameplay. Hobby board games, in turn, provide their players with the most perfect training tools to hone their gaming skills, as well as with the rewards for the acquisition of such skills.

A sense of control: "The flow experience is typically described as involving a sense of control – or, more precisely, as lacking the sense of worry about losing control that is typical in many situations of normal life."[24] This point builds on the previous one. As hobby board gamers learn not only to implement the rules of new games but also to develop effective strategies in them, a growing sense of control sets in. The players may not be in absolute control of the overall experience due to random events, secret information, and other players' actions, but they still have a clear sense of what they can and cannot do in any given situation. They can usually control, if nothing else, their own reaction to new inputs in the form of the moves they select.

After all, to be a game, an activity ought to allow players to make some significant choices, no matter how vast the amount of luck that surrounds those decisions. Randomness in this sense does not prevent the emergence of some sense of control, but simply offers a specific type of challenge in the form of risk management.[25] Csikszentmihalyi himself writes that a gambler may have no great objective influence on the outcome of a game, and yet a state of flow may still be reached when the gambler *believes* she is in control. This is possible because flow is in the consciousness and not in the outward activity, which

24. Csikszentmihalyi, *Beyond Boredom*, p. 59
25. Peter L. Bernstein. *Against the Gods: The Remarkable History of Risk*. Danvers, MA: John Wiley & Sons, 1998.

means that in any conflict between perception and fact, perception tends to prevail.[26]

The sense of control gamblers experience in casinos is even more prominent in the case of hobby board gamers playing hobby board games, mainly because such players usually *do* have a considerable saying in the direction they imprint on a game through their moves. Many modern hobby games involve little to no luck, which maximizes the sense of control in the players. Even in the presence of considerable random factors, good hobby games usually allow their players to make relevant decisions concerning the amount of risk they take. A textbook example comes from push-your-luck games like *Ra* (1999), *Incan Gold* (2005), or *Dice Heist* (2016), where the players may choose to settle for an immediate small reward or try to go for a larger reward at the risk of not getting anything at all. In games of this type, players make conscious decisions about the exact amount of control they choose to relinquish to luck. As long as a player can elect when and to what degree not to be in control, even the most unexpected results will be the natural consequence of perfectly controlled actions. Randomness can therefore peacefully coexist with control without endangering the players' psychological connection with the design.

Concern for the self disappears:

> Perhaps the clearest sign of flow is the merging of action and awareness. A person in flow has no dualistic perspective: he is aware of his actions but not of the awareness itself. A tennis player pays undivided attention to the ball and the opponent, a chess master focuses on the strategy of the game.[27]

26. Csikszentmihalyi, *Beyond Boredom,* p. 61.
27. Csikszentmihalyi, *Beyond Boredom*, p. 38.

> The absence of the self from consciousness does not mean that a person in flow has given up the control of his psychic energy … but in fact the optimal experience involves a very active role of the self … A person who pays attention to an interaction instead of worrying about the self obtains a paradoxical result. She no longer feels like a separate individual, yet her self becomes stronger … Because of this union of the person and the system, the self emerges at a higher level of complexity.[28]

Once again, Csikszentmihalyi finds that a board game provides a perfect example for this idea: "A chess player could not enjoy the game if he were unable to retrieve from his memory, at will, previous positions, past combinations."[29] The same can be said for hobby board gamers, who have a well-developed familiarity with the norms and conventions of modern hobby board gaming, and connect their planning of future actions with their knowledge of the rules of the game and of generally effective strategies. When the players' consciousness is absorbed in the analysis of all of these factors during gameplay, little psychic energy is left available for other endeavors. In that sense, our perception of the self recedes temporarily to the background. We are still completely ourselves ––which is why others can take our play style into account in their strategy, and we theirs–– but we do not linger on particulars and inessentials, and we commit at a very deep level to the task of analyzing new developments and constructing possible scenarios.

Sense of duration of time is altered: When playing an engaging hobby board game, experiencing a distortion in one's time perception is common. Several BGG users have left comments about this aspect of their game experience in the discussion thread I referenced above. John Wilder (desmothenes) wrote:

28. Csikszentmihalyi, *Flow,* p. 64, 212
29. Csikszentmihalyi, *Flow*, p. 64

> When playing a game of *Eldritch Horror*, when playing with other experience[d] gamers familiar with the rules, the game was going so smoothly and the story was engaging, so we really got into it. It was hard to believe when we looked at the clock that 4 hours had passed (the game took another 2).[30]

Another user (Marius van den Merwe – Sciurus) reported: "When it comes to board gaming I sometimes lose track of time and achieve a state of enhanced focus, but only while playing a complex game solitaire (e.g. *Navajo Wars* or *Fire in the Lake*)."[31] Another user (Jeff – Maximuss) wrote: "When I first bought *Pandemic* … my brother and I played the game again and again. Probably 10 times in about 12 hours, and that was with a sleep period in there too …We couldn't get enough, and the time just disappeared."[32] For user Marie Anne (Mafster) the time distortion produced by hobby board games acted even at the biological level, temporarily dampening her addiction to smoking:

> Just yesterday I experienced this "flow" in a two player game of *Le Havre*, my fifth play of the game. I was so completely immersed in the game and so extremely focussed, [sic] that I forgot that the demon nicotine runs my life. The game ran for what may have been close to two hours (though it's difficult to say, given that there was a definite distortion of time) and though nicotine usually demands my attention every 45 minutes at the very least, I actually forgot to take a smoke break.[33]

Concluding Words

30. https://boardgamegeek.com/article/22194744#22194744
31. https://boardgamegeek.com/article/22194792#22194792
32. https://boardgamegeek.com/article/22194242#22194242
33. https://boardgamegeek.com/article/22199455#22199455

To avoid any misunderstanding, we can certainly acknowledge that not all pleasure that can be derived from hobby board games has to come from flow, just like flow is not all that video games have to offer.[34] Hobby board game participants may experience the joy of socialization, the game being little more than an alibi for people to get together to enjoy each other's company. There may be a visual and tactile pleasure coming from attractive game components. In historical wargames, we may have the joy of learning about the past and testing historical hypotheses. Board games can be used in enjoyable and yet useful forms in teaching and business environments. Incidentally, none of these reasons for interest in board games excludes flow necessarily; rather, aesthetically pleasing components, historical exploration, mediated social interaction, and pedagogical benefits may simply act as incentives for psychological commitment, which in turn may lead to states of flow. Still, for hobby board gamers playing games designed to provide deep and multi-faceted challenges, flow (although rarely identified as such) remains one of the reasons for attraction toward this kind of game experience. When the environmental conditions are right, the design is complex without being overcomplicated, and the other players work with us to keep the game moving, flow can be achieved with all the gains usually associated with this mental state.

By analyzing this potential in the modern hobby board game world, my hope is not just to further our understanding of a still very young and mostly unstudied culture, but also to help more players identify the conditions that may lead them to improve their gaming experience and enrich their connection with the self.

34. Upton, pp. 99-100.

Pen and Paper

The Psychological Abuse of Curse of Strahd

SHELLY JONES

While much has been looked at in terms of video games and their psychological effect on players,[1] little has been explored about the psychological implications of tabletop RPGs.[2] There have been few examinations of how tabletop RPGs use the unique features of their medium to work with trauma. For the purposes of this study, I will be analyzing the 5th edition *Dungeons and Dragons* module "Curse of Strahd", which was released in 2016, in terms of how the game mechanics and narrative theme of the module reiterate key characteristics of psychological abuse, which the players are able to

1. Consider the ongoing debate about violent video games inciting violence as first noted by Anderson & Bushman in 2002. See Craig A. Anderson and Brad J. Bushman. "Effects of Violent Video Games on Aggressive Behavior, Aggressive Cognition, Aggressive Affect, Physiological Arousal, and Prosocial Behavior." *Psychological Science.* 12.5. (2001). pp. 353 -59.
2. A few studies have looked at how tabletop RPGs can be effective in a therapeutic setting, allowing patients as players to work through their own psychological problems. See the clinical work of Dr. Wayne Blackmon or Dr. Raphael Boccamazzo. Wayne Blackmon. "Dungeons and dragons: The use of a fantasy game in the psychotherapeutic treatment of a young adult." *American Journal of Psychotherapy.* 48.4. (1994). pp. 624-632 and Greg Tito. "Dr. Raffael Boccamazzo on D&D and Autism." Audio blog post. DragonTalk. Wizards of the Coast. May 5, 2016.

witness and engage with throughout the campaign. The setting, narrative elements, and unusual game mechanics combine in a rich tapestry of horror that allow the player to experience the manifestations of trauma through play.[3] While *Dungeons and Dragons* has previously been criticized for its lack of diversity and sensitivity to otherness,[4] "Curse of Strahd" works to present trauma and its effects in a meaningful way that allows players to critically engage with and reflect upon trauma. Unlike the typical hack and slash dungeon crawls from the 1980s, "Curse of Strahd" focuses on the psychological implications of physical violence. I argue that "Curse of Strahd" is a site for witnessing and performing the psychology of trauma, and specifically the psychology of abuse.

In her foundational work on trauma studies, Cathy Caruth suggests that "trauma is not locatable in the simple violent or original event in an individual's past, but rather in the very way that its unassimilated nature – the way it was precisely not known in the first instance – returns to haunt the survivor later on."[5] Trauma then is a cycle, a

3. In no way am I suggesting that playing this RPG, or any other game for that matter, is equivalent to being traumatized or abused in real life, nor do I mean to undermine or devalue the significance of that real life trauma. However, like the cooperative card game, *The Grizzled*, which allows players to explore the emotional and psychological sufferings of soldiers in a play-ful yet thought-ful homage, the "Curse of Strahd" provides a paradigm for trauma symptomatology to be explored and witnessed by the players, who then have the opportunity to choose to re-act and interact with the traumatic environment.
4. See Aaron Trammell's articles on misogyny and cultural appropriation in *D&D*, or Stenros and Sihvonen's work on the lack of LGBTQ representation in RPG source books. See Aaron Trammell. "Misogyny and the Female Body in Dungeons and Dragons." In *Analog Game Studies: Volume I*. Edited by Aaron Trammell, Evan Torner, and Emma Leigh Waldron. Pittsburgh, PA: ETC Press, 2016; Aaron Trammell. "How Dungeons & Dragons Appropriated the Orient." *Analog Game Studies* 3.1 (2016); and Jaakko Stenros and Tanja Sihvonen. "Out of Dungeons: Representations of Queer Sexuality in RPG Source Books." *Analog Game Studies* 2.5. (2015).
5. Cathy Caruth. *Unclaimed Experience: trauma, narrative, and history*. Baltimore: Johns Hopkins University Press, 1996, p.4.

repetition in which a victim not only experiences an initial stressful event, but then must re-experience it in new forms, echoes of the original event. Literary trauma studies explores ways in which the narrative can evoke this feeling of repetitive traumatic memory through innovative uses of flashback, elision, or other rhetorical devices. In her study on how video games virtually allow players to experience trauma, Tobi Smethurst focuses on the role of player agency as a key to involving the players emotionally in complicity and guilt of the traumatic experience. Her detailed reading of how the narrative elements illustrate traumatic symptomatology provides a framework for my own exploration of "Curse of Strahd", but whereas she focuses on the player's emotional unsettlement while playing, my analysis focuses on the game components themselves. Moreover, it is my contention that "Curse of Strahd" specifically posits players into experiencing a specific kind of trauma: abuse. Few would disagree that abuse, whether physical, psychological or sexual, is a kind of traumatic event, one that disturbs and distresses its victim in unspeakable ways. Indeed, "abuse is about a dynamic of extremes, domination and submission,"[6] an experience that can embed victims into a state of isolation and terror. In exploring how "Curse of Strahd" evokes elements of psychological abuse for the players to experience, it is important to establish: how the narrative elements reflect traumatic symptomatology; how the thematic underpinnings of the game further concretize the abuse that is depicted; and how the very mechanics of the game provide players with a space to experience the cycle of abuse and relive traumatic memory through repetition.

6. Michael Formica. "Understanding the Dynamics of Abusive Relationships." *Psychology Today*. July 14, 2008.

Setting the Traumatic Stage

"Curse of Strahd", the latest in a long line of revisions of the Gothic horror setting, eschews the typical sword and sorcery fantasy and instead revolves around a powerful vampire, Strahd von Zarovich. Strahd plagues the land of Barovia, a demi-plane cast away from its original universe upon the completion of his fatal pact with the Dark Powers. Through interactive roleplaying and randomization of key elements of the module, "Curse of Strahd" involves the players in not only witnessing, but experiencing trauma. The game forces players to face some subset of the many atrocities committed by or brought upon by Strahd. Players encounter the many victims of Strahd: a dead burgomaster and his adopted daughter, Ireena, who must flee Strahd's vampiric attentions; a mad abbot who creates flesh golem brides for Strahd as an attempt to appease him; dead-eyed villagers who gather in churches at night to stay safe from roving wolves, Strahd's spies; a dusk elf who stoned his own sister to save her from Strahd's unwanted advances. The unique game mechanics present within reiterate and actualize the psychological trauma that is being role-played as players face the vampire, a Bluebeard archetypal figure, who is both a physical and psychological predator. What makes the adventure particularly unique is the card reading mechanic, the Tarokka Deck, which randomizes elements of the "Curse of Strahd" module. These cards are a tactile and functional component that allow for replayability, an unusual feature for an RPG campaign. Beyond this, though, they also mimic the characters' psychology and allow the players to live and perform the psychological aspects of traumatic memory, of the abuse thematically woven into the narrative itself. The Tarokka Deck incorporates an inconsistency in the game play that reflects fragmented traumatic memory and reifies the inconsistency present within an abusive relationship.

The Tarokka deck. Image by Rudy Jahchan @Flickr CC BY-NC-ND.

As the players set foot in Barovia, having been magically transported there through one of several different "adventure hooks"[7], they can immediately sense the change in the setting around them, signaled firstly by a strange fog. Key markers of trauma are "feelings of disembeddedness, isolation"[8], a "sense of alienation and unreality"[9] that overwhelm the individual. "Curse of Strahd" imbues its players with aspects of traumatic experience through the very setting of the game; the location itself adds to the alienating quality of the adventure. Barovia is described as existing on a "demi-plane formed by Strahd's consciousness" from which "no creature can leave without Strahd's permission."[10] A deadly mist envelopes Barovia that overpowers players and forces them to move as Strahd sees fit. The fog as well as the "gray pall" and "deathly stillness"[11] of the land bespeak of the gestalt of psychological trauma. While serving to control the characters' movement, the fog is at its core disorienting, both physically and mentally. Characters who try to travel in the fog

7. Chris Perkins. *Curse of Strahd*. Renton: Wizards of the Coast, 2016, p. 18.
8. Tobi Smethurst. "Playing Dead in Videogames: Trauma in *Limbo*." *The Journal of Popular Culture.* 48.5. (2015), p. 823.
9. Kathleen Costello-Sullivan. "'My Memory Gropes in Search of Details': Memory, Narrative, and 'Founding Traumas' in John Banville's *The Sea*." *Irish University Review.* 46.2. (2016). pp. 345.
10. Perkins, p. 23.
11. Perkins, p. 23.

become lost and ultimately return unwittingly to Barovia, a thematic consequence, and gain a level of exhaustion, a ludologic consequence. If they continue to gain levels of exhaustion, ignoring their own health in order to try to escape, the players will ultimately perish in the mists.

Barovian NPCs are visually portrayed in the book in washed-out greys and purples, hues that suggest "emotional numbing."[12] They are viewed as living in a "culture of fear" in which they are ever plagued by "the Devil Strahd," who periodically preys and feeds upon them[13] Throughout the realm, there is a fierce sense of isolation as characters, both player characters and non-player characters alike, are trapped within the demi-plane, seemingly permanently. In this sense, all the characters, including Strahd himself, can be viewed as "sufferers of trauma" who "are often described as being trapped in limbo,"[14] forcibly removed from their normal existence.

Moreover, a lack of sunshine, while a key thematic plot point for the vampire's survival, also serves to reiterate the melancholic backdrop and disorient the players' innate sense of time. A significant consequence of trauma is an altering of the victim's perception of time; "ordinary linearity and unity of our experience of time" is disrupted by trauma.[15] Without sunshine as a key time-tracking element, players are forced to rely upon other means to signal the passage of time within Barovia. Further adding to that disorientation is the knowledge that the players have been abandoned from anything familiar or real. Some characters may even begin to question the very reality they live in as they witness their own

12. Smethurst, p. 822.
13. Perkins, p. 24.
14. Smethurst, p. 822.
15. Robert Stolorow. "Trauma Destroys Time." *Psychology Today*. October 21, 2015.

bodies dead before them, hanging from a gallows or sprawled out in the woods eaten at by wolves: manipulative illusions of the ever-pressing fog – a deceit of Strahd. This alienating effect, based upon the physical environment as well as the psychological manifestations, traumatizes characters, and gives players insight into the traumatic nature of Strahd.

The non-linear nature of the adventure also emphasizes the chaotic, traumatizing nature of Strahd and the land of Barovia. Like most sandbox modules, player characters may wander into areas they are ill-prepared for and risk death. Characters may feel overwhelmed by the open world before them in which they must make a clear path for themselves through trial and error exploring, traveling that may lead players to their early and unfortunate demise. Indeed, as noted on many RPG forums, "Curse of Strahd" is viewed as a particularly deadly module, but here death reflects the paradigm of trauma symptomatology. The ludology of death and resurrection is altered in "Curse of Strahd" as a means of reiterating the traumatic quality of the Gothic setting for the player characters.[16] If a player character dies, her soul is trapped within the mist; souls cannot pass on to an afterlife if it dies in Barovia. Even death then cannot allow characters to escape the oppressive realm. Should a player character die and be resurrected after being dead at least a day, the character "gains a random form of indefinite madness brought on by the realization that

16. That is to say, the game mechanic of how a player character might be resurrected is different in "Curse of Strahd" than it is from the ordinary game rules as set out in the core rules. If a player character drops to 0 hit points, she must succeed on three death saving throws or else permanently die. There are resurrection and revivify spells available that may save a PC from such a fate. In the core rule set, these spells do not have negative consequences to the resurrected character. "Curse of Strahd" alters this as a way to reiterate the consequences of experiencing trauma.

its spirit is trapped in Barovia."[17][18]The indefinite madness table and the realization that player characters' souls are trapped reiterate the "randomness and meaninglessness of [...] death," another symptom of trauma,[19] particularly as this madness attribute is determined randomly by the roll of a d100. The madness thematically reiterates the horror narrative, but also forces the player to adhere ludologically to a restricting condition, one that, upon each iteration of the role play of the attribute, causes the player to relive and re-experience her traumatic event. The character's death then is marked on the mind, and the character sheet, of the player.

Like many, if not all, RPG modules, "Curse of Strahd" incorporates tables in order to help a Dungeon Master easily create random encounters for the players. For "Curse of Strahd", however, these random encounters are not utilized in order for PCs to have opportunities for gaining experience points by verbing X nouns (e.g. killing twenty zombies; finding three gems). Unlike many modules, this particular one recommends leveling up based on milestone leveling rather than gaining experience points for defeating enemies. Instead, these random encounters function mainly to keep the anxiety level of player characters high. Player characters are encouraged to be hyper-vigilant to any potential dangers in the realm as a way to keep the players immersed in the Gothic nature of the narrative. As media scholar Maral Tajerian points out, "games that raise the player's anxiety actually sensitize them to danger" (her emphasis). The random encounters of "Curse of Strahd" then "sensitize" players to danger and "creates an environment in which some of the

17. Perkins, p. 24.
18. Some madness attributes might include: hallucinations, hypersensitivity to danger, mental impairment ala drunkenness, etc.
19. Smethurst, p. 823.

symptoms of trauma, such as hypervigilance and oversensitivity to certain stimuli associated with the traumatic event, can be virtually experienced."[20] The mechanics of the adventure reinforce and reflect the experience of trauma for the players to engage with.

Strahd as Bluebeard: The Repetition of Trauma

The original module, "I6: Ravenloft",[21] was published in 1983 by game designers Tracy and Laura Hickman. The vampire Strahd von Zarovich was designed by this husband and wife team specifically to reinforce the cautionary tale against abusive relationships, a theme that early vampire literature, such as John Polidori's "The Vampyre", strove to convey. In an interview on the official *Dungeons & Dragons* podcast, *Dragon Talk*, Tracy Hickman commented on how he wanted to create a "cautionary and tragic tale" about "what a vampire actually is": a predator.[22] Insistent on showcasing the monster for who he is, rather than glamorizing him (à la the *Twilight* series) or exoticizing him, the Hickmans modeled Strahd on the Bluebeard archetype, a murderer and abuser of women. Moreover, in discussing their initial development of Strahd, they wanted their vampire to be consistent with the Polidorian vampire – that is: a Lord Byron-esque character, a "gentleman vampire".[23] "He doesn't like women," Hickman explains as he describes the original vampiric model, "he preys on them."[24]

20. Smethurtst, p. 822.
21. Tracy Hickman and Laura Hickman. *Advanced Dungeons and Dragons I6 Ravenloft*. Lake Geneva: TSR, 1983.
22. Greg Tito. "Chris Perkins and Tracy Hickman on Curse of Strahd." Audio blog post. *Dragon Talk*. Wizards of the Coast. January 21, 2016.
23. Tito.
24. Tito.

"Ravenloft – The Living Wall, 1991 by Frank Kelly Freas" Image by Tom Simpson CC BY-NC-ND.

From the expanded background information provided in "Curse of Strahd" we discover that Strahd himself is a complicated figure: a brilliant military leader who fought off enemies to preserve his familial lands; a distant son who erected a castle and named it for his mother, who died before she could see it; a cold man who fell in love with a woman, Tatyana, only to have her prefer his own brother, Sergei, who was younger and protected from the atrocities of war; a murderer and a necromancer, a vampire who is ensnared by his own villainy. On the day of Tatyana and Sergei's wedding, Strahd struck out and killed his brother, and tried to woo Tatyana. In response, she threw herself from the walls of Castle Ravenloft in order to escape the rapacious vampire. Since the vampire's murdering rampage, Barovia has been cast away and Strahd has been enfettered to his curse, his own self-perpetuated and self-propagated trauma by

seeing Tatyana reincarnated into new women over the centuries. Thus, like Bluebeard, the key to Strahd is the repetition of the act, the recapitulation of the atrocity. Just as Bluebeard continues to woo and marry women before slaughtering them and keeping their bodies as tokens, memorabilia to relive and remember their flaws, so too does Strahd collect his victims over the years in the inescapable realm of Barovia. Thematically there are numerous tragic and traumatic events that occur in the narrative backgrounds of many of the non-player characters. This was strategically and intentionally crafted by Chris Perkins, game designer for Wizards of the Coast and lead designer for this module, as a means of highlighting the widespread effect of Strahd's violence on his land and his people so that increasingly as players continue their way through the region, they begin to realize their own fate may ultimately turn so bleak and dire: they too may become hopeless and lifeless, another gruesome and pathetic trophy in Strahd's cabinet of horrors.

The adventure begins to eschew the standard RPG premise that all players are robust heroes who will ultimately defeat the great evil that stands before them or else die trying in a TPK, or total party kill. For as we know, death is not an escape for Barovians and has not been an escape for Strahd either. As the title of the revised campaign suggests, the curse belongs to Strahd; he suffers from and is controlled by it and he too can never find a release. Just as the characters spring with hope for an escape only to be let down, Strahd too feels this same kind of emotional overhaul. As Chris Perkins states: "Every time someone new comes into the realm, there's the hope that they might change [things] and then the despair that follows inevitably that no, they really can't. This guy [Strahd] is too badly ruined."[25] The

25. Tito.

campaign reinforces the idea that Strahd cannot be changed. Like an abusive partner, like Bluebeard himself, no amount of love or effort will "make him better"; there is no fixing Strahd. His own traumatic memory cannot be processed or worked through, only witnessed and played through by the player characters in the adventure.

Ultimately, Strahd continues to try to replay and revise his own tragedy. Throughout the "Curse of Strahd" adventure Strahd endeavors to recreate (and re-invent) his relationship with Tatyana by pursuing women who seem to be embodiments of Tatyana's soul, her reincarnation. He is ""condemned to a repetition of the same set of pathological symptoms"[26] as he attempts to achieve the unattainable, to re-live and retroactively bring back to life the one person he has ever (supposedly) loved. Thus he perpetuates the cycle of trauma and abuse on strangers, on NPCs, on victims who can never live up to Tatyana, the paragon of Strahd's desire. As Gildersleeve suggests, fragments of traumatic memory continue to "interrupt[…] the present"[27] in a performance of the past, as Strahd's doomed obsession echoes through the centuries within the story and is repeated with each run-through of the module by different parties.

The Fortunes of Ravenloft

Throughout the module Curse of Strahd we see instances of "the unknown past interrupting the present,"[28] a symptom of trauma. In order to most effectively create an immersive experience for players, the Curse of Strahd's ludology mirrors and informs its own narrative.

26. Jessica Gildersleeve. "The Spectre and the Stage: Reading and Ethics at the Intersection of Psychoanalysis, the neo-Victorian, and the Gothic." *Australasian Journal of Victorian Studies*. 18.3. (2013). p. 105.
27. Gildersleeve, p. 105.
28. Gildersleeve, p.105.

Just as Strahd continues to repeat his trauma, so too do the game mechanics endeavor to reproduce this experience for the players. Included in the adventure, both physically and thematically, is the Tarokka Deck: a tarot-like set of cards that Madam Eva, an elderly Vistani NPC, uses to tell the player-characters their fortunes. She prophetically foretells key elements to the adventure: the location of crucial artifacts (the Tome of Strahd, the Holy Symbol of Ravenkind, and the Sun Sword) that will help the party destroy Strahd; the identity of a powerful ally; and even the location of Strahd himself within the labyrinthian Castle Ravenloft. While these randomizations may seem minor, they provide for a renewed and refreshed playing experience each time a party may enter Barovia. Even though "two different gaming sessions result in two distinct narrative lines"[29] in any campaign, these changes in fundamental aspects of the adventure point players to new places within the expanded game world. With these internal, arbitrary elements shifting within the game, there are numerous permutations within the single adventure. So replayability here does not constitute a complete *Eternal Sunshine of the Spotless Mind* mental wipe of the players' knowledge of the module, but rather a re-creation of the initial scene – a do-over, a *Groundhog Day* in which characters learn and try a new approach – with the caveat that some of the components may be altered.

In the original "I6 Ravenloft" adventure, Strahd's own goal was a random element, emphasizing his own chaotic nature: not even he knew precisely what he ultimately wanted to achieve until the adventure began. Ultimately in the revised version of "Curse of Strahd" the vampire's goal becomes statically focused on three things,

29. Margaret Carter. "*I, Strahd*: Narrative Voice and Variations on a Non-Player Character in TSR's 'Ravenloft' Universe." *The Fantastic Vampire: Studies in the Children of the Night*. Edited by James Craig Holte. Westport: Greenwood Press, 2002, pp. 89.

the main goal being to win Ireena Kolyana, who he believes to be another host for Tatyana's soul. This revision limits his own randomness, but forces him to focus on the repetitive cycle of abuse, the principal element that situates him within the Bluebeard archetype, thus further condemning players to this traumatic cycle.

In looking at the Tarokka Deck mechanic in both the Ravenloft adventure and the "Curse of Strahd", the effect of the ludology is a bit different though the mechanic itself is functionally the same. The randomization of elements in "Ravenloft" was designed specifically to provide "built in replay value."[30] Afterall, "Ravenloft" is only 32 pages long. By modern standards this is what we might call a one-shot adventure as it could have been played in a single sitting of several hours rather than many multiple-hour sessions that a typical full-length campaign requires. In comparison, at 256 pages "Curse of Strahd" is anything but a one-shot. So while the cards themselves are a holdover from the original "Ravenloft" module, they must work differently given the larger world and greatly extended play time. While they can provide players with the opportunity to replay the entire adventure, this is less likely to happen as an extended campaign as opposed to a one-shot experience. Potentially the hold-over of this game mechanic was done for nostalgic purposes; as Chris Perkins reminds us, if all the *D&D* nerds out there (myself included) ranked their favorite modules, "Ravenloft" would likely be near the top of the list.[31] But as nostalgic as it may be, the cards themselves serve a more significant purpose: they reify both the theme and Gothic

30. Dan Casey. "The Top 10 Dungeons and Dragons Modules." *Nerdist*. October 17, 2013. http://nerdist.com/the-top-10-dungeons-dragons-modules/
31. On a recent Nerdist.com top ten list, "Ravenloft" was listed at #8 and on an enworld list, it was ranked number 1.

atmosphere, and reiterate the randomness and ubiquity of Strahd's violence.

Fan art of Ravenloft. Image by slopesmg @deviantart CC BY.

Players of "Strahd", through their characters, witness and perform the psychology of trauma, and specifically of abuse. Abusive relationships are "driven by insecurity, fear that feeds that insecurity and an expectation of inconsistency, both real and perceived" (Formica). Not only does the narrative of "Curse of Strahd" illustrate this condition, the ludology of the module manifests it: players going into "Strahd", even having played it before, have an expectation of inconsistency for the land, the people, and Strahd himself. Indeed, Strahd himself is an option for a random encounter in Castle Ravenloft (and was in the original gameplay as well), emphasizing his presence as an ever uncertainty, forever random and tyrannically abusive in his inconsistency. His presence is further randomized as his final location

in Castle Ravenloft is ultimately produced by the arbitrary draw of the Tarokka Deck. Strahd is ubiquitous and ephemeral, appearing and lashing out at characters for he sees no other option, a characteristic of abuse (Formica). He is stuck and he knows it. He will never successfully escape the tragedy of his own making; and the players too must experience this through repeated trial. Each session for the players is an exercise in unfolding and unpacking Strahd's trauma as the players witness and perform their own. Like the psychotherapeutic process, this experience progresses over multiple game sessions. The expanded world has done more than showcase the extent of Strahd's corruption; it mires the player-characters into the fog and into the mind of Strahd and the Tarokka Deck provides them with a key to process through the trauma in different ways with each new play through.

Access to the Page

Queer and Disabled Characters in Dungeons & Dragons

MICHAEL STOKES

> D&D is a game that teaches you to look for the clever solution, share the sudden idea that can overcome a problem, and push yourself to imagine what could be, rather than accept what is… The adventures you embark on, the characters you create, the memories you make—these will be yours. D&D is your personal corner of the universe, a place where you have free reign to do as you wish. — Mike Mearls and Jeremy Crawford[1]

The fifth edition *Dungeons & Dragons Players Handbook* opens with these words, yet the spirit of this invocation reaches back to the very first edition. *Dungeons & Dragons* is representative of a realm of play that prides itself on creativity, possibility, and access to worlds that exist beside the universe its players live in. In a recent interview with Forbes magazine, the brand director of D&D speculated on the widespread popularity of the game: "Dungeons & Dragons gives you this safe environment to communicate when you're not necessarily the best communicator. It fills these needs for people who maybe are

1. Mike Mearls and Jeremy Crawford. *Dungeons & Dragons Player's Handbook (5th Edition)*. Renton, WA: Wizards of the Coast, (2014).

having anxieties over it."[2] The game acts as a means of storytelling and identity formation—as outlined by Sarah Lynn Bowman[3]—and as a training ground for understanding identity and interpersonal communication.[4]

It becomes necessary then, when such a method of entertainment can top Amazon book sales,[5] to open up the history and content of the game's guidebooks to see what formations of identity are represented in the texts and in what ways. This essay considers the discourse of the *Dungeons & Dragons* and *Pathfinder* handbooks (between 1979 and 2014) through the lenses of queer studies and disability studies. Although representations of genderqueer and disabled characters are fraught in the earlier texts, they become more complicated in later editions. For this reason, I argue that the role-playing handbooks that I engage with here offer a set of snapshots into how queerness and disability, as game mechanics, are negotiated between players and designers in different epochs of the development of *Dungeons & Dragons*.

I examine a range of handbooks in order to provide a longitudinal sense at how representation is managed in tabletop role-playing games derived from *Dungeons & Dragons*. The 1979 *Dungeon Master's*

2. Todd Kenreck. "Behind The 'Dungeons & Dragons' Resurgence." *Forbes Magazine*, 28 September 2016.
3. Sarah Lynne Bowman. *The Functions of Role-Playing Games: How Participants Create Community, Solve Problems and Explore Identity*. Jefferson, NC: McFarland, (2010).
4. See Aaron Trammell. "Misogyny and the Female Body in Dungeons & Dragons." In *Analog Game Studies: Volume I*. Edited by Aaron Trammell, Emma Leigh Waldron, and Evan Torner. Pittsburgh, PA: Carnegie Mellon University: ETC Press (2016), pp. 23-33 and Aaron Trammell. "How Dungeons & Dragons Appropriated the Orient" *Analog Game Studies* 3.1, (2016). http://analoggamestudies.org/2016/01/how-dungeons-dragons-appropriated-the-orient/
5. David M. Ewalt. "What's Next For The New Dungeons & Dragons?" *Forbes Magazine*, 15 April 2015.

Guide was the direct ancestor of the later third, fourth, and fifth editions of *Dungeons & Dragons*. It marked a refinement in the rules and a capstone on the initial *Advanced Dungeons & Dragons* core rulebooks. I include the spinoff game Pathfinder in my analysis due to its wide audience, collaborative creation, and its focus on story: "We go out of our way, in many places, to give you the tools to do that [invent your own stories]."[6] For several business quarters after its release, *Pathfinder* outsold the fourth edition of *Dungeons & Dragons*, according to the online trace magazine ICv2.[7] Finally, I consider the most recent release of *Dungeons & Dragons* as it reflects the most up to date representations of queerness and disability in its rules.

For diverse identities to be implemented in *Dungeons & Dragons* they must be both a part of the cultural conversation about the game and desirable. In *Dungeons & Dragons*, genderqueer and disabled people have access to this conversation either explicitly or obliquely. What has limited their access in the past is how they are described in context of the game's rules and playing conventions. If a player cannot imagine a character who lurches or has a different amount of limbs and this case is not modeled—or is actively discouraged—then it is forced out of the dialogue of identity formation at play in the game. This absence has the multifarious effects of disallowing disabled characters from the game, barring disabled players from visualizing themselves in the realm of play, and curtailing dialogue regarding disability in a conceptual realm that many use to explore ideas that are not fully formulated.

6. Charlie Hall. "The Story of Pathfinder: Dungeons & Dragons' Most Popular Offspring." *Polygon*. 1 August 2016.
7. I find evidence of this in their top 5 RPG lists for Summer 2011, 2012, and 2013 in addition to their top 5 RPG lists for Q2 in 2011 and 2012 and Q4 in 2011. https://icv2.com

The difference between forms of access for disability and queerness may be rooted in the complications of discourse between queer and disability studies. In her work, "Bad Romance: A Crip Feminist Critique of Queer Failure," Merri Johnson discusses the disconnect between queer and disability studies. She states that "the work of [queer and crip] dialogue has been rather onesided, with crip theorists making overtures and remaining politely unsatisfied with queer theorists' openness to the relationship."[8] Johnson discusses several instances where the advancement of queer theory relies on interpretation generated in disability studies texts, but which leaves disability out of its discussion. The result, then, is that queer theory is bolstered without reciprocity for the theory that it draws from. Much work on the intersection of disability and queerness leans toward the establishment of queer discourse, with lesser amounts of attention being given to the advancement of disability discourse. In this light, the changes surrounding the world of roleplaying identity follow similar patterns to the changes in intersectional identity discourse. A close examination of the handbooks of *Dungeons & Dragons* is a way to follow how these changes in representation have unfolded over the last forty years.

Stumbling into the Handbooks

The text of the *Advanced Dungeons & Dragons Dungeon Master's Guide* (1979) is laden with the many tables and rules that *Dungeons & Dragons* is known for, along with colorful, anecdotal snippets such as "while the intelligent character will know that smoking is harmful to

8. Mirri L. Johnson. "Bad Romance: A Crip Feminist Critique of Queer Failure." *Hypatia* 30.1 (2014), p. 252.

him, he may well lack the wisdom to stop (this writer may well fall into this category)."[9] These conversational tidbits bring an intimacy to the text that makes it personable and easier to read between the long strings of example formulas to determine lifespan or character weight. However, when it comes to introducing potentially disabled characters or the possibility of the dungeon master's story causing death or disability, this convivial tone makes it seem that disability is universally undesirable: "Are crippling disabilities and yet more ways to meet instant death desirable in an open-ended, episodic game where participants seek to identify with lovingly detailed and developed player-character personae? Not Likely!"[10] Here, the author outlines expectations of play within the gaming realm: the game should be a continuing story with loveable and relatable characters, none of whom may be disabled—because disability is equivalent to death and removes the chance of connection between the player and character. What arises from this construct are several assumptions about who has access to the promised adventure within the realm of the game.

As explained above, The *Advanced Dungeons & Dragons Dungeon Master's Guide* assumes that 'crippling disabilities' are the equivalent of character death within *Dungeons & Dragons*. This perspective—that disability is equal to death—persists beyond the framework of *Dungeons & Dragons*. In her work, *Feminist, Queer, Crip,* Alison Kafer develops the idea of 'no future' in similar terms of death and disability. Drawing from Ostrander's interviews with young male people of color, she finds that 'dead in jail or in a chair' [is] recognized as all the

9. Gary Gygax. *Dungeon Masters Guide*. TSR Games: Lake Geneva, WI (1979), p. 15.
10. Gygax, p. 61.

same, all signs of no future."[11] The world of *Dungeons & Dragons* circa 1979, then, holds the same assumption: "disability is the sign that one never had a future in the first place."[12] By virtue of this perspective, then, disabled characters—and by extent, disabled identities—are not considered to be laden with potential in the way that able-bodied identities are. Through Kafer's lens of disability as death, one can read that there are no expectations of future performance from disabled characters. A disabled character does not have access to the "open-ended, episodic game" because it is already read as dead.

This inherent death-in-disability reifies the idea that a non-disabled body is a societal expectation. In Elsa Sjunneson-Henry's "Reimagining Disability in Role-Playing Games," she discusses the lived experience of approaching roleplaying games as a disabled player. In her discussion, she notes issues with games in the *World of Darkness* and *Apocalypse World* settings. *World of Darkness* allows players to take "flaws" which give them a surplus of points to use elsewhere on their character. She explains that "flaws include Deafness, Blindness, Bad Sight, and many mental health conditions. Problematically, all of these 'flaws' are boiled down to a number of points."[13] *Apocalypse World*, however, does not allow for playing a disabled character from the beginning of play. This treatment of disability has two issues for Sjunneson-Henry: "[her] disabilities were reduced to points" and it "essentializes disability as a bad thing that happens to you and not a regular part of the character's experience

11. Alison Kafer. *Feminist Queer Crip*. Bloomington, IN: Indiana University Press (2013), p.33.
12. Kafer, p. 33.
13. Elsa Sjunneson-Henry. "Reimagining Disability in Roleplaying Games." In *Analog Game Studies: Volume II*. Edited by Evan Torner, Emma Leigh Waldron, and Aaron Trammell. Pittsburgh, PA: Carnegie Mellon University: ETC Press (2017), pp. 93-96.

with the world."[14] These experiences that Sjunneson-Henry encounters speak to disability studies discussion on the insistence of able-bodiedness being primarily a social construction.

In his preliminary contribution towards reconciling queer studies and disability studies, Robert McRuer details this compulsory able-bodiedness,"able-bodied identities, able-bodied perspectives are preferable and what we all, collectively, are aiming for. A system of compulsory able-bodiedness repeatedly demands that people with disabilities embody for others an affirmative answer to the unspoken question, Yes, but in the end, wouldn't you rather be more like me?'[15] Framing the inquiry as a question in the dungeon master's guide and ending with "Not likely!"[16] asks and answers the very question of disabled identities and pushes them aside. This rejection of non-normativity is emphasized in the portion of 1979's *Dungeon Master's Guide* under the heading "The Monster as a Player Character." This section is devoted to explaining the human-centeredness of the narrative: "all players are, after all is said and done, human, and it allows them the role with which most are desirous and capable of identifying with."[17] The text marks the assumption that all players are desirous of the highly praised (therefore normal and able-bodied) human form—and that therefore they will most readily identify with it.

Nefarious Silence Around Sexuality

14. Elsa Sjunneson-Henry, pp. 93-96.
15. Robert McRuer. "Compulsory Able-Bodiedness and Queer/Disabled Existence." *Disability Studies Reader (Fifth Edition)*. New York: Routledge (2016), pp. 303-304.
16. Gary Gygax, p. 15.
17. Gary Gygax, p. 21.

The *Advanced Dungeons & Dragons Dungeon Master's Guide* has very little to say about queerness or homosexuality. Player interactions are left vague, and to that degree and expression of a queer identity would largely depend on the group generating a D&D narrative. However, for the dungeon master, it does offer insight into the accessibility of non-normative sexuality in the framework of the game's cast of characters. In designing non-player characters (NPCs), it gives a 'morals' table with entries such as "virtuous," "normal," "lusty," and "perverted,*" "sadistic,*" as well as "depraved.*"[18] Those marked with asterisks are not just held in opposition to an assumed norm, but are significantly less likely to occur. They are pushed to the margins and must be rolled a second time to confirm. In so doing, the game sets up an expectation of "normal" morals being prevalent. This nebulous framework establishes expectations of how a "normal" sexuality which in influences the NPCs' ethical outlook. In this sense, the accessibility of queer characters to the story is one that is laden with expectations of dubious morality and alienation as a result of its "deviation" from these stated moral norms.

18. Gary Gygax, p. 101.

Similarly, normative sexual practice for characters is seen as a perk as it is seen as the primary avenue to produce offspring. In a passage that details the life and death of characters (from disease to old age) the *Dungeon Master's Guide* encourages the dungeon master to frame the character's legacy in terms of offspring: "once a character dies due to old (venerable) age, then it is all over. If you make this clear, many participants will see the continuity of the family line as the way to achieve a sort of immortality."[19] The expectation of patriarchal lineage shows how *Dungeons & Dragons* assumes that players will design able-bodied, heteronormative characters. As McRuer argues, "the system of compulsory able-bodiedness that produces disability is thoroughly interwoven with the system of compulsory heterosexuality that produces queerness."[20] In this sense, there's a strong push to reinforce the centrality of able-bodied and heteronormative characters within the play structure by excluding disabled and queer characters from representation.

Image by photognome @Flickr CC BY-NC-ND.

In the words of Jaako Stenros and Tanja Sihvonen, *Dungeons &*

19. Gary Gygax, p. 15.
20. Robert McRuer, p. 301.

Dragons "grew from… a particularly conservative youth culture."[21] As noted in their text "Out of the Dungeon,"—which addresses queerness in a wide array of role playing games—Stenros and Sihvonen highlight this statement from the Red Box (1983) Version of D&D:

> In D&D games, as in real life, people have ethical and theological beliefs. All characters are assumed to have them, and they do not affect the game. They can be assumed, just as eating, resting and other activities are assumed, and should not become part of the game.[22]

In their analysis of the Red Box version of the *Dungeon Master's Guide,* Stenros and Sihvonen argue that "we can assume that sexuality is covered by this statement: 'it should not be part of the game.'[23] This complicated denial of sexuality in general and aligning queerness with evilness echoes through the silence and stillness of some of the later D&D texts and questions what access a queer identity would have in the gamespace.

21. Jaakko Stenros and Tanja Sihvonen. "Out of the Dungeons: Representations of Queer Sexuality in RPG Source Books." In *Analog Game Studies: Volume II.* Edited by Evan Torner, Emma Leigh Waldron, and Aaron Trammell. Pittsburgh, PA: Carnegie Mellon University: ETC Press (2017), pp. 71-92.
22. Jaakko Stenros and Tanja Sihvonen (Quoting Gary Gygax), p. 74.
23. Jaakko Stenros and Tanja Sihvonen, p. 75.

An illustration of a character in Pathfinder. Image by Andrea Alemanno CC BY-ND.

The updated third edition of the *Dungeons & Dragons Players Handbook* has even less to say about queerness than the 1979 version of the text. The only mentions of sex are in terms of physical height and weight. The entirety of the entry on gender is: "Gender: your character can be either male or female."[24] This recalcitrance to speak on sex and sexual orientation says little on its own merit, as it lacks the further contextualizing elements of morality that appeared in the original AD&D manual. This lack of representation has led to "allegations that … Dungeons & Dragons publisher TSR… had rules that banned the depiction of queers. Although such claims are common, we have thus far been unable to substantiate them."[25] It reinforces a gender binary while not advancing its previous links between sexuality and morality. There is a discussion on morality and a character's so called "alignment" on the axes of good and evil or chaotic and lawful, but these valuations avoid language of desire.[26] In terms of queer access to the realms of roleplaying, the updated third edition of *Dungeons & Dragons* neither works against previous anti-queer depictions, nor does it attempt to reify it. This silence seems to emphasize the removal of sexuality from *Dungeons & Dragons* that was prescribed in the Red Box edition.

24. Julia Martin and John Rateliff. *Player's Handbook* (*Revised Third Edition*). Renton, WA: Wizards of the Coast (2003), p. 109.
25. Jaakko Stenros and Tanja Sihvonen, p. 79.
26. Julia Martin and John Rateliff, pp. 104-106.

Disabled Characters Tell Better Stories

Where the texts are silent on sexuality, they speak volumes about disabilities and their implementation. In terms of disability, the era of third edition *Dungeons & Dragons* and *Pathfinder* adds complexity and conflict to disabled characters in a manner that increases their visibility and representation. They encourage the use of disability in roleplaying, but degrade the idea of living as a disabled character. In the *Dungeons & Dragons Dungeon Master's Guide (revised third edition)*, the section on NPCs offers advice on adding depth to characters played by the dungeon master. In this section it gives a table of "One Hundred Traits" random traits that make them more "interesting" and "memorable."[27] Of these ninety nine options, at least twenty five easily lend themselves to some form of physical or mental disability, such as "walks with a limp," "visible wounds or sores," and "neurotic."[28] The dungeon master is encouraged, then, to create NPCs with disabled traits in order to make them more memorable to the players. This use of disability as a storytelling element evokes the literary process of "narrative prosthesis" as constructed by David Mitchell and Sharon Snyder. In their work, Mitchell and Snyder find that disability is often used as "as a stock feature of characterization and… as an opportunistic metaphorical device."[29] They argue that while disabled characters are ubiquitous in literature, they are often only present to augment the story of an able bodied character, or to

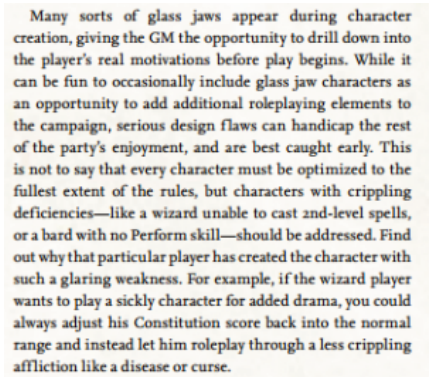
27. Julia Martin and John Rateliff. *Dungeon Master's Guide* (*Revised Third Edition*). Renton, WA: Wizards of the Coast (2003), p. 128.
28. Julia Martin and John Rateliff. *Dungeon Master's Guide* (*Revised Third Edition*), p. 128.
29. David T. Mitchell and Sharon L. Snyder. "Narrative Prosthesis and the Materiality of Metaphor." *Disability Studies Reader (Second Edition)*. New York: Routledge (2006), p. 205.

be exploited for the sake of the narrative and "cured," "obliterated," "rescued," or "revalued."[30] This edition of the *Dungeon Master's Guide* emphasizes that these traits "don't have any effect on ability scores, skills, or game mechanics"[31] which are used algebraically to determine successes in the realm of the game. Instead, these traits exist to be storytelling elements, small quirks that add depth to NPCs.

Pathfinder is a bridge between the updated third edition and fifth edition of *Dungeons & Dragons*. For this reason,it offers unique insight into the accessibility of the gamespace. Its market-competitiveness with *Dungeons & Dragons* and its own claims to storytelling merit its inclusion in this essay. The *Pathfinder GameMastery Guide* offers some insight into the application of this literary process to roleplaying games at the cusp of where it transitions from advice regarding player characters to where it offers advice on the creation of NPCs. The guide emphasizes the crucial role of NPCs to the story and states "designing NPCs thus becomes an exercise of creativity, which the GM [game master] can cultivate by reading fantasy literature or watching fantasy on the screen."[32] The ties between NPCs and stock disabled characters becomes evident in this context, given that roleplaying storytelling draws heavily on established literature—visible as well in the original AD&D dungeon master's guide when nudging dungeon masters to follow storytelling canon instead of trying to make their own, non-human oriented campaign: "how can such an effort rival one which borrows from the talents of genius and imaginative thinking which come to us from literature?"[33]

30. David T. Mitchell and Sharon L. Snyder. *Narrative Prosthesis*: *Disability and the Dependencies of Discourse*. Ann Arbor, MI: Michigan University Press (2001), pp. 53-54.
31. Julia Martin and John Rateliff. *Dungeon Master's Guide* (*Updated Third Edition*), p. 128.
32. Cam Wolfgang Baur Banks, et. al. *Pathfinder Roleplaying Game GameMastery Guide*. Redmond, WA: Paizo Publishing (2010), p. 80.
33. Gary Gygax, p. 21.

Here, one can see the perpetual intertextuality between literary process and roleplaying tendencies.



Many sorts of glass jaws appear during character creation, giving the GM the opportunity to drill down into the player's real motivations before play begins. While it can be fun to occasionally include glass jaw characters as an opportunity to add additional roleplaying elements to the campaign, serious design flaws can handicap the rest of the party's enjoyment, and are best caught early. This is not to say that every character must be optimized to the fullest extent of the rules, but characters with crippling deficiencies—like a wizard unable to cast 2nd-level spells, or a bard with no Perform skill—should be addressed. Find out why that particular player has created the character with such a glaring weakness. For example, if the wizard player wants to play a sickly character for added drama, you could always adjust his Constitution score back into the normal range and instead let him roleplay through a less crippling affliction like a disease or curse.

Description of a "glass jaw" character in Pathfinder. Image used for purposes of critique.

In the passages pertaining to handling player characters, the *GameMastery Guide* re-emphasizes the use of disability as a stock storytelling feature, but also adds caveats that it can be taken too far. In the section that gives advice to the game master on different types of characters and players, it warns: "While it can be fun to occasionally include glass jaw characters as an opportunity to add additional roleplaying elements to the campaign, serious design flaws can handicap the rest of the party's enjoyment, and are best caught early. This is not to say that every character must be optimized to the fullest extent of the rules, but characters with crippling deficiencies… should be addressed."[34] The *GameMastery Guide* uses forms of the word cripple frequently to emphasize how playing a disabled character would not only be unenjoyable for the player of the character, but that "The game should not be made less enjoyable—and the party crippled—[for] a single character."[35] Even when this guide was published, its word choice seems distinctly anti-disability. As early as the year 1998, "cripple as a descriptor of disabled people [was] considered impolite."[36] The *GameMastery Guide*'s

34. Cam Wolfgang Baur Banks, et. al., p. 73.
35. Cam Wolfgang Baur Banks, et. al., p. 67.
36. Simi Linton as quoted by Beth Haller, Bruce Dorries, and Jeissica Rahn. "Media

publication in 2010 falls distinctly beyond this shift in the language of disability. In *Pathfinder*, disability is reified as a storytelling element, but only to certain degrees and in certain contexts. It follows the assumption seen that the foremost desire of player characters is a non-disabled experience within the roleplaying world. This continued denigration of non-normative people precludes them from the potentialities and futures offered in roleplaying games.

The framework of the updated third edition of *Dungeons & Dragons* and *Pathfinder* character system demonstrates many of the issues with roleplaying game handbooks discussed in Elsa "Reimagining Disability in Role-Playing Games." In this article, Sjunneson-Henry discusses how "it is psychologically important to feel as though you are a part of the universe in which your story is set."[37] In the article, Sjunneson-Henry discusses how in many RPGs "disabilities are at best neglected… and at worst used as a punchline for a bad joke." The language of character creation used in these handbooks alienates disabled players by warning against characters whose disabilities move beyond simply being a story point.

The fifth edition of *Dungeons & Dragons* marks the most recent incarnation of the rules and suggestions for roleplaying on a large scale, and within it one can read changes in its messages about disability and queerness. In the fifth edition *Player's Handbook*, the tables which suggest height and weight are no longer broken down by male and female of each race.[38] Beyond this move away from reifying gender and sex constructs, the handbook offers the following

Labeling Versus the US Disability Community Identity: a Study of Shifting Cultural Language." *Disability and Society* 21.1 (2006).

37. Elsa Sjunneson-Henry, p. 91.
38. Mike Mearls and Jeremy Crawford, p. 121.

advice: "Think about how your character does or does not conform to the broader culture's expectations of sex, gender, and sexual behavior…You don't need to be confined to binary notions of sex and gender… You could also play a female character who presents herself as a man, a man who feels trapped in a female body, or a bearded female dwarf who hates being mistaken for a male."[39] These passages of advice not only move beyond previous edition's concepts of sexual preference being linked to morals or being absent from consideration, but they also carry with them explicit suggestions and implied conversations. The implied conversation of this direction is that the player can discuss with the dungeon master what the prevailing constructs of sex and gender are in the realm of the game. This conversation hinges on strong awareness of how sex and gender are formulated as ideas and how they are performed within the realm of the roleplaying game. The suggestions for character creation here make an accessible route into the game for transpeople, nonbinary people, and queer people whose sexual and gender identity are fluid. This affirmation of identities moves past the previous assumptions of the game that queer identities were undesirable or outside of consideration for players and characters. In constructing a framework to discuss the multiple potential sexes and genders of a character, the absence of any nuanced suggestion for disability becomes suspect.

In the central text of character formation, the game continues much of its prior views and expectations of disabled characters, however there are indications in other areas that the narrative of disability in *Dungeons & Dragons* is changing. In the player character generation portion of the fifth edition *Player's Handbook*, the entirety of its "other physical characteristics" section is: "You choose your character's age

39. Mike Mearls and Jeremy Crawford, p. 121.

and the color of his or her hair, eyes, and skin. To add a touch of distinctiveness, you might want to give your character an unusual or memorable physical characteristic such as a scar, a limp, or a tattoo."[40] Again, the idea of narrative prosthesis appears. However, in the entry for the suggested characteristics of the soldier class, the *Players Handbook* gives examples of personality traits which align with a possible mental disability. Among the traits of the soldier are listed possibilities such as "I'm haunted by memories of war. I can't get the images out of my head,"[41] "I sleep with my back to a wall or tree, with everything I own wrapped in a bundle in my arms,"[42] and "I've lost too many friends, and I am slow to make new ones."[43] These traits, while not explicit, evoke categories of re-experience, avoidance, and arousal trigger from the diagnosis of Post-Traumatic Stress Disorder[44] (Black and Grant 178-80). By including these suggestions for players to consider and portray, Dungeons & Dragons fifth edition seems to be moving away from a flat portrayal of disability. This modeling of non-normative thought is a beginning towards placing peoples with different minds and bodies into the realm of the game. It begins to move towards access for those with mental or physical disability, without the explicit consideration given to queerness.

These alternate forms of entry into the gamespace make for an uncomfortable potentiality. In terms of representation incomplete incorporation may well be a step in the right direction, but representation alone lacks the nuance and open-endedness one

40. Mike Mearls and Jeremy Crawford, p. 121.
41. Mike Mearls and Jeremy Crawford, p. 140.
42. Mike Mearls and Jeremy Crawford, p. 140.
43. Mike Mearls and Jeremy Crawford, p. 141.
44. Donald W. Black and Jon E. Grant. *DSM-5 Guidebook: the Essential Companion to the Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition)*. Washington, DC: American Psychiatric Publishing (2014), pp. 178-80.

expects of a game system that is founded upon open-ended stories and inventing one's own story. In her work, "Race In/For Cyberspace: Identity Tourism and Racial Passing on the Internet," Lisa Nakamura questions the cultural tourism of middle class white males in the online roleplaying MUD LambdaMOO. In the cyberspace of LambdaMOO, Nakamura finds that "the entire social space of LambdaMOO is 'whited out' in the name of cybersocial hygiene."[45] By this, she means that there is an overarching whiteness that attempts to quash non-stereotypical representations of Asianness. This structure exists to perpetuate cultural tourism on the part of the privileged majority of white males who interact with the gamespace. By opening theoretical access to gamespace in *Dungeons & Dragons*, the handbooks offer both the opportunity for non-normative players to position themselves in the game and the opportunity for non-disabled or non-queer players to "pass" as these characters.

In the spirit of *Dungeons & Dragons* it becomes necessary to push, then, to imagine an actualized roleplaying experience for disabled players and/or characters. As Nakamura concludes: "a diversification of the roles which get played, which are permitted to be played, can enable a thought provoking detachment of race from the body, and an accompanying questioning of the essentialness of race as a category."[46] Such a detachment becomes more complicated when addressing disability, where "social constructionism makes it possible to see disability as the effect of an environment hostile to some bodies and not to others, requiring advances in social justice rather than medicine."[47] In order to accommodate discussion on disability,

45. Lisa Nakamura. "Race in/for Cyberspace: Identity Tourism and Racial Passing on the Internet." *Works and Days* 13 (1995), p. 183.
46. Lisa Nakamura, p. 183.
47. Tobin Siebers. "Disability in Theory: From Social Constructionism to the New Realism of the Body." *American Literary History* 13.4 (2001), p. 738.

Dungeons & Dragons would need to address and incorporate not only non-normative minds and bodies within its models for play, but a discussion of various ways that social systems disavow their presence in society. It would not be sufficient to only introduce a character that does not use their legs without also discussing why the world within the campaign does not accommodate this difference or why societies would treat the character differently than one who does use them.

As can be seen from the changing text of the sourcebooks, there are internal stresses with queerness and disability, where queerness receives explicit endorsement for consideration and only subtle hints are given for permissible, rounded disabled characters. This tension is not necessarily negative, but provides a suitable off-balance conceptual space to consider the futures of disabled identity in roleplaying games. This tension reflects alternate conversations that are occurring at a level separate from that of the handbooks. It also reflects the necessity of different strategies for including queer and disabled discourse in the game.

Rules Lawyering as Symbolic and Linguistic Capital

STEVEN DASHIELL

It's inevitable. In *Dungeons & Dragons* or *Pathfinder* players will go to war over the rules. Can our wizard hit that orc party with a fireball spell? He was groggy from waking up and his aim might be off. In tabletop role playing games, which produce dozens of rulebooks, players have innumerable opportunities to get into the weeds when interpreting the rules. At the game table, all players treat one another equally, but this courtesy tends to privilege the loudest voices in the room as opposed to the smartest. I want to discuss one of these voices, the rules lawyer. A rules lawyer is a player who argues and interprets the rules of the game during play. There are two dominant characterizations of this archetype. On the one hand, we see a vociferous commentator who acts as a slog on the game. On the other, a crusader challenging breezy rules interpretations with canon, providing stability and more enjoyment. The common thread between these archetypes is that being a rules lawyer provides players with symbolic and linguistic capital. Furthermore, the proclivity of

the rules lawyer toward masculine forms of discourse (such as argument) exemplifies the ubiquity of hegemonic masculinity in tabletop role-playing.

"Rules lawyering" is one of those terms that has been around for about as long as there have been people playing tabletop role playing games. The rules lawyer has commonly been seen as the invested intellectual, the Brainy Smurf of the role playing game who means well but comes off sounding haughty, preachy, and arrogant. In my group, we liken rules lawyering to the curse of lycanthropy – the worst thing in the world is for someone to become so invested in the game's rules that they are "turned" into another rules lawyer. To be a rules lawyer, or to be referred to as one, is a pejorative in the roleplaying world.

Given the stigma that comes along with rules lawyering, why do people still engage in the behavior? What prompts players to feel like it is necessary to engage in rules lawyering behavior? Rules lawyering is a case study in hegemonic masculinity for game studies scholars. I posit that rules lawyering (like other terms in the feminist lexicon like *mansplaining* and *cultural appropriation*) has grown beyond its original meaning into something that is interpreted differently by the individuals who use it. My sense is, like these terms, rules lawyering is governed by the famous line from Supreme Court Justice Potter Stewart in his analysis of obscenity: "I know it when I see it." This implies that you don't need a hard and fast definition for a rules lawyer; players know the behavior when it's presented to them. Examples of interpretations of the rules lawyer are varied. Gary Fine defines the term as "a participant in a rules-based environment who attempts to use the letter of the law without reference to the spirit,

usually in order to gain an advantage within that environment".[1] Slavicsek and Baker say in *Dungeon Master for Dummies* it is "a player who argues against a DM's verdict or adjudication by making references to the rules".[2] I define the rules lawyer as a player who explicitly and fervently offers a different interpretation of the rules than the Game Master during gameplay. This definition acknowledges how conflict with the Game Master, impact on the overall group, and the agency of the rules lawyer all become important as social currency.

Sociologist Pierre Bourdieu believed that *practices* (like rules lawyering) can be analyzed as a system that explains the shared relationship between the individual (or actor) and the social world. By looking at the component actions of an individual, especially those habitual actions that allow the actor to conform to the system (*habitus*), one can get a better sense of what is valued by the actor and the system (capital), and physical and conceptual realms where valued knowledges, artifacts, and procedures are engaged (field).[3] In terms of capital, while Bourdieu originally came up with three types (social, cultural, and economic), he later expanded with concepts of various other types, such as symbolic capital and linguistic capital.[4] Symbolic capital involves the interplay between having a specific item of value and being able to appreciate it and convey its value. Linguistic capital concerns itself with the power of one's discursive

1. Gary Alan Fine. *Shared Fantasy: Role-Playing Games as Social Worlds*. Chicago: University of Chicago Press, 2002.
2. Bill Slavicsek and Richard Baker. *Dungeon Master for Dummies*. Hoboken, NJ: Wiley and Sons, 2006.
3. Pierre Bourdieu. "The Forms of Capital." In *Handbook of Theory and Research for the Sociology of Education.* Edited by John G. Richardson. New York: Greenwood, 1986, pp. 241-258.
4. Pierre Bourdieu. "The Economics of Linguistic Exchanges." *Social Science Information* 16.6 (1977), pp. 645–68.

ability: the knowledge of languages and the "correct way" to speak them (such as dialect) and how that could transmit knowledge about one's status.

Using practice theory as a model, there's value in seeing the symbolic and linguistic capital of rules lawyering. Symbolic capital explains why such behavior is tolerated, but why the term can defy definition. To practice rules lawyering represents the ultimate expression of symbolic capital. A player understands the rules so deeply, so without error, that they are willing to argue with anyone (including the Game Master) about a meaning. Given that many rules lawyers engage in their initial challenge from a perspective of memory (meaning they aren't reading a rule book when they levy their challenge), this reinforces the position of their symbolic capital by establishing these people as subject matter experts.

There's a huge difference between a teleport spell and a teleport sewer in Jersey. "Teleport" by James Grimmelmann @Flickr CC BY.

Rules lawyers must be able to not only understand the game mechanics enough to correct someone, but use the in-game language well enough to demonstrate mastery. Therefore linguistic capital is important in order for one to be an effective rules lawyer. If a player does not use the correct name for a spell, they come across as uninformed. After all, there is a difference between the spells Teleport and Greater Teleport; they cannot be used interchangeably! Therefore, it is important for the rules lawyer to not only know what

they are talking about, but also to convincingly sound like they know what they are talking about. This balance of symbolic and linguistic capital is vital to be an effective (and successful) rules lawyer.

A great deal of the language that we talk about that characterizes rules lawyering has been discussed by sociolinguists who study gender. Linguistic patterns are gendered. Corrective and dominating discussion, for example, are linguistic features that the study of language tends to attribute to men. The interruptive nature of rules lawyering lends itself better to what sociolinguist Scott Kiesling refers to as "masculine discourse."[5] Linguists Deborah James and Sandra Clark demonstrate how culture perceives men to interrupt more than women when in fact there is no difference among genders in the behavior.[6] Evidence suggests this "man talk" – a term popularized by linguist and gender studies scholar Jennifer Coates – isn't inherent or biological, but a method of speaking that is cultivated in men through socialization.[7] Citing works of past gender theorists, Peter Knussman notes that language is used to assert dominance among men, and interruptions are the key linguistic feature to convey this. He writes, "[Interruption use] is generally explained by the relative power of the participants which derives from their social status. The higher incidence of interruptions, thus, is seen in the relatively high social and economic status of men".[8]

5. Scott F. Kiesling. "Men, Masculinities and Language." *Language and Linguistics Compass* 1.6 (2008), pp. 653-673.
6. Deborah James and Sandra Clarke. "Women Men and Interruptions: A Critical Review." In *Gender and Conversational Interaction.* Edited by Deborah Tannen. Oxford: Oxford University Press, 1993, pp. 231-280.
7. Jennifer Coates. *Men Talk: Stories in the Making of Masculinity.* London: Wiley-Blackwell, 2003.
8. Peter Knussman. "Gender, Status and Power in Discourse Behavior of Men and Women" *Linguistik Online* 5.1 (2000).

The performance of rules lawyering can reinforce hegemonic masculinity in other ways. Kiesling theorizes that men's friendships are heavily based on indirectness in conversation, and that interaction types like rules lawyering, while combative and at times overbearing, lead to a level of respect and can increase homosociality and affection between men.[9] The performance is, however, disruptive and while it might lead two people closer, akin to tenets of hegemonic masculinity, it is destabilizing for the game – the social act suffers for the benefit of a small few. This connection between the arguing men, however, might be at the cost of others who share the table space. Indirectness is a common tactic of dominant groups, meaning those in other categories (racial ethnic minorities, sexual minorities, women, etc.) might interpret the interaction as arguing and find it disruptive, obnoxious, and diverting. Without experience in dealing with rules lawyering, the entire experience could seem off-putting to a table not used to the performance

While there are positive expressions of symbolic and linguistic capital, it could be argued that social capital is hampered. Unfettered rules lawyering potentially represents a drag on any game system. Few players not involved in the debate would want to engage in a lengthy discussion of whether the phrase "others touched" meant a person could be touching someone with their toe rather than their finger to get a spell effect! The discussion generally is between the rules lawyer, the GM, and the affected player, leaving others to either watch the production or wait out the experience. Given that tabletop role-playing games tend to be lengthy experiences in their own right, this adds to the duration but not to the experience for many players. As Walden points out, "participants are drawn to D&D because it

9. Scott F. Kiesling. "Homosocial Desire in Men's Talk: Balancing and Recreating Cultural Discourses of Masculinity." *Language in Society* 34.5 (2005), pp. 695-726.

is entertaining and enjoyable. The game is engrossing; participants identify with their character and suspend 'reality' in favour of fantasy."[10] Rules lawyering "suspends the suspension" in a way. Players are thrust back into a real world where their imagined characters again become words on paper governed by mechanics in a book. In the moment, it is understandable that no one likes a rules lawyer. Like Huizinga's spoilsport, the rules lawyer can be seen as "shatter[ing] the play world itself. He robs play of illusion."[11]

Rules lawyering can have a much more direct effect on the social organism that is the gaming group. The nature of gaming, specifically role-playing games, emphasizes the shared experience and communal nature, and the power of imagination. Aubrey Adams states, "players fulfill social needs through group communication; because it was shown that players fulfilled needs related democracy, friendship, extraordinary experiences, and ethics, it can be extrapolated that meeting these needs serves as motivation for the game-play itself."[12] Rules lawyering, conversely, pushes the game structure and rules to the fore, calcifying the power of the social structure. In cultural capital Bourdieu notes three forms: institutional, embodied, and objectified. The rules lawyer, through his agency, proves his superior capital by displaying all three forms of cultural capital: institutional through superior specialized knowledge, embodied through a dominant, arguing demeanor, and objectified through the supply of books directly quoted to prove a point. The

10. C. Walden. "A Living Breathing World: Examining Participatory Practices within Dungeons and Dragons." Masters Thesis. Aukland, AUS: Aukland Institute of Technology, 2015.
11. Johan Huizinga. *Homo Ludens: A Study of the Play Element in Culture.* London: Routledge, 2003.
12. Aubrey Adams. "Needs Met Through Role Playing Games: A Fantasy Theme Analysis of Dungeons and Dragons." *Kaleidoscope: A Graduate Journal of Qualitative Communication Research* 12.6 (2014), pp. 69-86.

rules lawyer serves to police behavior, similar to the explicit gender policing Rapheala Best suggests occurs in elementary school.[13] The rules lawyer is a vocal monitor, whose agency is guaranteed by authority granted him by cultural capital.

The Authoritarian Game Master. "Even Stormtrooper enjoy D&D" by heath_bar @Flickr CC BY-NC-ND.

The explanatory nature of rules lawyering often takes an authoritarian tone, providing status to those who use it. Women and minorities, often outnumbered at the gaming table, might demur from rules lawyering behavior because of their internalized marginalization coupled with a sense of what capital they might lose if proven wrong. This only serves to reify the sense of expressive geekdom being White and male. For all the diversity we see around the table, the world of games is arguably a male preserve; the persistence of the rules lawyer only drives that fact.[14] Thus, another way to view rules lawyering is as a means of reinforcing masculine power, thriving at the game table, a

13. Raphaela Best. *We've All Got Scars: What Boys and Girls Learn in Elementary School.* Bloomington: Indiana University Press, 1989.
14. The *male preserve* is a concept created by Eric Dunning that was meant to describe areas of the social world dominated by men where women were generally kept out. More diversity and integration has reduced the numbers of social institutions that could still fall into this definition, but the modern interpretation of the male preserve, provided by Christian Matthews, are "*symbolic spaces* where increasingly undermined narrations of manhood can continue to be practiced"

field of practice where one's years of experience codes as a badge of honor. For many, the threat of the diverse table might not be consciously realized, but as the composition and configuration of groups grow, varied concerns of sexism, racism, cultural appropriation and the like may serve to sideline an assumption of tabletop games as a masculine refuge, or "man cave." In these spaces, men representing the dominant group may feel they have no voice. Yet, as a rules lawyer myself, these conversations must take a back seat to game culture's new, more inclusive, habit. "Sorry – that's not covered by the rules."

New Spaces

Who Has Access?

Making Accessible Play Spaces in Minecraft for Children with Autism

KATHRYN E. RINGLAND

Access to game play is not always guaranteed, especially for those with disabilities. Who has access to what kinds of experiences is always in flux. Children with autism, for example, often do not have access to normative physical face-to-face game play in the same way other children might. Their comfort with face-to-face interactions varies from child to child, as well as their comfort levels in processing different sensory inputs.[1] Kathryn E. Ringland, Christine T. Wolf, Lynn Dombrowski, and Gillian R. Hayes. "Making 'Safe': Community-Centered Practices in a Virtual World Dedicated to Children with Autism." *CSCW 2015*. Vancouver, BC: ACM, 2015, pp. 1788–1800; Kathryn E. Ringland, Christine T. Wolf, LouAnne E. Boyd, Mark Baldwin, and Gillian R. Hayes. "Would You Be Mine: Appropriating Minecraft as an Assistive Technology for Youth with Autism." *ASSETS 2016*. Reno, Nevada: ACM, 2016, pp. 33–41; Pamela J. Wolfberg. *Play & Imagination in Children with Autism*. 2nd ed. New York City, NY: Teachers College Press,

1.

2009. Jean A. Ayres and Jeff Robbins. *Sensory Integration and the Child: Understanding Hidden Sensory Challenges*. Western Psychological Services, 2005. These children often prefer to engage in social play within virtual spaces, such as in *Minecraft*, a virtual "toybox" of building blocks, that autistic children find more accessible than physical world play spaces.[2] Christine T. Wolf, Heather Faucett, Lynn Dombrowski, Gillian R. Hayes and Kathryn E. Ringland. "'Will I Always Be Not Social?': Re-Conceptualizing Sociality in the Context of a Minecraft Community for Autism." *CHI 2016*. San Jose, CA: CHI, 2016. In this essay, I will explore how parents and children have worked together to create an accessible play space. Here, the physical and virtual have become inevitably intertwined as they have not only configured their physical access to the game, but also their software, virtual world, and social interactions. Firstly, parents and children consider the physical layout of their play space – adjusting hardware, not only to allow *Minecraft* to run optimally, but also to create access to play that an autistic child with special sensory needs might require. Secondly, parents and children must negotiate with one another in order to gain access to *Minecraft* – both in obtaining the initial software and the time to play. To create access to this play space, the community must share knowledge with its members, from hardware setup to particular social rules. In doing this these community members work towards creating access to a comfortable, safe place for these children to play.

> [For] disability in particular, we can study how not only social barriers exist within games … but physical barriers as well.

To understand how access to this play space is created, we must first define access. Access, in general, is not a given experience for any

2. Ringland, et al., "Making 'Safe'";

one person. Access occurs at the moments where a body and the world interact. "Access…is an interpretive relation between bodies" or between bodies and the world.[3] Tanya Titchkosky. *The Question of Access: Disability, Space, Meaning*. Toronto, ON: University of Toronto Press, 2011, p. 3. When access is faulty or denied, disability is created in that moment.[4] Elizabeth Ellcessor. *Restricted Access: Media, Disability, and the Politics of Participation*. Postmillennial Pop. NYU Press, 2016. Disability "is not simply lodged in the body but created by the social and material conditions that 'dis-able' the full participation of a variety of minds and bodies."[5] Faye Ginsburg, and Rayna Rapp. "Disability Worlds." *Annual Review of Anthropology* 42.1 (2013), pp. 53–68. Indeed, "questions of access can arise for anyone, at any time, and anywhere for innumerable reasons, access is a way people have of relating to the ways they are embodied as beings in the particular places where they find themselves."[6] Therefore, access goes beyond ability and disability in a medical or physical sense. Rosemarie Garland-Thomson refers to these failed moments of access as a "misfit," where a "misfit occurs when the environment does not sustain the shape and function of the body that enters it." [7] Rosemarie Garland-Thomson. "Misfits: A Feminist Materialist Disability Concept." *Hypatia* 26.3 (2011), pp. 591–609, here pp. 593-594. This misfit does not occur all the time, during every interaction in the world, but rather during encounters in the environment that was not built for that body (*e.g.,* a shelf that is too high, a wheelchair encountering stairs). In summary, access can be

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6. Titchkosky, p. 3
7.

defined as the point of interaction when the world is able to sustain a body and that body is able to *fully experience* the interaction.

Access is usually reserved for the "majority" or normative body (*i.e.,* those bodies that are privileged by society), but there has also been an effort to create a more inclusive environment. This can be seen through official legislation, such as the Americans with Disabilities Act (ADA) , and through individual efforts to create inclusive, safe spaces, such as moderating forums. Handicap parking, as mandated by the ADA, is a prime example of giving access to a certain set of individuals who did not have access previously. Considering the physical aspects of the handicap space – creating wide spaces and adding a ramp to the sidewalk allows for those with mobility impairments to move freely from a vehicle to a sidewalk. Likewise, in considering the social aspects of handicap parking – the licensing required to have access to the spaces, demarcation of the wheelchair symbol, and the inference of priority for disabled individuals – all show how society deems those with disability may have access to public spaces. However, these priorities and considerations only extend to a certain subgroup of disabled individuals – those deemed by the state to have the "right" kind of disability. As discussed in other disability studies literature, society reflects these priorities by shaming those who use the space but whose appearance does not fit the societal expectations of someone who is disabled, even though they are legitimately using the space with the required licenses and tags.[8]

Within Game Studies, certain types of games and gameplay have been privileged over others – for example, digital games over analog

8. Ann N Davis. "Invisible Disability." *Ethics* 116.1 (2005), pp. 153–213.

games.[9] Aaron Trammell, Emma Leigh Waldron, and Evan Torner. "Reinventing Analog Game Studies." *Analog Game Studies* 1.1 (2014). When exploring both analog and digital games, what assumptions are there about the players who play? In both physical and digital spaces, more often than not, players are imagined to be able-bodied (if not cisgender, heterosexual, white, and male).[10] Adrienne Shaw. *Gaming at the Edge: Sexuality and Gender at the Margins of Gamer Culture*. University of Minnesota Press, 2015. When making assumptions about the imagined audience of a game, designers are potentially creating troubled points of access for players. This is salient for many different bodies, not just those with disabilities. As Shaw states, "play spaces are also not inherently welcoming to all bodies"[11] (*e.g.,* those of people of color, women, LGBTQ). But for disability in particular, we can study how not only social barriers exist within games (*e.g.,* limited diversity, exclusivity of playgroups), but physical barriers as well. Exploring non-normative play allows us as scholars and game designers to bridge our understanding of this analog-digital divide (that seems to separate physical play from digital play) that exists in games scholarship by explicating how one begets the other and vice versa.

This essay draws upon data collected from my ethnographic fieldwork, which takes place in an online community that has grown around a *Minecraft* server known as "Autcraft." *Minecraft* is an open-ended, free-play style digital space through which players can interact in a virtual world with no particular goals or play requirements.[12] Sean C. Duncan. "*Minecraft*, beyond Construction and Survival." *Well*

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10.
11. Shaw, p. 187.
12.

Played: A Journal on Video Games, Value and Meaning 1.1 (2011), pp. 1–22. The open-endedness of *Minecraft* allows for an expression of individuality and creativity during play, which may make the game particularly compelling for some players.[13] In this sense, *Minecraft* is less like a normative computer game, and more like an open toybox full of building blocks. The players in this large toybox can play whatever games they choose. As previous work has found, *Minecraft* is a particularly accessible choice for children with autism – given the challenges they may face in a physical world play space – with the ability to play in a more amenable sensory environment.[14]

Through "multiplayer" *Minecraft* allows players to interact with others and be as socially engaged as the individual player desires in a procedurally generated virtual world. One world could have each individual building on his or her own land plot, while another could have a communal space where everyone builds collaboratively. This makes *Minecraft* much more like a virtual world – or a toybox where many people can play together at once – rather than a typical videogame (*i.e.,* more like *Second Life* rather than *World of Warcraft*). This allows for social play to occur in ways that might be similar to a playground, without many of the physical barriers that prevent access for those with autism.[15]

Autcraft is a semi-private server on *Minecraft* created for children with autism and their families. As such, anyone wishing to join must first complete an application to be added to the "white list." This application includes a declaration of having autism or being a friend or family member of someone with autism who plays on the server.

13. Duncan.
14. Ringland, Wolf, Boyd, et al. "Would You Be Mine."
15. Ringland, Wolf, Faucett, et al., "Will I Always Be Not Social?"

Only those who have been added to the white list can access the server. Autcraft currently has more than 7,000 white-listed members with a daily average of approximately 50 players in-world at peak hours of the day and approximately 1,200 unique players logging in each month. This community maintains a *Minecraft* virtual world in tandem with other social media platforms, including YouTube, Twitch, Twitter, Facebook, and a community maintained website (including an administrator's blog, community forums, member profiles, and an in-browser web messenger). The community Facebook page states that Autcraft is "[the] first *Minecraft* server dedicated to providing a safe, fun and learning environment for children on the autism spectrum and their families." The Autcraft community expresses the goal of allowing players to play without the fear of being bullied. As such, the server provides a supportive environment in which children can socialize while participating in an activity they enjoy.

Autcraft has some unique features that make it different from other *Minecraft* servers. This includes administration of the virtual world, construction and use of unique spaces within the virtual world, and organization of specialized events and activities. Many of these features are accomplished through "mods" (*i.e.,* additional software packages that modify the original game) to either the single player or multiplayer game. Using these mods, a server owner can customize the virtual world, gameplay, and objects within the virtual world (*e.g.,* add or modify existing objects found within the virtual world). Autcraft is set up with specific measures in place with the intention of creating a "fun, safe environment for children with autism."[16] Kathryn E. Ringland, Christine T. Wolf, Lynn Dombrowski, and Gillian R.

16.

Hayes. "Making 'Safe': Community-Centered Practices in a Virtual World Dedicated to Children with Autism." *CSCW 2015*. Vancouver, BC: ACM, 2015, pp. 1788-1800. These safety measures include giving each player the ability to keep their items safe from other players, turning off violent monsters, and monitoring and logging of all activity by administrators, moderators, and add-on tools.

I gained access to this community by contacting the founder and discussing my interest in learning more about the community and *Minecraft* server with the administrators. After gaining the appropriate ethics board approval, I was added as a regular player to the community whitelist. I announced my presence through the community forums and social media, as well as within the virtual world itself. I had my own custom avatar created to look like a researcher in order to make my presence clearer (See Figure 1).

Figure 1. A researcher's avatar. Image provided by author.

I also created an in-world office where I could be found by the other community members (See Figure 2). The data I collected and analyzed included interviews of children and parents, fieldnotes from my participant observations, directed and non-directed forum discussions, chat logs created by the *Minecraft* game, and digital artifacts such as screen shots and web posts.

Figure 2. An in-game office for the avatar. Image provided by author.

The motivation for creating the Autcraft community stemmed from a need to have a safe place for autistic children to play. For those with autism, social interactions can be challenging, particularly in person and on the telephone.[17] Janet E. Lainhart and Susan E. Folstein. "Affective Disorders in People with Autism: A Review of Published Cases." *Journal of Autism and Developmental Disorders* 24.5 (1994), pp. 587–601; Wolfberg, *Play and Imagination*. Despite their challenges in social interactions and popular misconceptions about their sociability, individuals with autism typically express a desire to create social connections with others.[18] Eve Müller, Adriana Schuler, and Gregory B. Yates. "Social Challenges and Supports from the Perspective of

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18.

Individuals with Asperger Syndrome and Other Autism Spectrum Disabilities." *Autism* 12.2 (2008), pp. 173–90; Elinor Ochs and Olga Solomon. "Autistic Sociality." *Ethos* 38.1 (2010), pp. 69–92; Amit Pinchevski and John Durham Peters. "Autism and New Media: Disability between Technology and Society." *New Media & Society* 18.11 (2015). Pinchevski and Peters 2015). Online communities, including social networking sites,[19]Moira Burke, Robert Kraut, and Diane Williams. "Social Use of Computer-Mediated Communication by Adults on the Autism Spectrum." *Proceedings of the 2010 ACM Conference on Computer Supported Cooperative Work* (2010), pp. 425–434; Hwajung Hong, Jennifer G. Kim, Gregory D. Abowd, and Rosa I. Arriaga. "Designing a Social Network to Support the Independence of Young Adults with Autism." *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work* (2012), pp. 627–636. can create multiple avenues for communication for those who are uncomfortable with face-to-face interactions.[20] Despite the potential advantages online communication has for people with autism, these interactions also bring their own challenges. It can be difficult to know who is trustworthy in a space where multiple identities, some fraudulent, are easily created.[21] Cyberbullying can be harder to avoid than in-person bullying with increasing mobile and home connectivity.[22]Sameer Hinduja, and Justin W. Patchin. "Cyberbullying: An Exploratory Analysis of Factors Related to Offending and Victimization." *Deviant Behavior* 29.2 (2008), pp. 129–56; Ringland, et al. "Making Safe"; Robert S. Tokunaga. "Following You Home from School: A Critical Review and Synthesis of Research on Cyberbullying Victimization."

19.
20. Pinchevski and Peters. "Autism and New Media."
21. Burke, Kraut, and Williams. "Social Use."
22.

Computers in Human Behavior 26.3 (2010), pp. 277–87. For these reasons, parents and children in the Autcraft community have had to make decisions about what to prioritize in terms of access to play online. To create and maintain access to the game, parents and children modify both their physical and virtual environments. I will explore some of the ways they configure their physical environment and the liminal space between the physical and virtual worlds. The liminal space, in this case, is distinct from the physical space and the Autcraft virtual world, as a place where critical infrastructure is setup and the software for the virtual world is maintained. A liminal space would include activities such as the computer and software setup, registering and maintaining user accounts, installing software modifications. In the liminal space, one does not necessarily occupy a body as in the physical world or virtual world, but nevertheless play still occurs (*e.g.,* overclocking the computer or "playing" around with software settings). Throughout this process, both parents and children are negotiating their priorities in access to the game and engage in various social dialogs in order to maintain.

The physical environment and access to *Minecraft* poses several different challenges for autistic children – both because they are autistic and because they are children. First, as children, they are often not in control of their physical computing setup – particularly younger children who do not yet have the privilege of their own computers or devices. This means that for these children, they must use the family computer, often out in an open space. This also means they might not have permission to use the computer whenever they desire, being relegated to times when parents tell them it's okay to play or when their siblings are not using the device. This varies from home to home, but is not questioned when discussed online. A child might say they have to get off now because their older sibling needs

to do their homework or that their hour is up. This is met with fond farewells, with everyone understanding why the child must leave. How and when a child gets access to a computer must be negotiated within each family. Parents often struggle with how much "screen time" to give a child,[23] Alexis Hiniker, Sarita Y. Schoenebeck, and Julie A Kientz. 2016. "Not at the Dinner Table: Parents- and Children-S Perspectives on Family Technology Rules." *Association for Computing Machinery* 27 (2016), pp. 1374–87. but with autistic children this is complicated by media and experts concerned over the so-called "addiction" to games a medium[24] Nicholas Kardaras. *Glow Kids: How Screen Addiction Is Hijacking Our Kids and How to Break the Trance*. New York: St. Martin's Press, 2016; Micah O. Mazurek, and Christopher R. Engelhardt. "Video Game Use in Boys With Autism Spectrum Disorder, ADHD, or Typical Development." *PEDIATRICS* 132.2 (2013), pp. 260–66; Micah O. Mazurek and Christopher R. Engelhardt. "Video Game Use and Problem Behaviors in Boys with Autism Spectrum Disorders." *Research in Autism Spectrum Disorders* 7.2. (2013), pp. 316–24. and by the child's desire to engage in the virtual world, potentially leading to issues such as temper tantrums and meltdowns. One such instance of a tantrum occurred in the virtual world and led to a string of tantrums in multiple players, forcing the administrators to shut down the virtual world for a couple hours to allow everyone to cool off. Administrators, parents, and children must all learn to balance how much time spent in the play space is appropriate and when access should be given or denied.

The physical spaces where the computer is located often get blurred

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with the social experience online as children share their hardware specifications online and seek advice from others. As children get older, some get the privilege of having their own computers in their bedrooms. This is a source of pride for them and they post the specs of their computers and even pictures of their computing setups in the Autcraft forums (See Figure 3).

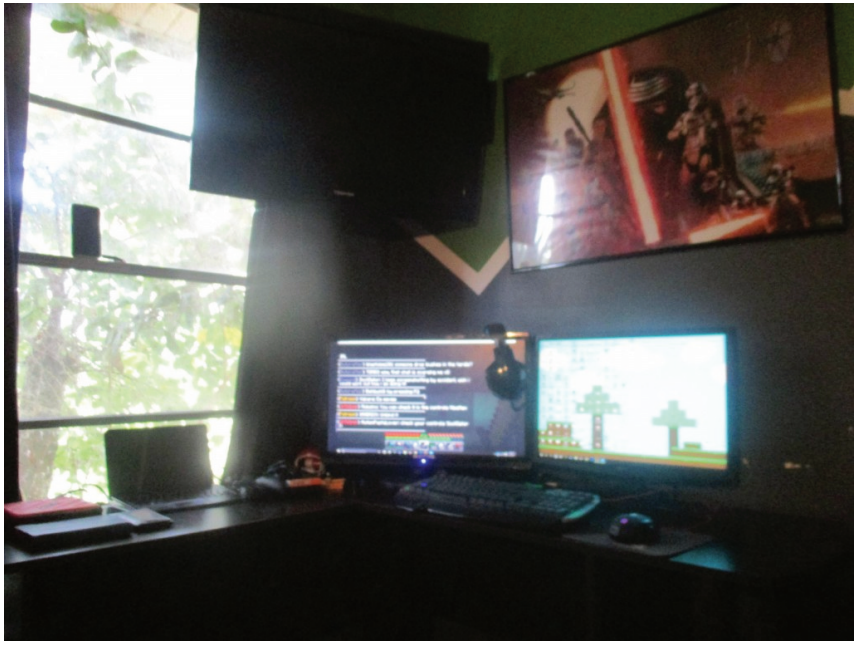


Figure 3 – A picture of a home computer set-up. Image provided by the author.

They also seek each other's advice on the best hardware to upgrade to for *Minecraft* to work better. This can also have the effect of leading these children to a sense of responsibility and accomplishment. They learn skills of how to customize their own hardware systems, what kinds of components they can add on, and how these different changes affect their gameplay. This work of arranging their physical space is a social experience that blends both offline and online spaces,

and through advice-seeking, creates points of access both in their physical and digital interactions.

Another important consideration in the physical setup of *Minecraft* access are the various sensory concerns for those with autism. This includes adjusting the hardware so that it is a more comfortable setup, including dimming or brightening the screen, adjusting the volume of the audio, and even adjusting the brightness of the lights within the physical room. This physical set-up is often mirrored by similar adjustments in the Autcraft virtual world. For example, a child digs a hole in the ground with their avatar in order to make the screen go black (as opposed to simply turning off the screen).[25] This example shows the analog-digital divide in their play is not as stark or as obvious as one might think: Creating access happens concurrently across the physical and digital environments.

Along with hardware and physical environment considerations, the liminal space between the physical and virtual environments proves an important source of contention and access to the play space. This liminal space includes the software itself, user accounts (which currently cost $26 USD), and the computer system setup. The software for *Minecraft* can be downloaded any number of times to compatible devices with a valid user account login. For some children, this means they have their own account (with their own screen names) and for other children they must share the account with a sibling or parent. Children and parents negotiate and decide where to spend their resources in order to create access to *Minecraft* while balancing other priorities in the family – including rules about how much time a child can spend on the computer, how much money a family can afford to spend on access to the game, and the

25. Ringland, Wolf, Boyd, et al. "Would You Be Mine."

needs of other family members. This becomes more than a simple question of access to game play, but a negotiation over the shared environment and individual values to gain access to the Autcraft community.

Through a computer with an internet connection, a child can access the full version of the *Minecraft* software. While there are mobile editions of the game, the Autcraft virtual world is only supported through the computer version. However, for children with limited access to a computer, they may also access the chat functionality of the virtual world through third-party mobile applications. These applications log a user into their account and their avatar appears in the virtual world. But the user cannot move their avatar or even see the virtual world, except for the text chat. This allows community members to participate in one aspect of the virtual world play, even if they do not have access to the full *Minecraft* game. Using these applications to engage in the virtual world show that the child is willing to have some engagement in the virtual world play, or at least the social aspects of this play, rather than none at all.

For those parents who are able to afford to give their child access, they must also "buy in" to the Autcraft experience – that is, they believe that Autcraft is a valuable place for their children to be spending their time. Much of the parent and child's time is consumed in work, school, and various therapies to help support the autistic child, what little time is left for free play is especially precious. Some parents admit trepidation about allowing too much "screen time" or not understanding the technology or game enough to make informed decisions about their child's access. A whole forum is dedicated to helping parents navigate the Autcraft space, while another entire forum is dedicated to solving hardware and software

issues. These online forums become almost as important as the virtual world itself. Both children and parents use it to gain the knowledge required – which can be intricate and in-depth – to gain entry to the virtual world. This knowledge spans hardware and software set-up (including how to add mods and understanding IP addresses) to the social rules needed to navigate the social play within the community.

Parental involvement ranges from minimal involvement to co-playing with their children. Co-playing can take the form of parent and child controlling one avatar in-world together or playing on separate devices in the same physical space. This includes the founder of Autcraft who is also a father of two young boys. His motivation in creating the server was for autistic children to have somewhere they "can feel safe but still get the experience of playing with other people." Many other parents also take roles within the Autcraft community (*e.g.,* administrators) and, therefore, not only play and interact with their own child, but other children (and adults) in-world as well. Parents created a series of rules for interactions within the community to create a safer play space, which everyone, not the just children, must abide by.[26] This parental involvement and rule-making demonstrates the need for both creating a structured, safe play space for autistic children, as well as the lengths these families must go through in every aspect of their lives to meet the needs of their children. And for children whose parents cannot be as involved, they are also granted this same kind of safety through the infrastructures in place and through help provided both through the community's social media and in-world.

There is one group of individuals who are explicitly excluded from the Autcraft community and denied access to the play space – that

26. Ringland, et al. "Making Safe"

is, trolls and those who mean harm to the players with autism. This exclusion is controlled mainly through the whitelist of permitted players. The administrators maintain a list of banned usernames that keeps most of the mischievous makers at bay. However, one hacking incident led administrators to take more stringent precautions. Hackers had managed to redirect the IP address of the Autcraft server so that when players tried to log in they were sent to another virtual world instead. As reported in an administrator's blog, "Once there, they were encased in a bedrock box from which they could not leave and were told that they were rejects from society, degenerates and that they should kill themselves." These individuals made use of their own specialized knowledge of the liminal space in order to engage in their own form of play, at the expense of members of the Autcraft community. When administrators of Autcraft were able to stop the hackers from redirecting Autcraft players, the hackers then launched a DDOS (Denial-of-Service) attack on the Autcraft virtual world, which is a means of technically denying access to the virtual world for everyone. As the administrator put it in his blog, the hackers attempted "to make Autcraft unplayable for everyone because if they couldn't tell the children to kill themselves directly, then they'd at least try to take everything away from them that they could." These attacks eventually caused the Autcraft administrators to change the Autcraft IP address – meaning community members had to understand how to reconfigure their own settings in order not to be locked out along with the hackers. Creating access for some inevitably means denying access to others – especially when the goals for one group are in opposition to the goals of another group.

Figure 4 – A disability sign. Image provided by the author.

As with the handicap parking, the ADA requires buildings be accessible to people with certain kinds of disabilities – in particular,

those with mobility impairments (See Figure 4).[27] Likewise, software and website accessibility requirements mainly focus on those with visual impairments. Not all accessibility and access is equal for everyone – some disabilities are inherently privileged over others. As with the examples above, the Autcraft community, parents, and families privilege access to this virtual play for children with autism. This is important because in many other contexts, autistic children are expected to accommodate others – engaging in interactions and play that they find difficult and uncomfortable – especially in physical world, face-to-face play. For many of the children in Autcraft, the Autcraft virtual world is the only place for them to play and have friendships. Even with creating this play space, this is not accessible to all children, even all autistic children. However, the Autcraft community continues to strive to include as many diverse children as possible. Through this essay, we can begin to understand the various barriers to access to play faced by autistic children, so that in future we can broaden our understanding of accessible play, allowing for a more diverse play community. This means not only understanding how spaces, such as Autcraft, can be included in Games Studies literature, and replicated for other marginalized groups, but also expanding this understanding to other aspects of life. Instead of forcing those with disabilities to accommodate our expected social interactions and methods of play, we can shift our own assumptions about what play in various game media could and might be.

27. Davis. "Invisible Disability."

Game Interfaces as Disabling Infrastructures

DAVID PARISI

Game interfaces, and game mechanics, have long been sites where hegemonic models of physical, sensory, and cognitive functioning are expressed and enacted—spaces where normative machinic subjectivities are constructed. But recently, they have also become sites where such hegemonic models are contested, as aspiring players demand recognition for their own individual and collectivized bodies. Consequently, a new class consciousness emerges around game interfaces, as they undergo a test of their compatibility with a range of bodies previously excluded from consideration. For those players whose bodies do not mesh seamlessly with standardized game interfaces, these machines are experienced as exclusionary, requiring players to actively reshape and modify in order to function effectively. As Stephanie Boluk and Patrick LeMieux suggest, the "screens, interfaces, and protocols" of games "can be inaccessible and *disabling* for many players."[1]

1. Stephanie Boluk and Patrick LeMieux. *Metagaming: Playing, Competing, Spectating,*

In "The Game Player's Duty: The User as an Assemblage of the Ports,"[2] German media theorist Claus Pias explores the relationship between game players and game machines. Attempting to move beyond the cybernetic formulation of humans merging harmoniously with computers, Pias suggests instead that humans become components of the machines they play with through a process of machinic subjectification. By agreeing to play a given game, the player takes on the duty of responding to the machine's prompts; any dereliction of this duty is "punished with a symbolic death."[3] As Pias explains:

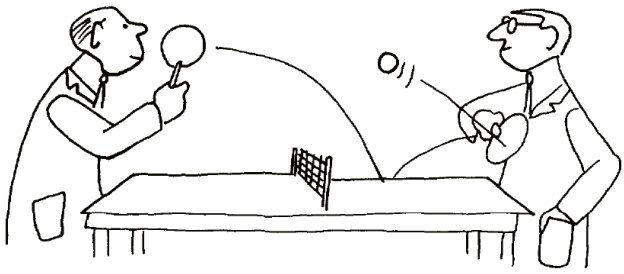
> A game program is […] not only a set of instructions, a kind of law code for the world of the particular game, that I have a duty to follow when I am in the company of computers, but at the same time also a police agent that precisely monitors my actions."[4]

In order for this arrangement to exist in the first place, however, the machine and human must be acclimated to each other, so that information may pass smoothly and efficiently between the two—the commands that the player must execute in order to demonstrate their fealty to the order of the game have to be received, via sense organs operationalized as information-reception channels, and, in order to fulfill their obligation to the software, the player enters commands on

Cheating, Trading, Making, and Breaking Videogames. Minneapolis, MN: University of Minnesota Press, 2017, p. 170. Emphasis added. On the concept of technologies more generally as enabling and disabling, see Michael Schillmeier. "Dis/abling Practices: Rethinking Disability." *Human Affairs* 17 (2007), pp. 195-208. Specific to digital media, see the work of Gerard Goggin, in particular his forthcoming "Disability in Haptic Mobile Media." *New Media & Society* (2017).

2. Claus Pias. "The Game Player's Duty: The User as a Gestalt of the Ports." In *Media Archaeology: Approaches, Application, and Implications*. Edited by Erkki Huhtamo and Jussi Parikka. Berkeley, CA: University of California Press, 2011, pp. 164-183.
3. Pias, p. 179.
4. Pias, p. 179.

an input device. Describing this mutual legibility in sensory terms, Pias initially assigns primacy to the human rather than the machine body, arguing that "there is no (inter)action without visual or haptic procedures—the computer has to be 'humanized.'"[5] But he quickly notes that the human, too, has to be acclimated to the machine, with a "cleaving together (or *suturing*) of human bodies and machine logic […] necessary for the human to become 'machine shaped.'" Games, for Pias, are ultimately "a test of this compatibility" between humans and machines; humans pass this test when they "acquire the ability to function as components of the machine."[6]



Interactive communication consists of short spurts of dialog . . . . .

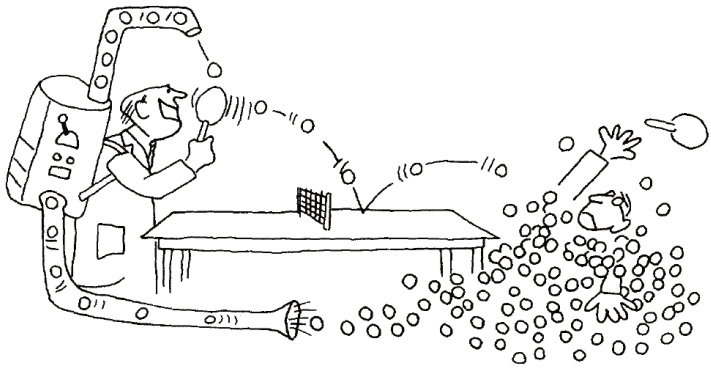
A metaphorical illustration of information passing "smoothly and efficiently" between the human and the machine. Illustration by Roland B. Wilson, for J. C. R. Licklider's 1965 article "Man-Computer Partnership."

But what if the player's body cannot pass this test? What if the player fails to effectively receive the commands issued by the machine, and cannot send the appropriate commands back to the machine? What

5. Pias, p. 180.
6. Pias, p. 180.

if, in other words, the cybernetic feedback loop between player body and machine system fails to close? The punishment for dereliction of duty is symbolic death in the game world—a disciplinary technique that will encourage the player to adapt themselves more perfectly to its rule systems. This assumes, problematically, that the player's body is capable of such an adaptation on its own—that the machine was initially designed in such a way that it would not overwhelm or "overload" the body with commands that it was simply not equipped to respond to coherently. While arguing for the malleability of the human body to the machine, Pias assumes that the human shaped by the machine is stable and constant across the range of different bodies, not accounting for the multitude of differences between player bodies, and taking for granted a universal capacity of humans to adapt themselves to game machines. For those bodies that are incompatible with the game interface, it is experienced as an exclusionary site: the game is a test of compatibility that they fail, in spite of their willingness to become machinic subjects.[7] The game's infrastructures of possibility are simply incompatible with their bodies.

7. In a recent *New York Times* op-ed, Jillian Weise pointed to the malleability with technology that many people with disabilities have little choice but to acquire. Describing her own experience living with a computerized prosthetic leg, Weise notes the ways that she constantly shapes herself to the affordances of the device—maintaining a weight that will be supported by the artificial limb, keeping its battery charged, and learning to work the app that selects between the leg's preconfigured functioning modes. A cyborg by necessity, Weise contrasts her subject-position to that of what she terms "the tryborg": a nondisabled early (voluntary) adopter of wearable technologies eager to demonstrate their capacity to merge harmoniously with digital machines. "Tryborgs," she explains "want to be cyborgs," but they inhabit a counterfeit identity, appropriated from the disabled persons who "depend on the computer for some major bodily function." Living with a disability, then, frequently entails cultivating an intimate and sometimes antagonistic merging with machines that function as compensatory technologies. Jillian Weise. "Dawn of the 'Tryborg.'" *New York Times.* November 30, 2016. https://www.nytimes.com/2016/11/30/opinion/the-dawn-of-the-tryborg.html.



. . . filibustering destroys communication.

Pias draws on J. C. R. Licklider's formulation of the user overwhelmed by machine inputs that they are unable to accommodate themselves to. Illustration by Roland B. Wilson, for Licklider's 1965 article "Man-Computer Partnership."

The Biopolitics of Game Interfacing

While videogames come neatly packaged in ideologies of hedonism and escapism, the critical tradition Pias builds upon situates them as a way to think through human-machine relationships more broadly. Games are always already political, serving as a means of acclimating their players to the structures, logics, and bodily habits required for laboring with machines, whether in the case of mechanical arcade games—as Erkki Huhtamo argues in "Slots of Fun, Slots of Trouble"[8]—or with digital games, as Lev Manovich suggests in "The

8. Erkki Huhtamo. "Slots of Fun, Slots of Trouble. Toward an Archaeology of Electronic Gaming." In *Handbook of Computer Games Studies*. Edited by Joost Raessens and Jeffrey Goldstein. Cambridge, MA: MIT Press, 2005, pp. 1-21.

Labor of Perception"[9] (a point underscored and deepened by Samuel Tobin in an earlier issue of this journal).[10] More specifically, game interfaces—as sites where humans rub up against machines—fill a biopolitical function, allowing for the capture of data about player bodies, quantifying at a micro scale the temporalities of human sensory and motor processes, and harnessing the rhythms of machinic interaction. Game interfaces help make player bodies and bodily processes productive in a neoliberal, late capitalist order that depends on the circulation of data through information-processing subjects. Videogames, then, depend on and further the biopolitical project of making life and lives statistical.

Moreover, videogames exist within a longer tradition in industrial design that produces and articulates normative models of bodily functioning through the intense study of the way bodies interact with objects—a Taylorist process of attempting to generate an efficient feeding of human energy into machines. The positivist programs of study in this tradition (ergonomics, human factors, and user-centered design, for example) emerged in the context of industrial and postindustrial capitalism, and depend on the solicitation and aggregation of information about the bodies of technology users, so that the design of objects may be refined to operate more harmoniously with humans (Edward Tenner fantastically details the follies of this approach).[11]

9. Lev Manovich. "The Labor of Perception." http://manovich.net/content/04-projects/007-the-labor-of-perception/05_article_1995.pdf
10. Samuel Tobin. "Cocktail Cabinets: A Critique of Digital and Ludic Essentialism." In *Analog Game Studies: Volume II*. Edited by Evan Torner, Emma Leigh Waldron, and Aaron Trammell. Pittsburgh, PA: Carnegie Mellon University: ETC Press, 2017, pp. 175-179.
11. Edward Tenner. *Why Things Bite Back: Technology and the Revenge of Unintended Consequences*. New York: Vintage, 1997.

Specific to games, this process entails identifying an ideal-typical user, and crafting an interface that suits their body, as it is revealed through iterative design and testing. For example, in reconceptualizing the design of their console controller for the release of the Xbox One, Microsoft reportedly mocked up hundreds of different prototypes, experimenting with different shapes, sizes, and button configurations, while spending over $100M on development and testing. Of paramount concern was ensuring that the final design would mesh seamlessly with the so-called "golden hands"—Microsoft's internal shorthand for a class of "core" game players who were the primary audience for the redesign.[12] Crucially, Microsoft did not take aim at the normal, or seek to determine the statistically-average hands of game players, but instead turned to those "hardcore gamers who end up understanding the minutiae of the controllers better than the people who designed them."[13] The interface embodied a marketing strategy, where Microsoft hoped its controller would appeal to gamers in the bourgeoning e-sports industry; the design of the Xbox One controller expressed a fantasy of its desired subject.

12. David Parisi. "A Counterrevolution in the Hands: The Console Controller as an Ergonomic Branding Mechanism." *Journal of Games Criticism* 2.1 (2015). http://gamescriticism.org/articles/parisi-2-1/.
13. Dan Hsu. "The Xbox One Controller: Projectors, Smells(!) and Other Stuff That Didn't Make It In." *VentureBeat.* November 18, 2013. http://venturebeat.com/2013/11/18/the-xbox-one-controller-projectors-smells-and-other-stuff-that-didnt-make-it-in-part-1-exclusive/.

Assumptions of normative player and avatar bodies are a historic part of video game advertising. Image by MoonOnThePasture @Flickr CC BY-NC.

But not all hands can be golden. Problematically, the outcomes of such design processes are experienced by many gamers as limiting and disabling, as game interfaces, both at the level of hardware and software, encode normative models of bodily, sensory, and cognitive functioning, while conversely defining those who fail to meet the expectations of the machine. The body of the gamer, as depicted in industry marketing and promotional materials, is a normate one following Rosemarie Garland-Thomson,[14] complete with what Mark Paterson has termed a "normate sensorium"[15] that situates the non-normate, impaired sensorium as its other. The assumption of this normate body is not merely representational: it is encoded in the design of game controllers, in audio and visual presentation of game data, and in the navigational affordances of game systems, the result of a "normate template"[16] that silently informs the practice of interface design.

14. Rosemarie Garland-Thomson. *Extraordinary Bodies: Figuring Physical Disability in American Culture and Literature*. New York: Columbia University Press, 1997, p. 209.
15. Mark Paterson. *Seeing with the Hands: Blindness, Vision, and Touch after Descartes*. Edinburgh: Edinburgh University Press, 2016, p. 209.
16. Aimi Hamraie. "Universal Design Research as a New Materialist Practice." *Disability Studies Quarterly* 32.4 (2012). http://dsq-sds.org/article/view/3246/3185.

As constructivist theorists of disability like Garland-Thomson argue, disability is not something that bodies have inherently, but rather, something that they acquire through interfacing with environments hard-coded with ableist assumptions. All bodies have limits, but the limits of "disabled" bodies present themselves far more spectacularly and forcibly, because infrastructures are not configured to accommodate them. Infrastructures, rather than bodies, are disabling. Informed by such constructivist theories, Boluk and LeMieux push on this point in their new book *Metagaming,* situating game interfaces as sites for creative and transformational experimentation that prompt reflection on the arbitrariness of standard modes of play. The "standard way to play," Boluk and LeMieux argue, exists as "a matter of cultural and historical production—a not-so-lusory attitude toward videogames that privileges a normative, or standardized, body."[17] Through their analysis of "metagames" like Mary Flanagan's *[giantJoystick]* and blind playthroughs of *The Legend of Zelda: Ocarina of Time*, they suggest that games hold the potential to "reveal the invisible rules guiding play."[18] Disability becomes infrastructural and social, rather than individual—and games are socially produced infrastructures within which play takes place, enabling some bodies, while disabling others.

Contesting the Interface

In response to these hegemonic and normative interfaces, there has been an increasing push by activist communities of disabled gamers to point out the ways in which game interfaces embody and express

17. Boluk and LeMieux, p. 40.
18. Boluk and LeMieux, p. 40.

ableist norms of bodily, sensory, and cognitive functioning. AbleGamers, a nonprofit founded by Mark Barlet in 2004, advocates on behalf of gamers with disabilities, providing detailed guidelines for developers so that they can make their games accessible to a wider range of player bodies. The AbleGamers Includification project (2013) presents "a practical guide to game accessibility"[19] for developers, including accessibility checklists for consoles and PCs, with accessibility broken down into the categories of mobility, visual, and hearing. The guide is impressive in scope and method, providing specific examples of how standard game interfaces are experienced as limiting to players with particular conditions, and describing, for example, how a gamer with Muscular Dystrophy will have different accessibility needs than one with Cerebral Palsy, with the former having limited range of motion, but better precision control, and the latter having greater range of motion, but less precision control. Building reconfigurability and remappability options into games, the document suggests, will help the gamer find their own personalized "mobility sweetspot."[20] The guide credits developers who have already worked to improve the accessibility of their games, pointing to certain games as exemplars for other developers to emulate (*Dragon Age: Origins* earns high marks, though they concede that it too will prove exclusionary for some gamers).

What emerges from this guide is a rhetorical framework for articulating different player bodies in response to standard controller and interface configurations—a request to make disabled players' bodies legible to the designers who configure game machines, in

19. Mark Barlet and Steve Spohn. *Includification: A Practical Guide to Game Accessibility*. The AbleGamers Foundation, 2012. https://www.includification.com/AbleGamers_Includification.pdf.
20. Barlet and Spohn, p. 10.

hopes that the interface will become more malleable, adaptable, and accessible. In the process of critiquing the failures of game interfaces to accommodate the particulars of their bodies, disabled gamers articulate themselves as biopolitical subjects, describing the microphysics of their bodily interfacing with particular games, and telling stories of how they experience certain interfaces as disabling.

AbleGamers effectively flips Pias's script: it is not the player who fails the test of their compatibility with the game machine, but rather, the machine that fails the test of its compatibility with the player. AbleGamers—as a platform for the aggregation of disabled gamers' experiences interfacing their specific bodies with specific games—exposes the normative, ableist assumptions encoded in game design at the micro scale. The interface now becomes a battleground for representation at the material—rather than symbolic—level, with gamers pressing on developers to bake accessibility into their products. As David Mitchell and Sharon Snyder argue in *The Biopolitics of Disability*, "disability subjectivities are not just characterized by socially imposed restrictions, but, in fact, productively create new forms of embodied knowledge and collective consciousness."[21]

In service of imparting such subjectivities, Barlet and Spohn provide a list of developer exercises throughout the guide intended to simulate the embodied experience of navigating a game or computational system with different motor, mobility, and sensory affordances. And while Boluk and LeMieux, building upon Alison Kafer's critique of disability simulation exercises,[22] rightly point to the limits of such

21. David Mitchell and Sharon Snyder. *The Biopolitics of Disability: Neoliberalism, Ablenationalism, and Peripheral Embodiment*. Ann Arbor, MI: University of Michigan Press, 2015, p. 2.
22. Alison Kafer. *Feminist, Queer, Crip*. Bloomington, IN: Indiana University Press, 2013.

disability-emulation metagames,[23] the push to make developers aware—at the material and psychotechnical level—of how interfaces are encountered by disabled gamers holds the potential to make at least incremental changes in the practice of design.

Barlet and Spohn also catalog the experiences of disabled gamers who have taken it upon themselves to modify and hack their interfaces, whether through third-party software mods that adapt a game's audiovisual display to suit their needs, or by reworking controllers so that they allow for single-handed gaming (such as those designed by Ben Heckendorn). These ad hoc techniques that disabled gamers use in their attempts to make do with the interfaces provided to them by the industry showcase the grassroots creativity and ingenuity of those marginalized by the normate template, while also implying the more radical solutions that might form formalized partnerships between developers and those in disabled communities. Underlying these examples is the message that videogames consistently fail the test of their compatibility with player bodies in ways unimaginable for and invisible to their creators.

The Game-Maker's Duty

Game interfaces have always been normative—they have always brought with them ideas about the proper relationship between player bodies and machines, about which bodies can and should be allowed to derive pleasure from games. But they were not always recognized as such. Now that game interfaces have been reconceptualized as sites of struggle and contestation, the crucial question becomes one of tactics: how should those arguing in favor of more inclusive interfaces situate their argument? If interfaces are

23. Boluk and LeMieux, pp. 169-170.

expressions of power, on what grounds can that power be successfully challenged, opposed, and productively reappropriated?

In making their appeal, AbleGamers assures game developers that implementing accessibility features will leave games' core functionality intact: the guide opens with a single-page frequently asked question section titled "Let's get a few things out of the way" that addresses common concerns raised by developers when considering adding accessibility options. The FAQ page explains that, no, adding accessibility options will not break achievements; that most accessibility features are "cheap and easy" to implement. But most crucially, the FAQ sheet situates disabled gamers as a market that can be profitably catered to by developers: in response to the question, "how do I justify the cost of developing features for a fragment of my potential audience?" the FAQ touts the "over 33 million disabled gamers in the United States alone" and over 1 billion people worldwide with "some form of a disability." It concludes, based on the sheer size of the audience, that "the potential upside […] is well worth the cost for most games."[24]

Includification presents a neat neoliberal solution to the problem of game accessibility—a bloodless revolution where disabled gamers' access rights merge harmoniously with the interests both of game publishers and other gamers, with massive increases in accessibility promising to be accompanied by a corresponding rise in revenue. The guide repeatedly situates accessibility as a pact with publishers: an inset against the backdrop of a screenshot from Stardock's *Demigod* states that there are 63 million Americans with disabilities, telling developers "that's a lot of your customers."[25] The Includification

24. Barlet and Spohn, p. 7.
25. Barlet and Spohn, p. 27.

guide presents a framework for transforming nonproductive bodies—bodies that exist outside the loop of machinic consumer subjectivity—into productive subjects that are incorporated into a circuit of human-machine interaction that exists inside of a broader network of capitalist subjectification.[26]

If games are a test of the compatibility between machines and humans, this test itself exists a level below another more all-consuming one: the test of the player's compatibility with the fundamental logic of market capitalism, where rights are accorded to people not based on any inalienable notion of shared human dignity, but rather, based on the individual's ability to articulate their value in market terms. In this framework, where disabled gamers are worthy of access and accommodation chiefly because they represent undermobilized capital, it is also possible for gamers with disabilities to fail the compatibility test, if they have a condition deemed too rare to justify the price of inclusive design. AbleGamers makes a nice end run around this by suggesting that designers can solve the bulk of accommodation problems by simply making games as user-configurable as possible, and arguing that so-called "Level One" and "Level Two" accessibility can be implemented for a fairly low cost. In pressing their case, however, they downplay the possibility that developers will balk at any accessibility implementation costs that rise above zero, repeatedly touting the ease of increasing configurability options. Even while conceding that "game accessibility will not

26. Although I take a somewhat critical approach to the AbleGamers Includification document in this article, I laud the foundation for the scope and intensity of their efforts (which are not represented comprehensively in this piece). As someone who is not disabled myself, but did grow up with a paraplegic sibling, I gained a deep appreciation for the practical difficulties of both accessibility itself, and of advocating for infrastructures to be made accessible. AbleGamers embodies the spirit of DIY activism that has underpinned the disabled rights movement for decades, while pushing for the fight for access into a vital new terrain.

always be a profitable endeavor," Barlet and Spohn revert back to the neoliberal position that rights ought to be allocated to individuals based primarily on their purchasing power, suggesting in the following sentence that "there are 100 million gamers with disabilities worldwide, many of whom have disposable cash for things like entertainment and who shy away from video games because of the possibility of being literally unable to play the game they just bought."[27]

As with accessibility in other infrastructures, game accessibility presents a complex problem, owing especially to the heterogeneity and multiplicity of "disability" as a category, and to the corresponding variety of material accommodations necessary to accommodate the range of potential players. In calling for games to be made more adequate to the needs of gamers who fall outside the borders of the normate template, AbleGamers expresses the ways in which games too often fail their players, offering pragmatic remedies to the problems faced by many disabled gamers. However, in couching their appeal in the rhetoric of the market, they tacitly concede that the obligation of developers to disabled gamers hinges on the aggregate purchasing power that can be mobilized by inclusive design. Appeals to the ethical duty of game developers to design with accessibility in mind may be met with success on an individual basis, but it may be wildly naïve and optimistic to expect the industry at large to expend resources solely on this basis. Yet another approach, explored by Powers, Nguyen, and Frieden,[28] would be to press on the legal obligation of developers and publishers

27. Barlet and Spohn, p. 9.
28. George Powers, Vinh Nguyen, and Lex Frieden. "Video Game Accessibility: A Legal Approach." *Disability Studies Quarterly* 35.1 (2015). http://dsq-sds.org/article/view/4513/3833.

to build accessibility into their products, building on established rights won in other commercial spheres. Regardless of the strategy pursued, the struggle over game interfaces will remain—to merge Pias with Boluk and LeMieux—an ongoing metagame, with the articulation of disabled gamers as both machinic and economic subjects as its outcome.

Queering the Controller

MIGUEL SICART

To begin, I must acknowledge that Jess Marcotte (@jekagames) presented their research on queering game controls around the same time I presented this work. Had I known about it before, I would have engaged with and cited Marcotte's work, which is more interesting and better researched than my own. I recommend that readers read it before they read my piece: http://tag.hexagram.ca/jekagames/cgsa-2017-queering-game-controls-slides-and-talk/

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I want to share some news about videogames. I have good news and bad news, but given the sorry state of the world, let's start with the good news: videogames are getting better.

We can start with the obvious. There are more and more sports games simulators, and darkly monochromatic war-games about white people shooting brown people. These may be the most commercially successful games, but they no longer exclusively define

videogame culture. We finally have videogames about poverty,[1] the beauty of the universe,[2] sex and intimacy,[3] and the challenges of being different in a world dominated by sameness.[4]

Videogames are exploring new expressive palettes. Mechanics and narratives are now instruments for exploring the many ways in which we can play. The pleasures of video games are now more expansive, more mature, and more inquisitive than ever before. We finally have mature games for mature players.

That was the good news. The bad news? No matter if the game is a poverty simulator, a meditation about wholeness and nothingness, or a walking simulator that explores memories and despair, most games are either controlled by fancy typewriters or impersonal pieces of plastic with protruding sticks and more buttons than one has fingers. While games mature into the future of creative expression, we still control them with technologies developed decades ago.[5] Building on the work of Naomi Clark, merrit kopas, Todd Harper, Jaakko Stenros, Kaho Abe, Bonnie Ruberg, and many of the others in the queer games movement who constantly challenge game scholars to think harder about the many heteronormative frames that guide the games industry, let me try to convince you that as video games develop new vocabularies of expression, they are weighed down by the conservative modes of control that we still use to design,

1. See *Cart Life* (Hofmeier, 2011). https://docubase.mit.edu/project/cart-life/.
2. See *Everything* (Double Fine, 2017). http://www.everything-game.com.
3. See *Ladykiller in a Bind* (Love Conquers All Games, 2016). http://store.steampowered.com/agecheck/app/560000/.
4. See *Mainichi* (Mattie Brice, 2012). http://www.mattiebrice.com/mainichi/.
5. And yes, I know what you are thinking: this is the age of ALT-CTRL at GDC, this is the age of Arduino and motion controllers. But I see no real development. See http://www.gdconf.com/news/heres-lineup-games-playable-gdc-2017s-alt-ctrl-gdc-showcase/.

develop, and play them. Let me argue that video game controllers have a very limited expression palette and that there's very little that controllers make us *feel*. Emotions such as desire, longing and arousal are always expressed through game mechanics and narrative; they are not embodied and felt viscerally, and this is a problem.

I am unsettled by the status quo that permeates how we think about games and controllers, and the culture of "alternative controllers" like those showcased at alt.ctrl.gdc[6] does little to reassure me. We don't need alternative controllers, we need controllers for the alternative emotions, alternative bodies, and alternative experiences that games now foster. We must explore the possibilities of game interfaces, and embrace the traditions that analyze[7] and encourage[8] alternative ways of engaging with controllers. It's time to push things beyond what is understood and established, and to think of controllers as the embodied part of the game experience, as the way of exploring the uncertainties of the body-player.[9] I want to explore game controllers from the perspective of erotic Human-Computer Interaction and consider sex toys. What better way of challenging the controller as a

6. See http://www.gdconf.com/events/altctrlgdc.html.
7. David Parisi. "Shocking Grasps: An Archaeology of Electrotactile Game Mechanics." *Game Studies* 13.2 (2013). http://gamestudies.org/1302/articles/parisi; David Parisi. "Game Interfaces as Disabling Infrastructures." *Analog Game Studies*, 4.3 (2017). http://analoggamestudies.org/2017/05/compatibility-test-videogames-as-disabling-infrastructures/; Claus Pias. "The Game Player's Duty: The User as a Gestalt of the Ports." In *Media Archaeology: Approaches, Application, and Implications*. Edited by Erkki Huhtamo and Jussi Parikka. Berkeley: University of California Press, 2011, pp. 164-183.
8. Academically, see Stephanie Boluk and Patrick LeMieux. *Metagaming: Playing, Competing, Spectating, Cheating, Trading, Making, and Breaking Videogames*. Minneapolis, MN: University of Minnesota Press, 2017. Artistically, see the Copenhagen Game Collective. http://www.copenhagengamecollective.org.
9. Gregory L. Bagnall. "Queer(ing) Gaming Technologies. Thinking on Constructions of Normativity Inscribed in Digital Gaming Hardware." In *Queer Game Studies.* Edited by Bonnie Ruberg and Adrienne Shaw. Minneapolis: University of Minnesota Press, 2017.

paradigm of interaction than to think about it through this intimate lens?

This is a manifesto, but also hopefully the first step of a research program that considers how to design controllers for other intimacies of interaction in videogame play. This is a project about queering the video game controller. As Naomi Clark puts it, "it is the refusal to obey orthodox conventions about games, and [the] willingness to embrace bare systems, that makes it easier for queer games to achieve striking new forms of interplay and consonance between the experiences and the aspects of queer existence they represent and the structures of interaction that players encounter."[10] This logic can be applied to videogame controllers, which endure as gaming's most orthodox convention. As Gregory L. Bagnall asserts, "material gaming technologies mediate and influence our experiences with games […] [G]aming technologies are informed by the very same dominant, hegemonic, heterosexist paradigms that game scholars, critics, and developers have identified in games themselves."[11] It is time to question controllers, to expand our vocabulary so we can design and analyze intimate embodied experiences that explore the full potential of videogame controllers.

F is for Feeling

10. "What is Queerness in Games, Anyway?" In *Queer Game Studies*. Edited by Bonnie Ruberg and Adrienne Shaw. Minneapolis, MN: University of Minnesota Press, 2016, Kindle loc. 698.
11. Gregory L. Bagnall. "Queer(ing) Game Technologies: Thinking of Constructions of Normativity Inscribed in Digital Gaming Hardware". In *Queer Game Studies*. Edited by Bonnie Ruberg and Adrienne Shaw. Minneapolis, MN: University of Minnesota Press, 2016, Kindle loc. 2769-2776.

Mainstream videogames—especially shooters—are the pinnacle of reactionary videogame design and videogame culture. It feels very unfair to mock *Call of Duty: Advanced Warfare* (Activision, 2014) for its lack of subtlety—after all, it is another Michael Bay-esque shooter that glorifies a particular superheroic understanding of the military—but for such a serious game, it can sometimes be so, so silly. Like when it commands players via an onscreen prompt to "Press F to pay respects." The structure of cybernetic play is so beautifully simple—*Call of Duty* translates emotions to button presses and quick time events.

When we press F to feel something, the controller translates what we feel into a clear input that the game can process. This is magic! We press a button, and the game reacts to our minute action. We move a stick, and *that thing* on screen reacts. We shake it, it moves. And vice versa, we can sometimes *feel* the game world vibrating in our hands. Although this cybernetic loop helps to make great, enjoyable, videogames, it is also a profound flaw.

This cybernetic process happens through controllers: keyboards and mice, touch screens, and dedicated gamepads. I am aware of the scarce but poignant work done on the history of game controllers,[12] but my project is slightly different. I want to take the side of cabinets of wonders and truck stop games rather than the dominant, established history of the controller, the console and the computer. The genealogy of the questioning I propose aligns videogame

12. William Lu. *Evolution of Video Game Controllers: How Simple Switches Lead to the Development of the Joystick and the Directional Pad*. 2003. http://www.stanford.edu/group/htgg/sts145papers/wlu_2003_1.pdf; Nicolas Nova and Laurent Bolli. *Joypads!: The Design of Game Controllers. CreateSpace Independent Publishing Platform*, 2014.

controllers not with *Pong* and mainframes, but with love tester machines[13] and other props for play.

Love tester machines. (Image by Cuppysfriend on Wikimedia Commons, CC BY-SA.)

Essentially, game controllers are two things: physical interfaces, and systems of control.[14] Game controllers provide a means to provide input to the game system, in order to interact with it and wait for its feedback. They are machines designed specifically to allow users to give instructions to a computer to process.

We press X to jump, R3 to check the map, left stick to walk. We

13. See https://en.wikipedia.org/wiki/Love_tester_machine.
14. David Parisi. "A Counterrevolution in the Hands: The Console Controller as an Ergonomic Branding Mechanism." *Journal of Games Criticism*, 2.1 (2015), pp. 1–23. https://static1.squarespace.com/static/51f9aac5e4b080ed4b441ba7/t/54fa6875e4b07e462fd5cf14/1425696885139/Parisi-2-1.pdf.

do so obediently, knowing that these virtual worlds are all reacting to these minute gestures. And it feels good. We experience a sense of power when we affect a game's world just by pushing a button, pushing a stick, squeezing a trigger. It is a dream of agency, a mediating magical machine that makes us fast, strong, able and powerful. Controllers are, or can be, devices of liberation.

But controllers are also systems of control. All games, however complex, must be controllable. We need to press X to jump, and we can only jump if we press X. The controller tells us what to do, *controls* what can be done, and captures us within its definition of agency. Powerful, yes, but also limited to a very specific architecture of control.[15]

The architecture of control is one of limits, of predesigned possible actions. Our hands are limited to the prehensile capacities of the fingers. Controllers provide input, but it is the eye that processes the feedback.[16] In everything else, the controller provides input for the eye to understand. The body becomes a provider of instructions, an instrument for the mind, which is the executor of actions and the processor of results. The body is but an appendix to the controller, a medium between the mind and the machine.[17]

15. Michel Foucault. *Discipline and Punish: The Birth of the Prison.* London: Penguin, 1977.
16. There is rumble, yes, but the vocabulary of shaking and vibration has not evolved beyond the bygone days of *Rez* (SEGA, 2001).
17. Peter-Paul Verbeek. "Cyborg Intentionality: Rethinking the Phenomenology of Human–technology Relations." *Phenomenology and the Cognitive Sciences* 7.3 (2008), pp: 387-395: doi:10.1007/s11097-008-9099-x.

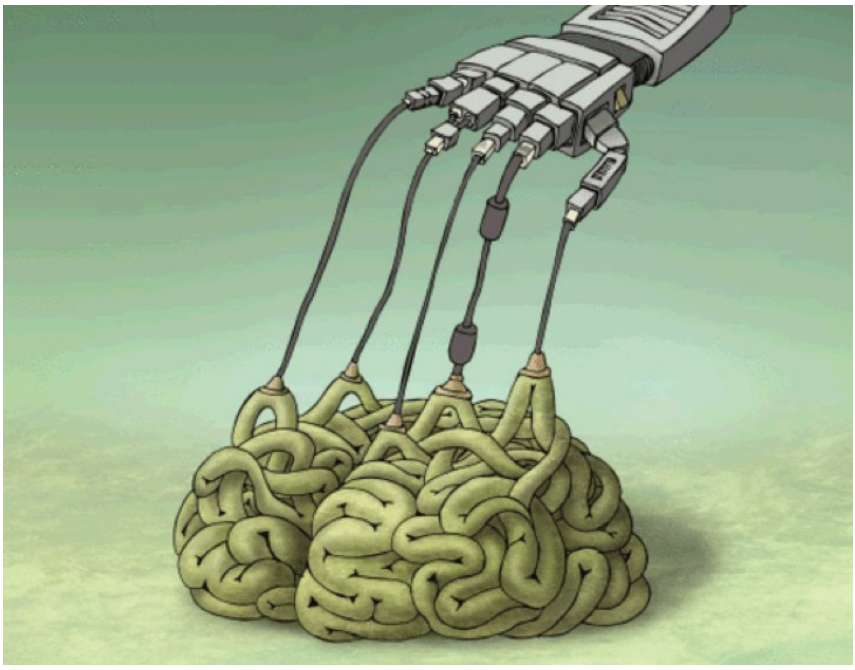


Image by Amber Case on Flickr, CC BY-NC.

Game controllers are Cartesian prisons. They trap the body and turn it into an instrument for the audiovisual animal. Our body does things, but only our mind is allowed to understand them. Even games with "motion controllers" are just gymnastics of conflict, ignoring the multiple other ways in which bodies can play. Physical games are for the body what puzzle games are for the mind: tests on particular configurations (of bodies, or intellects) that leave out as much (appendages, individuals, and groups) as they include.

It is in the controller based feedback loops where the power of videogames lies. Videogames provide agency beyond bodies that can be limited or limiting, socially, biologically, or culturally. But this is also a great Cartesian lie, one that denies the pleasures of the body *doing* things and *feeling* things. We press F to feel. It is time to

imagine controllers that open the body to the pleasures of the mind. Controllers are a starting point for thinking about games and the body.

Toys

You may be thinking: all this sounds interesting, but what alternatives are there? Controllers are what they are, games are what they are! That might be true, but only when we game design scholars think as isolationists. We bind ourselves to understanding how the industry does things, or should do things. Which is fine, but oh so limiting.

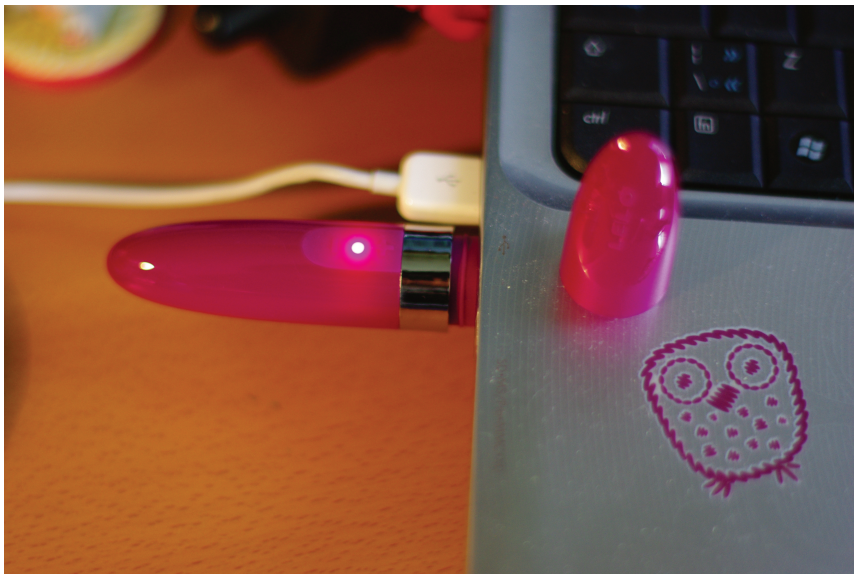
We have a problem in game design, a lack of a vocabulary and inspiration to create intimate embodied experiences that use controllers as part of that experience, rather than as interfaces to a visual world. We need knowledge about how people share embodied emotions mediated by technologies. And not just any emotional technology, but those that invoke forms of pleasure and intimacy, as those are still largely unexplored areas in games. And while game design might not have this knowledge, other areas of interaction design do. Why seek inspiration in "maker culture" interfaces, or in movies and other fictions when there are already intimate controllers out there? Controllers that foreground bodies and pleasure in their design. Let's look at sex toys.[18]

The history of technologically augmenting human bodies for sexual

18. Anna Eaglin and Shaowen Bardzell. "Sex Toys and Designing for Sexual Wellness." In *CHI'11 Extended Abstracts on Human Factors in Computing Systems*. 2011, pp. 1837–1842. doi:10.1145/1979742.1979879.

pleasure is long, so I want to limit my scope to motorized pleasure devices (dildos and vibrators but also rings and other similar devices).[19] In fact, I want to focus on modern sex toys, created in cooperation between sexologists and interaction/industrial designers. These toys leverage new materials with computational interfaces, making them arguably one of the most successful (yet puritanically overlooked) examples of Third Wave HCI.[20]

19. Rachel P. Maines. *The Technology of Orgasm. "Hysteria," the Vibrator, and Women's Sexual Satisfaction*. Baltimore: The Johns Hopkins University Press, 1999. See also Jeffrey Bardzell and Shaowen Bardzell. "Pleasure Is Your Birthright: Digitally Enabled Designer Sex Toys As a Case of Third-wave HCI." In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems.* 2011.
20. Johanna Brewer, Joseph Kaye, Amanda Williams, and Susan Wyche. "Sexual Interactions: Why We Should Talk About Sex in HCI." In *CHI '06 Extended Abstracts on Human Factors in Computing Systems.* CHI EA '06. ACM, 2006. http://doi.acm.org/10.1145/1125451.1125765; Jeremy Birnholtz, Irina Shklovski, Mark Handel, and Eran Toch. "Let's Talk About Sex (Apps), CSCW." In *Proceedings of the 18th ACM Conference Companion on Computer Supported Cooperative Work & Social Computing.* 2015.



A vibrator charging through a computer USB port. (Image by Kimli on Flickr, CC BY-NC.)

In their landmark study on sex toys, Shaowen and Jeffrey Bardzell explain how the design of modern sex toys is always a critical process.[21] Designers set off with the goal of creating pleasurable, embodied experiences, and they do so by asking users, materials, and contexts, key questions about how these devices would be used, what their users are looking for, and how can they satisfy those needs.

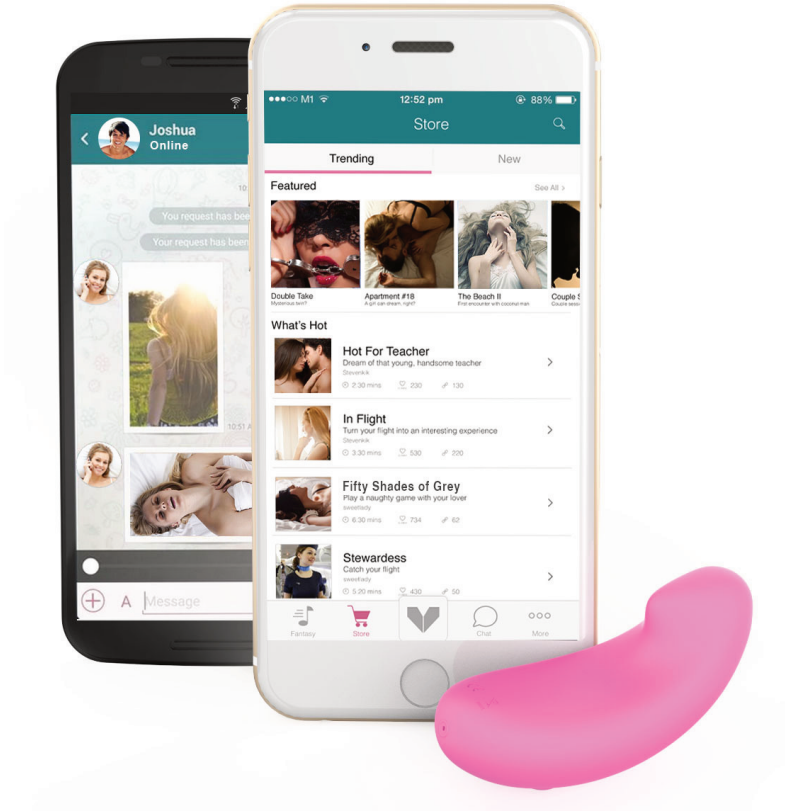
I am not claiming here that we need to design game controllers *as* sex toys, but that we should approach the design of game interactions as sex toy designers approach the design of their products: by critically questioning the role of bodies and pleasure in the experience of a game.

What can we learn from sex toys, then? First of all, sex toys are

21. Eaglin and Bardzell.

technologies that an eminently visual animal will use in non-visual ways, so they are designed to be perceived and felt through touch and sound. Sex toys understand how the body acts and learns, where the body is and how to extend that knowledge into technologies. Game design needs to understand how to design for embodied experiences that are not subordinate to the eye, and the haptic design of sex toys is a step forward in that direction.

Sex toys are also examples of ergonomic designs that use limited feedback mechanisms in creative ways. Essentially, a DualShock controller is an awkwardly held dildo. There is no good reason not to be inspired by the palette of expressions that a sex toy can achieve with the same mechanisms. And the same goes for all the computational connectivity of modern sex toys. These devices have Bluetooth, which they use to connect to apps that adjust tactile feedback based on sensor input. These same sensors are widely available in most game controllers. How can we reimagine these inputs and outputs in a way that provides pleasure in the interaction, beyond the mind-driven mastery of the system?



A modern vibrator controlled via a smartphone app. (Image by Hollenderek on Wikimedia Commons, CC BY-SA.)

Perhaps the biggest inspiration that we can take from sex toys is that of the design of and for a context. Dildos, rings, and other sex toys are designed for the embodied experience of sexual pleasure. Their designers understand context and work to enhance it. They are designed to be a part of a broader embodied experience that happens in a situation, in a particular context.

Sex toys are designed to be one part of a larger experience, within a larger setting. They are toys because they help us play. They liberate

because they don't gatekeep play as controllers do, they only aid in its pleasures. And so, game controllers should take that liberating function too. They should liberate us from the Cartesian prison of the gaze and logics that take the form of a game. Sex toys help people create, structure, and enjoy a pleasurable play experience, and videogame controllers should do the same. They should forget being *about* the game, and refocus on the player as an embodied, emotional being seeking pleasures.

Game controllers must follow the lead of sex toy design. Because controllers are not just a gateway to the simulated environment on a screen. They are not just the input mechanisms for algorithms dressed up as worlds. Controllers are elements of bodies in motion that seek pleasure in playing. Until controllers are designed to facilitate embodied forms of pleasure, they will jail us within the Cartesian trap of mind and body. Sex toys, as things we play with, show us how tools augment and mediate the human experience of pleasure.

Queering the Controller

There remains a cultural obstacle to this radical new ethic of controller design. Controllers have been designed and used as simple input (and occasionally rumble) devices since they were first developed. Changing this paradigm requires deep rethinking of games as forms of pleasure.

Interestingly, we already have examples of this alternative way of thinking in new types of interfaces. Tablets and phones, with their touch interfaces, have shown how creators are ready to explore the

ways the body plays with games. *Fingle*[22] playfully encourages us to touch others, and *Chicanery*[23] uses physical proximity for rougher forms of physical play. *Luxuria* Superbia[24] *Cunt Touch This*[25] and *La Petite Mort*[26] redefine touch as a form of embodied experience.

The fact that most of these examples are found on touch devices juxtaposes the frontier of controller design against its orthodoxy. The relative newness of touch interfaces, combined with their obvious physicality, has already inspired many developers to design more playfully. What we need is that same spirit for all game controllers, for all those plastic horns and head-mounted bricks. We need to queer those controllers.

I understand how potentially problematic it is that I, a middle-aged, straight, tenured, white, cis male academic, use queer theory in an article. However, my work is deeply indebted to the field of queer game studies, from Bonnie Ruberg and Adrienne Shaw to Coleen Macklin, merrit kopas, and Mattie Bryce. I want this article to be a very modest contribution to this field. Following Naomi Clark's application of the queer theory to game studies,[27] my goal is not to hijack the term or perform identity tourism, but to use the concept of queerness to push the discussion on game controllers. Queerness lends much to this discussion because it allows us to question the status quo of discourse and to think differently about bodies and

22. Game Oven, 2011. https://itunes.apple.com/us/app/fingle/id490109661?mt=8.
23. Anna Anthropy/Bennet Foddy, 2010. http://auntiepixelante.com/?p=257.
24. Tale of Tales, 2013. http://luxuria-superbia.com.
25. Copenhagen Game Collective, 2014. http://www.copenhagengamecollective.org/projects/cunttouchthis/.
26. Lovable Hat Cult, 2014. http://lovablehatcult.dk/petite.html.
27. Naomi Clark. "What is Queerness in Games, Anyway?" In *Queer Game Studies*. Edited by Bonnie Ruberg and Adrienne Shaw. Minneapolis, MN: University of Minnesota Press, 2016, pp. 3-14.

interaction. This intervention is precisely what is needed when considering controller design.[28] We need to break the norms so that a radical new approach to embodied experience becomes possible.

There is a deeply patriarchal, normative, male-centric discourse embedded in the Cartesian logic of the controller. The controller as we conceive it now is an instrument for the gaze, but it is a man's—wait, no—a boy's gaze. And that gaze determines everything else, in games as well as in the arts.[29] So by queering the controller not only do I want to change how we think about controllers, but I also want to highlight how much of the work in game studies, including mine, never challenged the deeply troubling assumptions that are primordial to the ways we interact with videogames. To queer the controller, we need to queer game studies, and thanks to the efforts of so many, we can now continue these lines of inquiry.

So, how can we queer the game controller? I think there are two main strategies that we can follow: thinking alternatively about how to use existing game controllers to convey embodied, non-visual experiences, or making new controllers that engage with the bodies that play. Thanks to the democratization of game-making tools, many creators are not necessarily the type of engineers/artists that can

28. See Anna Anthropy. *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Drop-outs, Queers, Housewives, and People Like You Are Taking Back An Art Form.* New York: Seven Stories Press, 2012. Derek A. Burrill also offers a great overview of the relation between queer theory and game studies in "Queer Theory, the Body, and Videogames." In *Queer Game Studies*. Edited by Bonnie Ruberg and Adrienne Shaw. Minneapolis, MN: University of Minnesota Press, 2016, Kindle loc 997-1152.

29. Laura U. Marks, "What Can a Body Do? Answers from Trablus, Cairo, Beirut, and Algiers." *Paragraph* 38.1 (2015), pp. 118-135; Laura U. Marks. "Thinking Like a Carpet: Embodied Perception and Individuation in Algorithmic Media." *Acta Universitatis Sapientiae, Film and Media Studies*, 7.1 (2014): pp. 7-20, doi:10.2478/ausfm-2014-0011; John Berger. *Ways of Seeing*. New York: Penguin Books, 1990.

create new controllers. So we need to have strategies to queer existing controllers. We need to look at console controllers *as if* they were sex toys, from the lens of a body that seeks out pleasure.[30]

I cannot provide direct solutions, but inspirations. What if we rejigger the tactile elements in these controllers? What if caressing becomes a way of giving input, one that is followed by feedback from the rumble motors? What if squeezing the analog triggers was actually an analog way of providing input, a matter of careful degrees of sensation? What if shaking, balancing, vibrating were ways of touching the controller? The queer game controller is that which understands that input and feedback are non-visual, that they are related, but subordinate to the visual cybernetic loop. A queer controller gives meaning to the body at play, and turns that body into a source of pleasures.

The other main strategy is to create queer controllers from scratch. Following the success of the maker culture in games, more and more game exhibitions are accepting works with non-conventional controllers. However, many of these seem to shy away from the pleasures of the body. They are clever contraptions for some forms of pleasure, but they are not always exploring the full potential of the body as a source of pleasure. Why not think about controllers that leverage networking to create synchronized yet remote ways of *being* with another body? Or controllers that afford one-to-many pleasurable interactions? Or how about thinking about other forms of providing input? Not hard buttons, but moist controllers. Bodies have wide ranges of expression for which we can use sensors to

30. See also Aaron Trammell and Emma Leigh Waldron. "Playing for Intimacy: Love, Lust, and Desire in the Pursuit of Embodied Design". In *Rated M for Mature: Sex and Sexuality in Video Games.* Edited by Matthew Wysocki and Evan Lauteria. New York and London: Bloomsbury Academic, 2015, pp. 177-193.

translate into input. But for queer controllers, we need to think not about providing input, but about creating sensual sensors.

All bodies play, yet videogames so often neglect that very simple fact. We have forgotten our bodies, we have limited them to being just a vessel for minds to enjoy games. It is time to bring all bodies to play. It is time to think about the embodied pleasures of play beyond the pleasures of the mind. It is time to queer controllers.

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What Counts

Configuring the Human in Platform Studies

IAN BELLOMY

As is, platform studies has nothing to say about analog games.

When Richard Garfield invented *tapping*—a game act in *Magic: The Gathering* (1993) wherein a player rotates a card sideways to indicate use—he did not discover nor invent a new physical feature or process within a playing card or cards, nor did he invent some new way to physically modify a card.

He recognized that it was convenient and useful to appropriate a card's orientation as having a certain *significance*; that orientation could be used to *indicate* a logical state for use in a logical process. Tapping is a brilliant design decision because the act is easy for people to perform, the result is clearly observable, and the binary state that the rotation signifies is sufficient for creating conditional logic such as 'creature cards can block, if not tapped'. The act also makes the card text more difficult to read—a nice parallel to removing an item from the player's domain of influence.

There are several lessons here: (1) The card doesn't compute, the

person computes. (2) The person performs the computation by appropriating an otherwise continuous feature of the world. (3) The very act of performing the computation has experiential side effects. And so it is that *people* constitute a unique computing system, e.g. a unique platform.

Platform Studies

With regards to *electronic* computing, Ian Bogost and Nick Montfort make several observations: computer systems exist in standardized forms, or *platforms*; each platform affords designers particular computational opportunities; these opportunities influence the character of the artifacts made for the platform; and lastly, these relationships were hitherto overlooked.[1] For example, the stringent memory constraints of the Atari VCS made pseudo-random number generation prohibitive (even the small space an algorithm would take up was valuable), but the system's instruction set allowed access to the bytes used in running the game code. So for *Yar's Revenge* (1981), Howard Scott Warshaw used data from unrelated instructions that the machine was running to create the kind of pseudo-random data needed for drawing the game's "neutral zone". As Montfort and Bogost state, "When the player looks at the neutral zone on the screen, he is also literally looking at the code."[2] This kind of technical perspective can reveal hidden authorial fingerprints and allow us to better understand such games in relation to similar artifacts.

Bogost and Montfort's observations form the basis of the ongoing

1. Ian Bogost and Nick Montfort. "New Media as Material Constraint. An Introduction to Platform Studies." *Electronic Tectonics: Thinking at the Interface*. (2007), p. 176.
2. Ian Bogost and Nick Montfort. "Platform Studies: Frequently Questioned Answers." Paper presented at the *Digital Arts and Cultures Conference 2009*, Irvine, California. (December 2009), pp. 93-94.

and successful MIT Press book series *Platform Studies*. Each book concerns how developers cope with a set of computational capabilities and the effects of this coping on the procedural artifacts that depend on that platform. The underlying premise being that we can better understand digital artifacts *qua* authored entities if we better understand the unique technical conditions under which they were created.

But whether because game systems are the more recognizable platforms,[3] because of some affinity between games and computers,[4] or for some other reason entirely, computer games are a prominent subtopic in platform studies literature. This has led Nathan Altice (2014)[5] and Jan Švelch (2016)[6] to consider what Bogost and Montfort's perspective might contribute to the study of *analog* games.

However, their responses take liberties with how *platform* is construed. Their paths diverge over the topic of computation; Švelch jettisons this aspect of platform studies altogether. These pose equally divergent questions for future analog platform studies. Although each of them makes insightful observations, they each admit different complications. I propose that these can be avoided and other insights gained by branching in yet another direction; one that emphasizes computation even more than Altice does; and one where computational capabilities are situated in *people*, not materials. In short, accepting that computation need not be done by technology, people's ability to compute qualifies people as platforms.

3. Cf. Bogost and Montfort, "Platform Studies."
4. Jesper Juul. *Half-real: Video games between real rules and fictional worlds*. Cambridge, MA: MIT Press, 2011. Here, pp. 61-64.
5. Nathan Altice. "The Playing Card Platform." *Analog Game Studies* 1.4 (2014)
6. Jan Švelch. "Platform Studies, Computational Essentialism, and Magic: The Gathering." *Analog Game Studies* 3.4. (2016)

This notion has at least two precedents. Designer Tim Fowers used a people-as-platform metaphor to introduce a room full of game programmers to board game design at *IndieCade*.[7] His framing was similar to that of Samara Hayley Steele who states that "aggregate larp rules are a type of code that runs on humans."[8] However, I am not advancing an argument about whether or not rules are a kind of code, or as Steele goes on to claim, that programming languages are like human languages (or vice versa). My point is more plain: People really are a computing platform because people really do compute. By what means people share, learn, and discus game algorithms, instructions, or "code" is no doubt an important topic. But there are more pressing matters here: What human capabilities allow for anything like "human code" to exist in the first place? How do these capabilities affect design decisions and the experience of playing games that utilize these capabilities? In sum, how is an analog platform study possible without equivocating on platform study's fundamental concepts?.

What gives?

As is, platform studies has nothing to say about analog games. Bogost and Montfort define *platform* as "a computing system of any sort upon which further computing development can be done."[9] But their notion of "any sort" shouldn't be taken too liberally; they clearly constrain their subject matter to electronic artifacts through frequent references to hardware, software, and digital media:

7. Tim Fowers. "Tabletop Board Game Design". Presentation at *IndieCade*, Los Angeles, CA, 2016.
8. Samara Hayley Steele. "The Reality Code: Interpreting Aggregate LARP Rules as Code that Runs on Humans." *International Journal of Role-playing* 7 (2016): pp. 30-35.
9. Bogost and Montfort, "Platform Studies," p. 2.

> "The hardware and software framework that supports other programs is referred to in computing as a platform."[10]
>
> "Computational platforms, unlike these others, are the (so far very neglected) specific basis for digital media work." [11]
>
> "The [Platform Studies] series investigates the foundations of digital media: the computing systems, both hardware and software, that developers and users depend upon."[12]

Technologies such as cards, dice and little wooden blocks are not electronic artifacts; they cannot themselves compute; they cannot execute algorithms. Strictly speaking, we could define analog games as those games that exist *sans platform*. So something must give in order to do an analog platform study (at least in spirit). Altice and Švelch provide two examples. Each raises useful points and suggests very different directions for future analog platform studies. Moreover, they admit different (and interesting) complications that future studies should either address or avoid.

Altice frames playing cards as a platform. He discusses the historical, social and technological contingencies of cards, their use in contemporary games and the consequences of their attributes on game design decisions. He makes an effective argument that cards' material attributes provide the kinds of capabilities and constraints on game authorship that platform studies seeks to explicate. His approach is clearly in the spirit of platform studies.

But in order to talk about cards in this way, Altice takes a tricky position that entails some undesirable consequences. He

10. Bogost and Montfort, "New Media," p. 1.
11. Bogost and Montfort, "Platform Studies," p. 3.
12. Nick Montfort and Ian Bogost. *Racing the beam: The Atari video computer system*. MIT Press, 2009, p. vii.

simultaneously proposes that cards are relevant to platform studies because of their computational capacities but that it is their *non*-computational qualities that are relevant. Altice begins by describing Richard Garfield's tapping mechanic as like a "processor upgrade" and in so doing seems to bridge the gap between platform studies' computational concerns and analog media.[13] But Altice soon leans away from this metaphor. After conceding that a computational framing carries certain (unnamed) risks, he argues that the more important underlying topic of platform studies is *material* constraints. This shift burns the computational bridge from platform studies in the first place, or it denies the need to build such a bridge at all. The first issue would undermine his claim to being a platform study, the latter is tenable but creates a significant problem. If platform studies are foremost about material constraints, then the topic space is unbounded. Appropriate platforms could include rocks, tables or cold rolled steel. Perhaps this is one of the unspoken risks that Altice alludes to—if we can take cards as computational, why not everything else?

In contrast, Švelch disapproves of the computational aspect of platform studies all together. In place of Bogost and Montfort's stipulated definition of platform, Švelch substitutes a broader version from Tarleton Gillespie.[14] His view is that *platform* should refer to a structure that allows people to "communicate, interact, and sell," as opposed to a technology that runs programs. Švelch then uses this perspective to discuss how the collectable card game *Magic: The Gathering* qua Gillespie-platform facilitates trading, card modification and other community practices. His work provides a look at how

13. Cf. Altice.
14. Tarleton Gillespie. "The politics of 'platforms'." *New Media & Society* 12.3 (2010), pp. 347–364.

an existing game can spur interrelated meta-game activities that a computational sense of platform studies might fail to explain or address.

Švelch's specific target is a good one. He aims at platform studies' "analytic of layers"—the taxonomy of related scholarly work that Bogost and Montfort describe in order to situate their undertaking. These divisions are worth considering further because they can be critiqued even while accepting the computational sense of platform. For example, we could note how platform affordances[15] are not properly located in the computing system itself. Even in Montfort and Bogost's inaugural platform study of the Atari VCS,[16] it's clear that the console's capabilities expand over time due to the growth of shared knowledge about tricks and techniques. In this way, the constraints of the platform cannot be cleanly separated from the community of practitioners. Whether or not developers are "using," "discovering," or "inventing" a platform's capabilities is an interesting question worth further consideration.

Despite Švelch's interesting argument, if we pursued the direction that he advocates, we'd need a new name for the line of inquiry previously known as "platform studies." To be clear, Švelch's approach *prima facie* is a problematic basis of Bogost and Montfort-style analog platform studies because it is based on a definition of platform that Bogost and Montfort have explicitly considered and

15. Whether in the original Gibson sense or in later formulations by Norman. See: James J. Gibson. "The Theory of Affordances." *Perceiving, Acting and Knowing,* eds. Robert Shaw and John Branford. Hoboken, NJ: John Wiley & Sons, 1977, pp. 127-143; Donald Norman. *The Design of Everyday Things*. New York: Basic Books, 1988.
16. Montfort and Bogost, *Racing the Beam.*

dismissed.[17] Under the section "*Misconception #4: Everything These Days Is a Platform"* they write:

> "If [Gillespie] reads the computational sense of "platform" as outdated, this view is not at all tenable… Current video game developers, for example, have a very clear idea of what "platform" means, and they use the term in the same way that we do… The sense of a platform as a computational platform…is certainly, overall, the most relevant one in the history of digital media."

And while Švelch's stated goal is to strengthen their perspective, his revisions are substitutive, not additive. His emphasis on community practices obscures the kind of questions that platform studies was invented to address in the first place, e.g., what were the computational constraints and their influences on Garfield's original design of *Magic: The Gathering*? How does this game relate to other games designed within the same constraints?

Yes, these questions in their strict form have a fundamental issue in assuming that analog games are contingent on computational constraints, and I will deal with this below. However, Švelch's critique is aimed at platform studies as a whole and thus represents a different concern—that it is not advisable to apply platform studies as is to analog games because of an inherent flaw.

The argument behind this charge is problematic. Švelch goes too far in framing the topic's limits as a defect. He argues that platform studies has a "blind spot" in that it implicitly prioritizes technical aspects—but this prioritization is explicit. Bogost and Montfort explicitly advance a computational sense of platform. They are clearly interested in the computational capabilities that a developer contends

17. Bogost and Montfort, "Platform Studies," pp. 3-4.

with when crafting procedural artifacts. The fact of this emphasis and its centrality to platform studies is independently noted by Thomas Apperley and Darshana Jayemane.[18] They state that the value of platform studies is that the focus on computer systems provides a novel yet stable basis for investigation. If this grounding is to prioritize technical aspects, then so be it; it is just the nature of studying computational craft. Whether or not these investigations dovetail into community practices or any other topic is immaterial.[19] Platform studies is not game studies with a different name.

People as platforms

In contrast to Altice and Švelch, I am willing to bend on platform studies' *technology* clause. Bogost and Montfort have the right of it when they emphasize platforms' computational idiosyncrasies. But while computation may be essential to platform studies, technology is not essential for computation.

People also compute. People can perform algorithms. People can read and enact algorithmic instructions. Analog game design is contingent on human algorithm enactment capabilities. Therefore, in the absence of the technology clause, people qualify as a platform (or a category of platforms). This statement has several unintended implications which I will dismiss presently before elaborating on three important facets of the human platform. These include: (1) experiential side effects; (2) computational appropriation; and (3) the ability to perform non-algorithmic processes.

18. Thomas Apperley and Darshana Jayemane. "Game studies' material turn." *Westminster Papers in Communication and Culture* 9.1 (2012): pp. 5-25.
19. Indeed, discussions of meta-game phenomena predate platform studies. See: Katie Salen and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT Press, 2004, pp. 481–483.

I am not suggesting that analog platform studies should frame people as nothing other than algorithm enactors. Nor am I presuming or advocating for a computational theory of mind.[20] Nor am I claiming that gameplay or games are essentially computational. I am only pointing out that humans can perform algorithms in addition to (or by means of) all of their other capabilities, and that these sets of operations alter the stakes around claims related to analog platform studies.

I also do not mean to suggest that analog platform studies should be, foremost, a digression into cognitive science. I take the ultimate goal of a platform study to be a better understanding of the ways in which specific computational characteristics indirectly influence the kinds experiences we have with the procedural artifacts that depend on the platform in question. And while cognitive facets like short-term memory limits and the speed at which people can perform arithmetic are surely relevant, there are features to the human platform that are more consistent to every person and more fundamental to the experience of analog gameplay. Let us turn to them now.

Experiential Side Effects

Human computation is experienced from the first person; the process has a phenomenological dimension to it. For people, there is something that it is like to perform an algorithm. There are experiential side effects. For example, the children's game *Snakes and Ladders* and the folk card game *War* are experientially distinct, despite the fact that formal descriptions of both games involve the same amount of player input, namely: none at all. Similarly, drawing a

20. In which case, humans would be a platform because the human brain would be seen as a computer. When I speak of *people* computing I am referring to conscious intentional acts.

random card from of a stack of six is experientially distinct from rolling a die even though each method of randomization is statistically equivalent. More interestingly, *good enough* results can be had by flipping three coins. While this method can theoretically produce an endless sequence of no-results (zero or seven), the occasional no-result can intensify drama by delaying resolution.

More importantly, experiential side effects can impact a game's formal processes despite the game's formal description not covering experiential features. This is evident in cases of bluffing, where the challenge is to avoid expressing experiential side effects. There are no instructions in *Poker* that describe the game significance of feelings or expressions yet these phenomena play a pivotal role in how the game state changes. Experiential side effects can lend additional complexity to analog gameplay. Designers are wont to introduce or eliminate this complexity as desired.

If platform studies is about how computational capabilities indirectly affect our experiences with procedural artifacts then this facet may be the most important. The experience of analog gameplay does not begin with some kind of encounter with an abstract formal process; it includes the experience of instantiating those very processes.

Computational Appropriation

Components do not compute, players compute using components. When humans play analog games they appropriate objects in order to perform computations. By this, I mean that people compute by way of assigning formal significance to some features of the world. The rotation of a card means this, the shape of a hand means that, and the size of a pile of little wooden cubes means nothing at all—unless

we say otherwise. In this way, the computational constraints and opportunities that analog game designers face proceed from the human ability to assign significance and not just from the physical attributes of materials.

This perspective is rooted in a broader view expressed by John Searle[21] and in some capacity by Ned Block,[22] John Bishop,[23] John Preston[24] and Schweizer and Jablonski[25]—that whether or not some process is a computation depends on whether or not we attribute to it the status of it being a computation.[26]

To borrow and extend an example from Searle, we could appropriate a house window for doing computation by assigning a 0 to it being open and a 1 to it being closed. But this assignment would not

21. John R. Searle. "Minds, Brains, and Programs." *Behavioral and Brain Sciences* 3.3 (1980): pp. 417–424; John R. Searle. *The Rediscovery of the Mind*. Cambridge, MA: MIT Press, 1992.
22. Ned Block. "Searle's arguments against cognitive science." *Views into the Chinese room: New essays on Searle and artificial intelligence.* eds. John R. Preston and John M. Bishop. Oxford, UK: Oxford University Press, 2003, pp. 70-79.
23. John M. Bishop. "A cognitive computation fallacy? cognition, computations and panpsychism." *Cognitive Computation* 1.3 (2009): pp. 221-233.; John M. Bishop. "Dancing with pixies: Strong artificial intelligence and panpsychism." *Views into the Chinese room: New essays on Searle and artificial intelligence.* eds. John R. Preston and John M. Bishop. Oxford, UK: Oxford University Press, 2003, pp. 360-378.
24. John Preston. "From Observer-Relativity to Assignment-Dependence." *The 7th AISB Symposium on Computing and Philosophy: Is Computation Observer-Relative?* (2014);John Preston. "Kinds and Limits of Computation." *The 6th AISB Symposium on Computing and Philosophy: The Scandal of Computation-What is Computation?* eds. Mark Bishop, and Yasemin J. Erden. (2013)
25. Paul Schweizer and Piotr Jablonski. "Abstract Procedures and the Physical World". *The 6th AISB Symposium on Computing and Philosophy: The Scandal of Computation-What is Computation?* eds. Mark Bishop, and Yasemin J. Erden.(2013).
26. Ronald Endicott (1996) claims to refute Searle entirely but Preston (2014) notes that Endicott doesn't manage to address (and actually agrees with) Searle's underlying point that for something to be syntactical someone must assign significance to a physical state. Ronald P. Endicott. "Searle, syntax, and observer relativity." *Canadian Journal of Philosophy* 26.1 (1996): pp. 101-122.

describe a physical fact about the window nor would it have any bearing on a breeze that comes through. Inversely, there is nothing inherent in the window's many variable properties (openness, cleanliness, temperature, shuttered-ness, etc.) that would allow us to discover that the window is computing, let alone what, exactly, it may be computing. This assignment dependence is especially apparent in cases where the exact same physical processes can be said to be simultaneously performing two different computations. As Block and Bishop point out, there is no physical difference between a circuit that implements a logical OR operation and one that implements a logical AND operation except for which voltage is assigned which digital value.[27] For some *thing* to be part of a computational process, some significance must be intentionally assigned to an arbitrarily limited set of its physical features or relationships.[28]

I must concede that the perspective here could also apply, with problematic results, to the digital computing systems that Bogost and Montfort are interested in. By such an account, even electronic systems would be computational only insofar as we judge their behaviors to be the correct implementations of some algorithms. The

27. For a similar example of this phenomena see Frank Lantz's conjoined board games *Ironclad: The Spectacle of Mechanical Destruction* and *Ironclad: The Technique of Scholarly Discourse* (in: Salen and Zimmerman, *Rules of Play*, pp.286–297). In these games players play two different games simultaneously with the same pieces. While Lantz's intention is to have two players playing both games simultaneously, there's no reason each game couldn't be played by a different pair of people, in which case the significance of each piece would literally be observer-dependent.
28. Even in the event that we were to accept an alternative view of computation that admits natural processes such as DNA replication (e.g., Endicott), there is still the fact that the processes found in analog game play are human powered, e.g., manually rotating a playing card or rolling a die or moving a pawn cannot be an observer-independent natural computation because the very process is itself contingent on an observer.

potential validity of such a stance is hinted at in the *Yar's Revenge* example: The machine behavior that Warshaw used to generate a random visual texture was only a component of a pseudo-random generation algorithm insofar as Warshaw appropriated it as such. This leads us back to Altice's problem—if humans are necessary for something to be a computation and if any observable feature can be appropriated for computation then is it not the case that platforms are solely defined by their specific material qualities?

To this I can only reply that the case of a person computing by moving around a few dozen inert objects is notably distinct from a person that computes with a billion man-made electric transistors perpetuating their own state changes. In the latter case, the machines are so complex and so opaque to their users that the study of the machine is worth emphasizing, but in the former, the peculiarities of a person's role in the computation are much more salient.


5v
0v
0v


0v
5v
0v


5v
5v
5v


0v
0v
0v

Figure 4. Whether or not this circuit is an AND gate or an OR gate depends on what Boolean value (true/false) we assign to what voltage. Image provided by the author.

This brings me to another point in favor of Altice's interest in materials—even though a specific set of features might implement *different* computations, it doesn't follow that these specific features can implement *any* computation. As Block notes, even though the same circuit could implement different operations there are many operations that that circuit cannot implement.[29] Similarly, a designer can appropriate a pair of dice for many different algorithms, but they cannot appropriate these dice for any algorithm. Moreover, the features that designers can appropriate are limited to what players can conveniently observe. For example, the temperature gradient of a playing card is not a good candidate for appropriation because players have no way of observing this gradient under normal conditions. This means the potential computations we can perform are *partly* constrained by the components at hand. And a person with a 52 card deck of western playing cards and a table could be said to constitute a sub-category of the person platform.

But while a set of components may constrain potential algorithmic procedures, we must be careful not to privilege the material as the source of the computation. This is imperative for understanding the imaginative work that analog game designers *do*. In the case of Richard Garfield's aforementioned tapping innovation, he neither discovered nor invented some new physical feature or process, he invented a novel appropriation. This fact of appropriation also provides a route of imbuing analog games with cultural significance—we can appropriate culturally significant entities. Poker

29. Block.

can be played with chips, cash, or chore obligations. We can appropriate *his* cards, *her valuable* cards, or *his valuables*. In these cases, the components obtain a kind of polysemy or multi-stable meaning. How these intersecting significances might create more complex meanings and experiences is surely an experiential side effect for game designers to consider.

Non-algorithmic processes

Finally, not all analog game processes are algorithms. The human platform is uniquely capable of supporting gameplay that incorporates other kinds of activity. In other words, the set of algorithms that a person can reasonably perform does not exhaust the set of processes a person can enact. By extension, analog game designers do more than define algorithms.

For the moment, let us accept Juul's intimation that the possible rules of a game played on a computer are exactly those rules that are algorithms.[30] This provides clear examples of uniquely human instruction following capabilities. To clarify what does *not* constitute an algorithm, Juul borrows Donald Knuth's example of a recipe. A recipe, he notes, requires knowledge about the domain beyond the instructions. (For example, how much is a "pinch" of salt exactly?) Because an algorithm must be useable without understanding, he says, the recipe does not qualify as an algorithm. However, we can easily include this kind of not-algorithm in an analog game. For starters, we could attach the goal "prepare the recipe in less than x minutes". We would then have a game with a non-algorithm instruction. Here is another example from the existing game *Apples to Apples* (1999):

30. Juul, pp. 61–63.

> "The judge … selects the one [red apple card] he or she thinks is best described by the word on the green apple card."

This instruction requires understanding from outside the formal system in order to cope with the qualifier "best described" (not to mention a sense of humor).

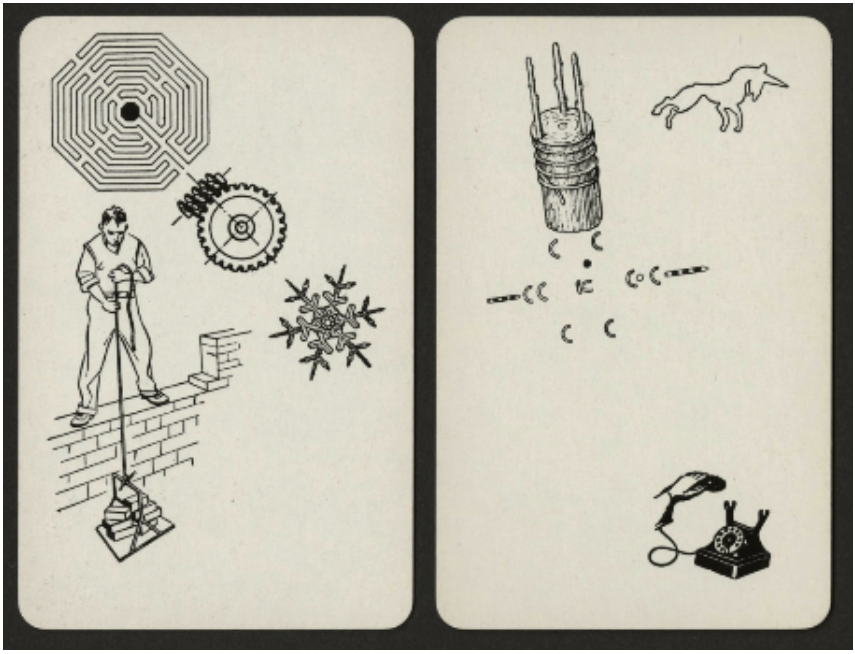
This raises interesting questions that future analog platform studies should consider: If analog game processes need not be algorithmic, then are algorithmic procedures necessary for analog game play at all? But assuming that algorithmic and non-algorithmic procedures coexist in many cases, are there consistent ways in which they interact? It will be useful (if not necessary) to better understand how our computational and non-computational abilities intersect if we want to understand how design decisions are affected.

In closing, people can perform algorithms. The features of human computing capabilities affect analog game design. Human computing is novel in terms of how it affects analog gameplay experience; it is experienced from the first person and it is contingent on our ability to see things as having formal significance. But while our algorithmic capabilities admit us to the platform category our relevant capabilities are not constrained to algorithms. And while people's capabilities are certain to vary greatly (by age, experience, knowledge and so forth) the facets mentioned here—experiential side effects, computational appropriation, and the potential for performing non-algorithmic instructions—are consistent to everyone.

The Impossible Reversal

George Brecht's Playfulness in Deck: A Fluxgame

PETER MCDONALD



Two cards from Deck: A Fluxgame. Image used for purposes of critique.

George Brecht's *Deck: A Fluxgame* (1964) is a singular object, one that hovers between toy, game, and puzzle. It consists of playing

cards printed with black-and-white images, collaged from encyclopedia drawings, diagrams, and photos. The subject matter is wide-ranging and comes from specialist domains: mechanics, optics, architecture, fluid dynamics, sport, etc. The sixty-four cards have neither suit nor number and, despite the suggestion of divisibility into eight groups of eight or four groups of sixteen, clear categories are wanting. The meaning of each individual card is a mystery. The collages often seem to generate thematic associations or visual puns, but they simultaneously resist such interpretations. Instead of looking for an interpreter, the cards need to be handled, to be spread out on a table and piled up, to be shuffled and dealt. The game includes no instructions, rules, or goals, and only the work's title and materials suggests it is a game at all. Yet, the cards ask to be played with, even without any explanation of what that means. People invent all sorts of games with *Deck*, they collaborate to improvise stories and tell fortunes, they use the cards as prompts for performance, to inspire drawings, and much else. In *Deck,* one confronts the riddle-like character that pervades all of Brecht's work.

Deck, and George Brecht's art more generally links together chance, indeterminacy, and freedom through play. There has been recent work in game studies on uncertainty as a category that keeps games tense and lively, and this article expands upon that work in a case study to show three things.[1] It argues that uncertainty can be used intentionally and determine the design of games. It also makes a case for being a little fustier with the concepts—like chance, indeterminacy, ambiguity, and the like—that we use to describe uncertainty. Finally, games do not simply mimic the world's

1. Greg Costikyan. *Uncertainty in Games*. Cambridge: MIT Press, 2013; Thomas Malaby. *Gambling Life: Dealing in Contingency in a Greek City*. Champaign, IL: University of Illinois Press, 2003.

uncertainty, but give metaphors for conceptualizing the world as uncertain in the first place. The idea of chance, as Brecht recognizes, is always a worldly idea that depends on the equipment capable of exemplifying it.

Games provide such equipment in the form of dice, cards, coins, roulette wheels, lottery draws, and spinners.[2] Brecht's studies of probability theory and the philosophy of science were what first drew him into the orbit of contemporary art.[3] Trained as a chemist, Brecht spent the first fifteen years of his career with Pfizer and Johnson & Johnson, during which time he began experimenting with chance procedures in drawing and painting. A night class introduced Brecht to the methods of Dadaism and Surrealism, as well as the action painting of Jackson Pollock and the composition methods of John Cage. He began to correspond with Cage in 1956, and wrote an essay on chance methods in science and art the next year. When Cage offered a course in experimental composition at the New School for Social Research in 1959, Brecht jumped at the opportunity. Each week of this class, Cage would give a minimal and odd prompt for composition, and during the following week the class would perform and discuss the works that resulted. In that space, Brecht met and collaborated with future members of Fluxus, an artistic movement of the 1960s that tried to merge art in everyday life. For many Fluxus artists, games, jokes, and toys were an ideal way to accomplish this goal—especially when they were made in a skewed or disrupted manner.[4] During these sessions, Brecht began to use chance as a

2. Henry Martin and George Brecht, eds., "Chance-Imagery," in *An introduction to George Brecht's Book of the Tumbler on Fire*. Milano: Multhipla Ed., 1978, pp. 130–48.
3. George Brecht, *George Brecht--Notebooks: June, 1958-September, 1958*, Dieter Daniels and Hermann Braun, eds. vol. I, Köln: W. König, 1991, p.83.
4. For a discussion of the relationship between Fluxus and play, see Garnet Thorne. "Winning Isn't Everything: Fluxus Play, Games, and Gags in the Era of the Spectacle."

part of the performance process itself. By incorporating text-based instructions as elements of a musical score, Brecht could program moments of indeterminacy for the viewer or performer. Initially, Brecht composed complex tables of values that linked a feature of a playing card to a feature of a performance. For example, his first complete score, "Motor Vehicle Sundown (Event)," is a piece to be played by any number of individuals, each of whom receives twenty-two shuffled cards with simple instructions for operating a vehicle. The cards include instructions such as: "Head lights (high beam, low beam) on (1-5), off," or "Accelerate motor (1-3)."[5] Numbers following the instructions give the performer an optional range of durations for the performance. The result is a structured-but-aleatory cacophony, where cars come into and out of harmony with one another. Similarly, in "Card – Piece for Voice" the suit of an upturned card instructs the performer to produce a sound, according to the schema "Hearts: Lips / Diamonds: Vocal cords and throat / Clubs: Cheeks / Spades: Tongue," while the card number represents the duration of that sound. Other early works operate in the same way, such that each performance changes based on the shuffle.[6] In 1959, playing cards were Brecht's favored method of introducing chance into his events, of breaking performers out of their habits, and of taking away the artist's personal control.

Master of Arts, University of Illinois at Chicago, 2003; Claudia Mesch. "Cold War Games and Postwar Art." *Reconstruction* 6 (2006); Owen Smith. "Dick Higgins, Fluxus, and Infinite Play: An 'Amodernist' Worldview." *From Diversion to Subversion: Games, Play, and Twentieth-Century Art*, ed. David Getsy, State College, PA: Penn State Press, 2011, pp. 118–31.; Natasha Lushetich. "Ludus Populi: The Practice of Nonsense." *Theatre Journal* 63.1 (2011): pp. 23–41; Tim Stott. *Play and Participation in Contemporary Arts Practices*. New York: Routledge, 2015.

5. George Brecht, "Motor Vehicle Sundown (Event)," *An Anthology of Chance Operations*, La Monte Young, ed. München: Heiner Friedrich, 1970.
6. Other examples include "Spanish Card Piece for Objects," and "Candle-Piece for Radios"

Two common reactions often greet chance-based work, and Brecht's canny and preemptive defense against these reactions reveals his view of the artist's function.[7] A first criticism is often lobbed at the very *possibility* of chance in art. The universe, by these lights, is determined as an endless and implacable causal chain, and any seemingly random work—such as a piece of automatic writing—can easily be traced back to a proximate cause in the artist's life. Brecht responds scientifically to such skepticism about chance. Since the rise of probabilistic thinking in the 19th century, the notion of strict causality has been untenable, and the theorems of Kurt Gödel and Werner Heisenberg show that uncertainty is the bedrock of reality. Rather than trying to trace uncertainty to ultimate causes—which will always be uncertain—Brecht brings into focus the proximate and experiential quality of uncertainty. Chance only becomes visible for Brecht when it matters to the observer, when it becomes *felt*.

The second criticism concerns the ethics of using chance-based procedures. This criticism contends that far from reducing the artist's agency and control—as in Cage's ideal of egoless art—aleatory methods actually extend control at a more abstract level. Setting up a system using chance determines the parameters within which chance can fall; the artist knows that a die will only ever give an answer from one to six. Chance operations, in this view, conceal a will to an even greater sense of control, one that wishes to abolish chance itself. Again, Brecht's response is that of the scientist. Throughout his career, Brecht considered his art as a kind of research. Rather than an ethical constraint, Brecht uses chance as an epistemological tool for creating bias-free experiments. Control is important to any experiment, but introducing chance creates a testable variable whose

7. Susan Stewart, "To Take a Chance," *The Open Studio: Essays on Art and Aesthetics.* Chicago: University Of Chicago Press, 2005, pp. 9–14.

possible outcomes can surprise the observer. Giving up control is always a relative procedure for Brecht, the production of a zone of unknowing that is partial.[8]

Brecht's vision of aleatory aesthetics, especially as it is articulated in "Chance-Imagery," is more systematic than many of his contemporaries. Yet, Brecht's work undergoes a sudden change around 1961 because of a contradiction introduced by chance.[9] After that date, the elaborately structured possibilities of his playing card works are paired down dramatically. He starts to write simple directions that sometimes amount to a single word and rarely stretch to more than a handful. Indeed, while actual cards remain important for his event scores, as in *Water Yam* (1963), their content no longer seem to instruct at all, but merely call attention to ongoing processes within the world. Pieces, such as "Drip Music," which in 1959 read "A source of dripping water and an empty vessel are arranged so that the water falls into the vessel," are simplified to "Second version: Dripping." These works drop the programmatic and explicit tools for generating bias free randomness, and raise a question about the role of chance in Brecht's method.

Authorial control came to present a problem for Brecht after all. In a 1966 afterward to the belated publication of "Chance-Imagery," Brecht writes that he could not "have foreseen the resolution of the distinction between choice and chance which was to occur in my

8. On this point, see also Anna Dezeuze, "Unpacking Cornell: Consumption and Play in the Work of Rauschenberg, Warhol and George Brecht," *Papers on Surrealism* 1 (2004): pp. 16-17.
9. For a detailed accounting of Brecht's development from the mid-1950s to the early 1960s, see Julia Robinson, "From Abstraction to Model: In the Event of George Brecht & the Conceptual Turn in the Art of the 1960s" PhD Dissertation. Princeton, NJ: Princeton University, 2008.

own work."[10] Brecht was not worried about exerting a structuring control over the outcome of situations, but he did recognize that his scores imposed an alien will upon people.[11] Cage said of one early piece that "[n]obody ever tried to control me so much," and Brecht later reflected that he "learned that lesson there, I realized I was being dictatorial."[12] How *not* to dictate became a problem in his work, and if it was influenced Cage's ethics, it was equally the concern of a scientist accidentally biasing his results. By moving from elaborate card pieces to brief and simple scores, Brecht solves this dilemma by leaving the realization of a given work up to the participant. In his notebooks Brecht invents the "enigmatic notion of 'choiceless choosing'" as a synthesis of each constraint.[13] It is a phrase that points to his belief that choice is ultimately illusory, and can be integrated as one more variable in an experiment.[14] In the later part of his career, Brecht would even claim that "I'm not at all sure that I've ever invited anybody to think or do anything….I don't demand anything."[15]

Chance continues to play a role in Brecht's proto-minimalist events through the coincidence of word and world. He understands all sorts of everyday occurrences to fulfill the conditions for an event like "Dripping," without any need for a performer. Noticing a leaky faucet, a rainstorm, or sweat on a hot day all count as valid realizations of the score. For the observer, each is a random occurrence that just

10. Brecht, "Chance-Imagery," p. 25.
11. This question forms a recurring theme in Brecht's interview with Michael Nyman. Michael Nyman, "An Interview with George Brecht." *An introduction to George Brecht's Book of the Tumbler on Fire*, ed. Henry Martin. Milano: Multhipla Ed., 1978, pp. 105–22.
12. Nyman, "Interview," p. 115.
13. Julia Robinson. *George Brecht, Events: A Heterospective*, ed. Alfred Fischer (Köln, DE, Verlag der Buchhandlung Walther König, 2005), p. 52.
14. Henry Martin, "An Interview with George Brecht," in *An introduction to George Brecht's Book of the Tumbler on Fire*, ed. Henry Martin. Milano: Multhipla Ed., 1978, p. 75.
15. Lebeer, "Interview," p. 84.

happens to coincide with the printed word, which makes the chance character explicit.[16] Chance events, though, are only one uncertainty that these scores can provoke. Other kinds of uncertainty are just as, or more, important to Brecht's style. Brewing a pot of coffee as part of a morning routine, for instance, produces a "dripping" that is neither dictated nor random but habitual. The result is ambiguous rather than indeterminate, a small kind of distinction, but one to which Brecht's notebooks pay attention.[17] During this period Brecht began to thoroughly explore the ambiguity that a performer faces when interpreting such scores.

With the reduction of chance operations, we might expect to see a similar decline in the toys and games that Brecht used to model chance. In fact, exactly the opposite occurs. Toys become a staple element of the assemblages and Fluxkits that Brecht created after 1962. Hand puppets, tops, skipping rope, all kinds of balls, alphabet blocks, dominoes, chess pieces, and many more such objects appear throughout his work. Dice and cards persist, but without the one-to-one correspondence between card and instruction that characterized his early scores. Brecht also produced a series Fluxkits with George Maciunas that take games as an explicit theme. In the *Games and Puzzles* (1965) series, Brecht gives the player outlandish tasks that exacerbate the ambiguity of his simplified event scores. "Swim Puzzle" for instance, consists of a sea shell or ball, and the instruction "Arrange the beads such that / the word CUAL never appears." "Ball Puzzle" gives the prompt: "Find ball under bare foot / Without moving, transfer ball to hand." These tasks feel impossible, but do not demand any heroic effort, only a change in perspective that is

16. Gascia Ouzounian, "The Uncertainty of Experience: On George Brecht's Event Scores," *Journal of Visual Culture* 10.2 (2011), pp. 198–211.
17. Brecht, *Notebooks vol. I,* p. 69.

just out of reach. Sometimes the task is too easy—CUAL will never appear—and the lack of satisfaction seems to call for another answer. Sometimes the impossibility comes from a self-imposed constraint—I cannot ask someone to move the ball for me. Brecht himself experiences his own puzzles in this way: they are difficult, he writes, "for me too. For one of them it took me several years to figure it out…. I have enough experience to know that when an idea like that comes to me it has to have a solution."[18] Brecht's puzzles give rise to their own answers.

George Brecht's Valoche/Flux Travel Aid (1963/1975-1978). Image used for purposes of critique.

Toys, games and puzzles thus continue to serve as models of uncertainty for Brecht, but in a sense that goes beyond chance.

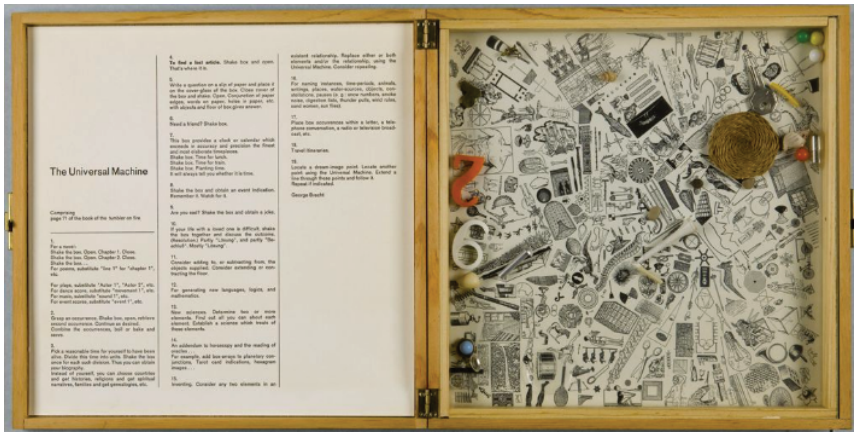
18. Lebeer, "Interview," p. 88.

Unlike games of chance, puzzles are ordinarily determined: they have a right answer, and that answer becomes trivial and obvious after it has been solved. Before one grasps the solution, and while knowing it is fully determinate, the puzzle remains entirely uncertain for the solver. By provoking minor paradoxes, Brecht's puzzles extend this feeling indefinitely. Despite this difference, both puzzles and games of chance provoke the same feeling of playfulness. In both, the world feels stacked against the player—either through enormous odds, or through incomprehensibility. In both, it is the smallest possible gesture that upends the world. A single cast of a die or turn of a card is enough to change one's fortune, and a slight shift in perspective makes a nonsensical riddle seem obvious. In both, there is a deep historical connection to the rhetoric of fate and destiny.[19] Julia Robinson characterizes this aesthetic of Brecht's works through "[t]he irony, the quirky reversals, the wit and the occasional moments of sublime minimalism" that it elicits.[20] The point I want to make is that his style is rooted in a familiar pleasure of games, one that comes from exacerbating uncertainty, and one that marks out Brecht's work as *playful*.

This context helps illuminate the game of *Deck* that initially seems so hard to parse. Like Brecht's early work with playing cards, *Deck* uses cards to highlight the effects of chance. After internalizing the problem of choiceless choice, Brecht does not *instruct* the player about how to play with *Deck.* The player must invite the game into her life. The individual cards still function, as in "Motor Vehicle Sundown (Event)," as possible prompts. *What* the cards prompt, however, is ambiguous and riddle-like; they have more in common with the

19. Brian Sutton-Smith, *The Ambiguity of Play*. Cambridge, Mass.: Harvard University Press, 1997.
20. Robinson, *A Heterospective*, p. 127.

interpretive conundrums of Brecht's impossible *Games and Puzzles*. The two modes of chance and puzzling come into a tighter relationship in *Deck* than anywhere else in Brecht's work, and chance is ultimately subordinated to interpretation. It is impossible to take in the whole of *Deck* at once, to try to make global claims about its meaning. So, a randomly dealt hand of cards becomes the ideal way of grasping, quite literally, a subset of *Deck* and making sense out of it. Chance thus becomes one moment within the larger movement of Brecht's aesthetic of uncertainty.



Brecht's Universal Machine II. Image used for purposes of critique.

We can trace the relation between chance and interpretation further by comparing Deck with its twin, *Universal Machine II* (1965). This was a work composed in the same year, and with the same set of encyclopedia imagery, which Brecht cut up again and re-arranged to make *Deck*.[21] In *Universal Machine II*, the diagrams are condensed onto a single piece of paper, which has been glued onto the back of

21. Or vice versa, Brecht himself is unsure of the order of operations. Jon Hendricks, Fluxus Codex: Gilbert and Lila Silverman Fluxus Collection, Detroit, Michigan (Gilbert and Lila Silverman Fluxus Collection, 1988), p. 189.

a wooden box. The box is covered by a sheet of glass, and contains some assorted objects—buttons, metal clips, an awl, or stones—which are unique in each piece. On a facing cover are suggestions for using *Universal Machine II*, such as "For a novel: / Shake the box. Open. Chapter 1. Close. / Shake the box. Open. Chapter 2. Close" or, "New sciences. Determine two or more elements. Find out all you can about each element. Establish a science which treats of these elements" or, "Need a friend? Shake box." Like *Deck*, the act of shaking subordinates chance operations to a moment of interpretive uncertainty. Each time, a gestalt forms between the background images and a piece of debris, which draws a connection between two or more images in contingent and reciprocal ways. Unlike *Deck*, though, *Universal Machine II* explicitly writes out its possible functions, and thereby draws attention to the meaning-making operation.

Universal Machine II connects the most disparate things into a single universe of sense. By establishing chance relations between its objects, it produces an ontological flattening. An acrobat exists in the same sense as an architectural drawing and a snowflake. *Deck* extends this operation, which the debris highlights, through a chance combination of cards. Rather than separating objects into things and relations (illustrations and debris), *Deck* makes the illustrations do double duty by allowing the picture plane itself to move, as cards are re-arranged by the player. The title of *Universal Machine II* calls attention to a *universal* flattening. At the same time, the title encodes a critical pun, one that sets up a contrast between Brecht's work and the computational flattening of the universal Turing machine.

The Turing machine, described by Alan Turing in 1936, is a theoretical model of a computer that describes how it is possible

to build a machine that can perform any computation by reading *instructions* from a tape, and transforming those instructions according to a *table of values*. Brecht was interested in computing, and collaborated with James Tenney, a pioneer of computational art in the 1950s.[22] The above description of Turing's machine—whose first iterations were operated with punch cards—is clearly analogous to Brecht's early use of playing cards to transform an input into a variable output. Indeed, one of Brecht's commentators, Henry Martin, describes his work as "an enormous computer insofar as it accepts any and all information that one cycles into it."[23] However, with his transition away from *instructions*, Brecht's work no longer establishes a universality through the computer's ability to reduce the world into a series of calculable bits. In contrast to computation, *Universal Machine II* borrows a model of universal connection from the encyclopedia form, which establishes an aleatory and indeterminate connection between entries. Encyclopedia diagrams use visual strategies to depict objects from a null or neutral subject position, whose surrounding "whiteness is an arena of potentiality that fosters connections without fixing them or foreclosing thought experiments."[24] *The Universal Machine II* thus reveals a commitment to a particular kind of universality shared by *Deck*, which suggests anything could be connected to anything else without the mediation of calculation or instruction. *Deck* further refines some elements of *Universal Machine II* that remain tied to Brecht's earlier methodology. *Deck* stretches out the neutral white space between the densely

22. Douglas Kahn, "James Tenney at Bell Labs." *Mainframe Experimentalism: Early Computing and the Foundations of the Digital Arts*, Hannah Higgins and Douglas Kahn, eds. Berkeley: University of California Press, 2012, p. 133.
23. Martin, *Introduction*, p. 41.
24. John B Bender and Michael Marrinan, *The Culture of Diagram*. Stanford, CA: Stanford University Press, 2010, p. 23.

collaged encyclopedia diagrams, and eschews the ontological difference introduced between debris and representation. It also manages to suggest a world of possible uses in the material and habitual affordances of cards, without a page of explicit directions.

Deck is singular not just because it comes with no instructions, goals, or rules for play—which is equally true of toys and puzzles—but because Brecht uses all the tools at his disposal to embed a sense of a goal and a way of developing rules in the equipment of play itself. Playing with *Deck* is crucial to discovering these affordances. In my experience with *Deck,* there is a basic game that emerges and one that Brecht also seems to have played. In one interview, he describes using *Deck* in such a way that each player makes up rules "as they go along and then unmake[s] them…each player can criticize the other's rules, intervene, and change the rules." Brecht gives an example of one such rule, where "[e]veryone had to take three pictures from three cards and turn them into a joke, improvising."[25] The invitation of the encyclopedic images and the chance structure of the cards allow *Deck* to make the transit from toy to puzzle to game, and back again. It gives the player a push and a hint, but does not give them a means or a map. It is rule-governed but without any rules, purposive without any purpose. *Deck* marks the most accomplished synthesis of Brecht's thinking about chance, instructions, and uncertainty.

25. Gislind Nabakowski, "An Interview with George Brecht," *An introduction to George Brecht's Book of the Tumbler on Fire*, ed. Henry Martin. Milano: Multhipla Ed., 1978, p. 95.

Escape Rooms and the Seductive Ubiquity of Capture

SAWYER KEMP

I had a two year stint working as an operator and game designer at an escape room in Sacramento, California. If you are unfamiliar with the escape room craze, the conceit is that a team of players are "locked in a room" – scare quoted here because in most states, it's illegal to *actually* lock people in rooms, as that's considered entrapment and generally frowned upon – typically for one hour, where they must find clues, hidden objects, and patterns in order to solve a chain of puzzles that eventually (ideally) lead the party to escape the room. Live escape games offer a set and a goal, and the players become the actors in their own participatory mystery play. Escape games as a form offer a provocative object of study because of their place at this intersection of theater and gaming. Because gaming itself is often regarded as a form of escapism, what does it mean when a game to encourages you to escape itself? In fact, the titular "escape room" marker is only ironically applicable: the party pays for a room of enclosure only; the escape is not guaranteed. Instead,

the performance space fostered by escape games generically fosters theatrical and narratological tropes of tragedy while creating a "safe" space for the curiously suburban masochistic fantasy of limitation, entrapment, and struggle. In this space, gamers play at "real"-world scenarios of masochistic entrapment, but in doing so, ironically become complicit in affirming the outside, real, world as the normative state of "freedom" to which the gamer must return.

One of the few academic works currently published on escape rooms is a short article by Scott Nicholson in *Analog Game Studies*, in which he argues that the live escape room has no definitive genealogy, and is instead the "convergence of other games and media."[1] Although I agree that escape games as a form represent the combination of these facets into a live gameplay experience, I would argue that the overwhelming similarity across digital and analog Escape Games suggests at the very least a strong rhetorical genealogy from online "escape the room" games to live action "escape the room" games. It is significant that in this trajectory, the formal shift from one that is primarily digital into one more analog and phenomenological also foments an increase in the dependence on narratological conventions of survival and tragedy.

Most of the early digital escape games were fairly simple, free to play games hosted online from independent creators. The entire game takes place in one room, typically with four walls and some limited furniture. The player is a disembodied "hand" with no functional or visible avatar. Importantly, they had little to no situating or expository text. It's unclear if these textual conventions were aesthetic or practical – limited text could potentially minimize

1. Scott Nicholson. "Emergence or Convergence? Exploring the Precursors of Escape Room Design." *Analog Game Studies.* March 2016.

translation issues, for instance – but the effect is that the earliest of these digital games had very limited narratives. Often games would offer no exposition at all, expecting the player to infer the goal from the title. Games that did give flavor text to set up the locked room were spartan, offering lines like "I wake up in a strange room" or the vaguely incriminating setup "I wake up in a strange room… What happened last night?" A perfect example comes from the 2008 game "Switch" from Neutral, a designer who released 7 escape games from 2007 to 2015. In "Switch," the textual exposition is "Somehow you are in the locked room… Escape from here," before you are dumped into the room staring at a wall. Although the genre of digital escape games did become more robust and complex over time – "Submachine" by Mateusz Skutnik is a nice example of a franchise that started out very simply as a spacial puzzle, and developed into a longer complex narrative about time travel and parallel universes – a signature component of these early games is this very limited narrative function. The impact is that the stakes of the games were unclear – escape the room *or what??* – because the real "or what" is that the player would just become incredibly frustrated at their inability to progress in lieu of any monster or villain to exact punishment on the player.

Escape rooms often look like ordinary rooms, but they hide many puzzles. "The Arcade Photography Contest" by lunajubilee @Flickr CC BY.

However, a noticeable development when looking at live action escape games is their almost unilateral dependence on a more narrative-driven ludic function as part of the immersive and theatrical experience. This is the result of two factors: the first is the need for differentiation under the pressures of market competition: live game venues differentiate themselves from and compete with other venues by having a more unique storyline. More importantly, I would offer that the legal restriction of not being able to physically lock the player in a room necessitates narrative as a tool for progressing through the puzzles. Working at the escape room, I often had to tell players that "Leaving through the emergency exit does not constitute 'winning.'" In order to convince players to suspend disbelief and participate in the collective fiction that they must escape the room, narrative becomes

integral to escape game mechanics. This also reifies the emphasis on the fantasy of entrapment rather than the fantasy of escape, which we can see through player behavior. Even after teams "beat" a game and have the opportunity to exit the room, they sometimes linger in the space over puzzles they enjoyed or found difficult, technical effects that delighted them, or prop pieces they found intriguing but couldn't find a "use" for. The variety of entrapment scenarios ranging from realism to futurism do offer rationale for escape, but they also provoke curiosity and investigation for the space itself, seemingly against instinct.

Popular escape narratives include escapes from prison, zombies, serial killers, mad scientists, bad magicians, ghosts, demons, viral outbreaks and bombs. One of the most complex and large-scale games, *The Last Defender* by Nathan Allan at the House Theatre in Chicago, invited audiences to negotiate a cold war scenario. In Allan's game, players collaborated, solved puzzles, and made group decisions to arrive at one of three possible endings: the world was destroyed by nuclear war (failure), a nuclear stalemate was achieved (success/reality), or players could agree to allow the city of Chicago to be destroyed in order to reach universal peace. In interviews, Allan has said he hoped players might make connections to debates about gun violence and gun control. Although the explicit connection from escape game to a social issue is a rarity, politicizing struggle and escape is a natural connection.

In her 2007 book *Early Modern Tragedy, Gender and Performance*, Roberta Barker offers the following definitions of comedy and tragedy: "Comedy offers a fantasy of escape from social constraints; tragedy enacts a fantasy of entrapment that allows us to see those

constraints and their effects more clearly."[2] Her pithy gloss echoes what I've heard described by designers as the predominantly "masculine" form of the Escape room. "Masculine endings" in escape rooms refers to the overwhelming dominance of "life or death" narrative stakes. The popularity of prison and horror scenarios suggests that the fantasy of entrapment is indeed both tragic and masochistic. If the escapism in escape gaming is the fantasy of entrapment itself, this fantasy is twofold: that they are entering a space that will be difficult to extricate themselves from (it isn't), and that the penalty for failure is death (it isn't). Like video games, many live escape rooms facilitate this role-play by having the player assume either a criminal element ("You have to escape before the police show up!") or an allegiance to a repressive state apparatus ("You are the police, and you have to do the thing before the bad guys show up!"). This supports a fantasy for the assumed white male subject to experience social constraints and danger like the real threat of jail, or the real threat of bodily harm. I would also argue that the fantasy extends to the player who may not inhabit the assumed white male subject position by offering not just the fantasy of danger and violence, but also the fantasy of safe withdrawal, as gamers at most venues can emergency exit if needed.

There is also a social component to this fantasy: the live venue offers escape for *teams* of players, not just the individual. Groups of players often include bachelor/ette parties, corporate departments, athletic teams, families, and groups of friends, suggesting that the game does not precisely foster an experience of *escape* but rather a transportation of known, discrete social structures into another system that is very close to recognized (if not directly known and experienced) systems

2. Roberta Barker. *Early Modern Tragedy, Gender and Performance 1984-2000: The Destined Livery*. London: Palgrave Mcmillan, 2007.

of struggle. In fact, the corporate world embraces escape games specifically because of this feature, which enables affinity groups to practice collectively operating within limited structures of limitation. If that phrase seems circular or redundant, it's because it *is.*

In order to facilitate the masochistic fantasy of entrapment and endangerment, it becomes necessary to construct a support system that monitors and facilitates ongoing consent. Using Deleuze's model of masochism as detailed in *Coldness & Cruelty* which suggests that masochism is largely contract-based, (i.e. the sadist is not the opposite of the masochist because the masochist says "hurt me" and the sadist says "no"), the masochist only wants to enjoy the specific pain that he agrees to enjoy.[3] Deleuze and Leopold Sacher-Masoch. *Masochism: Coldness and Cruelty*. Cambridge, MA: Zone Books, 1991. While most game venues ask players to sign a release form, the labor of care-taking on behalf of players is constant and ongoing for the entire visit. Working as an operator, I can attest that the minute players walk in the door they want to know if they will "really" be locked in, what will happen if they need to use the restroom, whether they can bring their phones in, etc. A front end "briefing" by no means prevents them all from asking these questions a hundred times, but it does the work of educating and instructing players. Once teams are in the rooms, the operator watches them play (either by entering the room with them or through digital surveillance) to make sure they don't get hurt, cause any damage or *get stuck*. While "getting stuck" for a few hours or days at a time is a normal stage of a video game, it is an unacceptable one for a business. Consensual entrapment thus necessitates the *idea* of the *possibility* of escape. This takes another form of redundancy with both the emergency exit

3. Gilles

which we might classify as a "real" but extradiegetic escape, as well as operators who can offer hints that help players work toward a diegetic escape.

In lieu of this robust caretaking device to support players as they enter into masochistic, tragic fantasy, we might wonder what potential the form of escape games offers for comedic genre. Within its capacity as a form that specifically desires to make "escape" difficult, can the escape room stage Barker's idea of comedy as the "fantasy of escape from social constraints," or can the escape room only constrain? As a Shakespearean scholar, the elaborate Rube Goldberg-esque chains of events and choices that make up theatrical comedy seem to map easily onto the escape room where you use a key you found stuck to a magnet under a table to open a panel that gives you a strip of wire that you use to fish a *different* key out of a fish tank and unlock a *different* panel that slides open to reveal a 3 digit code to open the box you found 30 minutes ago. Yet, comedic forms of escape are harder to pin down. The exceptions to the rule are largely found in the field of education. Game companies like Breakout EDU who cater to K-12 students use "escape" style puzzles to teach a range of subjects and must obviously shed the deadly stakes so common in escape games. But, these traveling puzzle games tend to likewise shed the narrative and escape function altogether.

The Houdini Room in San Francisco by Palace Games does educational work while maintaining the escape element. The game is a permanent installation at the San Francisco Palace of Fine Arts. In the fictional backstory to this game, players are invited to try their hand at the "world's first escape room" designed by Harry Houdini as a challenge to eight public intellectuals (Thomas Edison, Alexander Graham Bell, Henry Ford, Charlie Chaplin, John Philip

Sousa, William "Buffalo Bill" Cody, Helen Keller, and Luther Burbank) who really participated in the 1915 World's Fair for which the Palace was built. In this story, the exposition is all front-loaded and the escape element is posed as an intellectual pursuit, not a deathmatch. However, this means that the narrative is almost disconnected from the escape. Puzzles are solved in eight tracks signifying the eight innovative thinkers, and solving puzzles along a track yields some minor additional information about each innovator, but the information does not build on the story. While the puzzles are fun and the production value is one of the best in the region, the narrative is almost too meta to make much of a genre intervention at all, since "you are a team of thinkers who want to challenge yourself with puzzles" is already the story of *any* escape room.

The Michigan National Guard celebrates victory at an escape room. "IMG_0473" by The Michigan National Guard @Flickr CC BY-NC.

Preserving the teleology of the escape while challenging the narrative material to produce different genre results has proved difficult, but there are a few small escape companies intentionally experimenting with the "feminine ending" escape games. One example can be found at Aviki Games, a small company that has pioneered mobile escape games in the Sacramento area. Their first game "Escape the Dressing Room" was a mini-game (running about 20 minutes) that involved a series of puzzles related to costume, makeup, and scripts, to symbolize the actor preparing to go on stage. The "escape," then, is to be out of the dressing room and at places *on time*. This preserves the sense of narrative that both compels action and brings it to a definite conclusion with high stakes *other than death*. Their second game, "The News Room," similarly invites players to solve journalism-themed puzzles (sports, weather, stocks) in order to uncover hot new information for a press release. Teams win the game by having one player speak into a microphone to give the press release.

What is striking about these games is perhaps easiest to see in "The Newsroom," because despite being set in a news studio, it manages to remain completely apolitical. Escape games, by nature, could easily be used to model intersections of oppression as tools to teach social justice. Anna Anthropy's digital game *Dys4ia* is an excellent model for this kind of critical game design. In *Dys4ia*, the player participates in a series of minigames that model a transwoman's difficulty getting access to healthcare, navigating microaggressions, and dealing with her own body. This system of struggle and frustration is already formally a part of escape game design, but social constraints seem to lend themselves more to the tragic fantasy of masochistic entrapment, while the comic fantasy of escape is limited in its scope. Both the Palace Games and Aviki Games examples explicitly or tacitly promote and glamorize knowledge production, technical skill, and dedication;

the brilliant innovators Houdini hopes to challenge, the actor preparing for her role, the news team steadfastly pursuing a lead, are all images that attempt to actualize the dream of the interdisciplinary humanities. These games substitute the threat of violence for the promise of individual and intellectual futurity.

The comedic fantasy of "escape from social constraints" seems to be one in which the same society just functions well and toward its own betterment, but not because it has undergone critical self-reflection, reparations, or restructuring. Indeed, perhaps that is the fantasy it offers: escape from social peril and structural violence without meaningful social change. It shares this feeling of inextricability with the tragic/masculine games in the genre. Teams make a masochistic agreement to experience constraint and attempt cooperative intellectual labor, striving for an ideal degree of interpersonal effectiveness. Rather than ludic escapism, "escape" rooms illustrate entrapments that exaggerate our embeddedness within our own systems of family, work, and relationships by offering the narrative threat of potentially losing those systems, while also relying on the team as as a microcosmic system of potential achievement.

Chalk, Props, and Costumes

Two Exercises for Teaching Pervasive Game Design

THERESA JEAN TANENBAUM, DAN GARDNER, AND MICHAEL CROWLING

Pervasive games represent a unique challenge for teachers and designers. By definition they escape the traditional temporal, spatial, and social boundaries that often contain play,[1] often taking place over large public geographies with big player communities, and ill-defined play sessions. This makes them difficult to playtest and iterate for designers, and it often renders them inaccessible to students. Games like *Pac Manhattan*[2] can be studied by students via videos and online documentation, but these are often inadequate for communicating the lived experience of play that is central to game design education. In this article we explore how toys, props, and costumes can be used in combination with simple prompts as design materials for the creation of public pervasive game play experiences. We describe two classroom exercises which use readily available

1. Annika Waern, Markus Montola, and Jaakko Stenros. "The Three-sixty Illusion: Designing for Immersion in Pervasive Games." *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (2009), pp. 1549–1558.
2. Frank Lantz. "About." *Pac Manhattan.* http://www.pacmanhattan.com/about.php

analog materials to create alternate realities within the campus environment.

Students used different architectural features on campus as constraints for their designs. Image used with permission by the authors.

In previous work we have drawn on techniques from theater and performance studies to explore how props and costumes help create opportunities for players to better identify with the characters of a fictional world.[3] We view props and

3. See Theresa Jean Tanenbaum, Karen Tanenbaum, Katherine Isbister, Kaho Abe, Anne Sullivan, and Luigi Anzivino. "Costumes and Wearables As Game Controllers." *Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction* (2015) pp. 477–480; Theresa Jean Tanenbaum, Nicole Crenshaw, and Karen

toys as a form of *embodied narrative interface*[4] that uses the players own bodily experiences and sense memory to evoke meaningful narrative experiences of play. Costumes and props act like user interfaces: they can take on aesthetic and semantic aspects of a fictional world and they afford and constrain player activity in ways that are evocative and meaningful. We call costumes and props "costumes" and "props" within the formal context of theatre practice, but within more informal play we would simply call them *toys*. Certainly, toys serve the same purpose as costume and props. They are containers for narrative scripts, with affordances and constraints that can shape the behavior of their users in meaningful and evocative ways. More so than other physical objects, toys are the crystallization of meanings and behaviors into an artifact. And of course, they are also equipment for *play*.

In the following sections, we describe two exercises which show how toys—props and costumes—are central to the practice of game design. These exercises were implemented in a class that we taught on Mobile and Ubiquitous Games at UC Irvine in the Spring of 2016.[5]

Tanenbaum. "Its'a Me, Mario!": Costumed Gaming's Effects on Character Identification." *Abstract Proceedings of the First International Joint Conference of DiGRA and FDG* 13 (2016); and Theresa Jean Tanenbaum and Karen Tanenbaum. "Envisioning the Future of Wearable Play: Conceptual Models for Props and Costumes as Game Controllers." *Foundations of Digital Games, 2015* (2015).

4. See Jim Bizzocchi, Ben Lin, and Theresa Jean Tanenbaum. "Games, Narrative, and the Design of Interface." *International Journal of Art and Technology* 4.4 (2011) pp.460–479 and Theresa Jean Tanenbaum and Jim Bizzocchi. " Rock Band: A Case Study in the Design of Embodied Interface Experience." *ACM Press* (2009) pp. 127–134.
5. These activities that were used to teach different aspects of pervasive game design to an upper division undergraduate class, comprised of 63 juniors and seniors (3rd and 4th year university students). Throughout this discussion we have changed student names and blurred out faces to respect the privacy of our participants, except in situations where we have received explicit permission from the students involved. These two exercises are not the only ones taught in this course: for more details on the

Chalk was a toy that helped to motivate the design for the activity, "Walk 'n' Chalk." In this activity, students were encouraged to use chalk to alter their taken for granted day-to-day environment. For us, chalk was an ideal material for a public game design intervention. Chalk is impermanent, but with a useful half-life, especially in lightly trafficked spaces. This means that while it can meaningfully alter an environment it doesn't entail a student designer in any lasting intervention into the space. Chalk is a *permissive* medium, affording experimentation and risk taking. Chalk is also a *performative* medium for design, because the student must undertake the design in full view of potential spectators and players. The act of altering a public space – even temporarilly and nondestructively – implies some defiance towards the normative uses of that space.

class please visit the syllabus online here: https://transformativeplay.ics.uci.edu/classes/ics-163-mobile-ubiquitous-games/

Chalk games also colonized natural elements on campus, like this tree root obstacle course. Image used with permission by the authors.

"Walk 'n' Chalk" was inspired in part by a game discussed by Celia Pearce in her GDC'15 presentation.[6] The activity she describes is one that she has run in a number of contexts, including Siggraph 2005 and IndieCade 2012.[7] In this activity, participants use chalk to create new versions of "hopscotch" that remediate existing digital games in public spaces. Pearce's hopscotch games are often based on existing digital games (e.g., "DDR Hopscotch") but they can also be thematically inspired (as in the case of "extreme hopscotch" and "non-cartesian hopscotch"). Mary Flanagan describes a similar

6. Tracy Fullerton, Colleen Macklin, Andy Nealen, Celia Pearce, Brenda Romero, John Sharp, Jeff Watson, and Eric Zimmerman. "Teaching Games with Games 2: Six More Exercises in Play." *GDC Vault* (2015). http://www.gdcvault.com/play/1022280/Teaching-Games-with-Games-2
7. Celia Pearce. *Hopscotch Video Game Adaptations*. IndieCade 2012.

chalk-based game design activity that she calls "Hyper Gendered Hopscotch" where players/designers are asked to unpack and explore their assumptions about gendered behavior through the design of new hopscotch games.[8]

We took the chalk games of Pearce and Flanagan as inspiration for our first activity, the "Walk'n'Chalk", but varied the design slightly to better emphasize the specific affordances of the campus context. We provided the students with examples of different chalk-based games, and then gave them the following instructions:

> *"In our groups we will be using sidewalk chalk to transform sections of the campus into games.*
>
> *Grab some chalk! In the time remaining in class, we are going to create and play some sidewalk games around campus. These games don't need to be very complicated. Have at least one member of your group taking pictures and documenting the process. Try to get passersby to playtest your game. Try to keep from getting into trouble with school authorities.*
>
> *Use the environment! Stairs, pathways, hidden areas, open spaces, bottlenecks, and ledges are your friends. Think about how to scale-up the difficulty Can you create an altered reality? A compelling fiction?"*

8. Colleen Macklin, John Sharp, Naomi Clark, Mary Flanagan, Katherine Isbister, Stone Librande, Pheonix Perry, Michael Sweet, Sean Duncan. "Teaching Games with Games: 7 Exercises in Play." *GDC* (2014). http://archive.org/details/GDC2014Macklin

A spectator plays one of the students' games. Image used with permission by the authors.

The goal of this activity was to give students a simple toy, chalk, for making site-specific interventions into the campus environment. We asked each team to document their games and to observe how members of the campus community interacted with their designs. The chalk in this activity acts as a "meta-toy", or a "toy for making more toys". Chalk transforms the environment itself into a playground: it imposes rules and meanings on the environment that then produce new relationships between spectators and space. Tiles become "lava", stairs become obstacles, railings and ledges become cliffs and balance beams. In this way, a toy like sidewalk chalk operates as a low-tech tool for augmented reality (AR) game design.

Time Travel LARP

"You are a group of time-traveling historians visiting [campus] to study the social rituals and behaviors of primitive 21st century university students prior to the collapse of the First American Empire. You have researched your subjects meticulously and gone to great lengths to re-create the clothing and

accessories of the time period, but your historical records have grouped the entire 50 years of "pre-collapse" history into a single era, and so you don't fully grok that fashions and trends changed radically between 1970 and 2020. Consequentially, you might have some trouble blending in. As historians, you know that the world you are visiting is poised upon a precipice, ready to plunge into social, political, economic, and ecological chaos for several hundred years, but your research subjects do not know this. You must conduct research into the attitudes and beliefs of this era, without disrupting the timeline, or revealing your extra-temporal origins. This will be complicated by the fact that your time machine cannot pinpoint dates effectively, so you don't know what time you have traveled to."

One of the instructors (Theresa Jean Tanenbaum) in costume. Image used with permission by the authors.

Our second example, the "Time Travel Larp," was initially inspired by a similar Live Action Role Playing (LARP) assignment taught by Richard Lemarchand at USC as part of his Experimental Game Topics: Avant-Garde Games & Player-Artists class.[9] The goal was to create a role-playing experience that could scale to the class of 63 students, that didn't involve simulated combat, and that required them to interact with ordinary people on campus to socially expand the magic circle. Inspired by research into cosplay,[10] and our own previous work on costumed play, we instructed the students to arrive in "costumes" which needed to betray that they were time travelers trying (unsuccessfully) to blend in. Our previous work on

9. Lemarchand, Richard. "Experimental Game Topics: Avant-Garde Games & Player-Artists." University of Southern California Course Syllabus (2016). http://web-app.usc.edu/soc/syllabus/20151/18369.pdf
10. See Jason Bainbridge and Craig Norris. "Posthuman Drag: Understanding Cosplay as Social Networking in a Material Culture." *Intersections: Gender, History and Culture in the Asian Context* 32 (2013) pp.1–11; Henrick Bonnichsen. "Cosplay - Creating or Playing Identities?: An Analysis of the Role of Cosplay in the Minds of its Fans." Stockholm University Masters Thesis (2011). http://www.diva-portal.org/smash/get/diva2:424833/FULLTEXT01.pdf; and Nicole Lamerichs. "Stranger than Fiction: Fan Identity in Cosplay." *Transformative Works and Cultures* 7.0 (2011).

costumed play has highlighted the ways in which wearing narratively salient clothing can both alter the social performance and perception of a player (e.g.: people treat you differently when you're wearing an elaborate Princess Peach wig and dress) and how a player constructs their own relationship to a character and sense of self (e.g.: when you're wearing the dress and wig you become aware of the impact of the clothing on the character on the screen, and you construct a different sympathetic/empathetic relationship with the character). This aligns with the experiences that actors have of wearing their characters costumes for the first time in rehearsal. The costume both constitutes and communicates alternative identities. We provided visual references for the clothing of the different eras encompassed in the narrative, and encouraged them to coordinate looks within their groups. We also provided a series of questions for students to ask in their guises as future historians researching life in the early 21st century.

Sample questions for historical time travelers

- *"How has President Trump's War on Sweden altered the price of lutefisk in the Pan-American market? Are you even able to buy lutefisk at this establishment?"*
- *"Do your AI tutoring systems still respect your autonomy as an individual student, or have they started addressing you as "meat-person #6023?"*
- *"Did you lose any family or friends in the super tornado that wiped out the American heartland? How are you preparing for the next ultra-storm?"*
- *"How did the Great Facebook Blackout of '18 impact your life? What do you think about Congress voting to reclassify Facebook as a utility to prevent new blackouts?"*
- *"Don't you hate it when your self-driving car gets caught in a 'hack-storm' and ends up spinning in circles until you puke? Man I'm glad they installed hydrophobic seat covers on all of the new models!"*
- *"It's so tragic about the Mars colonists, don't you think?"*

We had also learned from conversations with Richard Lemarchand that his students spent a large portion of their semester developing their LARP characters. We didn't have room in the schedule to do this. Instead we provided our students with "character personality" and "character secret" tables (included in the appendix), which we used to help structure their roleplaying.

As with the chalk activity, we encouraged students to document and reflect upon their experience of performing in-character around campus. The teaching team also dressed in costume and circulated around campus in order to check-in with teams and observe their interactions with the campus population.

The props and costumes used in this activity played a significant role in how the students and the teaching team interacted with each other and the broader campus community. One student brought a classic boom box with a mix tape of pop music from the '80s that he could blast loudly while walking around. Another student embraced the Doctor Who time travel mythos and arrived in class with a suit, fez, and "sonic screwdriver". One student determined that in his future, monkeys had evolved sentience, and so spent the LARP wearing a simian mask. Within the instructional team, we created a few props that allowed us to interact with and encourage students while maintaining the fictional premise. Professor Tanenbaum created a belt-worn device with knobs and dials on it, and an antique phone handset that he used to communicate back to his "superiors in the future". This prop was especially useful because it allowed him to engage in loud improvised conversations within the public space, even when there wasn't a willing interlocuter, and it allowed him to convey information and ideas to student groups when he encountered them on campus.

Lessons Learned

It is essential to get students designing and playing pervasive games as quickly as possible, with as few barriers to entry as possible. Toys, in this exercise, were an invaluable design medium, helping to efficiently focus student attention on the narrative and mechanical structures of the games they were engaging with.

Prior to the start of this class, very few of our students had heard the term pervasive games, let alone played or designed one themselves. The "Walk'n'Chalk" activity allowed them to begin designing and playing with site-specificity and spatial expansion of the magic circle.

Not only did students get to experience bystanders being transformed into players by their games, but the chalk lasted around campus for weeks, resulting in an inadvertent experience of temporal expansion. The LARP activity gave them a chance to experience a socially expanded design, and provided a small taste of a fully immersive experience. In their documentation and reflections, it was clear how deeply toys had intervened in this process: many students expressed surprise that wearing a silly hat and talking to strangers could result in such a transformative role-playing experience.

Two examples of student teams. Images used with permission by the authors.

The chalk, costumes, props, and toys used in these exercises were not simply "gimmicks" or "accessories" for the students (and instructors). They were the material signifiers that allowed for the creation and maintenance of an alternate reality for both players and spectators. In the LARP world, there is the concept of the "three-sixty illusion"[11] wherein players of a game are able to completely substitute the fictional reality for the real one. Perhaps the most effective and infamous example of this occurred during the *Prosopopeia* project[12] when a team of players inadvertently assaulted a homeless spectator who had fallen asleep within a chalk circle that had been drawn to

11. Waern, et. al.
12. Staffan Jonsson, Markus Montola, Annika Waern, and MartinEricsson, M. "Prosopopeia: Experiences from a Pervasive Larp." *Proceedings of the 2006 ACM SIGCHI International Conference on Advances in Computer Entertainment Technology* (2006).

indicate the presence of a Non-Player-Character (NPC).[13] External signifiers like chalk markings, secret messages, costumes, and other apparatus were essential to how Prosopopeia established and maintained its fictional overlay on top of reality. In our two examples, we did not set out to accomplish anything as ambitious as the three-sixty illusion, but the use of similar tools and toys helped us to create momentary fictional realities.

We have identified some distinct challenges to teaching and designing pervasive games. Our goal with these exercises is to help to lower the barriers to entry that prevent students and designers from creating pervasive play experiences, and to show how toys, props, and costumes can help create opportunities for students, instructors, and spectators to imagine and inhabit alternative realities within the context of their daily lives. By reconceiving the game design class as a unique resource for creating these kinds of games, we hope to provide a roadmap for future classroom innovations that teach difficult design skills and advance our knowledge of different game forms.

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We'd like to thank the students of UC Irvine's Spring 2016 ICS 163: *Mobile and Ubiquitous Games* class for their enthusiastic participation in these design explorations.

13. Jason Farman. *Mobile Interface Theory: Embodied Space and Locative Media*. New York: Routledge, 2013.

Appendix – Character Creation Tables

Roll (1d10)	**Character Personality**
1	Outgoing
2	Shy
3	Nervous
4	Suspicious
5	Arrogant
6	Wheedling
7	Skeptical
8	Too-Friendly
9	Smug
10	Mysterious

Roll (1d20)	Character Secret
1	Not actually a Time-Traveler, but instead is an escaped mental patient.
2	Suffering from time-travel amnesia, and trying to hide it.
3	Infiltrated historical mission to destroy the timeline.
4	Is carrying a rare infectious disease, and knows it.
5	Is a robot trying to pass for human.
6	Is an alien with no interest in passing for human.
7	Thinks they have telepathic abilities, but doesn't.
8	Actually has telepathic abilities, but cannot control them.
9	Is horribly allergic to something in our era.
10	Infiltrated historical mission to try and prevent a disaster.
11	Prepared for the mission by watching every episode of Doctor Who.
12	Suffering from time-travel related indigestion.
13	Occasionally, uncontrollably, breaks into song.
14	Has nothing to hide, and is a sane reasonable person.
15	Obsessed with historical details, and generally enthusiastic about everything.
16	Pathological liar.
17	Forgot to bring snacks, and is very hungry, but finds contemporary food revolting.
18	Comes from a future where cats are extinct, and is obsessed with kittens.
19	Comes from a future where the color red is forbidden, and having trouble adjusting.
20	Has a broken translator, and can only speak with hand gestures, and incoherent gibberish.

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