

This Game SUX: Why & How to Design Sh@*!y User Experiences

Michelle V. Cormier

Exertion Games Lab

Monash University

Melbourne, Victoria, Australia

Michelle.Cormier@Monash.edu

Nicolas LaLone

Rochester Institute of Technology

Rochester, New York, USA

nick.lalone@rit.edu

Shano Liang

Worcester Polytechnic Institute

Worcester, Massachusetts, USA

sliang1@wpi.edu

Rose Bohrer

Worcester Polytechnic Institute

Worcester, Massachusetts, USA

rbohrer@wpi.edu

Bill Hamilton

PLEX Lab

New Mexico State University

Las Cruces, New Mexico, USA

bilhamil@nmsu.edu

Phoebe O. Toups Dugas

Exertion Games Lab

Monash University

Melbourne, Victoria, Australia

Phoebe.ToupsDugas@Monash.edu



Figure 1: The feline protagonist of *Stray* [G7], crashing into several piles of books while wearing a paper bag on their head. When choosing to wear the bag, the directional controls for the cat are inverted.

Abstract

While normative – “good” – game design and user experiences have been established, we look to games that challenge those notions. Intentional frustration and failure can be worthwhile. Through a reflexive thematic analysis of 31 games we identify how intentionally non-normative design choices lead to meaningful experiences. Working within the established Mechanics Dynamics Aesthetics (MDA) Game Design Framework, we lay out themes to design **Shitty User Experiences (SUX)**. We contribute SUX MDA themes for designers and researchers to counter the status quo and identify new forms of play and interaction.

CCS Concepts

- Human-centered computing → Interaction design theory, concepts and paradigms; User centered design; HCI theory, concepts and models;
- Applied computing → Computer games.



This work is licensed under a Creative Commons Attribution-NonCommercial- ShareAlike 4.0 International License.

CHI '25, Yokohama, Japan

© 2025 Copyright held by the owner/author(s).

ACM ISBN 979-8-4007-1394-1/25/04

<https://doi.org/10.1145/3706598.3713246>

Keywords

Shitty User Experience, SUX, jank, abusive game design, fumblecore, queer play

ACM Reference Format:

Michelle V. Cormier, Shano Liang, Bill Hamilton, Nicolas LaLone, Rose Bohrer, and Phoebe O. Toups Dugas. 2025. This Game SUX: Why & How to Design Sh@*!y User Experiences. In *CHI Conference on Human Factors in Computing Systems (CHI '25), April 26-May 1, 2025, Yokohama, Japan*. ACM, New York, NY, USA, 15 pages. <https://doi.org/10.1145/3706598.3713246>

1 Introduction

Human-computer interaction (HCI) has presently coalesced, to some degree, on what constitutes normative – “good” – design of user interfaces (UIs) [69, 78, 106] – e.g., affordances must be signified and discoverable; designs should communicate what to do through layout, shape, colour; feedback must be immediate, clear. Similar normative notions of design hold in video games [56, 58, 68, 75, 77] – e.g., game mechanics should be discoverable and easily learned; gameworlds should communicate their potential for action through layout, shape, colour; outcomes of choices must be immediate, clear. Normative designs minimise a player’s distraction from any core mechanics – players can almost instinctively manipulate puzzle

pieces, traverse the environment, discover, heal, fight, etc. – without thinking of or noticing the UI [36, 56, 65, 66, 75, 87, 98, 99].

The present research began from an observation that, while normatively designed user experiences (UX) benefit many games, play need not be productive or easily learned – it does not even need to be engaging. The present research centres games that achieve valued aesthetics, but not because they adhere to normative UX. We began to use the term “shitty”¹ to describe these experiences because it highlights a peculiar combination of “bad” UX, interesting mechanics, valuable aesthetics, humour, and irreverence. Working from our observations and our positionality as well-played [2, 33] researchers, we refined a definition of “shitty” through a literature synthesis and a thematic analysis of the gameplay in over 30 games:

A **shitty user experience (SUX) game** is one that is purposefully designed to violate normative UX, in terms of control and feedback, so that it drives players to fail at *ostensible* game objectives, while the game is *essentially about experiencing failure*.

We position SUX to trouble [51] normative UX. By documenting SUX elements of existing games, our goal is to theorize these non-normative design strategies to help designers and researchers better understand the use and value of SUX. SUX games have proliferated and are popular, so we expect that their counter-normative approach to design makes them interesting for HCI research, where they have rarely been considered. To render the present research broadly applicable in game design, we take the step of building it upon the Mechanics-Dynamics-Aesthetics (MDA) Framework [55], described later.

In the remainder of the paper, we address our positionality and personal backgrounds, synthesise background topics, then describe our thematic analysis way of knowing. From this, we lay out our SUX MDA themes, which focus on commonalities observed in game mechanics and the aesthetics that those produce. We then discuss how designers can value SUX and think about how it is best incorporated into other designs.

2 Positionality

The present research derived from the authors’ curiosity about games that violated assumptions about how best to design games and UX. These were games that we had encountered multiple times; they seemed odd after having been immersed in education and research on normative UX for decades. This curiosity led us to investigate the games that we knew of and to seek out others – what we have come to call SUX. Since this project is fundamentally interpretivist, we provide further positionality to aid in understanding the group’s perspective [6, 21, 50, 51].

The research team consists of six game design and HCI researchers. All of us are *well-played* [2, 33] – we have the privilege of decades of being immersed in games, game design, and game culture [84, 102, 103]. Three are published game developers.

We all have had extensive and well-resourced experience of living in the United States of America (USA); one of us is from China and two recently moved to Australia. Four of us are trans

¹One might criticise the term *shitty* as lacking nuance or specificity. We counterargue that this is an intentional gesture to avoid nuance traps [52] and maintain appropriate focus on the essential experiential nature of shit.

feminine and queer, living through a gaming and research life not as ourselves with a later-in-life experience of rejecting the norms of the world, as well as binary notions of gender [3, 95]. The remainder of the team are cis men.

Notably absent are trans masculine and cis feminine perspectives. Any research team is necessarily incomplete with regards to some perspectives [23]. We invite other researchers to draw on our work, expand it, and, perhaps, find alternative understanding of SUX.

3 Background

We synthesise a number of topics, establishing the hegemony of normative design that addresses UX and games. We then consider queer perspectives, which counter norms, as well as prior research that has encountered SUX and SUX-like qualities in games. We close the section by providing a primer on the MDA Framework.

3.1 The Hegemony of Normative UX

At any given moment, normative design is established in HCI, especially with regard to interactive artefacts and *the computer*, which has not really changed since it was established [37]. Designs change constantly in response to discovered human need, new technologies, and trends [27, 37, 38, 78, 85, 93]. At the same time, decades of research have established human-centred approaches that provide data-backed implications and principles [69, 78], which, as designers, researchers, teachers, and students we learn and incorporate. Principles ensure that designs are learnable, discoverable, usable, secure, accessible, etc. [69, 78, 106]. Such norms are useful and their hegemony is self-propagating.

The Action Cycle suggests that people work from a goal, determine how to take action in the world, execute the action, then observe the outcome [69, 97]; this becomes a repeating loop. Natural mappings and well-connected, clear feedback are a core element of normative interaction design [69] in these loops. *Natural mapping* asserts that controls should obviously – for some deeply culturally situated and learned set of assumptions about context – connect to what they do (e.g., a control with clear setting markings positioned near the item it manipulates). Natural mappings support users in grasping what and how a control performs what action. Well-connected and immediate *feedback* about results of actions let users know that they have successfully, or not, performed an action and what the outcome action was.

Game mechanics are action-outcome loops that inform the player about the state of the game [59, 87] – a control mapped to an action, which is perceived by the player. This game mechanic loop mirrors the Action Cycle. Some game controls are a form of natural mapping, especially with regards to directional controls: e.g., pushing up on a control stick moves an object up on the screen, a character moving forward, or the in-game camera to rise (if the stick is controlling the camera). In these scenarios, feedback lets the player know what has happened: e.g., the object moves up on the screen, the character walks forward, or the camera moves. Such natural mappings for game control leads to an intuitive feeling of interaction, as Swink [98] suggests that a game’s controls should feel as little mediated, seamless, and as invisible as possible. Natural mappings and feedback are normative approaches to designing game mechanics.

Mappings may be learned, which is the case for many video game controls [75]. Decades of game designs and gaming culture have established a number of conventions for what actions game inputs *should* map to, some of which are grounded in more general interaction design [28, 34, 61, 87]. Game design changes over time. This change could be due to new processors capable of more processing and more memory, new modes of input and feedback, changes in economic and cultural contexts, and/or nostalgia or vintage re-imagining [44]. The ability to remap controls, dynamically generate content, and patch problematic balancing has become a major feature, especially for usability [26, 32, 40].

3.2 Queer Play

Queer game studies and queer design are fundamentally about challenging normative approaches [83], countering normative UX. Ruberg and Shaw [83] established queer game studies to describe a nascent academic paradigm that integrates queerness with the study of games, which emphasises its subverting potential in critical, cultural, political, and design aspects of game studies. This research highlights concepts such as non-productive [48, 49] and non-normative [30, 81, 83] ways of designing and interacting with games.

Queer game studies focuses on subverting mainstream, unspoken normative expectations in design and gaming communities such as “games should be just for fun” [48, 80, 83]. A normative design expectation is that designers are supposed to construct games to maximise fun and achieve a successful and pleasurable aesthetics, which has long been a guiding principle in game design texts (e.g., [18, 61, 87]). For instance, Dennin and Burton [35] describe how mainstream and AAA game designs aim for immersion, whereas designs leading to negative feelings such as frustration are always abandoned because they are not considered fun and do not meet the cis / heteronormative expectations of gameplay. Halberstam takes Scott’s perspective [90] on political studies to claim that legibility is a normative characteristic that identifies whether a design is successful [48]. Moreover, Ruberg critiques that the normalized game design strategies for productivity and usability restrict infinite possibilities for interaction and implicitly persuade players “to play a video game the ‘right’ way, the way that the game intends, is also to play along” [81]. To promote diverse perspectives and innovation potentiality of non-normativity in games, queer game studies focuses on deliberately violating expectations (e.g., [1, 47, 53, 86, 89, 94, 96]), as Clark describes the ethos of queerness as to find “unspoken norms by which a field of activity or knowledge is operating” and to find “points of rupture that destabilize those assumptions” [30].

Queer play endorses non-normative play in normative game designs. Queer play is embodied in queer understandings and ways of playing from the player-side perspective: queer reading [74, 80, 108], playing queer [4, 49], and/or game queering [81, 91]. Queer play leads to analysing games with an emphasis on concepts of no-fun potential [80], queer failure [48], game deconstruction [49, 82], and the pleasures of non-heteronormative players [83]. For instance, Ruberg takes the concepts of masochism and kinkiness to promote the “playful embrace of pain” and the value of embracing failure moments in games as the countering of normative desires

[80]. Notably, the queer concept of “no fun” potential [80] clearly challenges the monolithic principle of “game design for fun,” while the queer “glitch” [45, 49] highlights how games can be re-designed for deconstruction and breaking the potential and rules of games. Queer play concepts and perspectives suggest reframing play and desire as types of doing that can be different. These perspectives challenge normative design standards and provide discourse that contextualises failure as a way to understand players’ normative-countering play and experience. We consider queer play as players’ potentiality to deconstruct game design norms and no-fun potential as “a [normative-countering] mode of experience” [80] that calls for exploring SUX.

3.3 Prior Research on SUX Concepts

The present research looks at what we have, through our analysis, termed *shitty user experience (SUX)*, and focuses on motivation and methods of design to achieve it. We began this project with our own notions of “shittiness” in games, but developed a literature synthesis of concepts in the game design literature that are adjacent or overlapping: jank [12, 89], glitch [45], fumblecore², and no-fun games [80]. While other researchers have explored these terms and their meaning for games, this is the first paper to perform a substantial analysis of SUX in the wild. We consider SUX to serve as a superset for these terms, and we discuss the correlations between these terms and SUX.

Most related to the present research is *jank* [12, 89], the definition of which we borrow from Bennett and Mekler:

Jank is a gaming vernacular term for game-elements that are somehow “off”: sloppy, glitchy or clumsy. Examples include frustrating control schemes, primitive visuals, absurd physics errors, and NPCs with wooden, alienating behaviour. [12, p.1]

While we are thinking about purposeful SUX design, and, thus, set aside programming mistakes and graphical fidelity, Bennett and Mekler go on to position jank and janky aspects of games as aesthetically meaningful choices of game design. These breakdowns in normative playability can serve to highlight a player’s lack of agency, their powerlessness [12, 107]. Similarly, Gass highlights how *glitch* – the intentional use of game logic and graphical errors – can be employed to communicate queer experiences as players encounter unexpected game states. Jank can create space for reflection or allow a break in immersion for a player to consider in-game events with objectivity [12, 73]. Or, it can create absurd spectacles, turning a player’s failure into comedy [12, 45, 57]. Therefore, we recognize that the jank and glitch concepts are separately describing the embodiments of the aesthetics of SUX, and challenging the normative expectations of design outcomes wherein a player is expected to achieve a goal.

Relating to this last concept, the term “fumblecore” has come into popular usage to describe games where the ostensible goal

²While we have investigated, we have not found a definitive source for the term. We presume it is a portmanteau of “fumble” – “a bungling attempt at something” [70] – with “core” as a reference to “hardcore” gaming, which derives from its meaning as “Designating a particularly uncompromising, extreme, aggressive, or experimental version of any of various types of popular music (originally jazz).” [71]. The “core” of hardcore gaming has been, somewhat tongue-in-cheek, repurposed into “casualcore” and similar terms in the gaming and fashion community.



Figure 2: Screenshots of *Octodad: Dadliest Catch* [G33] wherein the player navigates simple goals with comical results. The top two demonstrate the swing of a tentacle knocking objects free of a tabletop while the bottom two show an attempt to walk down the aisle at a wedding thwarted by banana peels.

may be to win but the essential and most entertaining goal is to create the most amusing spectacle regardless of failure [57]. *Octodad: Dadliest Catch* [G33] gives simple, straightforward goals (e.g., walk down the aisle at a wedding) but the protagonist is an octopus pretending to be a human with wiggling tentacles for arms (Figure 2). Consequently, the game offers complex controls juxtaposed with exacting requirements so that even simple goals become an exercise in futility. It is this spectacle – leg tentacles splaying and swinging wildly as the protagonist navigates around flower pots, pedestals and banana peels while the assembled audience murmurs in appreciation – that is the quintessential experience of fumblecore. Fumblecore is often applied socially, with such games as *Drink More Glurp* [G12], where players compete against each other in Olympic-styled events as more and more satirical “sponsors” change the rules and physics of each event into nearly unwinnable spectacles. We consider that the fumblecore describes one of the motivations of the player’s enjoyment of the SUX, as well as why designs toward SUX are valuable to investigate and theorize into the framework.

Jank and fumblecore foreground the player’s powerlessness and lack of agency to promote interesting failure – games may be designed to encourage a feeling of weakness or discomfort. This genre of game invites the player to engage with negative emotions through its design [12, 41, 80]. This kind of game, one that encourages sadness, misery, rage, fear, etc. in its players, is

essentially “no fun” [80]. These no-fun games have the capacity to inspire, to invite reflection, to lead players to catharsis or to make peace with emotions they may otherwise avoid [41, 80]. *Getting Over It with Bennet Foddy* [G4] provides a quintessential example. The player must make a grueling uphill journey using complex and often unpredictable controls, punctuated by moments of failure that can send them tumbling back to their starting position. Over this climb, a narrator speaks at length on the nature of game design and the relationship between player and designer, comparing their shared experience of overcoming hardship, frustration, and setback.

3.4 Mechanics, Dynamics, & Aesthetics (MDA) Framework

Hunicke et al. [55] established the Mechanics, Dynamics, and Aesthetics (MDA) Framework as a process through which designers can consider how they may create particular, desired experiences – the *aesthetics* – and how this is removed from the immediate elements that the designer has control over. We develop the present research in terms of MDA, as it is a useful framing for design. We earlier defined *game mechanics* as action-outcome loops, which is consistent with prior work [59, 87]. We note this to highlight a potential for confusion [105]: in MDA “mechanics” includes what prior work calls “game mechanics” and covers many

elements besides. To explain MDA, we work “backwards” from aesthetics.

While number of frameworks for designing and analysing games exist (e.g., Design, Dynamics, Experience [105]; game design lenses [88]), we have made use of MDA in our own prior work and have found it to be a useful framing. MDA is fairly high level framing, and other frameworks offer detail, but we find that the simplicity of MDA is effective here. The original work on MDA does not build its suggested aesthetics from data, but the present work does. Our findings, framed as the SUX MDA, could easily be adapted to other, similar frameworks as needed through an additional round of thematic analysis.

Aesthetics describe the emotional experiences of players during a game. Hunnicke et al. argued it is important to move away from generic conceptualisations such as “fun” toward more direct vocabulary that encompasses a range of possible experiences that players may have. Examples include challenge: struggling with and eventually triumphing over adversity; narrative: experiencing and being a part of a story; fellowship: being a part of a team; etc. [55]. These aesthetics can then be used to more concretely describe the experienced play outcomes of players. In this work, we identify aesthetics unique to SUX, particularly those associated with different forms of failure and success.

Aesthetic experiences are created by *dynamics*, i.e., game states that emerge as players play with mechanics [55]. For example, Hunnicke et al. discuss how an aesthetic of challenge may be created through dynamics such as time pressure or opponent play. Dynamics are established through the design of mechanics and describe the resulting mathematical, probabilistic, relational, and feedback systems within the game. Through our analysis, we identify SUX dynamics themes involving different systems of failure and loss of control.

Mechanics are essentially all elements over which the designer has control [55] – e.g., actions and behaviours afforded to players, narrative and artistic elements, level design. We note this definition is more expansive, but not incompatible with, our prior sense of *game mechanics* – designed moments in which a player observes the game state, makes a decision, enacts the decision, and observes the outcome. This definition is drawn from a combination Salen Tekinbas and Zimmerman [87] and Juul [59], and focuses more on the potential actions players take within the game. The MDA definition of mechanics includes both the actions available and conditions established within the game that give rise to dynamics. In our SUX framework, we identify SUX mechanics themes, which often focus on player input controls and how the game translates player input into in-game action.

4 Reflexive Thematic Analysis Way of Knowing

The present research employed reflexive thematic analysis [20, 21] to understand shittiness in games. Reflexive thematic analysis has evolved since its introduction (i.e., [19]) and we use the most recent recommendations in performing the work. In this section, we address our analysis process and the state of our data corpus at the end of the project.

4.1 Process

Reflexive thematic analysis is an iterative process that involves immersing oneself in the data corpus and using one’s own positionality to understand themes coming out of the data [20, 21]. In this section, we explain how we performed the six phases of reflexive thematic analysis, as laid out in Braun et al.’s guide [22]. While we report the phases in-order, since the process is iterative, we cycled through them repeatedly over the course of the project. Note, too, that much of this reporting is summative – it reflects the final state of the research as it exists at the Writing Up phase.

4.1.1 Phase 1: Familiarising Yourself with the Dataset. The present research involves deep understanding of developed games and how they are played. To this end, we needed to build a corpus and familiarise ourselves with it, so that we could code it and extract themes. Corpus building happened in three main stages: an initial brainstorm, searching, and further discussion and group brainstorming.

To begin, the research team wrote down all the games they had experienced or were aware of that involved non-normative UX, employing our positionality as (mostly) queer, well-played researchers over June 2023–September 2023. These were recorded on a spreadsheet, along with some description of what was unconventional about them – a justification of their shittiness.

In July 2023, two of the authors looked to Valve’s Steam³ and Nintendo’s eShop⁴ to identify additional games that would fit the frame of the corpus. While these two marketplaces overlap in terms of content, we hoped searching them both would improve the variety of results. In addition, one researcher was familiar with Steam while the other familiar with the eShop – this helped in identifying games from which to stem and keywords to search.

This process involved starting from the games in the initial brainstorm to see what games the platforms recommended as similar, were made by the same developer, and/or were released by the same publisher. The process also involved performing searches for related terms, often those marked on discovered games, such as “fumblecore”, “physics based”, “ragdoll”, and “intentionally frustrating”. Search-based approaches turned up few results outside of those already discovered. In addition, incomplete or unavailable games were not included, as we could not play them. This expanded corpus became the seed of the project moving forward.

We reflected on the games in the corpus, adding new ones that had come to light, and updating the corpus to match our current understanding of shittiness. We played the games in the corpus and took notes on the experience. The team met regularly (at least once a month) and reviewed the corpus from October 2023–May 2024. A major element of these meetings was to decide on what constituted what we would come to call SUX and determine if games needed to be removed from the corpus.

³Steam (<https://steampowered.com>) is a combination online marketplace, game launcher app, and game-centred social media platform. It is extremely popular; SteamDB (<https://steamdb.info/instantsearch/>) lists over 100,000 games available on the platform as of January 2024.

⁴The Nintendo eShop (<https://store.nintendo.com>) is the online marketplace for downloadable games for the popular Nintendo Switch.

Table 1: Summary of the contents of the SUX MDA Framework, grouped by mechanics, dynamics, and aesthetics. Aesthetics includes an intermediate structure categorising them as SUCCESS or FAILURE.

MDA	SUX MDA	description
mechanics	MISMAPPED CONTROLS	controls do not align with learned expectations
	EXAGGERATED RESPONSES	controls' impact on gameplay is unexpected and may change
	OVERLY CONCRETE CONTROLS	controls map to sub-parts of a high-level action
dynamics	LOSS OF CONTROL	player inputs do not predictably change game state
	FAST FAILURE	fail states of the game are inconsequential and happen frequently
	MINOR FAILURE	fail states of the game are beneficial to the player
aesthetics	SUCCESS:: HARD-EARNED SATISFACTION	feeling accomplished after many failures
	CHARACTER BONDING	the player feels a stronger tie to characters (or other elements) of the game due to working together successfully
	GREAT COLLABORATION	players feel satisfaction after working together
	FAILURE:: JOY IN ABSURDITY	failures result in silly or ridiculous outcomes that players find funny
	SHOCK VALUE	failure states are large and impactful on player experience
	SPITE	failure fuels an ongoing need to push harder to completion

4.1.2 Phase 2: Coding. Through our ongoing meetings, identified particular elements of the games that troubled normative UX. These elements coalesced around inductive codes (i.e., labels for the data [22]) that identified the ways in which the games induced failure. We coded games based on their game mechanics. Our initial codes highlighted player expectations, the abstractness of controls (or lack thereof), and to what degree shittiness arose in the games in the corpus (e.g., was it a debuff⁵? a particular level?). We also coded games based on number of players. As the research progressed, we considered codes that centred player skill and experience.

4.1.3 Phase 3: Generating Initial Themes. We looked at our codes across games and considered how they were similar or dissimilar. Themes emerged that considered games' relations to players (e.g., single player, multi-player, eSports, and spectator experiences). We reflected on challenge and fun as organising principles, especially considering how games enable manipulating interfaces in playful ways and how failure can be entertaining. In this phase, we also began drawing heavily on queer design literature and prior terminology (discussed in Background) and connected these some of the authors' positionality as transgender gamers.

4.1.4 Phase 4: Developing & Reviewing Themes. As well-played game designers, we consider agency as a key element coming out of the corpus. We focused on game mechanics to consider how designers might make games that feature shittiness. As we advanced through reviewing themes, we considered how best to share and make use of what we had identified about SUX games. Our work, up to now, had been largely inductive, but we turned to the MDA Framework as a way to make themes actionable for designers. We saw that what we had drawn out of our corpus fit well into themes

within mechanics, dynamics, and aesthetics, and so employed these deductively as a high-level themes.

4.1.5 Phase 5: Refining, Defining, & Naming Themes. As we finalised our process, we recorded six complete intermediate iterations of themes and how they relate to the MDA Framework. Early versions considered only mechanics. Yet, we were interested in play experiences and had been identifying themes that were also aesthetics. As we closed in on our mechanics and aesthetics, we looked at how emergent game states materialise and created a final, seventh iteration, our SUX MDA Framework.

4.1.6 Phase 6: Writing Up. The Writing Up phase was largely summative, including producing the present report. In organising the themes into a SUX MDA, we considered how designers might make use of them and how they might apply outside of game design. Table 1 and Figure 3 show the resulting framework while the corpus is shared through the Ludography.

4.2 Corpus Characteristics

Our resulting SUX corpus, described in Ludography, includes 31 games, some of which represent game series with repeated SUX elements. This corpus is not exhaustive, but it is useful [17, 72]. Games in the corpus feature control design features or playing experiences that are non-normative UX. In developing the corpus, we encountered saturation – we were no longer discovering new themes of shittiness among found games, only repeated elements from games already represented.

5 SUX MDA Themes

The present research has examined a number of games that we classify as SUX games. From these, we derived SUX MDA themes – themes that lay out the types of SUX mechanics a designer might use, which, when players engage with them, will likely result in SUX dynamics, and then result in desired SUX aesthetics. SUX

⁵In gamer jargon, a “buff” is an effect that makes a game element more effective or otherwise better, usually temporarily [104]; a “debuff” is the opposite – it makes the game element functionally worse. Note that while a debuff may effectively cancel out a buff, it is not the removal of a buff.

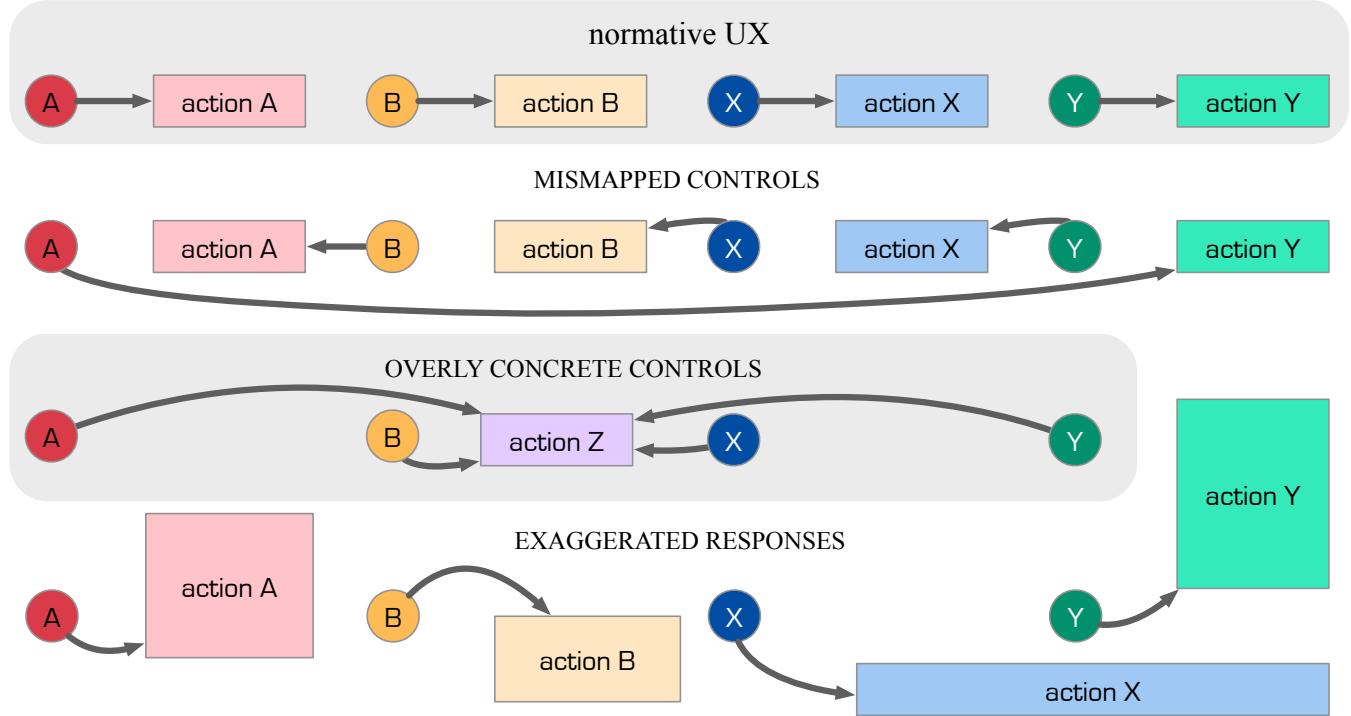


Figure 3: Conceptual diagrams showing the mappings of controls to actions in games with SUX mechanics. Control inputs are represented by coloured circles, with actions as rectangles. In **normative UX** (top), control inputs map to expected actions, a combination of natural mappings (e.g., pushing a control stick forward to move forward) and genre-specific learned mappings (e.g., press ‘A’ to jump). In **MISMAPPED CONTROLS** (second from top), control inputs are mapped to unconventional actions. For **OVERLY CONCRETE CONTROLS** (third from top), multiple control inputs are needed to accomplish what is often a single, abstracted action. For **EXAGGERATED RESPONSES** (bottom), actions are disproportionately sized to represent how corresponding actions are of a different magnitude than the player would come to expect, based on experience playing games.

aesthetics are broken into two categories: those of **SUCCESS** and **FAILURE**. Designers and researchers who are looking to develop games with SUX aesthetics can use this resource to do so, or to assess how their own ideas expand this design space or fit into it. Table 1 briefly explains each element.

5.1 SUX Mechanics Themes

The SUX mechanics themes centre non-normative player controls. Normative UI design prioritises natural mappings and clear feedback, which players are expected to know [66]. There is no shortage of deliberate and creative attempts to violate such normative expectations in game design. Designers can invoke SUX mechanics themes to create interesting scenarios in which players are required to put more attention into the game’s controls, reducing ludic efficiency [99], rather than relying on their control literacy [66]. Our SUX mechanics themes are: **MISMAPPED CONTROLS**, **EXAGGERATED RESPONSES**, and **OVERLY CONCRETE CONTROLS**; we supply a conceptual diagram to help explain them in Figure 3.

5.1.1 MISMAPPED CONTROLS. **MISMAPPED CONTROLS** refers to game designs that violate player expectations for how game controls map to action. In accordance with normative UX, one expects natural

mappings [69] or play in-line with prior expectations of game controls (as noted in Background). **MISMAPPED CONTROLS** can also refer to situations in which controls are not well-communicated to players and require learning. In many cases, **MISMAPPED CONTROLS** are a temporary debuff rather than a feature of the game.

In Figure 1, we see the player’s embodiment, a cat, in *Stray* [G7]. The player can choose, as a cat might, to interact with a paper bag (by having the cat stick its head into the bag); doing so temporarily applies a **MISMAPPED CONTROLS** debuff – all movement controls are inverted until the bag is removed.

5.1.2 OVERLY CONCRETE CONTROLS. In games with **OVERLY CONCRETE CONTROLS**, the player has granular control over some entity in the game – they can only manipulate small parts of the entity. **OVERLY CONCRETE CONTROLS** is a violation of the expectations that mechanics should be discoverable and easily learned. In many games, the design abstracts out controls so that the player is directing an entity’s direction and the player is making choices at that level. This shifts the level of abstraction for interacting with the game, rendering it unfamiliar and challenging. What the player does, then, is re-create what should be “higher level” mechanics using smaller building blocks at a higher cognitive load.

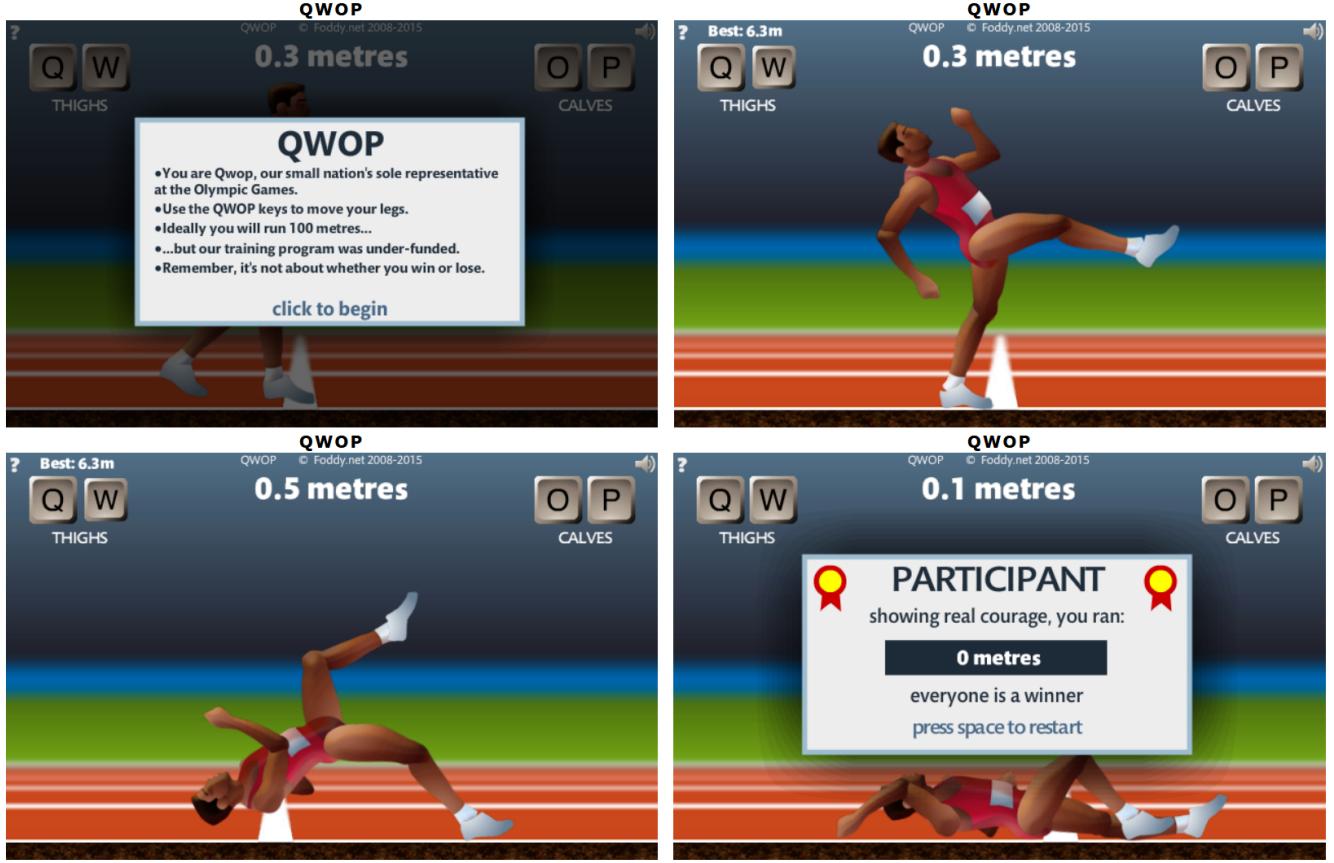


Figure 4: A series of images depicting a typical play session of *QWOP* wherein the player is presented with the controls, play begins immediately, the player avatar becomes unbalanced and collapses to the ground.

QWOP [G2] (Figure 4) is a quintessential example: the player must move a character through a footrace. In games about foot racing, a player likely uses an analogue stick or directional pad to direct a character to run. The player will make choices about how to avoid obstacles, timing of jumps, etc. In *QWOP* [G2], the player makes choices about how far and quickly to move two joints in each of the character’s legs while battling the physics of the character’s mass. The player character may tip forward or backward – losing the game if the character falls. The player must work out not only how to run, but also how to jump; they must still handle jump timing, despite the lack of abstraction.

5.1.3 EXAGGERATED RESPONSES. Mechanics covers the set of designed choices and game system responses to them – EXAGGERATED RESPONSES describes how a designer might change the *degree* of responses – feedback – to player inputs. These responses may be hard for a player to anticipate, leading to a lose state. Many physics-based games make use of EXAGGERATED RESPONSES so that player input becomes magnified or diminished (e.g., as when moving on a slippery material). EXAGGERATED RESPONSES can be used as a way to induce dynamics of LOSS OF CONTROL.

In the *Moving Out* games [G15, G16], players cooperatively move bulky furniture and other items. Because the furniture is heavy (and, in many cases, the ground is slippery), movement mechanics are EXAGGERATED RESPONSES. Characters need more time start moving on slippery surfaces and take longer to stop; their momentum moves them when they turn.

5.2 SUX Dynamics Themes

Our SUX dynamics themes consider emergent game states that derive from the combination of the mechanics with the player’s choices. These themes centre the ways in which players arrive at failure states: LOSS OF CONTROL, FAST FAILURE, and MINOR FAILURE.

5.2.1 Loss of Control. LOSS OF CONTROL occurs when players cannot predict what impact the controls have on the game, challenging natural mappings and feedback. Often, these such issues derive from mechanics of MISMAPPED CONTROLS or EXAGGERATED RESPONSES in concert with unclear physics. This interrupts the game mechanic loop because the player cannot anticipate what their next move will do. When LOSS OF CONTROL happens, players may feel the game is getting away from them;

they may need to make small, experimental moves; seek a reset; or to simply stop to get their bearings.

This is a key characteristic in games like *QWOP* [G2] (Figure 4) and *Stiltfella* [G26], where the player character is at risk of falling. Tipping the character forward or backward requires shifting the character's centre of balance, which is not easy, given the controls. Similar outcomes happen in the cooperative game *Space Team* [G27]. Players need to execute fictitious commands on a space ship to keep it safe, but it is unclear which part of the interface corresponds to the command and what the outcome of interacting with it will be.

5.2.2 FAST FAILURE. The FAST FAILURE theme refers to the failure state that is so transitory as to be nearly irrelevant to continued play. Such games may make failures happen frequently, using a combination of mechanics, but also not really penalise the player. In *CLOP* [G3], and its predecessor *QWOP* [G2], the failure state can occur so quickly as to be completely missed by the player – the player avatar is reset to its starting position and play resumes immediately after a single key press. We note that FAST FAILURE is a characteristic of non-SUX games, as well, especially those that are exceptionally hard.

5.2.3 MINOR FAILURE. MINOR FAILURE incorporates incidental failure states of non-critical game objectives. These fail states do not halt gameplay and may be essential. Such designs often offer multiple paths to victory [101], where some failures are expected or, as a player, you simply *cannot* do everything! One example is from *Cities Skylines* [G14], in which particular failures *must* happen in order for the player to unlock new buildings. While one objective is failed, another implicit objective is completed, allowing the player greater flexibility in building choice and potentially unlocking larger benefits during play.

5.3 SUX Aesthetics Themes

Aesthetics represent emotional states that the designer wishes players to experience and that result from play. The SUX aesthetic themes focus on success and failure. Failure, itself, can be a desirable state here.

5.3.1 SUCCESS::HARD-EARNED SATISFACTION. Many games we examined involved complex, exacting controls that asked for a significant investment of time and effort from the player to learn – HARD-EARNED SATISFACTION. In learning these controls, for example, developing expertise of OVERLY CONCRETE CONTROLS, there is a sense of satisfaction from the expertise. HARD-EARNED SATISFACTION may also derive from repeated failures to progress, followed by advancement.

Games such as *Grow Home* [G32] let you see your growth as a literal plant that follows up and through the challenges the game presents. Other game series, such as *Dark Souls* [G17] and *Monster Hunter* [G11], have intense requirements of the player, but the reward is discovering more and more incredible monsters (with resulting loot) and challenges to overcome (experience that is literally earned).

5.3.2 SUCCESS::CHARACTER BONDING. The mechanics of a game, particularly its controls, can represent the ability of the player character to effect change in the world of the game. In this way,

making EXAGGERATED RESPONSES can give a feeling of instability while OVERLY CONCRETE CONTROLS can make even simple actions seem like intense challenges for the protagonist. We see this in *Siren* [G20], where many otherwise ordinary humans are forced to fight otherworldly threats with resulting poor combat skills represented with exacting, complex controls. In these scenarios, CHARACTER BONDING, we see that one of the emotional outcomes of play is a sense of connection to a character (or characters). This may come through the sense that the player and the character are a single unit, or that the player has a strong relationship to the fictional character, with whom they worked hard.

5.3.3 SUCCESS::GREAT COLLABORATION. Similar to CHARACTER BONDING, but instead relating to how multiple game *players* may work together, is GREAT COLLABORATION. SUX games may develop GREAT COLLABORATION by creating scenarios where multiple players need to work together to overcome a challenge. Games such as *Katamari Damacy* [G22] and *Heroes of the Storm* [G6] have cosplay modes – a two-player cooperative mode where both players are controlling the same avatar within the game. In *Katamari Damacy*, each player is responsible for a different side of a ball that must be rolled – to go forward, both players need to go forward; to turn, only one player goes forward; etc. In *Heroes of the Storm*, one character, Cho'gall, has two heads – one player moves the character and the other performs attacks. *Moving Out* [G15] offers opportunities for GREAT COLLABORATION – players have to work together to hold a single piece of furniture and manoeuvre it through a complex environment (Figure 5). This method of play requires strong cooperation and coordination between the two players, fostering moments of collaboration that can feel triumphant and connective.

5.3.4 FAILURE::JOY IN ABSURDITY. When we incorporate multiple FAST FAILURE states, the amalgamation of failures can be visually absurd. A central element of most fumblecore games, JOY IN ABSURDITY is meant to invoke humour in the player and/or the player's audience. The intent is for players to laugh together at a resulting spectacle.

Our corpus posited one such JOY IN ABSURDITY in the tower of precariously stacked, nearly nude body builders in *Mount Your Friends* [G29]. Each round of play in *Mount Your Friends* (Figure 6) is timed to give the player a sense of urgency, managing the OVERLY CONCRETE CONTROLS and EXAGGERATED RESPONSES until their avatar is frozen in place on top of the tower. Control immediately switches to the next player and their avatar is sent up the tower in rapid-fire rounds. At the end of the game, the camera pans up the tower showing how each body messily connects to its neighbours, nearly nude bodies clinging together with phallic objects pinwheeling about their crotches creating a sweaty tower through the clouds.

5.3.5 FAILURE::SHOCK VALUE. In creating an unstable system, the player is primed to be surprised by events that are no longer clearly telegraphed to them. Games that make use of SHOCK VALUE rely on the unexpected more than humour to delight players. Flipping your toast avatar in *I Am Bread* [G10] neatly into an open flame, tripping over your friend and into a spinning fan blade in *Gang Beasts* [G8],



Figure 5: Two characters hold a couch (the wrong way) attempting to move it through a small space near a pool. These kinds of experiences are common, because the game's EXAGGERATED RESPONSES make it hard to do the right thing. When players are successful, they experience GREAT COLLABORATION, but often experience HARD-EARNED SATISFACTION and JOY IN ABSURDITY.

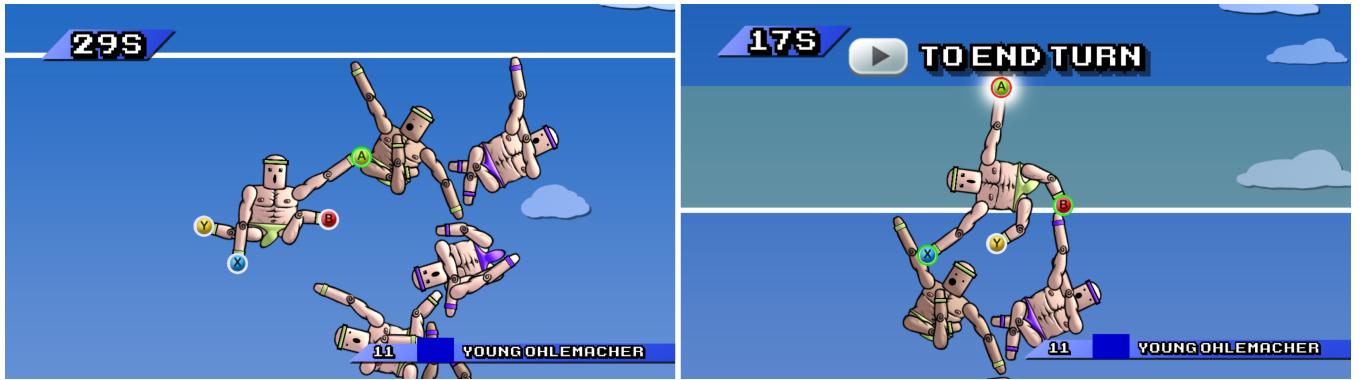


Figure 6: The theme of JOY IN ABSURDITY is illustrated by a typical play session of *Mount Your Friends* [G29]. The player's gymnast is directed up the tower of gymnasts through an ostensibly simple interface that requires a great deal of hand contortion to achieve success.

or walking through a wall and into a room of screaming eyeballs in *LSD Dream Emulator* [G1] are all examples of this theme.

5.3.6 FAILURE::SPITE. In some cases, failure can feel undeserved particularly when it occurs due to unforeseen challenges or forces (such as SUX mechanics). When players are repeatedly frustrated and then fuelled by such frustration to press through playing a SUX game, those players are engaging in SPITE. Death by an arrow launched off screen in *Dark Souls 2* [G18] was cited as one such case. These kinds of failures fuel a one-sided rivalry between player and game, the player feeling cheated by the game and looking to exact revenge by overcoming it with renewed vigour.

6 Discussion

We revisit our early definition of shitty user experience (SUX) games, using MDA to expand it.

A **SUX game** is one [whose mechanics are] purposefully designed to violate normative UX, in terms of control and feedback, so that [its dynamics drive players to be unable to achieve] *ostensible* game

objectives, while [the game's aesthetics *centre* engaging with failure, rather than achieving the objectives].

The present research was motivated by an interest in games that do not follow normative UX, yet people were interested in playing them. This produced a corpus of games that violate normative UX in various ways, sometimes engaging in forms of queer design. At the same time, the SUX MDA themes are not limited to only SUX games – SUX mechanics, dynamics, and aesthetics may be found in a range of games and could be usefully designed into many systems. Certainly, the themes that we identify as SUX usefully appear in many normatively designed games in support of their aesthetics. Likewise, SUX games can engage in normative play experiences.

SUX game designs deliberately push players toward failure through their UIs, which challenges normative expectations of UIs and UX. SUX can still produce meaningful and playful moments – many SUX games are ostensibly framed around normative notions of “winning” and “losing” – yet our sense is that their *central aesthetics require failure*. Out of our analysis, we came to frame all aesthetics as being either **SUCCESS** or **FAILURE**, but even **SUCCESS** in

SUX centres FAILURE – either through its repeated occurrence or through its constant threat. All of the SUCCESS aesthetics (i.e., HARD-EARNED SATISFACTION, CHARACTER BONDING, GREAT COLLABORATION) are based on the additional joy brought about by working through extreme adversity. FAILURE::SPITE likewise reflects this kind of experience. The other two forms of FAILURE: JOY IN ABSURDITY and SHOCK VALUE are of a different nature. They reflect the delights that the act of, and sometimes spectacle of, failure can produce.

Normativity is about adherence to established conventions, not the incidental outcomes they produce, therefore the act of SUX subverting expectations is capable of generating playfulness without adhering to normative principles. This act of subversion places them outside of normative design, even if SUX themes are eventually so taken up by designers as to become mainstream and common. SUX designs are playful precisely because they contrast sharply with normative expectations, creating moments of surprise, challenge, or frustration. This dynamic interaction highlights its counter-normative qualities rather than diminishing them, and allows them to challenge and redefine conventions.

Designers follow normative UX in game mechanics and dynamics because following design principles and conventions enables players to have high ludic efficiency [99] and engage past control literacy [66] to quickly begin playing. Designers rarely interrogate the status quo of control design. These expectations of normative play also reveal the procedural rhetoric [14, 92] of game design, where the players are given power to be successful, to conquer, and to solve [24, 66]. Games tell players that they will have no trouble to act as they want through pushing a button, and players are used to having such power within most video games.

The identified SUX MDA themes are derived from extant games and are extensible, potentially serving as inspiration for new designs beyond what has already been made. As designers come to further subvert and queer norms, we expect the SUX MDA themes to help them in scoping their designs or findings. The themes are functional for designers to use in making their own games and, in some cases, interactive systems in general. We expect them to be a useful vocabulary for discussing and researching games. In the remainder of this section, we address how to use SUX MDA and make a call to value SUX, even outside of games.

6.1 Using SUX MDA Themes

When using the MDA Framework, designers begin by considering the desired aesthetics for their games [55] – what should the player feel or experience when the game plays out? Our aesthetics offer a set of choices for this question, enabling describing potential SUX-style play. If a designer wishes to make a game that is challenging and rewards persistence and repeated goes, considering HARD-EARNED SATISFACTION and SPITE are good options; forms of camaraderie with in-game characters (CHARACTER BONDING) or with human players (GREAT COLLABORATION) may also be of interest. If a fun, silly, collaborative experience is desired, then JOY IN ABSURDITY and GREAT COLLABORATION are worthwhile to explore, as well as possible SHOCK VALUE. With intended aesthetics in mind, the

designer should consider mechanics and dynamics to start building the game. SUX dynamics and mechanics are useful starting points.

Designers may, naturally, not wish to build a SUX game in particular – after all, games founded on normative UX are tremendously popular. At the same time, a designer may wish to invoke particular aesthetics within the broader scope of their game. SUX mechanics and dynamics offer a means for designers to “sprinkle in” some SUX into their games. In more normative multiplayer games, a debuff that interferes with a player’s control scheme may offer a refreshing way for players to attack one another. In single player games, puzzles or environments might offer surprises for players for humourous or serious ends.

We also wish to note that our SUX themes are extensible and offer a useful framing for designers and researchers going forward. The SUX MDA themes could be recombined with other MDA framings (e.g., [55, 62]) to find new, emergent aesthetics. We believe that our work here offers a “scope” for future work – as designers identify new ways to violate norms (possibly as new norms emerge), they have a set of themes against which to compare their findings.

6.2 Valuing SUX

We reflect on the value of SUX from multiple perspectives, which we hope help designers and researchers see its importance beyond games. In these other contexts, they can function as *strong concepts* [54] – not immediately as applicable as they are for games, but useful for describing particular phenomena.

6.2.1 SUX for Interactive Systems. We may be able to apply SUX beyond games, at least descriptively as strong concepts [54], to other interactive systems (e.g., productivity software, social networks). While we strive to avoid mistakes of affective computing in the past (e.g., Clippy [79]), we might consider how SUX aesthetics can apply to interactive systems. Our choices in these interactive systems (the designed mechanics) often feel like a SUX. We make choices, interactive systems fail to do what we intend (their dynamics), and we experience SUX aesthetics.

While those designing productivity software likely never intend to develop SUX, they often do. SUX can be used as a framing to understand how designed systems are impacting users, but is unlikely to be a valuable design tool in this space. For example, it can be useful to consider SUX dynamics themes when thinking through how users approach software and other interactive systems. Do users experience a LOSS OF CONTROL? Does the system offer FAST FAILURE or MINOR FAILURE to help the user get to what they need to do? One hopes they do not get there because the designer used MISMAPPED CONTROLS, but if it seems that there are EXAGGERATED RESPONSES or OVERLY CONCRETE CONTROLS issues, that should be considered.

There can be great triumph in HARD-EARNED SATISFACTION when getting a word processor to arrange a form just right and one might well get there via an experience of SPITE. Productivity software designers might detect such states and celebrate (or downplay) these instances – a non-normative approach to system design. While game designers may expressly seek out SUX aesthetics for their game designs, interactive systems designers should think about them, as well, even if they represent failure or error states. Perhaps even expressly acknowledging failure is worthwhile (e.g., the user

keeps doing the same operation or activates “undo” repeatedly – why?).

SUX is relevant to the notion of seams [29] in system design. *Seams* are disconnects or discontinuities among the technologies that hold together interactive experiences (e.g., failures of sensors to locate players or connectivity dead zones in a mixed reality game [9]). Prior research looks at how we can render designs *seamful* – leveraging seams as intentional aesthetic choices in designing UX and making participants aware of them [9, 10, 29]. We expect that SUX design approaches can offer useful aesthetics that might arise from seams.

We leave this as intermediate design knowledge [54] and a pointer to future work – we believe that SUX in interactive systems could be a useful framing, but more research is needed. After all, given the normative expectations in productivity software, SUX might simply be “sucks” in this context.

6.2.2 Design for Variety of Experiences. Video games possess the ability to convey complex emotions that align with the human experience, offering a range of interesting experiences beyond winning and losing [5, 46, 63, 64, 76, 100]. A prevalent focus on normative UX and play outcomes restricts the range of potential emotional experiences in games [31, 62, 67]. Benford argues that intentionally creating uncomfortable interactions is just as important as creating comfortable ones for enhancing UX [11], identifying and understanding bad user experiences and their underlying mechanisms can enrich design methods for creating diverse experiences. Our analysis of SUX serves as evidence of the possibility of creating a diverse and intricate range of UX, echoing the queer play perspectives’ emphasis on the emotional intricacy of engaging in activities that involve pain, disappointment, chaos, and annoyance [80]. Similar to studies that highlight the significance of emotional complexity in a range of experiences portrayed in literature or films [7, 8], SUX’s focus on the “opposite side” of “good design” contributes to the diversity of experiences in interactive media, in which each SUX aesthetic carries its own value and message.

The use of SUX to facilitate the narrative affordances of interactive media can benefit from the unique aesthetics created by SUX. Foch [42] states that integrating failure and feelings of frustration into the story as a narrative method can make for compelling content and experiences, and Bopp [15] points out that painful emotional challenges can entail deep narrative affordances through player agency and complicity [16]. These perspectives describe how even interactions that are perceived as frustrating and negative can ultimately result in positive user narrative experiences, and can be treated as a narrative technique. Moreover, Birk [13] and Brown [25] identified stressful and negative emotions generated from interactions can enhance players’ emotional investment and mid-level immersion. This immersion fits with the concept of “mental affect” described by Galloway [43]; that bad controls and dizzying graphics encourage players to identify with the player character.

Moreover, our exploration of SUX is us practising reflective game design [39] to critique and question the dominating design of play. Our project suggests designers be aware of and reflect on existing interactions and reorient, redirect, deviate, and queer them [66].

Our analysis of SUX embodies Khaled’s reflective design patterns of “disruption over comfort” and “reflection over immersion” [60]. It indicates the potentiality of countering the status quo of the hegemony of normative UX and suggests reorienting mainstream game design through reflection. Therefore, our study of SUX, as a practical attempt at reflective game design, exemplifies the process of reflection to counter existing design normativity for other queer game designers and scholars.

7 Conclusion

The present research contributes to ongoing scholarship in designing a range of playful experiences (especially games), and is useful to game designers, developers, and researchers. We invoke reflexive thematic analysis on over 30 games (listed in the Ludography) whose mechanics, dynamics, and/or aesthetics run contrary to normative [“good”] design and expand scholarship on the plurality of enjoyment that can be derived from not following the rules. We contribute a definition of shitty user experience (SUX) – valuable experiences of UI failure for a player – which helps to scope the space of design and unify terminology in prior work. Through the focus on game design, we supply a SUX themes within the MDA Framework for game design and analysis. These SUX MDA themes offer insights into how designers can create mechanics (i.e., MISMAPPED CONTROLS, EXAGGERATED RESPONSES, OVERLY CONCRETE CONTROLS) that serve to drive dynamics (i.e., LOSS OF CONTROL, FAST FAILURE, MINOR FAILURE) and result in aesthetics that expand normative notions of game outcomes and name particular game experiences (i.e., SUCCESS::HARD-EARNED SATISFACTION, SUCCESS::CHARACTER BONDING, SUCCESS::GREAT COLLABORATION, FAILURE::JOY IN ABSURDITY, FAILURE::SHOCK VALUE, FAILURE::SPITE).

Shittiness is a proletarian experience of play. As scholars of HCI, we have too often introduced precise, technical terminology to characterise desired experiences. But, in so doing, we have too often privileged the lens of the most educated over that of the majority. In centring our study on the vulgar notion of shittiness, we call for centring our vulgar, everyday experiences as players.

Acknowledgement of Use of Artificial Intelligence

No form of generative artificial intelligence was used in the production of research or the writing of this work.

Acknowledgement of Country (Cormier, Toups Dugas)

We acknowledge the Traditional Owners and Custodians of Country throughout Australia and the lands on which we carry out our research, the Bunurong people of the Kulin Nations. We recognise their continuing connection to the land, waters, and community since time immemorial and that they never ceded sovereignty. We pay our respects to their Elders, past, present, and emerging.

Land Acknowledgement (Liang, Bohrer)

We would like to recognize the genocide of the Chaubunagungamaug and Hassanamisco Nipmuc Tribe on whose

unceded land WPI is located. Because this erasure is not confined to the past, we wish to bring particular awareness to the ongoing efforts of Nipmuc people to regain sovereignty over their ancestral land elsewhere in our state, particularly through the Belchertown-Nipmuc Farm Conservation Alliance <https://www.lampsonbrook-landback.org/>. The political and financial support of contemporary land-back work is a small step that can be taken to more materially counteract the erasure of the Nipmuc people.

Land Acknowledgement (LaLone)

We gather on the traditional territory of the Onöndowa'ga:’ or “the people of the Great Hill.” In English, they are known as Seneca people, “the keeper of the western door.” They are one of the six nations that make up the sovereign Haudenosaunee Confederacy.

We honor the land on which RIT was built and recognize the unique relationship that the Indigenous stewards have with this land. That relationship is the core of their traditions, cultures, and histories. We recognize the history of genocide, colonization, and assimilation of Indigenous people that took place on this land. Mindful of these histories, we work towards understanding, acknowledging, and ultimately reconciliation.

Land Acknowledgement (Hamilton)

We honor Native American knowledges and worldviews based on intimate relationships to the natural world. The genesis of the Southwest Indigenous Peoples, including the Pueblo, Navajo, and Apache, established their guardianship of the lands now occupied by New Mexico State University. We acknowledge and respect the sovereign Indian Nations and Indigenous Peoples and the history of genocide, colonization, and assimilation of Indigenous people that took place on this land. We pledge to have a meaningful and respectful relationship with Indigenous communities and Native American Peoples within the institution and ultimately work towards reconciliation, reparations, and land returns.

Acknowledgements

Special thanks to Florian ‘Floyd’ Mueller for pointing out to us that “shitty user experience” abbreviates to “SUX”. This material is based upon work supported by the National Science Foundation under Grant Nos. IIS-2106380, IIS-2425383.

References

- [1] Sara Ahmed. 2006. *Queer phenomenology: Orientations, objects, others*. Duke University Press, Durham, US.
- [2] Sultan A. Alharthi, Phoebe O. Toups Dugas, Olaa Alsaedi, Theresa Jean Tanenbaum, and Jessica Hammer. 2018. *The Pleasure of Playing Less: A Study of Incremental Games through the Lens of Kittens*. Carnegie Mellon University: ETC Press, Pittsburgh, PA, USA. doi:10.1184/R1/6686957.v1
- [3] Jocelyn Badgley et al. 2023. The Gender Dysphoria Bible. <https://genderdysphoria.fyi/en/> [Accessed: 24 June 2024].
- [4] Gregory Bagnall. 2017. Queer (ing) gaming technologies: Thinking on constructions of normativity inscribed in digital gaming hardware. In *Queer Game Studies*, Bo Ruberg and Adrienne Shaw (Eds.). University of Minnesota Press, London, UK, 135–143.
- [5] Jaime Banks. 2015. Object, Me, Symbiote, Other: A social typology of player-avatar relationships. *First Monday* 20, 2 (Feb 2015), 10 pages. doi:10.5210/fm.v20i2.5433
- [6] Shaowen Bardzell. 2010. Feminist HCI: taking stock and outlining an agenda for design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, USA) (CHI '10). Association for Computing Machinery, New York, NY, USA, 1301–1310. doi:10.1145/1753326.1753521
- [7] Anne Bartsch. 2012. Emotional gratification in entertainment experience. Why viewers of movies and television series find it rewarding to experience emotions. *Media Psychology* 15, 3 (2012), 267–302.
- [8] Anne Bartsch, Anja Kalch, and Mary Beth Oliver. 2014. Moved to think. *Journal of Media Psychology* 26 (2014), 125–140. Issue 3.
- [9] Steve Benford, Andy Crabtree, Martin Flintham, Adam Drozd, Rob Anastasi, Mark Paxton, Nick Tandavanitj, Matt Adams, and Ju Row-Farr. 2006. Can you see me now? *ACM Transactions on Computer-Human Interaction* 13, 1 (2006), 100–133.
- [10] Steve Benford and Gabriella Giannachi. 2011. *Performing Mixed Reality*. MIT Press, Cambridge, Massachusetts, USA.
- [11] Steve Benford, Chris Greenhalgh, Gabriella Giannachi, Brendan Walker, Joe Marshall, and Tom Rodden. 2012. Uncomfortable interactions. In *Proceedings of the sigchi conference on human factors in computing systems (CHI '12, 10)*. Association for Computing Machinery, New York, NY, USA, 2005–2014. doi:10.1145/2207676.2208347
- [12] Dan Bennett and Elisa D. Mekler. 2023. Jank Accounts: We Should Study ‘Broken’ Games. In *Companion Proceedings of the Annual Symposium on Computer-Human Interaction in Play* (Stratford, ON, Canada) (CHI PLAY Companion '23). Association for Computing Machinery, New York, NY, USA, 216–218. doi:10.1145/3573382.3616045
- [13] Max V. Birk, Ioanna Iacovides, Daniel Johnson, and Regan L. Mandryk. 2015. The false dichotomy between positive and negative affect in game play. In *Proceedings of the 2015 Annual Symposium on Computer-Human Interaction in Play* (London, United Kingdom) (CHI PLAY '15). Association for Computing Machinery, New York, NY, USA, 799–804. doi:10.1145/2793107.2810258
- [14] Ian Bogost. 2010. *Persuasive games: The expressive power of videogames*. mit Press, Cambridge, Massachusetts, USA.
- [15] Julia Ayumi Bopp, Elisa D. Mekler, and Klaus Opwis. 2016. Negative emotion, positive experience? Emotionally moving moments in digital games. In *Proceedings of the 2016 CHI conference on human factors in computing systems* (San Jose, California, USA) (CHI '16). Association for Computing Machinery, New York, NY, USA, 2996–3006. doi:10.1145/2858036.2858227
- [16] Julia Ayumi Bopp, Klaus Opwis, and Elisa D. Mekler. 2018. “An Odd Kind of Pleasure” Differentiating Emotional Challenge in Digital Games. In *Proceedings of the 2018 CHI conference on human factors in computing systems* (Montreal QC, Canada) (CHI '18). Association for Computing Machinery, New York, NY, USA, 1–12. doi:10.1145/3173574.3173615
- [17] Nathan Bos, Ann Zimmerman, Judith Olson, Jude Yew, Jason Yerkie, Erik Dahl, and Gary Olson. 2007. From shared databases to communities of practice: A taxonomy of laboratories. *Journal of Computer-Mediated Communication* 12, 2 (2007), 652–672.
- [18] Brenda Brathwaite and Ian Schreiber. 2009. *Challenges for game designers*. Course Technology, Massachusetts, USA.
- [19] Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 2 (2006), 77–101. doi:10.1191/1478088706qp063oa
- [20] Virginia Braun and Victoria Clarke. 2019. Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health* 11 (2019), 589–597. Issue 4.
- [21] Virginia Braun and Victoria Clarke. 2022. Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a *knowing* researcher. *International Journal of Transgender Health* 24 (2022), 1–6. Issue 1.
- [22] Virginia Braun, Victoria Clarke, Nikki Hayfield, and Gareth Terry. N.D.. Doing Reflexive TA. Website. <https://www.thematicanalysis.net/doing-reflexive-ta/> [Accessed: 11 July 2024].
- [23] Johanna Brewer. 2022. Playing Unbound: Towards a Radically Intersectional HCI. In *Extended Abstracts of the 2022 Annual Symposium on Computer-Human Interaction in Play* (Bremen, Germany) (CHI PLAY '22). Association for Computing Machinery, New York, NY, USA, 270–272. doi:10.1145/3505270.3558362
- [24] Mattie Brice. 2016. Death of the Player. Blog Post. <http://www.mattiebrice.com/death-of-the-player/>
- [25] Emily Brown and Paul Cairns. 2004. A grounded investigation of game immersion. In *CHI'04 extended abstracts on Human factors in computing systems* (Vienna, Austria) (CHI EA '04). Association for Computing Machinery, New York, NY, USA, 1297–1300. doi:10.1145/985921.986048
- [26] John M. Carroll. 1982. The adventure of getting to know a computer. *Computer* 15, 11 (1982), 49–58.
- [27] John M. Carroll and Mary Beth Rosson. 1987. Paradox of the active user. In *Interfacing thought: Cognitive aspects of human-computer interaction*. ACM, New York City, New York, USA, 80–111.
- [28] Justine Cassell. 2002. Genderizing HCI. In *The Handbook of Human-Computer Interaction*, J. Jacko and A. Sears (Eds.). Erlbaum, Mahwah, New Jersey, USA, 402–411.
- [29] Matthew Chalmers and Areti Galani. 2004. Seamful interweaving: Heterogeneity in the theory and design of interactive systems. In *DIS '04: Proceedings of the 2004 Conference on Designing Interactive Systems*. ACM Press, New York City, New York, USA, 243–252.
- [30] Naomi Clark. 2017. What is Queerness in Games, Anyway? In *Queer Game Studies*, Bo Ruberg and Adrienne Shaw (Eds.). University of Minnesota Press,

- Minneapolis, Minnesota, USA, 3–14.
- [31] Tom Cole, Paul Cairns, and Marco Gillies. 2015. Emotional and functional challenge in core and avant-garde games. In *Proceedings of the 2015 Annual Symposium on Computer-Human Interaction in Play*. ACM, New York City, New York, USA, 121–126.
- [32] Karen Collins, Kamen Kanev, and Bill Kapralos. 2010. Using games as a method of evaluation of usability and user experience in human-computer interaction design.. In *Humans and Computers*. University of Aizu Press, Aizu-Wakamatsu, Japan, 5–10.
- [33] Drew Davidson. 2008. Well Played: Interpreting *Prince of Persia: The Sands of Time*. *Games and Culture* 3, 3–4 (July 2008), 356–386.
- [34] Bernard De Koven. 2013. *The Well-Played Game: A Player's Philosophy*. The MIT Press, Cambridge, Massachusetts, USA.
- [35] Kimberly Dennin and Adrianna Burton. 2023. Experiential Play as an Analytical Framework: Empathetic and Grating Queerness in The Last of Us Part II. *Game Studies* 23, 2 (2023), 20 pages.
- [36] Kody R. Dillman, Terrance Tin Hoi Mok, Anthony Tang, Lora Oehlberg, and Alex Mitchell. 2018. A Visual Interaction Cue Framework from Video Game Environments for Augmented Reality. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (Montreal, QC, Canada) (CHI '18). Association for Computing Machinery, New York, NY, USA, 1–12. doi:10.1145/3173574.3173714
- [37] Paul Dourish. 2001. *Where the Action Is*. MIT press, Cambridge, Massachusetts, USA.
- [38] Paul Dourish. 2003. The appropriation of interactive technologies: Some lessons from placeless documents. *Computer Supported Cooperative Work (CSCW)* 12 (2003), 465–490.
- [39] Anthony Dunne and Fiona Raby. 2013. *Speculative Everything, With a new preface by the authors: Design, Fiction, and Social Dreaming*. MIT press, Cambridge, Massachusetts, U.S.
- [40] Wilfried Elmenreich. 2019. Short games: Quickly made, quickly played. In *Savagame: Agency, Design, Engineering*. Springer, Berlin, Germany, 41–53.
- [41] Charline Foch and Ben Kirman. 2021. “Slow down and look”: Desirable aspects of failure in video games, from the perspective of players. In *Proceedings of the 16th International Conference on the Foundations of Digital Games* (Montreal, QC, Canada) (FDG '21). Association for Computing Machinery, New York, NY, USA, Article 27, 10 pages. doi:10.1145/3472538.3472569
- [42] Charline Foch and Ben Kirman. 2022. “The game doesn’t judge you”: game designers’ perspectives on implementing failure in video games. In *Proceedings of the 17th International Conference on the Foundations of Digital Games* (Athens, Greece) (FDG '22). Association for Computing Machinery, New York, NY, USA, Article 14, 13 pages. doi:10.1145/3555858.3555868
- [43] Alexander R. Galloway. 2006. *Gaming: Essays on algorithmic culture*. Vol. 18. U of Minnesota Press, Minneapolis, Minnesota.
- [44] Maria B. Garda. 2013. Nostalgia in retro game design. In *Proceedings of DiGRA 2013 Conference*. DiGRA, Tampere, Finland, 10 pages.
- [45] Ari Gass. 2024. Glitch as a Trans Representational Mode in Video Games. *Media-N: The Journal of the New Media Caucus* 20, 1 (2024), 5–27.
- [46] Leya George, Aneesa Singh, Nadia Berthouze, Lorna Hobbs, and Jo Gibbs. 2023. Jamming-as-Exploration: Creating and Playing Games to Explore Gender Identity. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Hamburg, Germany) (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 208, 19 pages. doi:10.1145/3544548.3558046
- [47] Mary L Gray. 2009. *Out in the country: Youth, media, and queer visibility in rural America*. Vol. 2. NYU Press, New York City, New York, USA.
- [48] Jack Halberstam. 2011. *The Queer Art of Failure*. Duke University Press, London, UK.
- [49] Jack Halberstam. 2017. Queer gaming: Gaming, hacking, and going turbo. In *Queer Game Studies*, Bo Ruberg and Adrienne Shaw (Eds.). U of Minnesota Press, London, UK, 187–200.
- [50] Donna Haraway. 1988. Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies* 14, 3 (1988), 575–599.
- [51] Steve Harrison, Phoebe Sengers, and Deborah Tatar. 2011. Making epistemological trouble: Third-paradigm HCI as successor science. *Interacting with Computers* 23, 5 (2011), 385–392. doi:10.1016/j.intcom.2011.03.005
- [52] Kieran Healy. 2017. Fuck Nuance. *Sociological Theory* 35, 2 (2017), 118–127. doi:10.1177/0735275117709046
- [53] Lisa Henderson. 2013. *Love and money: Queers, class, and cultural production*. Vol. 18. NYU Press, New York City, New York, USA.
- [54] Kristina Höök and Jonas Löwgren. 2012. Strong concepts: Intermediate-level knowledge in interaction design research. *ACM Trans. Comput.-Hum. Interact.* 19, 3, Article 23 (Oct. 2012), 18 pages. doi:10.1145/2362364.2362371
- [55] Robin Hunnicke, Marc LeBlanc, and Robert Zubek. 2004. MDA: A formal approach to game design and game research. In *Proceedings of the AAAI Workshop on Challenges in Game AI*. Association for the Advancement of Artificial Intelligence, Washington D.C., USA, 5 pages.
- [56] Ioanna Iacovides, Anna Cox, Richard Kennedy, Paul Cairns, and Charlene Jennett. 2015. Removing the HUD: The Impact of Non-Diegetic Game Elements and Expertise on Player Involvement. In *Proceedings of the 2015 Annual Symposium on Computer-Human Interaction in Play* (London, United Kingdom) (CHI PLAY '15). Association for Computing Machinery, New York, NY, USA, 13–22. doi:10.1145/2793107.2793120
- [57] Ian Bryce Jones. 2016. Do the Locomotion: Obstinate Avatars, Dehiscent Performances, and the Rise of the Comedic Video Game. *The Velvet Light Trap* 77 (2016), 86–99. doi:10.7560/VLT7706
- [58] Kristine Jørgensen. 2013. *Gameworld Interfaces*. The MIT Press, Cambridge, Massachusetts, USA. doi:10.7551/mitpress/9780262026864.001.0001
- [59] Jesper Juul. 2005. *Half Real: Video Games between Real Rules and Fictional Worlds*. MIT Press, Cambridge, Massachusetts, USA.
- [60] Rilla Khaled. 2018. Questions over answers: Reflective game design. In *Playful Disruption of Digital Media*, Daniel Cermak-Sassenrath (Ed.). Springer Singapore, Singapore, 3–27. doi:10.1007/978-981-10-1891-6_1
- [61] Raph Koster. 2013. *Theory of fun for game design*. O'Reilly Media, Inc., Sebastopol, California, USA.
- [62] Nicole Lazzaro. 2009. Why we play: affect and the fun of games. *Human-computer interaction: Designing for diverse users and domains* 155 (2009), 679–700.
- [63] Shana Liang, Michelle V. Cormier, Phoebe O. Toups Dugas, and Rose Bohrer. 2023. Analyzing Trans (Mis)Representation in Video Games to Remediate Gender Dysphoria Triggers. *Proc. ACM Hum.-Comput. Interact.* 7, CHI PLAY, Article 388 (oct 2023), 33 pages. doi:10.1145/3611034
- [64] Ian J. Livingston, Carl Gutwin, Regan L. Mandryk, and Max Birk. 2014. How Players Value Their Characters in World of Warcraft. In *Proceedings of the 17th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '14)*. ACM, New York, NY, USA, 1333–1343.
- [65] Jonas Löwgren. 2007. Fluency as an Experiential Quality in Augmented Spaces. *Journal of Design* 1, 3 (2007), 1–10.
- [66] Jess Marcotte. 2018. Queering control (lers) through reflective game design practices. *Game Studies* 18, 3 (2018), 1–16.
- [67] Tim Marsh and Brigid Costello. 2012. Experience in serious games: between positive and serious experience. In *Serious Games Development and Applications: Third International Conference*, Bremen, Germany. Springer, Bremen, Germany, 255–267.
- [68] Mitchell W. McEwan, Alethea L. Blackler, Daniel M. Johnson, and Peta A. Wyeth. 2014. Natural mapping and intuitive interaction in videogames. In *Proceedings of the First ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play* (Toronto, Ontario, Canada) (CHI PLAY '14). Association for Computing Machinery, New York, NY, USA, 191–200. doi:10.1145/2658537.2658541
- [69] Don Norman. 2013. *The Design of Everyday Things: Revised and Expanded Edition* (2013 ed.). Basic Books, New York City, USA.
- [70] Oxford English Dictionary. 2024. fumble, n. In *Oxford English Dictionary*. Oxford University Press, Oxford, England.
- [71] Oxford English Dictionary. 2024. hardcore (adj.), sense 3. In *Oxford English Dictionary*. Oxford University Press, Oxford, England.
- [72] Lawrence A. Palinkas, Sarah M. Horwitz, Carla A. Green, Jennifer P. Wisdom, Nailhua Duan, and Kimberly Hoagwood. 2016. Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health and Mental Health Services* 42, 5 (2016), 533–544.
- [73] Amanda Phillips. 2017. Unruly Bodies: The Queer Physics of Fumblecore. <https://www.youtube.com/watch?v=dtGZlPPzyig>
- [74] Amanda Phillips. 2017. Welcome to my fantasy zone: Bayonetta and queer femme disturbance. In *Queer Game Studies*, Bo Ruberg and Adrienne Shaw (Eds.). University of Minnesota Press, London, UK, Book section 12, 109–123.
- [75] Lev Poretski and Anthony Tang. 2022. Press A to Jump: Design Strategies for Video Game Learnability. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (New Orleans, LA, USA) (CHI '22). Association for Computing Machinery, New York, NY, USA, Article 155, 26 pages. doi:10.1145/3491102.3517685
- [76] Zoey Reyes and Joshua Fisher. 2022. The Impacts of Virtual Reality Avatar Creation and Embodiment on Transgender and Genderqueer Individuals in Games: A Grounded Theory Analysis of Survey and Interview Data from Transgender and Genderqueer Individuals about Their Experiences with Avatar Creation Interfaces in Virtual Reality. In *Proceedings of the 17th International Conference on the Foundations of Digital Games* (Athens, Greece) (FDG '22). Association for Computing Machinery, New York, NY, USA, Article 25, 9 pages. doi:10.1145/3555858.3555882
- [77] Scott Rogers. 2009. Everything I Learned about Level Design I Learned from Disneyland. Recorded Lecture. <https://gdcvault.com/play/1305/Everything-I-Learned-About-Level> [Last Accessed: 11 July 2024].
- [78] Yvonne Rogers, Helen Sharp, and Jenny Preece. 2011. *Interaction Design: Beyond Human - Computer Interaction* (3rd ed.). Wiley, Hoboken, New Jersey, USA.
- [79] Jake Rossen. 2023. The Tragic Life of Clippy, the World’s Most Hated Virtual Assistant. *Mental Floss* (31 July 2023). <https://www.mentalfloss.com/article/504767/tragic-life-clippy-worlds-most-hated-virtual-assistant>
- [80] Bo Ruberg. 2015. No Fun: The Queer Potential of Video Games that Annoy, Anger, Disappoint, Sadden, and Hurt. *QED: A Journal in GLBTQ Worldmaking* 2, 2

- (06 2015), 108–124. doi:10.14321/qed.2.2.0108
- [81] Bo Ruberg. 2018. Queerness and video games: Queer game studies and new perspectives through play. *GLQ: A Journal of Lesbian and Gay Studies* 24, 4 (2018), 543–555.
- [82] Bo Ruberg. 2019. *Video Games Have Always Been Queer*. NYU Press, New York, New York, USA.
- [83] Bo Ruberg and Adrienne Shaw. 2017. *Queer Game Studies*. U of Minnesota Press, London, UK.
- [84] Matthew Rueben, Matthew R. Horrocks, Jennifer Eleanor Martinez, Michelle V. Cormier, Nicolas LaLone, Marlena Fraune, and Phoebe O. Toups Dugas. 2022. “I See You!”: A Design Framework for Interface Cues about Agent Visual Perception from a Thematic Analysis of Videogames. In *CHI Conference on Human Factors in Computing Systems*. ACM, New York City, New York, USA, 1–22.
- [85] Thomas E. Ruggiero. 2000. Uses and gratifications theory in the 21st century. *Mass Communication & Society* 3, 1 (2000), 3–37.
- [86] Gayle Salomon. 2009. Justification and queer method, or leaving philosophy. *Hypatia* 24, 1 (2009), 225–230.
- [87] Katie Salen Tekinbaş and Eric Zimmerman. 2003. *Rules of Play: Game Design Fundamentals*. MIT Press, Cambridge, Massachusetts, USA.
- [88] Jesse Schell. 2019. *The Art of Game Design: A Book of Lenses* (third ed.). A K Peters / CRC Press, Natick, Massachusetts, USA.
- [89] M. D. Schmalzer. 2020. Janky Controls and Embodied Play: Disrupting the Cybernetic Gameplay Circuit. *Game Studies* 20, 3 (September 2020), 15 pages.
- [90] James C. Scott. 1999. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press, New Haven, Connecticut, USA.
- [91] Adrienne Shaw and Elizaveta Friesem. 2016. Where is the queerness in games?: Types of lesbian, gay, bisexual, transgender, and queer content in digital games. *International Journal of Communication* 10 (2016), 13.
- [92] Miguel Sicart. 2011. Against Procedurality. *Game Studies* 11, 3 (2011), 209.
- [93] Gilbert Simondon. 2017. *On the Mode of Existence of Technical Objects*. University of Minnesota Press, Minneapolis, Minnesota.
- [94] Dean Spade. 2015. *Normal life: Administrative violence, critical trans politics, and the limits of law*. Duke University Press, Durham, North Carolina, USA.
- [95] Katta Spiel. 2021. “Why are they all obsessed with Gender?” — (Non)binary Navigations through Technological Infrastructures. In *Proceedings of the 2021 ACM Designing Interactive Systems Conference* (Virtual Event, USA) (DIS '21). Association for Computing Machinery, New York, NY, USA, 478–494. doi:10.1145/3461778.3462033
- [96] Susan Stryker. 2008. Transgender history, homonormativity, and disciplinarity. *Radical History Review* 2008, 100 (2008), 145–157.
- [97] Lucille Alice Suchman. 1987. *Plans and Situated Actions: The Problem of Human Machine Communication*. Cambridge University Press, Cambridge, UK.
- [98] Steve Swink. 2009. *Game feel: a game designer's guide to virtual sensation*. CRC press, Boca Raton, Florida. doi:10.1201/9781482267334
- [99] Theresa Jean Tanenbaum and Jim Bizzocchi. 2009. Rock Band: A Case Study in the Design of Embodied Interface Experience. In *Proceedings of the 2009 ACM SIGGRAPH Symposium on Video Games* (New Orleans, Louisiana) (Sandbox '09). Association for Computing Machinery, New York, NY, USA, 127–134. doi:10.1145/1581073.1581093
- [100] Phoebe O. Toups Dugas, Nicole K. Crenshaw, Rina R. Wehbe, Gustavo F. Tondello, and Lennart E. Nacke. 2016. “The Collecting Itself Feels Good”: Towards Collection Interfaces for Digital Game Objects. In *Proceedings of the 2016 Annual Symposium on Computer-Human Interaction in Play* (Austin, Texas, USA) (CHI PLAY '16). Association for Computing Machinery, New York, NY, USA, 276–290. doi:10.1145/2967934.2968088
- [101] Phoebe O. Toups Dugas, William A. Hamilton, and Sultan A. Alharthi. 2016. Playing at Planning: Game Design Patterns from Disaster Response Practice. In *Proceedings of the 2016 Annual Symposium on Computer-Human Interaction in Play* (Austin, Texas, USA) (CHI PLAY '16). Association for Computing Machinery, New York, NY, USA, 362–375. doi:10.1145/2967934.2968089
- [102] Phoebe O. Toups Dugas, Nicolas LaLone, Sultan A. Alharthi, Hitesh Nidhi Sharma, and Andrew M. Webb. 2019. Making Maps Available for Play: Analyzing the Design of Game Cartography Interfaces. *ACM Trans. Comput.-Hum. Interact.* 26, 5, Article 30 (July 2019), 43 pages. doi:10.1145/3336144
- [103] Phoebe O. Toups Dugas, Nicolas LaLone, Katta Spiel, and Bill Hamilton. 2020. Paper to Pixels: A Chronicle of Map Interfaces in Games. In *Proceedings of the 2020 ACM Designing Interactive Systems Conference* (Eindhoven, Netherlands) (DIS '20). Association for Computing Machinery, New York, NY, USA, 1433–1451. doi:10.1145/3357236.3395502
- [104] TV Tropes. N.D.. Status Effects. Wiki. <https://tvtropes.org/pmwiki/pmwiki.php/Main>StatusEffects> [Accessed: 11 July 2024].
- [105] Wolfgang Walk, Daniel Görlich, and Mark Barrett. 2017. Design, Dynamics, Experience (DDE): An Advancement of the MDA Framework for Game Design. In *Game Dynamics: Best Practices in Procedural and Dynamic Game Content Generation*. Springer Link, Berlin, Germany.
- [106] Colin Ware. 2004. *Information Visualization: Perception for Design* (2nd ed.). Morgan Kaufmann, San Francisco, CA, USA.
- [107] Douglas Wilson and Miguel Sicart. 2010. Now it's personal: on abusive game design. In *Proceedings of the International Academic Conference on the Future of Game Design and Technology* (Vancouver, British Columbia, Canada) (Futureplay '10). Association for Computing Machinery, New York, NY, USA, 40–47. doi:10.1145/1920778.1920785
- [108] Jordan Youngblood. 2013. “C'mon! Make me a man!”: Persona 4, Digital Bodies, and Queer Potentiality. *Journal of Gender, New Media, and Technology* 2 (2013), 19 pages. Issue 2.

Ludography

- [G1] Asmik Ace Entertainment. 1998. *LSD: Dream Emulator*. Game [Playstation]. Asmik Ace Entertainment, Tokyo, Japan.
- [G2] Bennett Foddy. 2008. *QWOP*. Game [iOS, Browser]. Bennett Foddy, England.
- [G3] Bennett Foddy. 2012. *CLOP*. Game [iOS, Browser]. Bennett Foddy, England.
- [G4] Bennett Foddy. 2017. *Getting Over It with Bennett Foddy*. Game [Windows, macOS, iOS]. Bennett Foddy, England.
- [G5] Bit Loom Games. 2020. *Phogs!* Game [Windows, Nintendo Switch]. Coatsink, Sunderland, England.
- [G6] Blizzard Entertainment. 2015. *Heroes of the Storm*. Game [Windows, macOS]. Blizzard Entertainment, Irvine, California, US.
- [G7] BlueTwelve Studio. 2022. *Stray*. Game [Windows]. Annapurna Interactive, California, United States.
- [G8] Bonelof. 2017. *Gang Beasts*. Game [Windows, Playstation 4, Nintendo Switch]. Double Fine Presents, Bone Loaf, San Francisco, US.
- [G9] Bossa Studios. 2013. *Surgeon Simulator*. Game [Windows, Playstation 4, Nintendo Switch, iOS]. Bossa Studios, tinyBuild, Atari, New York City, United States.
- [G10] Bossa Studios. 2015. *I am Bread*. Game [Windows, Playstation 4, iOS]. Bossa Studios, tinyBuild, Atari, New York City, United States.
- [G11] Capcom. 2004. *Monster Hunter*. Game [Playstation 2]. Capcom, Osaka, Japan.
- [G12] Catastrophic Overload. 2020. *Drink More Glorp*. Game [Windows, Nintendo Switch]. Yogscast Games, Bristol, England.
- [G13] Catobyte. 2023. *Super Bunny Man*. Game [Windows]. Catobyte Ltd., New Zealand.
- [G14] Colossal Order. 2015. *Cities: Skylines*. Game [Windows]. Paradox Interactive, Stockholm, Sweden.
- [G15] DevM Games, SMG Studio. 2020. *Moving Out*. Game [Windows, Switch, Xbox One, Playstation 4]. DevM Games, SMG Studio, Wakefield, England.
- [G16] DevM Games, SMG Studio. 2023. *Moving Out 2*. Game [Windows, Switch, Xbox One, Playstation 4]. DevM Games, SMG Studio, Wakefield, England.
- [G17] FromSoftware, Inc. 2011. *Dark Souls I*. Game [Windows]. Publisher, Tokyo, Japan.
- [G18] FromSoftware, Inc. 2014. *Dark Souls II*. Game [Windows]. Publisher, Tokyo, Japan.
- [G19] How Fast Make Games. 2017. *Hand Simulator*. Game [Windows]. How Fast Make Games, St. Petersburg, Russia.
- [G20] Japan Studio (Project Siren). 2003. *Siren*. Game [Playstation 2]. Sony Computer Entertainment, California, USA.
- [G21] Lena Dias. 2023. *Neurotype Cafe*. Game [Windows, macOS]. Lena Dias, MA, USA.
- [G22] Namco. 2004. *Katamari Damacy*. Game [Windows, Playstation 2, Nintendo Switch, Playstation 4]. Namco, Namco HomeTek, Tokyo, Japan.
- [G23] Nintendo R&D1. 2003. *WarioWare, Inc.: Mega Microgames!* Game [Game Boy Advance]. Nintendo, Kyoto, Japan.
- [G24] Nude Maker, Capcom Production Studio 4. 2002. *Steel Battalion*. Game [Xbox]. Capcom, Osaka, Japan.
- [G25] Psyonix. 2015. *Rocket League*. Game [Windows, macOS]. Psyonix, San Diego, USA.
- [G26] September Games. 2020. *Stilt Fella*. Game [Windows]. September Games, Vaasa, Finland.
- [G27] Sleeping Beast Games. 2012. *Spaceteam*. Game [iOS, Android]. Sleeping Beast Games.
- [G28] South East Games. 2014. *Probably Archery*. Game [Windows, Nintendo Switch]. South East Games, Gold Coast, Australia.
- [G29] Stegersaurus Software Inc. 2014. *Mount Your Friends*. Game [Windows, macOS]. Stegersaurus Software Inc., Toronto, Canada.
- [G30] Stegersaurus Software Inc. 2018. *Mount Your Friends 3D*. Game [Windows, macOS]. Stegersaurus Software Inc., Toronto, Canada.
- [G31] Triband. 2020. *WHAT THE GOLF?* Game [Windows]. Triband, Copenhagen, Denmark.
- [G32] Ubisoft Reflections. 2015. *Grow Home*. Game [Windows, Playstation 4]. Ubisoft, Saint-Mandé, France.
- [G33] Young Horses. 2014. *Ocotidad: Dadliest Catch*. Game [Windows, macOS]. Young Horses, Illinois, USA.