



Designing games that prioritize meaning over fun

Criando jogos que priorizam o significado em detrimento da diversão

Diseñando juegos que prioricen el significado sobre la diversión

Miguel Carvalhais^I, Pedro Cardoso^{II}, José Raimundo^{III} Ricardo Melo^{IV}

Abstract

A majority of contemporary game design is focused on developing a hedonistic loop, a friction-less aesthetic that hinges on familiarity and comfort to promote states of flow and player satisfaction. Not disregarding the advantages of designing for the hedonistic loop, this paper questions it and develops a critique that advocates for a focus on aesthetic friction, a shift of the play experience from the prioritisation of fun to the creation of contexts for the construction of meaning.

Keywords: Aesthetic friction; Game design; Hedonistic loop; Interaction; Construction of meaning

Resumo

A maioria do design de jogos contemporâneo está focada no desenvolvimento de um círculo vicioso hedônico, uma estética sem fricção que depende de familiaridade e conforto para promover estados de fluxo e satisfação. Sem desconsiderar as vantagens de desenhar para o círculo vicioso hedônico, este artigo questiona-o e desenvolve uma crítica que advoga por um foco na fricção estética, uma mudança na experiência de jogar que dá prioridade à construção de significado em detrimento da diversão.

Palavras-chave: Fricção estética; Design de jogos; Círculo vicioso hedônico; Interação; Construção de significado

Resumen

La mayoría del diseño de juegos contemporáneo se centra en desarrollar un círculo hedónico vicioso, una estética sin fricción que se basa en la familiaridad y la comodidad para promover estados de flujo y satisfacción. Sin dejar de lado las ventajas de entrar en el círculo vicioso hedónico, este artículo cuestiona y desarrolla una crítica que requiere un enfoque en la fricción estética, un cambio en la experiencia de juego que da prioridad a la construcción de significado sobre la diversión.

Palabras clave: Fricción estética; Diseño de juegos; Círculo vicioso hedónico; interacción; Significado

^I INESC TEC & Faculdade de Belas Artes da Universidade do Porto - mcarvalhais@fba.up.pt ORCID: <https://orcid.org/0000-0002-4880-2542>

^{II} Faculdade de Belas Artes da Universidade do Porto - pcardoso@fba.up.pt - ORCID: <http://orcid.org/0000-0001-8546-4194>

^{III} Faculdade de Engenharia da Universidade do Porto - joseraimundo3d@gmail.com - ORCID: <https://orcid.org/0000-0002-9686-1336>

^{IV} Fraunhofer Portugal AICOS - ricardo.melo@fraunhofer.pt - ORCID: <https://orcid.org/0000-0002-3186-3752>



1. Introduction

The idea of intentionally shifting a game's focus away from fun so that it may promote critical reflection and the creation of new meanings by their players, eventually also making it uncomfortable, is not entirely new.¹

Whether no-fun experiences are being problematically repackaged or simply overlooked, the current discourse around fun in video games is still disappointingly limited. (...) Fun itself can be deeply meaningful, but there is much more to video games than fun. As a blanket concept for making sense of the pleasure of playing games, fun is insufficient. (...) Video games have the power to communicate emotions as rich and difficult as befit the human experience. (Ruberg, 2015, p.113)

Games have purposes beyond entertainment, reflecting culture, social norms, concerns, values and beliefs (Flanagan, 2009). As an example of this, *The Sims* (2000) which on one hand can be seen as a digital version of the normative playground of dollhouses, also allows players to reflect on class, gender and late-stage capitalism (Flanagan, 2009, p.31-32). *The Sims'* personalization potential has also been used to create machinima with narratives that explore emotionally charged social circumstances, such as homelessness (Isbister 2017, p.39). This suggests that even fun-focused games can be turned into media for reflection and introspection.

These stories do explore emotionally fraught social situations – bullying, weddings, breakups and even eating disorders (...). One player created an ongoing blog narrative about father and daughter Sims who were homeless. This player portrayed homelessness by using the game's mechanics. She designated park benches as the actual character's homes and kept as much as possible to the actual in-game interactions that emerged between those characters and their neighbourhood. (Isbister, 2017, p.39)

Despite this track record, many contemporary games are designed to be as comfortable and familiar as possible, and whenever they may feel uncomfortable, frustrating or confusing, they are seen as flawed because "videogame tastemakers of yore sold us the toxic myth that fun is paramount" (Holiwell, 2015), promoting what we call *frictionless aesthetics*.

2. In defence of discomfort

We may understand frictionless aesthetics as a familiar and comfortable experience. This tendency in games can be seen as a consequence of the insight that "new experience[s] might force a whole new system on the brain, and often the brain doesn't like that. It's disruptive. The brain doesn't want to do more work than it has to." (Koster, 2013, p.42)

With this in mind, games based on frictionless aesthetics are mostly governed by conventional game design philosophies, presenting clear rules, objectives and affordances, intended to involve the player in a state of flow (Csíkszentmihályi, 1990), adjusting the effort they require from players according to their own performance, and sometimes adjusting themselves to players' own style of play, so that goals become more achievable.

While these strategies are critical to fostering enjoyable experiences, they feed the players' egos by complying with familiar routines, translating them into familiar experiences, genres, and game mechanics. This promotes a positive feedback loop guided by the pleasure of navigating familiar experiences, a loop that limits the creativity of game designers while alienating players' ability to reflect and to unravel new meanings. This is the *hedonistic loop*.

The limitations of games aren't just thematic. When I criticize games for being mostly about shooting people in the head, that's a design criticism as well. Most games are copies of existing successful games. They play like other games, resemble their contemporaries in shape and structure, have the same buttons that interact with the world in the same way (...), and have the same shortcomings. If there's a vast pool of experiences that contemporary videogames are failing to tap, then there's just as large a pool of aesthetic and design possibilities that are being ignored. I don't believe these are separate issues, either. To tell different stories, we need different ways of interacting with games. (Anthropy, 2012, p.5)

Experiencing something new and unfamiliar causes discomfort and friction in the experience of play. Presenting new fields of possibilities and contexts to players, making them produce new meanings from these new experiences, is the goal of what we call *aesthetic friction*. In this paradigm, the onus of the experience of play shifts from fun to prioritising the construction of meaning. This does not mean that games governed by aesthetic friction cannot be fun. It means that such fun will inevitably be affected by some friction.

¹ This paper stems from our previous work (ANONYMISED FOR BLIND REVIEW PURPOSES), it inspects more in depth some of the concepts explored there and adds new ones, further developing the theory.

Games should be uncomfortable if they have purpose, if they're handled with tact and emotional intelligence. (Holiwell, 2015).

3. DESIGNING AESTHETIC FRICTION

The hedonistic loop is rooted on player engagement, which is the focus of many game designers and a rule of thumb in the game industry. However, the hedonistic loop is only the start of a more complex and deep web of affective relationships with games that players may experience. With that in mind, when breaking the hedonistic loop we are not necessarily destroying player engagement. We are diving deeper into this mesh, exploring it to discover some of the principles that may be used to design aesthetic friction.

3.1 Anamorphosis

An *anamorphosis* is a distorted representation of something that appears normal when viewed from a particular perspective or by using a mirror or lens adequate to such distortion. Its principle is "to hide a vital aspect of the artwork from the viewer, an aspect that may be discovered only by the difficult adoption of a nonstandard perspective." (Aarseth, 1997, p.181) Anamorphic games transform the game world to explore the limits of human perception. In *Echochrome* (2008) the player traverses worlds inspired by M.C. Escher's work, with physics that depend on the perspective of the camera controlled by the player. Optical illusions are also explored by *Superliminal* (2019) where the player is invited to play with their perspective of the game world in order to progress. In *A Shadow's Tale* (2010), the player is able to rotate the stage projecting different shadows onto the set, in order to be able to find new paths to traverse the game world.

3.2 Aporia-Epiphany

Aporias are created by the deliberate inaccessibility of parts of a game, reminders of paths not taken or choices not made. *Epiphanies* are moments of release from aporias through their resolution. (Aarseth, 1997, p.3,91) We can find these aporia-epiphany dynamics in *Gris* (2018) where the player seeks to reclaim the protagonist's memory, and in *Her Story* (2015) and *Machinarium* (2009) where the player seeks to reconstruct or discover the history of the characters. We can say that the aesthetics of these games is based on hidden information, enveloping the player in "the same kind of narrative anticipation aroused by fiction" while feeling compelled to achieve goals to see what happens next (Costikyan, 2013, p.54), in an interesting play between dramatic tension and gameplay tension (Adams, 2013).

3.3 Enstranging Play

Enstranging play (De Wildt, 2014) occurs when the game deliberately directs the player's attention to the mechanics and logic of its own system, confronting them with "unexpected roles and demand[ing] reflection rather than inviting relaxing immersion" (Pötzsch, 2017). In *Desert Bus* (1995) the player crosses the desert driving a bus in real time; in *The Stanley Parable* (2013) a narrator breaks the fourth wall and tries to persuade the player to travel a specific path; and in *Metal Gear Solid* (1998), in order to win the battle against a particular foe, the player needs to change the physical port to which the game controller is plugged to.

3.4 Functional Estrangement

Functional estrangement (Dunne, 2005, p.41) promotes a disconnect between player and game, disrupting flow to add a layer of meaning to the interaction or to reflect on experience, adding purpose beyond passive entertainment.

To provide conditions where users can be provoked to reflect on their everyday experience of electronic objects, it is necessary to go beyond forms of estrangement grounded in the visual and instead explore the aesthetics of use grounded in functionality, turning to a form of strangeness that lends the object a purposefulness. (Dunne, 2005, p.41-42)

Examples can be found in *Spec Ops: The Line* (2012), a game that highlights the disconnection between war and its representation in modern war shooters as itself, and in *The Marriage* (2007), a game that is visually composed of abstract shapes but it is the game rules that represent something real, the author's view on the dynamics of marriage.

3.5 Unfriendliness

Unfriendliness is a form of provocation in which “[b]y poeticizing the distance between people and electronic objects, sensitive skepticism might be encouraged, rather than unthinking assimilation of the values and conceptual models embedded in electronic objects.” (Dunne, 2005, p.22) By being unfriendly, electronic objects stop being neutral media to become an experience in themselves. This is clear in the dense and confusing interface of *Papers, Please* (2013), or in the finite game saves of *Resident Evil* (1996) that force the player to replay large portions of the game in order to be able to save it in later and harder stages. It is also visible in *SOD* (2002), an art game that reskins the visual assets of *Wolfenstein 3D* (1992) into abstract geometric black and white shapes.

While [John] Cage removed the sound but left the framework for performing and listening in place, JODI removed the illusion of representational space but left everything else about *Wolfenstein 3D* alone. And as Cage forced a reconsideration of music by removing music, so JODI forces a reconsideration of videogames by removing playability through graphical disruption. (Sharp, 2015, p.43)

3.6 Partial Access

Partial access happens when the player is barred from parts of the game, through rules, space, objects, etc., sometimes being forced to replay in order to access them. This can be found in *Miegakure* (TBR), a game where the player navigates a world of four spatial dimensions through a 2D depiction of its 3D sections at a time; in *Passage* (2007) where the access to certain parts of the world is restricted to the player that chooses to pair up their character with a life partner; and in *One Hour One Life* (2018) in which players play “small part in a much larger story”, the life of a character from birth to death (one hour). After the death of the playable character the player may play again but “as a different person in a different place and different time, with another unique story to experience in the next hour”.²

3.7 Subversion

Artists inspired by avant-garde artistic movements of the 19th and 20th century tried to stimulate reflection and break conventions through provocative board-games, often built with ambiguous instructions or impossible winning conditions (Flanagan, 2009, p.90-93). *La piste* (1931) presents a closed circuit that seems to be destined to be travelled by a ball placed in a separate receptacle that has no connection to the circuit. A more recent example is *September 12th: A Toy World* (2010) where it is impossible to win, and where the best course of action may actually be not to play.

4. Experiencing aesthetic friction

4.1 Disobedience

Disobedience occurs when certain elements of the game that are crucial for players to progress are not entirely controllable by them. This can be witnessed in *The Last Guardian* (2016) and in *The Legend of Zelda: Breath of the Wild* (2017), with Trico in the first and the horses in the latter that do not always obey the player’s orders, or the robot in *Randobot* (2012) that although controlled by the player is governed by a probabilistic system that affects its response to commands.

4.2 Deception

Deception misleads the player into distrusting the game system itself. Close to the end of *Metal Gear Solid 2: Sons of Liberty* (2001), the game tries to persuade the player to quit by telling them to turn off the console and presenting the game over screen. *Kaizo Mario* (2007) and *Unfair Mario* (n.d.) are games that are constantly guiding the player to failure, simultaneously breaking platform gaming conventions. In *Doki Doki Literature Club!* (2017), the game system erases the character’s save files, inviting the player to do the same. In *Train* (2009) the goal is to control passenger trains towards a specific destination, only to later be confronted with the fact such destination is the death camp of Auschwitz. The game questions players about whether they want to comply with the rules while remaining passive spectators of the evoked historical drama.³

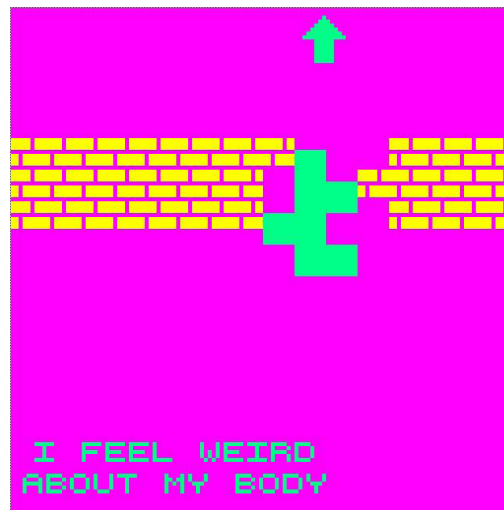
² Quotes from the game’s official website: <http://onehouronlife.com/>. Accessed on November 23rd 2019.

³ From <http://brenda.games/train>. Last accessed on 19 November 2019.

4.3 Alterity

Alterity refers to the development of an understanding of others or of the operations of artifacts or what they intend to convey in order to assume the viewpoint of others. *Dys4ia* (2012) is a series of autobiographical games that portray gender dysphoria as felt by Anna Anthropy. *Sekiro: Shadows Die Twice* (2019) forces the player to a state of mind analogous to that of the samurai that the game depicts. In *The Graveyard* (2008), the player traverses the game world very slowly, as the elderly character they control.

Figure 1 - *Dys4ia* (2012)



Source: Screenshot from authors' play session

4.5 Uncertainty

Uncertainty is rooted in a game or element that cannot be relied on, or that promotes unknown or unforeseeable situations. In *Extase* (1991) uncertainty becomes evident through the strange facial expressions of the android, which the player tries to (re)animate and that do not, ultimately, reveal whether they are being successful or not. *Sleep is Death* (2010) promotes uncertainty because both players can never be sure of how to act because their performance is based on each other's actions. It happens in *Home* (2012) because the consequences of the player's choices are not foreseeable and therefore it is not clear how events in the game will unfold. In *The Second Thought or Please, Don't Touch Anything* (2014), the player has to deactivate a bomb and there is no apparent causal relationship between the diverse interactive elements that become visible once they start pressing buttons. In *Façade* (2005) the player is never entirely sure how the non-player characters will respond to their text input.

4.6 Uncontrollableness

This is about making it hard to operate the particular elements of the game. This is evident in *Getting Over It With Bennett Foddy* (2017) in which the player has to climb piles of rocks and junk with a hammer while being inside a cauldron; in *Octodad: Dadliest Catch* (2014) and in *I Am Bread* (2015) where playable characters have dedicated controls for particular parts or their body that players need to operate simultaneously to move them through the game world; and in *Brothers: A Tale of Two Sons* (2013) where the player is forced to divide her attention while simultaneously controlling two different characters.

4.7 Distress

The traditional and often myopic focus on fun forecloses a rich array of emotions – among them anger, annoyance, fear, alarm, and hurt – that can in fact shape a game's message as much as (if not more than) its content and mechanics. (Ruberg, 2015, p.110)

Players may experience eventual distress in diverse situations in various types of games, even in those that solely focus on fun. Nevertheless, aesthetic friction only happens when distress is not solely a consequence of fun, but when gameplay is about distress itself, as with *PainStation* (2001), a variation of *Pong* (1972) in which players are physically punished.

Figure 2: Playing Painstation (2001).



Source: Picture by Ultimaratipharm, accessed on November 20th, 2019 at <https://en.wikipedia.org/wiki/PainStation#/mediaFile:Painstation.jpg>

Another example is *Super Hexagon* (2012), which is painfully fun because of its effective design in punishing players, immediately confronting them with a very demanding level of mastery (Ruberg, 2015, p.108).

5. Conclusions

The hedonistic loop is fed by frictionless aesthetics, which limits the creativity of game designers and restricts the expressiveness of games, focusing them on a very narrow set of experiences for very specific audiences. By prioritizing the construction of meaning over fun, designers promote some discomfort in the experience of play, but instead of seeing this friction as a flaw, we propose seeing it as a welcomed break from the hedonistic loop, that frees players from the prevailing myth that fun is paramount in games. In this line of thought, we see that aesthetic friction takes us one step closer to understanding how to design contexts for the production of meaning in games and how to expand our knowledge of games as expressive and communicative media, which interest will expand beyond traditional gaming audiences, making players out of people that are not interested in the hedonistic loop but rather in other experiences. With this in mind, we pinpoint some subjects we're developing in future work.

5.1 Transgression

"Transgression is defined as the breaching or trespassing of an abstracted boundary." (Jørgensen, et al., 2018, p.49) It is about breaking conventions, rules or limitations imposed by the game system. This seems to be a subject worthy of study in this scope since the game must work towards making its players think and act outside of the boundaries and norms that it first presents. It seems to require players to make an effort into thinking and *playing out of the box*, which can be accomplished through aesthetic friction.

5.2 The Hedonistic Loop and Dark Patterns

There seems to be a clear relationship between the hedonistic loop and dark design patterns, "used intentionally by a game creator to cause negative experiences for players that are against their best interests and happen without their consent." (Zagal et al., 2013, p.41) For example, after being enveloped in the hedonistic loop, it is quite common for players to be instigated to pay for unlocking new features or those necessary to continue playing in the hedonistic loop, or to establish social connections outside of the game, or incite others to play.

5.3 Towards an Understanding of Gamic Prosody

Since aesthetic friction prioritises meaning instead of fun, we may say that it also takes us closer to an understanding of what we call *gamic prosody*. In linguistics, prosody is concerned with intonation, tone, stress and rhythm of speech, elements that reflect particular characteristics of a statement as well as of its speaker. In similar terms, in music, prosody describes how a particular sound relates with other aspects of the composition. In this sense, we may define gamic prosody as how action in games is related with its potential meaning for the player.

References

- AARSETH, E. J. **Cybertext, Perspectives on Ergodic Literature**. Baltimore, MD: The Johns Hopkins University Press, 1997.
- ADAMS, Ernest. **Resolutions to Some Problems in Interactive Storytelling**. 2013. Tese PhD, University of Teesside, Inglaterra. Accessed on: 23 Nov. 2019, at: <http://www.designersnotebook.com>.
- ANTHROPY, Anna. **Rise of the videogame zinesters: How freaks, normals, amateurs, artists, dreamers, dropouts, queers, housewives, and people like you are taking back an art form**. New York, NY: Seven Stories Press, 2012.
- COSTIKYAN, Greg. **Uncertainty in Games**. Cambridge, MA: The MIT Press, 2013.
- CSÍKSZENTMIHÁLYI, Mihaly. **Flow: The Psychology of Optimal Experience**. New York, NY: Harper, 1990.
- DE WILDT, L. **“Enstranging Play: Distinguishing Playful Subjecthood from Governance”**. Philosophy of Computer Games Conference, 2014.
- DUNNE, Anthony. **Hertzian Tales: Electronic Products, Aesthetic Experience, and Critical Design**. Cambridge, MA: The MIT Press, 2005.
- FLANAGAN, Mary. **Critical Play: Radical Game Design**. Cambridge, MA: The MIT Press, 2009.
- HOLIWELL, S. R. A Maze of Murderscapes: Metroid II. **Gamasutra**. Available at: https://www.gamasutra.com/blogs/SRHoliwell/20150130/235329/A_Maze_of_Murderscapes_Metroid_II.php. Accessed on 14 Nov. 2019.
- ISBISTER, Katherine. **How Games Move Us: Emotion by Design**. Cambridge, MA: The MIT Press, 2017.
- JØRGENSEN, Kristine, et al. **Transgression in Games and Play**. Cambridge, MA: The MIT Press, 2018.
- KOSTER, Raph. **A Theory of Fun for Game Design**. Scottsdale, AZ: Paraglyph Press, Inc., 2013.
- PÖTZSCH, Holger. “Playing Games with Shklovsky, Brecht, and Boal: Ostranenie, V-Effect, and Spect-Actors as Analytical Tools for Game Studies”. **Game Studies, the international journal of computer game research**, Vol. 2, No. 17, Dezembro 2017. ISSN:1604-7982.
- RUBERG, Bonnie. “No Fun: The Queer Potential of Video Games that Annoy, Anger, Disappoint, Sadden, and Hurt”. **QED: A Journal in GLBTQ Worldmaking**, Vol. 2, No. 2, p. 108–124, 2015.
- SHARP, John. **Works of Game: On the Aesthetics of Games and Art**. Cambridge, MA: The MIT Press, 2015.
- ZAGAL, José Pablo, BJÖRK, Staffan e LEWIS, Chris. **“Dark Patterns in the Design of Games”**. In Proceedings of the 8th International Conference on the Foundations of Digital Games. Chania, Crete, Greece: Society for the Advancement of the Science of Digital Games, p. 39-46, 2013.

Ludography

A SHADOW'S Tale. Hudson Soft. 2010.
 BROTHERS: A tale of two sons. Starbreeze Studios. 2013.
 DESERT Bus. Imagineering. 1995.
 DOKI Doki Literature Club!. Team Salvato. 2017.
 DYS4IA. Anna Anthropy. 2012.
 ECHOCHROME. Sony Interactive Entertainment. 2008.
 EXTASE. Cryo. 1991.
 FAÇADE. Michael Mateas and Andrew Stern. 2005.
 GETTING Over It with Bennett Foddy. Bennett Foddy. 2017.
 GRIS. Nomada Studio. 2018.
 HER Story. Sam Barlow. 2015.
 HOME. Benjamin Rivers Inc. 2012.
 I Am Bread. Bossa Studios. 2015.
 KAIZO Mario. T. Takemoto. 2007.
 LA PISTE. Alberto Giacometti. 1931.
 MACHINARIUM. Amanita Design. 2009.
 METAL Gear Solid. Konami. 1998.
 METAL Gear Solid 2: Sons of Liberty. Konami. 2001.
 MIEGAKURE. Marc ten Bosch. To be released.
 OCTODAD: Dadliest Catch. Young Horses. 2014.
 ONE Hour One Life. Jason Rohrer. 2018.
 PAINSTATION. Tilman Reiff and Volker Morawe. 2001.
 PAPERS, Please. 3909 LLC. 2013.
 PASSAGE. Jason Rohrer. 2007.
 PONG. Nolan Bushnell and Ted Dabney. 1972.
 RANDOBOT. Serious Games. 2012.
 RESIDENT Evil. Capcom. 1996.
 SEPTEMBER 12th: A toy world. Gonzalo Frasca. 2010.
 SEKIRO: Shadows Die Twice. Activision. 2019.
 SLEEP is Death. Jason Rohrer. 2010.
 SOD. JODI. 2002.
 SPEC Ops: The Line. Yager Development. 2012.
 SUPER Hexagon. Terry Cavanagh. 2012.
 SUPERLIMINAL. Pillow Castle. 2019.
 THE GRAVEYARD. Tale of Tales. 2008.
 THE LAST Guardian. Sony Interactive Entertainment. 2016.
 THE LEGEND of Zelda: Breath of the Wild. Nintendo. 2017.
 THE MARRIAGE. Rod Humble. 2007.
 THE SECOND Thought or Please, Don't Touch Anything. Dmitry Lagutov, Dmitry Karimov, Alexander Vartazaryan, and Alexander Goryeslavets. 2014.
 THE SIMS. Maxis. 2000.
 THE STANLEY Parable. Galactic Cafe. 2013.
 TRAIN. Brenda Romero. 2009.
 UNFAIR Mario. (n.d.)
 WOLFENSTEIN 3D. id Software. 1992.