



# CTS CATALOGUE

PAULINE MARTY

90NES DESIGN 64 (СУЕДЯ 1)  
2016-2017

STOP SPITTING ON AAA GAMES - STOP DISSING DESIGNERS BECAUSE THEY MADE A SHOOTER YOU DIDN'T LIKE - STOP FEELING SUPERIOR BECAUSE A DESIGNER "SOLD OUT" - STOP TURNING YOUR NOSE AT ENTIRE GAME GENRES - STOP IGNORING INDIE GAMES BECAUSE YOU DON'T RECOGNISE THE NAME ON THE BOX - STOP THINKING A GAME NEEDS A BIG BUDGET TO BE A MASTERPIECE - STOP TRYING TO DEFINE A GAME TO YOUR OWN NARROW STANDARDS - STOP CALLING STORY-DRIVEN GAMES WALKING SIMULATORS LIKE YOU'RE THE GAME VALIDITY BIBLE - STOP CALLING INDIE DESIGNERS BASEMENT-DWELLERS - STOP MOCKING YOUR FRIEND WHO'S TRYING TO MAKE A GAME IN UNITY - STOP CALLING TWINE GAMES TEXT GAMES FOR GIRLS - STOP SAYING "GAMES FOR GIRLS" AND MARKETING AT GENDERED SPREADSHEET AUDIENCES LIKE IT'S 1955 - STOP HARASSING WOMEN WHO GAME - STOP FEELING THREATENED WHEN IT'S NOT ABOUT YOU - STOP RASING LIKE A THREE YEAR OLD WHEN PEOPLE WHO AREN'T EXACTLY LIKE YOU ARE REPRESENTED IN GAMES - STOP CALLING INCLUSION "PANDERING", YOU DON'T EVEN KNOW WHAT THAT MEANS - STOP BRINGING THE MEDIUM DOWN BY SHUTTING PEOPLE OUT - STOP BLEATING THAT GAMES HAVE NO VALUE AND CAUSE VIOLENCE - STOP WORKING FOR THE CLAMPDOWN

- LEARN SOMETHING FROM THAT BIG-BUDGET GAME -- LEARN SOMETHING FROM THAT BIG-BUDGET DESIGNER -- ADMIRE DESIGNERS WHO WORKED HARD TO GET WHERE THEY ARE NOW -- TRY SOMETHING NEW -- TRY SOMETHING DIFFERENT -- TRY SOMETHING SMALL -- CHALLENGE YOUR PERCEPTION OF WHAT A GAME IS, AND CAN BE -- EXPERIENCE SOMETHING THAT WILL MAKE YOU FEEL SOMETHING -- BE IN AWE OF THAT TINY TEAM WHO MADE THAT AMAZING GAME -- ENCOURAGE YOUR FRIEND TO CREATE -- FALL IN LOVE WITH AN INTERACTIVE STORY -- MAKE GREAT GAMES THAT CAN TOUCH ANYONE'S HEART -- BEFRIEND PEOPLE WHO SHARE YOUR PASSION -- WELCOME STORIES THAT AREN'T YOURS, YOU'LL LEARN SOMETHING -- CELEBRATE INCLUSION AND HOW MUCH IT BROADENS GAMES -- MAKE GAMES AN ART THAT EVERYONE CAN ENJOY -- RECOGNISE THE GOOD THAT GAMES CAN DO -

- SUPPORT GAMES BY EVERYONE  
FOR EVERYONE -

# CONTENTS

MANIFESTO.....	II
DESIGN RATIONALE.....	2-3
IMMEDIACY AND UI.....	4-5
INNOVATION AND AAA.....	6-7
THE 1983 CRASH.....	8-9
CASUAL NINTENDO.....	10-11
DISHONORED 2 AND REALISM.....	12-19
VISUAL ESSAY.....	20-23
REVIEW: PRUNE.....	24-25
BIBLIOGRAPHY.....	26-28

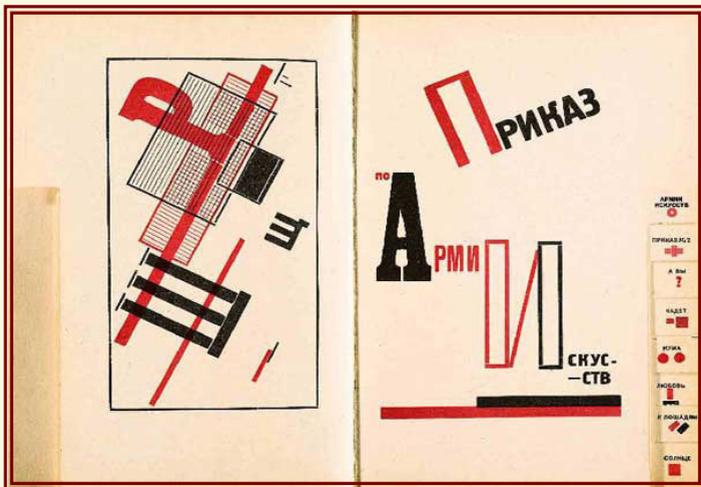
# И М А Г А З И Н



FIGURE 1



FIGURE 2



# DESIGN RATIONALE

**T**o design this catalogue, I chose to address what game studies mean to me: understanding and challenging games as an art form. Gaming is a young medium; through its evolution came assumptions about what games should be, who should make them, and who they should be for. As an art form and a tool of self-expression, I argue that games should not be bound to pre-established conventions and beliefs; they should challenge the status quo and push the medium forward by including as many people as possible in their production and consumption.



**I** am building this catalogue as a small manifesto challenging some rooted assumptions in gaming: that games shouldn't be political; that realism comes from graphics; that AAA can't innovate or make casual games; that the 1983 crash almost eradicated gaming; or that games are can only be made by selected people, for selected people.



**T**o illustrate this I have taken inspiration from a art movement that also challenged established codes and wanted art to be "*for the people, not the elite*" in an attempt to "*contribute to society and break with the past*" (LACMA, 2016): Russian Avant-Garde. Constructivism, a branch of Avant-Garde, sought to "*carry out a fundamental analysis of the materials and forms of art*" with "*democratic and modernising goals*" (The Art Story, 2017). This is how I envision game studies.



**T**he Russian Avant-Garde and Constructivist toolbox (Heller, 2017; California State University Northridge, no date) is used throughout this catalogue: bold typography and mixed font styles, echoing the cyrillic script; a limited palette of blue, red, and cream, inspired by real adverts (figure 1) and constructivist pamphlets; geometrical patterns, often oblique, emphasising structure and geometry (figure 2); and a relative minimalism in design and production, inspired by pamphlets that needed to be cheap and mass-produced.

# I M A G E S



FIGURE 1



FIGURE 2



# IMMEDIACY AND UI

**G**ames use on-screen user interfaces (UI) to convey information to the player such as stats, health, ammunition, maps, inventory, or tutorials. By being constantly visible on-screen, UIs can however affect what Bolter and Grusin call transparent immediacy, a state wherein *"the user is no longer aware of confronting a medium, but instead stands in an immediate relationship to the contents of that medium"* (Bolter and Grusin, 2000, p. 24). Can game UIs overcome this issue?



**S**ome games address this by allowing the player to remove on-screen UI, partially or totally. Other games, however, take a more direct approach to immediacy. To represent player health damage, *Resident Evil 7* uses a very visceral effect: blood stains on the edges of the screen (figure 1); the bloodier the screen, the closer to death the player is and the more healing becomes an emergency. This type of immersive UI creates immediacy with the player and sustains immersion, but it is too limited to convey complex, data-heavy information.



**O**ne franchise, however, addresses this issue head-on: *Fallout*, with the *"Pip Boy"* (figure 2). The Pip Boy, a computing device found in-game, sits on the character's wrist and can be accessed by the player at the touch of a button. The player can then flick through this small computer to see the inventory, map, and text-heavy quest information, through a simulated computer screen. While vitals such as health and experience points still appear permanently on-screen outside of the Pip-Boy UI, this device enhances the feeling of immediacy by creating an organic UI that is realistic within the game world and experience.



**H**owever, as Salen and Zimmerman observe, a focus on immediacy may not be right for all game genres and experiences, and, in some character-driven games, more classic UIs could actually enhance immersion (Salen and Zimmerman, 2004, p. 453). Something to consider when designing a game!

# I M A G E S



FIGURE 1



FIGURE 2



# INNOVATION AND AAA

**V**ideo games have the ability to tell innovative stories and to explore new forms of gameplay, challenging players in fresh and unexpected ways. AAA production, dependent on funding, shareholders and very large teams, may however favour more established conventions to ensure that a significant investment of time and money pays off. Indie production, however, requires less money upfront and is comprised of smaller teams, potentially offering the creative freedom that a large business may not have. Therefore, why look at AAA for innovation?



**A**AA, due to their financial advantage, have more means to innovate technically. This sometimes results in significant innovations such as the Nintendo Wii, the first console to offer motion control. Nintendo is also accredited for popularising gameplay innovations such as Asynchronous Gameplay, defined as *"multiplayer gaming in which players are experiencing the same game very differently"* (Herold, 2016). Beyond technology, how can AAA innovate?



**O**ver time, games have suffered from a lack of diversity, featuring largely male, white, and heterosexual characters (Ivory, 2009). BioWare, a AAA company, deliberately used their RPG series Dragon Age (figure 1) to address this issue by including romanceable LGBTQ characters. David Gaider, previously a lead writer at BioWare, explains that this was indeed a deliberate decision: *"it's something the team pushed for, because it "needed to happen"* (Gaider, 2015). AAA can therefore contribute to innovation in other fields than technology.



**T**he games themselves can also be a vector of innovation. Odama, developed by Nintendo in 2006 (Nintendo, 2017), took the gamble of playing with genres and tones by fusing pinball, war games, medieval Japanese battlefields, and voice controls (figure 2). The game, while not a critical success, was an example of a large AAA company trying new ideas and putting creativity first to push innovation.



**I**nnovation is not exclusive to indie games: there are different kinds of innovation, and there are game designers trying to push the medium in every corner of the gaming industry. They just need to be found.

# IMAGES



FIGURE 1



FIGURE 2



# THE 1983 CRASH

In 1982, the US home console market totalled \$3.2 billion, with Atari (figure 1) representing 70% of this market share (The Dot Eaters, 2017). However, a gradual saturation of the market (Video Game Console Library, 2016) and a drop in production quality (Oxford, 2011) gradually eroded this success. In 1983, three million of cartridges of Atari's "E.T." went unsold, marking an unfortunate turnaround in the gaming industry: revenues dropped 97% (World Public Library, no date), and the 1983 crash was upon gaming. Was this crash as absolute and damaging as claimed?

---

Firstly, it is worth noting that this event is sometimes called "*the American video game crash*"; Japan, getting even more specific, called it the "*Atari Crash*" (World Public Library, no date), indicating it was not perceived as a global disaster. Japanese company Nintendo, tellingly, continued production of their first home console during this period and released the Famicom in Japan on July 15th 1983, later released in the US.

---

Another contemporary technology trend must also be considered: home computers. The early 1980s saw computers getting increasingly cheap, small, and powerful. Not only could they be used for work or programming, but they could also be used for gaming. Testament to their versatility, their success as gaming platforms endured throughout, and long after, the video game crash.

---

In the UK, sales the ZX Spectrum, developed by Sinclair Research Ltd., cemented the format's success: in the run-up to Christmas 1983, over 50k machines were sold every month in the UK (Retro Gamer, 2015, p. 11). In the US, the very land of the video game crash, the Commodore 64 (figure 2) was itself released in August 1982, going on to become the largest-selling console in history, with an estimated 20 to 30 million sales (Commodore Computers, 2016).

---

Was the 1983 video game crash as disastrous as it sounds? Yes, but only for part of the world, and part of the industry.

# IMAGES



FIGURE 1



FIGURE 2



# CASUAL NINTENDO

Casual games, a term used for games that may not call for long-term commitment or frequent sessions (Computer Hope, 2017), are usually associated with small publishers or mobile developers. One video game giant has challenged this assumption, however: Nintendo.



In the mid 2000s, hardware competition in the gaming industry was rife. Microsoft cemented its gaming presence with the Xbox 360 in 2005, before Sony following suit with the 2006 PlayStation 3. How could Nintendo retain (or regain) their market-share against such increasingly sophisticated competition?



Nintendo turned away from technical escalation and instead turned towards the "Blue Ocean" strategy. Perrin Kaplan, VP of Nintendo of America in 2006, explains this model in an interview: "*Seeing a Blue Ocean is the notion of creating a market where there initially was none—going out where nobody has yet gone*" (Kaplan, 2006). He then explains how Nintendo will now strive to make games for people who have never played games, or who may not like core gaming genres, adding that these games were "*not the core of what we want to develop*" (Kaplan, 2006).



The result? A resounding success. The Blue Ocean console, the Wii (figure 1), sold over 100 million units (Nintendo, no date). Despite its technical inferiority, the Wii's sensing devices allowed the platform to release game genres never seen before and to reach a wide audience. One of the Wii's flagship titles, Wii Fit (figure 2), came with a sensing platform and prompted the user to do physical exercise; the game sold 42 million copies worldwide (Hollensen, 2013).



However, by 2011, Sony and Microsoft released their own version of the Wii's sensing device, and regained their market share superiority over Nintendo (Hollensen, 2013). This prompted Nintendo to move back towards a hardcore gaming market, a strategy which resulted in the follow-up console, the Wii-U, selling a disappointing 2 million less units than expected on its first year (Hollensen 2013). Blue Ocean works - but not forever.

# I M A G E S



FIGURE 1



FIGURE 2



# DISHONORED 2 AND REALISM

## INTRODUCTION

Realism in media can be defined as the link between a particular type of media and how it mirrors a form of reality (Glyndwr University, no date). Being both audio-visual and interactive, video games have an innate versatility with regards to representing realism, and can make use of several lenses to do so. This essay will explore how Dishonored 2 (Arkane Studios, 2016) uses these lenses to create realism and engage with the player. It will firstly focus on sensory aspects of realism by examining the audio-visual landscape of the game, before exploring how mechanical elements such as rules and artificial intelligence behaviour create realistic-ness, another form of realism. The essay will then examine how the game world is used to invoke social realism in the player, before finally analysing how the personalisation of the game experience serves to further enhance its prism of realism through choice.



## THE SENSORY EXPERIENCE

To assess whether a game is realistic, an initial question must be answered: what is realism in video games? For Adams, realism is "*a continuous scale upon which the game's relationship to the real world is measured*" (Adams, 2014, p. 520), conveyed through game graphics and physics. This definition is echoed by Malliet, whose study participants are found to spontaneously talk about game realism as a matter of graphical realism (Malliet, 2007).

Graphical and physical fidelity is indeed omnipresent in Dishonored 2, a game built around three-dimensional environments mirroring reality in their design and behaviour. Urban environments display true to life architecture, texture, shapes, and colours (figure 1); in-game nature echoes this with elaborate weather effects and realistic flora. Humanoids, while sometimes stylised, also mirror their real-world counterparts in their overall design. To further enhance the sense of fidelity, life-like physics and collision also apply in Dishonored 2: space can be navigated, walls and obstacles cannot be passed, and gravity is present, while various objects can be picked-up, thrown, or broken.

To achieve sensory realism, sound should also be examined. Ribbens calls for a phenomenon called perceptual pervasiveness, defined as a sensory experience that requires an auditory component (Ribbens., 2013). Dishonored 2 also fulfils this requirement by featuring a wide variety of in-game sounds, both mechanical (footsteps, gun shots, bird chirps, water ebbing, glass breaking) and environmental (characters talking, characters playing and singing songs, spoken audio diaries), all mirrored, once again, on real-life counterparts.

However, there is more to game realism than audio-visual faithfulness. Focusing solely on these elements constitute what Salen and Zimmer refer to as "*immersive fallacy*", in other words "*the belief that the pleasure of a media experience is the ability of that experience to transport the player into an illusory reality*" (Salen and Zimmer, 2004, p. 458). They argue that, instead, realism within a game must occur through "*an engagement that happens through play itself*" (Salen and Zimmer, 2004, p. 451). How can this phenomenon be defined, and how does it apply to Dishonored 2?



## RULES, BEHAVIOUR, AND REALISTIC-NESS

Play, as defined by Zimmerman, is "*the human effect of rules set in motion*" (Zimmerman, 2009, p. 26); Adams makes a similar link between play and rules, defining rules as "*instructions that dictate to the player how to play*" (Adams, 2014, p. 521). Rules determine how a player progresses, what they can and cannot do in-game, but also determine the behaviour of in-game objects and non-player characters.

As highlighted by Frasca, behaviours are an important component to simulations: "*[a simulation] does not simply retain the generally audiovisual-characteristics of the object but it also includes a model of its behaviours*" (Frasca 2003 p. 223); Malliet goes as far as arguing that this is the only way to determine realism, and states that "*a simulation of a car engine is considered realistic not when it looks exactly like a real car engine, but when it behaves like a real car engine*" (Malliet, 2007). If a game is to realistically simulate something or someone, behaviour, through rules, is therefore a factor that must be examined. This behavioural fidelity constitutes what Galloway calls "*realistic-ness*", in other words a "*yardstick held up to representation*" (Galloway, 2014).

In *Dishonored 2*, realistic-ness is present in several in-game elements, but it is best represented by the characters' behaviour and the rules behind it. *Dishonored 2*'s characters autonomously walk, talk, interact with each other, smoke, drink, play cards (figure 2), or interact with objects in the world; they can be seen reading signs, actioning water pumps, or looking at buildings and vistas. It is however in their interaction with the player that the characters show the full extent of their behavioural realistic-ness. Enemy guards, for instance, drastically change their behaviour as a result of the player's actions: if they overhear the player walk or hit an object, they will walk in their direction to look for them, going as far as looking under tables if they cannot find them. While on alert, they will also call back-up, close and lock doors or windows, and turn on alarm systems. It is interesting to note that if the player reloads the game, guards' behaviour will not always be the same, creating a sense of organic randomness that enhances realistic-ness. In-game civilians, similarly, will react to the player: they will run screaming if they spot the player carrying a corpse or sometimes alert guards if they spot other unlawful behaviour.

However, realistic-ness can also affect the game world at large; Gallo way for instance argues that, in terms of realistic-ness, theorists must also discuss the game worlds in which the actions occur (Gallo way, 2014). On this subject, Adams also notes that "*a realistic game assumes that players can count on certain similarities between the real world and the game world*" (Adams, 2014, p. 466). How does this occur within *Dishonored 2*?



## **A SOCIAL REALIST GAME WORLD**

Busselle and Bilandzic define the study of game worlds realism as as "*game social realism*", which highlights "*the extent of which the game content and game rules are consistent with the actual world*" (Busselle and Bilandzic, 2008). This theory considers that realism goes beyond well-designed rules and consistent behaviour, and seeps into the experience and feel of the game world. This is furthered by Malliet who notes that, in order to achieve authenticity and realism in a game, a theorist should look, amongst other things, at "*the social contracts that are possible within the game (i.e. what is being simulated in the game)*" (Malliet, 2007).

# I M A G E S



FIGURE 3



FIGURE 4



**A**s Ribbens notes, *"because players believe the designers have created a coherent fictional environment, they judge the environment as being more realistic"* (Ribbens, 2013). To achieve these goals, Dishonored 2 makes extensive use of its distinct historical setting, an alternate Victorian world set in the late 1800s. This is achieved through overall graphical fidelity but also through small details, all modelled on real Victorian equivalents: period-accurate adverts on the walls, criminal wanted notices, public event notices, and newspapers.

**B**eyond the simple historical accuracy, however, social commentary is an important part of game social realism; Galloway paraphrases cinematographer André Bazin saying that *"[realism] also means real life in all its dirty details, hopeful desires and abysmal defeats"* (Galloway, 2004). Dishonored 2 addresses this requirement by setting a very political and sinister tone to the game and to its narrative beats: a monarch has been overthrown, resulting in intense political turmoil that eventually turns the world into a totalitarian state. This has a direct consequence on the game world throughout the game: cities are increasingly deserted, curfews are enforced, chaos and criminal behaviour increases, and ruin and decay can be seen to slowly seep into the game world (figure 3).

**S**ocial realism can also be shown through more personal elements of the game world. On that subject, Galloway further defines social realist games as *"those games that reflect critically on the minutia of everyday life, replete as it is with struggle, personal drama and injustice"* (Galloway 2004). Dishonored 2 achieves this by making extensive use of civilian notes, letters and photos that can be found throughout the world, often telling very personal tales about characters within the game world, and, through a description of the hardships they experience, illustrating the harshness of the world they live in.

**B**eyond the game world there is, however, another way that games can exude emotions and make themselves more realistic to the player: the personal angle. Reporting on his studies Malliet notes that *"not all participants had the same understanding of game realism. [...] others associated realism with games that offer a real life-like experience or with games where the characters have human-like emotion"* (Malliet, 2007). What is this link and how is it applied by Dishonored 2?

## TOWARDS A PERSONAL NARRATIVE

The link between realism and personal relevance has already been made in the study of media; Hall notes, for instance, that "*something was considered realistic if the audience could either feel the character's emotions or have an affective response to the character as they would to a real person*" (Hall, 2003, p. 635). However, video games, through their action-based interactions, can further enhance this phenomenon. As Malliet notes "*games are often found to be more life-like the films, in the sense that players are offered a certain amount of freedom when it comes to making choices*" (Malliet, 2007); he goes on by quoting one of his interviewees stating that "*it is this freedom of choice that makes it appear realistic*", highlighting a clear link between the player's choices and the sense of realism.

**D**ishonored 2 places the importance of choice and control early on in the game as, within the first hour, the player must choose between two playable characters to play the rest of the game (figure 4). This choice will have various effects throughout the game, each playable character prompting different reactions the game's inhabitants and allowing different actions to be performed. As Sommerseth notes, "*Realism in games stems from the player's experience of control over the game*" (Sommerseth, 2007), making this an important factor for realism.

**I**n Dishonored 2, however, the notion of choice is further embedded in the gameplay itself. All the way through the game, the player must choose whether to be stealthy or confrontational, and, more importantly, whether to kill or merely incapacitate everyone they meet; this mechanic is also applied to important characters in the game. These choices affect the endings and the future of the world, sometimes drastically, as well as the game world itself: violent actions will result in more enemies and in greater decay of the game world and its inhabitants, while a stealthier or less lethal approach will help pacify on the world at large. These constant and important player choices are an illustration of what Van Looy calls "*introjection*", "*the fact that, in contrast to more traditional forms of fiction, in video games players themselves inject themselves into the action by means of their avatar*" (Van Looy, 2006). Konjin highlights a further link between in-game choices and player emotions by noting that "*by involving oneself to a certain extent into the situations, characters, and events in a mediated with, the viewer may adopt the perspective of the media figure and may experience emotions through empathy, identification, or becoming emotionally involved*" (Konjin, E, 2009).

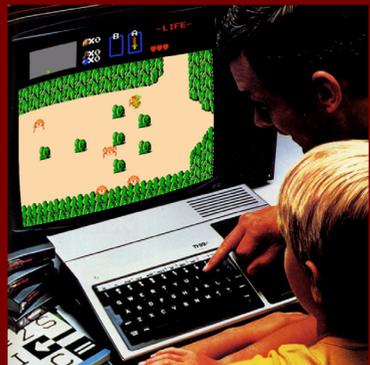
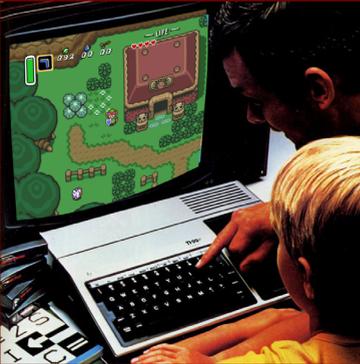
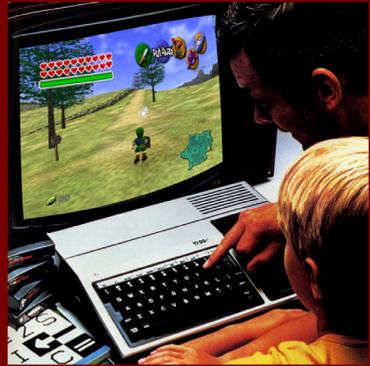
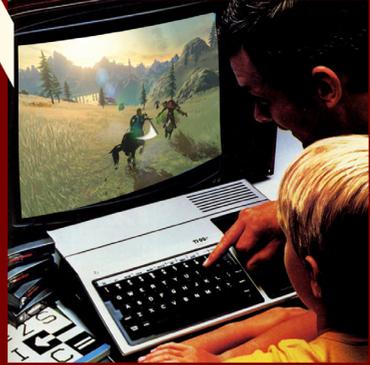
It should be noted, however, that realism through choice may not be achieved universally. As Malliet notes in his study on game realism, "*it was clear that not all gamers allow themselves to become involved in a game to the same degree*" (Malliet, 2007), the difference being especially strong in games featuring ethical or ideological issues where "*involvement is often a matter of individual choices of how much of one's morality one decides to take into the game*" (Malliet, 2007). Dishonored 2, where radically different choices can be made about the world and its inhabitants, may therefore not achieve realism with some players who chose not to engage with this type of realism.



## **CONCLUSION**

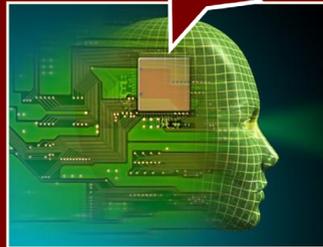
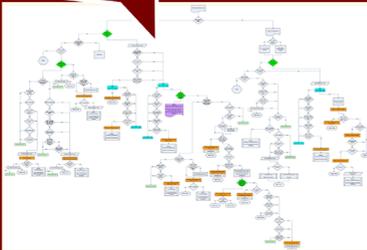
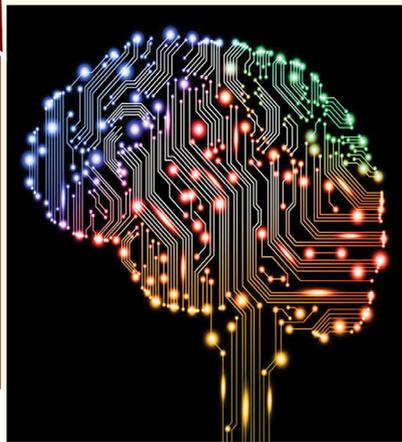
Dishonored 2 achieves realism through various lenses. The game uses graphical, physical and auditory fidelity to instil a sense of realism, building on this with carefully designed rules and behaviours that add realistic-ness. Dishonored 2 also makes use of its game world and setting to add a socially realistic element to the game, communicated through visual and written materials. Finally, by allowing frequent and meaningful choices throughout the gameplay, Dishonored 2 triggers a sense of control and emotional investment with the player, making realism personal. It should be noted, however, that this mechanic will not have the same effect on all players, as players may not all choose to invest emotionally and morally in the game.

# REAL



# REAL

# REAL



# REAL

R  
E  
A  
L

"THE MOST POPULAR FORMULA IN THE CITY!"  
**SOKOLOV'S ELIXIR.**

**PROMOTES ROBUST HEALTH & FITNESS**



**SURE TO PROTECT YOUR FAMILY FROM THE RAVAGES OF THE RAT PLAGUE!**

**RIZINA ROSHWATER PILLS**

THE AMAZING NEW TASTE  
**SENSATION**  
FIFTY ONE YEARS OF QUALITY

RIZINA BILLY CO  
KARNACA

**DUNWALL COURIER**

**THE CROWN KILLER STRIKES AGAIN**



**Calones, Galos**

**WINSLOW**  
SAFE COMPANY

BUILT FOR GENERATIONS



**DRINKS AND DIFFERENT**

**Pear & VANILLA SODA**

DELICIOUS AND REFRESHING

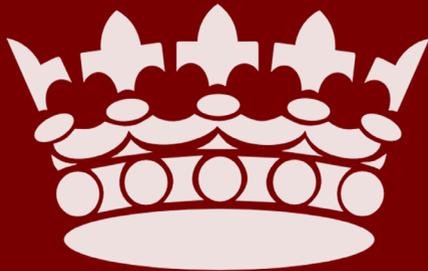
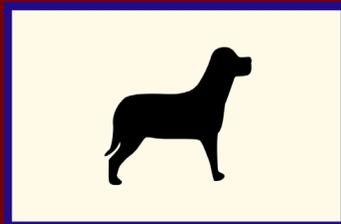
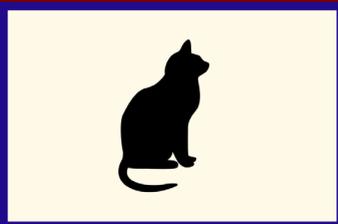
MADE FROM THE WHOLE FRUIT



**KARNACA**

FOOD TICKET PROGRAM

**CANCELED**



**REAL**

# I M A G E S

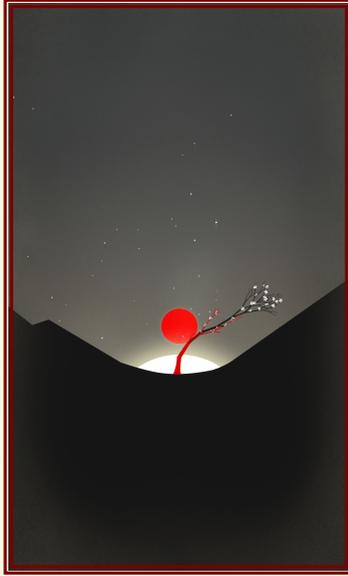


FIGURE 1



FIGURE 2



# REVIEW: PRUNE

**P**runo is a 2015 mobile game developed by Joel McDonald, around the ethos "*Cultivate what matters. Cut away the rest.*" (McDonald, 2015). It is centred around one single mechanic: pruning a growing tree's branches by swiping the mobile device's screen, so it can reach the light and flower. Levels are won when the tree bears the right amount of flowers, and lost when the tree's growth is stopped or destroyed by an obstacle.



**I**n Pruno, minimalistic sounds and visuals take centre stage (figure 1) and there are no written instructions. Gameplay is instead taught through a mix of visual cues (swiping motion symbol on the screen, highlight of the branches) and sounds (cutting sound, breaking sound when hitting an obstacle, chiming sound when flowering). This sparseness is echoed by a limited colour palette and subdued, single-note sounds. Aesthetically, Pruno is a very sensory game, allowing the player to lose themselves in what they experience without the distractions of text or complex mechanics.



**C**hallenge and strategy come from the trees' real-time growth, requiring quick thinking so they can be pruned tactically and avoid obstacles that lead to a game over. Later game stages include more complex mechanics, such as wind or objects gradually burning the tree (figure 2), increasing the challenge. Nonetheless, Pruno is a forgiving game: any level can be replayed without penalty, and levels can be skipped after several failed attempts. This player-centric approach emphasises experience over potential frustration, and further enhances the meditative feel of the game.



**P**runo is a consistent game, with simple but strong artistic vision and minimalistic gameplay. However, for these very reasons, the game can become repetitive after a few hours, lacking variety. The pruning gameplay can also be troublesome on small screens due to a lack of precision, resulting in occasional frustration. It might not be a game that can be played for days, but it is worth losing yourself in its beauty for a little while.

# BIBLIOGRAPHY

## DESIGN NATIONALS (PP. 2-3)

The Art Story (2017) *Constructivism*. Available at: <http://www.theartstory.org/movement-constructivism.htm> (Accessed 8 May 2017)

LACMA (2016) *Russian Avant-Garde*. Available at: <http://www.lacma.org/art/installation/russian-avant-garde> (Accessed 1 May 2017)

Heller, S. (2017) *Five Graphic Design Ideas From the Russian Revolution* | Royal Academy. Available at: <https://www.royalacademy.org.uk/article/five-things-graphic-designers-owe-to-russia> (Accessed May 1 2017)

California State University Northridge (no date) *Russia Constructivism*. Available at: <http://www.csun.edu/~p-jd77408/DrD/Art461/LecturesAll/Lectures/lecture07/Constructivism.html> (Accessed 5 May 2017)

## IMAGES

El Lissitzky (1923) *For the Voice*. Berlin: State Publishing House, pp 15-17, illus.

Mayakovsky, V., Rodchenko, A. (1923) *Advertisement for Bread from the Mosselprom Store* [Poster]. Available at: <https://shop.royalacademy.org.uk/poster-advertisement-for-bread-by-rodchenko-and-mayakovsky.html> (Accessed 10 May 2017)

## IMMEDIACY AND UI (PP. 4-5)

Bolter, J.D., Grusin, R (2000) *Remediation: Understanding New Media*. 1st ed. MIT Press.

Salen, K., Zimmerman, E. (2004) *Rules of Play: Game Design Fundamentals*. Cambridge: The MIT Press.

## IMAGES

Pip Boy (no date) [image]. Available at: <http://fallout.wikia.com/wiki/Pip-Boy> (Accessed: 10 February 2017)

Resident Evil 7 (2017) [image]. Available at: <http://www.gamespot.com/gallery/resident-evil-7-boss-guide/2900-1084/> (Accessed: 10 February 2017)

## INNOVATION AND AAA (PP. 6-7)

Gaider, D. (2015), 'BioWare Writer Talks Gay Romances and Sexual Diversity in Gaming'. Interviewed by Eddie Makuch for Gamespot. Available at: <http://www.gamespot.com/articles/bioware-writer-talks-gay-romances-and-sexual-diver/1100-6427587/> (Accessed 3rd March 2017)

Herold, C. (2016) *Asynchronous Gameplay*. Available at: <https://www.lifewire.com/asynchronous-game-play-2498315> (Accessed 3rd March 2017)

Ivory, J. (2009) 'Still a Man's Game: Gender Representation in Online Reviews of Video Games', *Mass Communication and Society*, 9, pp. 103-114.

Nintendo (2017), *Odama*. Available at: <https://www.nintendo.co.uk/Games/Nintendo-GameCube/Odama-268489.html> (Accessed 3rd March 2017)

Washenko, A. (2015) *6 indie games that pushed boundaries at E3*. Available at: <http://mashable.com/2015/06/25/innovative-indies-e3-2015/#CDwbDQpJlsqP> (Accessed 3rd March 2017)

## IMAGES

Cassandra (2014) [image]. Available at: <https://www.youtube.com/watch?v=Vm7T2y2bVAE> (Accessed 3rd March 2017)

Odama (2017) [image]. Available at: <https://www.nintendolife.com/games/gamecube/odama/screenshots> (Accessed 3rd March 2017)

## THE 1983 CRASH (PP. 8-9)

Commodore Computers (2016) *Commodore 64 - The Best Selling Computer In History*. Available at: <http://www.commodore.ca/commodore-products/commodore-64-the-best-selling-computer-in-history/> (Accessed 29 November 2016)

Oxford, N. (2011) *Ten Facts about the Great Video Game Crash of '83*. Available at: <http://uk.ign.com/articles/2011/09/21/ten-facts-about-the-great-video-game-crash-of-83> (Accessed 22 February 2017)

Retro Gamer (2015) 'Retroinspection: Sinclair ZX Spectrum', *Retro Gamer: The ZX Spectrum Book*, pp. 10-11.

The Dot Eaters (2017) *The Great Video Game Crash - End Game*. Available at: <http://thedoteaters.com/?bitstory=the-great-video-game-crash> (Accessed 22 February 2017)

Video Game Console Library (2016) *History of the Video Game Console : 1980s*. Available at: <http://www.video-game-console-library.com/>

ameconsolelibrary.com/pg80-over.htm. (Accessed 22 February 2017)

World Public Library (no date) *North American video game crash of 1983*. Available at: [http://www.worldlibrary.org/articles/north\\_american\\_video\\_game\\_crash\\_of\\_1983](http://www.worldlibrary.org/articles/north_american_video_game_crash_of_1983) (Accessed 29 November 2016)

#### **IMAGES**

Halt and Catch Fire - Atari (2016) [image]. Available at: <https://onpiratesatellite.com/home/halt-and-catch-fire-season-finale-s3-e9-nim-and-s3-e10-next> (Accessed 22 February 2017)

Halt and Catch Fire - Cameron (2016) [image]. Available at: <http://observer.com/2016/09/halt-and-catch-fire-3x04-recap-firing-lines/> (Accessed 22 February 2017)

#### **CASUAL NINTENDO CPP. 10-11**

Computer Hope (2017) *Casual Gaming*. Available at: <https://www.computerhope.com/jargon/c/casual-gaming.htm> (Accessed 22 February 2017)

Hollensen, S (2013) 'The Blue Ocean that disappeared - The case of Nintendo Wii', *Journal of Business Strategy*, 34(5), pp. 25-35. Available at: [http://www.academia.edu/3254871/Hollensen\\_S\\_2013\\_The\\_Blue\\_Ocean\\_that\\_disappeared\\_-\\_The\\_case\\_of\\_Nintendo\\_Wii\\_Journal\\_of\\_Business\\_Strategy\\_Vol\\_34\\_5\\_pp\\_25-35](http://www.academia.edu/3254871/Hollensen_S_2013_The_Blue_Ocean_that_disappeared_-_The_case_of_Nintendo_Wii_Journal_of_Business_Strategy_Vol_34_5_pp_25-35) (Accessed 22 February 2017)

Kaplan, P. (2006) 'Nintendo's New Look'. Interviewed by Rachel Rosmarin for Forbes, 7 February. Available at: [http://www.forbes.com/2006/02/07/xbox-ps3-revolution-cx\\_rr\\_0207nintendo.html](http://www.forbes.com/2006/02/07/xbox-ps3-revolution-cx_rr_0207nintendo.html) (Accessed 22 February 2017)

Nintendo (no date) *Hardware and Software Sales Units*. Available at: [https://www.nintendo.co.jp/ir/en/sales/hard\\_soft/](https://www.nintendo.co.jp/ir/en/sales/hard_soft/) (Accessed 22 February 2017)

#### **IMAGES**

Wii (no date) [image]. Available at: <http://beginnerstech.co.uk/wp-content/uploads/2011/04/wii.jpg> (Accessed 22 February 2017)

WiiFit (2013) [image]. Available at: <https://suwalls.com/games/wii-fit-21532/> (Accessed 22 February 2017)

#### **DISHONORED 2 AND REALISM CPP. 12-19**

Adams, E. (2014) *Fundamentals of Game Design*. 3rd ed. Thousand Oaks: New Riders Publishing.

Arkane Studios (2016) *Dishonored 2*. Bethesda Softworks.

Busselle R.W., Bilandzic H. (2008) 'Fictionality and Perceived Realism in Experiencing Stories: A Model of Narrative Comprehension and Engagement'. *Communication Theory*, 18, pp. 225-280.

Frasca, G. (2003) 'Simulation Versus Narrative: Introduction to Ludology', in *The Video Game Theory Reader*. London: Routledge, pp. 221-236.

Galloway, A. (2004) *Social Realism in Gaming*. Available at: <http://www.gamestudies.org/0401/galloway/> (Accessed 1 May 2017)

Glyndwyr University (no date) *Realism and the Contexts of Media*. Available at: [https://www.glyndwr.ac.uk/rdover/MED-STUD/realism\\_.htm](https://www.glyndwr.ac.uk/rdover/MED-STUD/realism_.htm) (Accessed 1 May 2017)

Hall, A. (2003) 'Reading Realism: Audiences' Evaluations of the Reality of Media Texts'. *Journal of Communication*, 53, pp. 624-641.

Konjin, E.A., et al. (2007) 'Emotions Bias Perceptions of Realism in Audiovisual Media: Why We May Take Fiction for Real', *Discourse Processes*, 46 (4), pp.309-340.

Mallet, S. (2007) 'An Exploration of Adolescents' Perceptions of Video Game Realism', *Learning, Media and Technology*, 31, pp. 377-394.

Ribbens, W. (2013) 'Perceived Game Realism: A Test of Three Alternative Models', *Cyberpsychology, Behaviour and Social Networking*, 16 (1), pp. 31-36.

Salen, K., Zimmerman, E. (2004) *Rules of Play: Game Design Fundamentals*. Cambridge: The MIT Press.

Shapiro, M.A., Chock, M. (2003) 'Psychological Processes in Perceiving Reality', *Media Psychology*, 5(2), pp.163-198.

Sommerseth, H. (2007) *Gamic Realism: Player, Perception and Action in Video Game Play*. Available at: <http://www.digra.org/digital-library/publications/gamic-realism-player-perception-and-action-in-video-game-play/> (Accessed 1 May 2017)

Van Looy, J. (2006) *The Promise of Perfection: a Cultural Perspective on the Shaping of Computer Simulation and Games*. PhD thesis, Catholic University of Leuven. Available at: <https://biblio.ugent.be/publication/514268> (Accessed 25 April 2017)

Zimmerman, E. (2009) 'Gaming Literacy', in *The Video Game Theory Reader 2*. London: Routledge, p. p26.

#### **IMAGES**

Dishonored 2: Cards (2016) [image]. Available at: <https://www.polygon.com/e3/2016/6/17/11917208/dishonored-2-pc-ps4-xbox-one-arkane> (Accessed 1 May 2017)

Dishonored 2: Choice (2016) [image]. Available at: <https://www.inverse.com/article/23745-dishonored-2-emily-corvo-character-choice-guide> (Accessed 1 May 2017)

Dishonored 2: Seized (2016) [image]. Available at: <https://www.polygon.com/2016/12/2/13817994/edge-of>

the-world-walkthrough-stealth (Accessed 1 May 2017)

Dishonored 2: Streets (2016) [image]. Available at: <https://www.gamespot.com/articles/dishonored-2-a-journey-through-emilys-assassination/1100-6439831/> (Accessed 1 May 2017)



## **VISUAL ESSAY (PP. 20-23)**

### **PAGE 14**

The Legend of Zelda (no date) [image]. Available at: <http://static5.businessinsider.com/image/57ac83aa918a0f313288a7dd-1200/the-legend-of-zelda-1986.jpg> (Accessed 28 April 2017)

The Legend of Zelda: A Link to the Past (no date) [image]. Available at: <http://zeldadungeon.net/gallery/albums/Zelda03/Screenshots/Fortune-Tellers-House-1.png> (Accessed 28 April 2017)

The Legend of Zelda: Breath of the Wild (2017) [image]. Available at: <http://www.cubed3.com/media/2017/January/botws20.jpg> (Accessed 28 April 2017)

The Legend of Zelda: The Ocarina of Time (2016) [image]. Available at: <https://s3-us-west-1.amazonaws.com/shacknews/assets/editorial/2016/11/ocarina1.png> (Accessed 28 April 2017)

The Legend of Zelda: The Twilight Princess (no date) [image]. Available at: [http://www.ztg.com/wp-content/uploads/2016/03/legendofzeldatwilighthd\\_04.jpg](http://www.ztg.com/wp-content/uploads/2016/03/legendofzeldatwilighthd_04.jpg) (Accessed 28 April 2017)

Ti-99 (no date) [image]. Available at: [http://www.1000bit.it/lista/t/ti/ti994a\\_ad.jpg](http://www.1000bit.it/lista/t/ti/ti994a_ad.jpg) (Accessed 28 April 2017)

### **PAGE 15**

AI (no date) [image]. Available at: <http://files.gandi.ws/gandi39571/image/irascahybrid.jpg> (Accessed 28 April 2017)

AI Flowchart (no date) [image]. Available at: [http://www.apartment167.com/overload/showcase/CTF4/CTF4\\_AI\\_Flowchart.jpg](http://www.apartment167.com/overload/showcase/CTF4/CTF4_AI_Flowchart.jpg) (Accessed 28 April 2017)

Brain (2014) [image]. Available at: [www.noeticsscience.co.uk/tag/artificial-intelligence/](http://www.noeticsscience.co.uk/tag/artificial-intelligence/) (Accessed 28 April 2017)

Civilization V (no date) [image]. Available at: <http://i.imgur.com/LKqhbDX.png> (Accessed 28 April 2017)

Dice (2014) [image]. Available at: <http://cdn-media-2.lifehack.org/wp-content/files/2014/08/25-Awesome-Board-Games-That-Will-Make-You-Smarter-and-More-Creative.jpg> (Accessed 28 April 2017)

### **PAGE 16**

Brick Wall (no date) [image]. Available at: <https://marketplace.seconddlife.com/p/bricks-wall-texture-13/4925285> (Accessed 28 April 2017)

Dishonored 2 Adverts (2016) Vice UK from Arkane Studios (2016) *Dishonored 2*. Bethesda Softworks. Available at: [https://www.vice.com/en\\_uk/article/the-propaganda-and-branding-of-dishonored-2](https://www.vice.com/en_uk/article/the-propaganda-and-branding-of-dishonored-2) (Accessed 28 April 2017)

Victorian Man Silhouette (no date) [image]. Available at: [https://img.clipartfest.com/83eebf-91fa508e7e212e15096154964\\_victorian-man-in-top-hat-clipart-silhouette-man-in-tophat\\_1587-2400.png](https://img.clipartfest.com/83eebf-91fa508e7e212e15096154964_victorian-man-in-top-hat-clipart-silhouette-man-in-tophat_1587-2400.png) (Accessed 28 April 2017)

Victorian Woman Silhouette (no date) [image]. Available at: <http://www.clipartqueen.com/image-files/victorian-lady-with-hat.png> (Accessed 28 April 2017)

### **PAGE 17**

Cat and Dog images accessed via Adobe (2017) *Photoshop CC* [computer program].

Crown (no date) [image]. Available at: <http://www.clker.com/cliparts/S/A/s/z/O/d/white-crown-hi.png> (Accessed 28 April 2017)

Hand (no date) [image]. Available at: <http://www.freeiconspng.com/img/14594> (Accessed 28 April 2017)

Handgun (no date) [image]. Available at: <http://www.iconsdb.com/icons/preview/black/gun-5-xxl.png> (Accessed 28 April 2017)

Ninja (no date) [image]. Available at: [https://maxcdn.icons8.com/Share/icon/Cultures/ninja\\_head1600.png](https://maxcdn.icons8.com/Share/icon/Cultures/ninja_head1600.png) (Accessed 28 April 2017)

Poison (no date) [images]. Available at: <http://pngimages.net/sites/default/files/poison-png-image-64744.png> (Accessed 28 April 2017)



## **PRUNE: REVIEW (PP. 24-25)**

McDonald, J. (2015) *Prune*. Available at: <http://www.prunegame.com/> (Accessed 10 February 2017)

### **IMAGES**

All images my own.

GAMES BY EVERYONE FOR EVERYONE  
GAMES BY EVERYONE FOR EVERYONE

the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million, and the number of people in the public sector who are employed in health care has increased from 2.5 million to 3.5 million (Department of Health 2000).

There are a number of reasons for the increase in the number of people employed in the public sector. One reason is that the public sector has become a more important part of the economy. Another reason is that the public sector has become a more attractive place to work. A third reason is that the public sector has become a more important part of the welfare state.

The increase in the number of people employed in the public sector has led to a number of changes in the way that the public sector is organized. One change is that the public sector has become more decentralized. Another change is that the public sector has become more market-oriented. A third change is that the public sector has become more customer-oriented.

The changes in the way that the public sector is organized have led to a number of challenges for the public sector. One challenge is that the public sector has become more complex. Another challenge is that the public sector has become more competitive. A third challenge is that the public sector has become more demanding.

The challenges that the public sector faces are a result of the changes in the way that the public sector is organized. The public sector must be able to meet these challenges in order to continue to provide the services that it is responsible for providing.

One way that the public sector can meet these challenges is by increasing the number of people employed in the public sector. This can be done by recruiting more people to the public sector. Another way that the public sector can meet these challenges is by increasing the productivity of the people who are already employed in the public sector.

Increasing the productivity of the people who are already employed in the public sector can be done in a number of ways. One way is by providing training and development opportunities for the people who are already employed in the public sector. Another way is by providing better working conditions for the people who are already employed in the public sector.

Providing better working conditions for the people who are already employed in the public sector can be done in a number of ways. One way is by providing better pay and benefits for the people who are already employed in the public sector. Another way is by providing better working hours for the people who are already employed in the public sector.