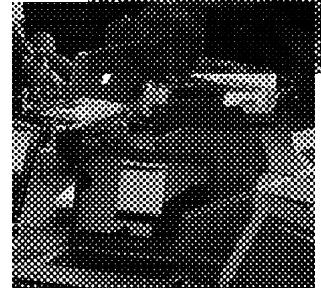
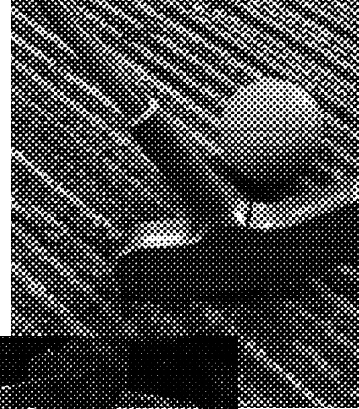




Workshops



BA (Hons)

Games Design & Art 2017



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ADAM PROCTER
Programme Leader
BA Games Design & Art

Adam Procter

Programme Leader

A little over three and a half years ago in November 2013 the Games Design and Art programme was given final approval to launch in September of the following year. Winchester School of Art, part of the Russell Group University of Southampton, developed a new type of games programme that would be research-led, engage thinking through making and challenge what games could be.

We designed an ambitious programme that was set to challenge our students to make games from the start. Not parts of games, not just ideas for games, not just art for games, but playable games and games with purpose, games steeped in research and understanding.

The games devised could take any form, be it digital, physical or mixed reality. The students could push the concept of what a game is, facilitating new ways of thinking and engaging in social change. They could challenge conventional mediums and encourage experimentation in things ranging from social media to chat bots or even processes used within business.

Triple A processes, large studios and crunch-time would all be questioned and interrogated. Genres such as first person shooters, sports simulations and racing clones would be challenged and scrutinized. Technology would not lead the choices but be second to great ideas and research. The choices on deployment and hardware would be determined by the demands of the concept and the best way to communicate, entice and engage with the players.

Students are introduced to critically thinking about game design through a deep historical look at design, art and game history. The Oulipo, a 1960s

French-speaking Avant-garde group of writers and mathematicians, would be as important to know and understand as the PDP-1 minicomputer with its first video game, Spacewar! This thinking is later applied in prototypes and playable objects.

We curated a programme that listens to the demands of the video games industry: the need for designers, artists and creative thinkers. In doing so we have also realised and identified a broader picture, that sees games in a wider definition as a purposeful, entertaining and experiential art form.

Games for good, games as experiences, games as art.

Our curriculum puts the players at the core and so user-testing events, pop-up arcades and physical games put bring players in touch with student projects at every stage: testing is fundamental to student learning. User experience design, design thinking, rapid prototyping, minimum viable products and teamwork feature throughout. Iterate often, fail hard. Every project should test and push the boundaries of games and gaming.

Unity was chosen as our primary game engine but we are committed to being hardware and software-agnostic. Ideas, concepts, design, and redesign through prototyping and testing would be the measure of student success. This feedback loop is crucial to learning.

Key games that have pushed the envelope of game design, often with small indie-style teams, are of major consideration; games such as Monument Valley, Journey, Cave Story, Braid, Little Big Planet, No Mans Sky, Everything, Electroplankton, Dear Esther, Beasts of Balance, Super Meat Boy, Elite, Sentinel, Splatoon, The Witness, Everyone has Gone to Rapture, Sound Shapes, Firewatch, Limbo and Overcooked.

So now we have a moment to pause and reflect, to look back and see that first version of the three year programme manifest itself in the graduates showcased within this publication.

It has been truly exciting over these last three years to see the ideas of the programme brought to life through the work the students have produced.

We have found that the principles of iteration have applied to the programme as well, with feedback from students and ongoing external industry contacts continuing to reshape the nuts and bolts of the course content and structure. However, we are pleased to say as we look at the work produced within the final projects represented here, we proudly present a set of games that have purpose, meaning, playability and raise the bar of what games and gaming can be.

We are immensely proud of the work that has been undertaken by them all. As a small programme staff team and a small cohort of students we have a great community feel that is showcased in the passion for all the projects and activities we undertake.

Over the last three years the students have worked tirelessly to learn a host of skills, traversing coding, art and design that have allowed them to prototype the ideas and concepts in front of players. They have made real physical crazy golf courses with digital counterparts, made hundreds of board game iterations and held numerous user testing events and ended every semester with a pop up arcade in a variety of locations including nightclubs, cinemas and cafes.

In the final year all students have really upped their game in promoting themselves professionally by attending and taking part in industry events across the UK. They have received praise from designers and artists within the industry, who have commented on their versatility, broad knowledge and understanding alongside their practical and promotional skills. In addition, we have run a host of external industry activities that have seen our students work with National Air Traffic Control, The Royal Society of Public Health, Deefax the UK Deaf Charity and education tech start up Manga High, bringing game design into new areas to inform and educate the public through game mechanics and game design.

Over the next few pages you will see the final major projects followed by the individual profiles of all our graduating students. The projects you will see cover a wide ranging spectrum of game concepts and I will let the project pages talk for themselves. However, suffice to say we firmly believe that, in different ways, they all live up to the expectations of the programme and



are meaningful, thought provoking and cutting edge. The last section of this publication contains eleven short essays written by the graduates designed to highlight and inform a broad audience on some of the issues and points of interest in game design currently.

The games industry as we know it is developing and game designers will have roles within a host of organisations, some of whom don't yet know they need game designers, be that via gamification, playful thinking and more. Digital games are themselves starting to carve out definitions as a new medium with their own affordances, structures and approaches that can only provide for exciting new types of narratives, experience and play.

I hope you enjoy the work created but more importantly that you see the purpose, creativity and impact these graduates will have as they continue on their journey as games makers, designers, artists and playful thinkers.



Keep it going

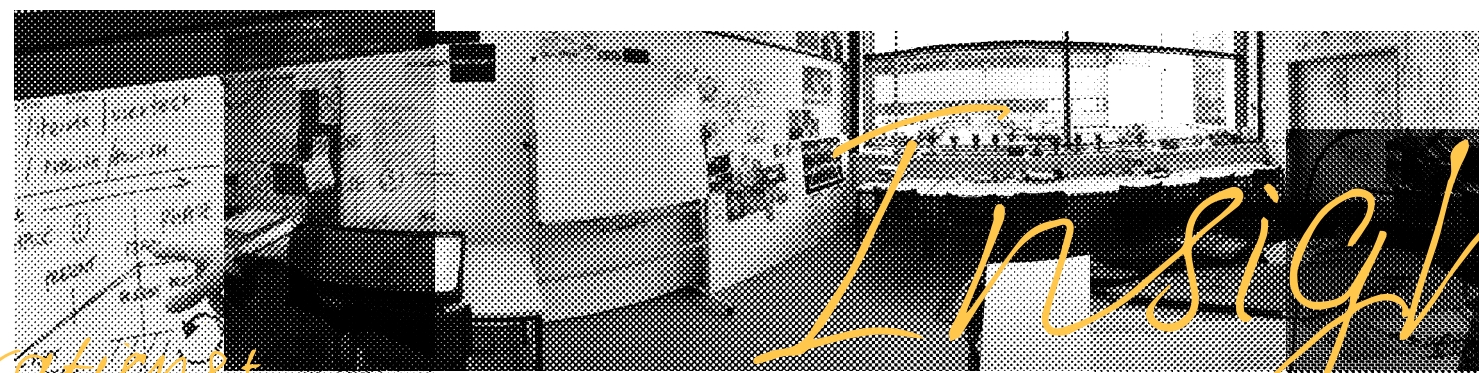
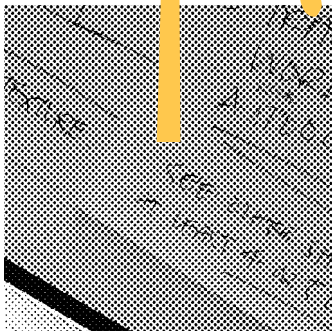
Projects



build narratives

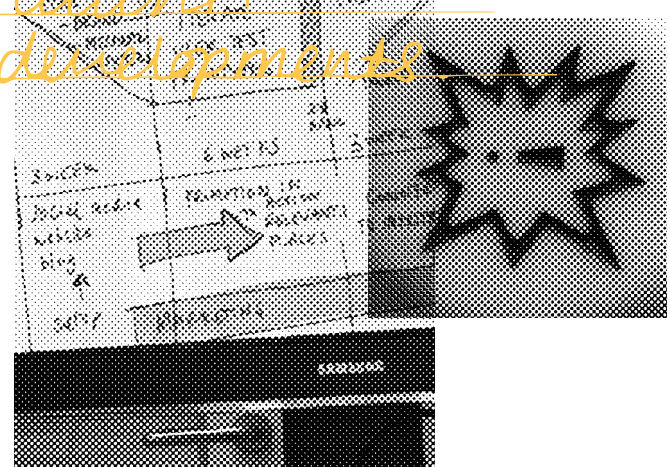
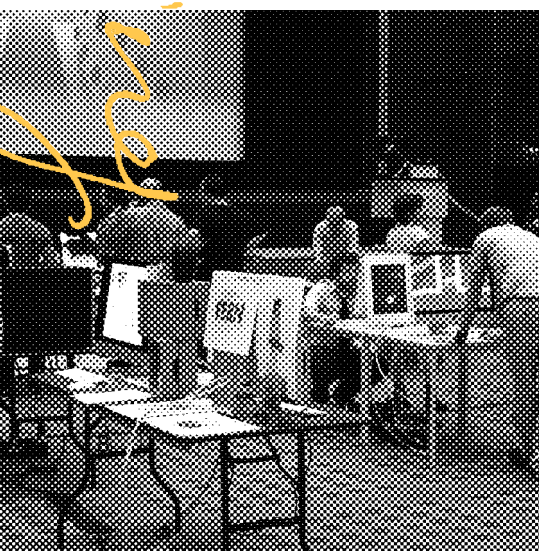


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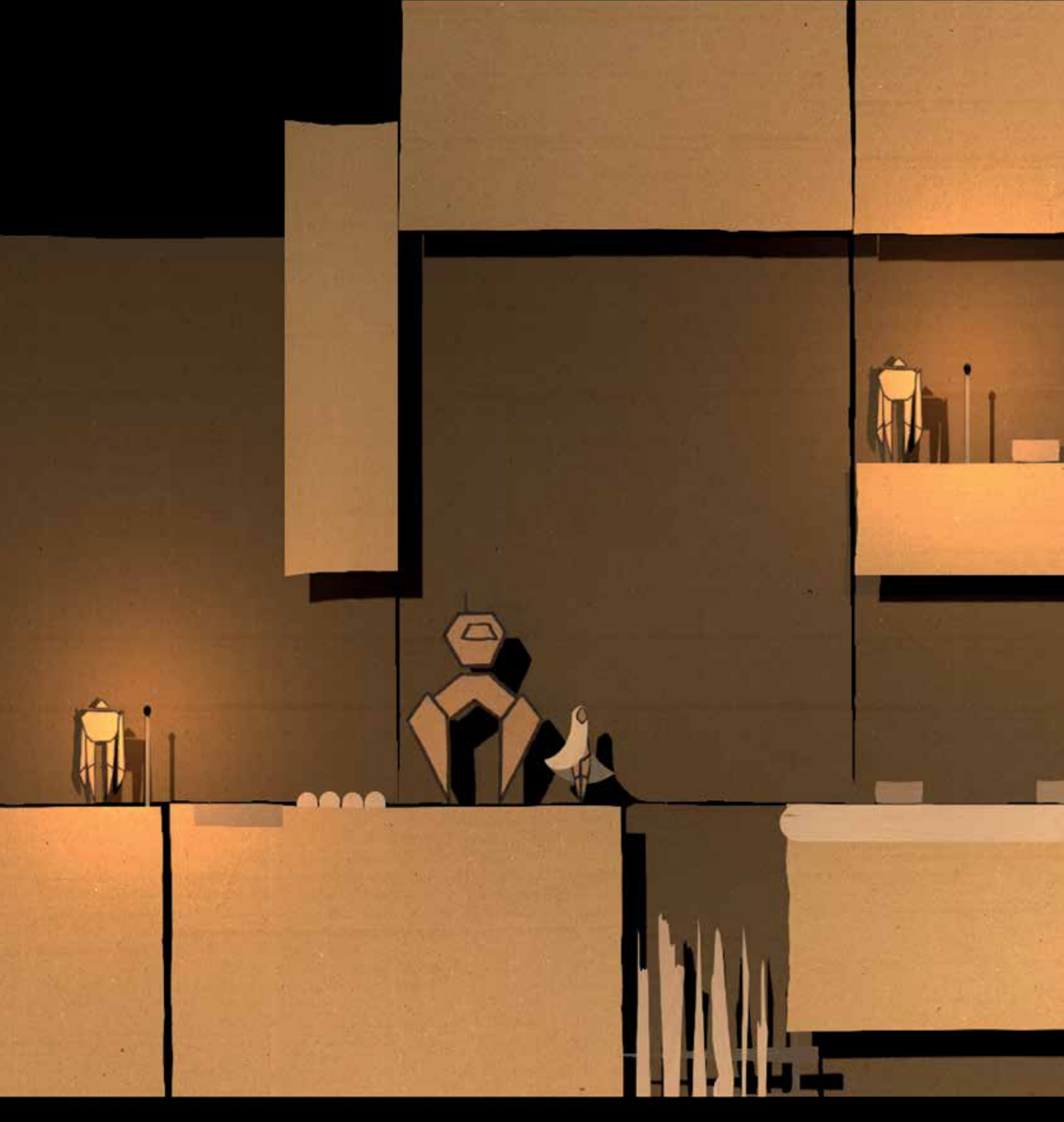


iterational developments

Insights



Read the books



Denizen Puzzle-Platformer

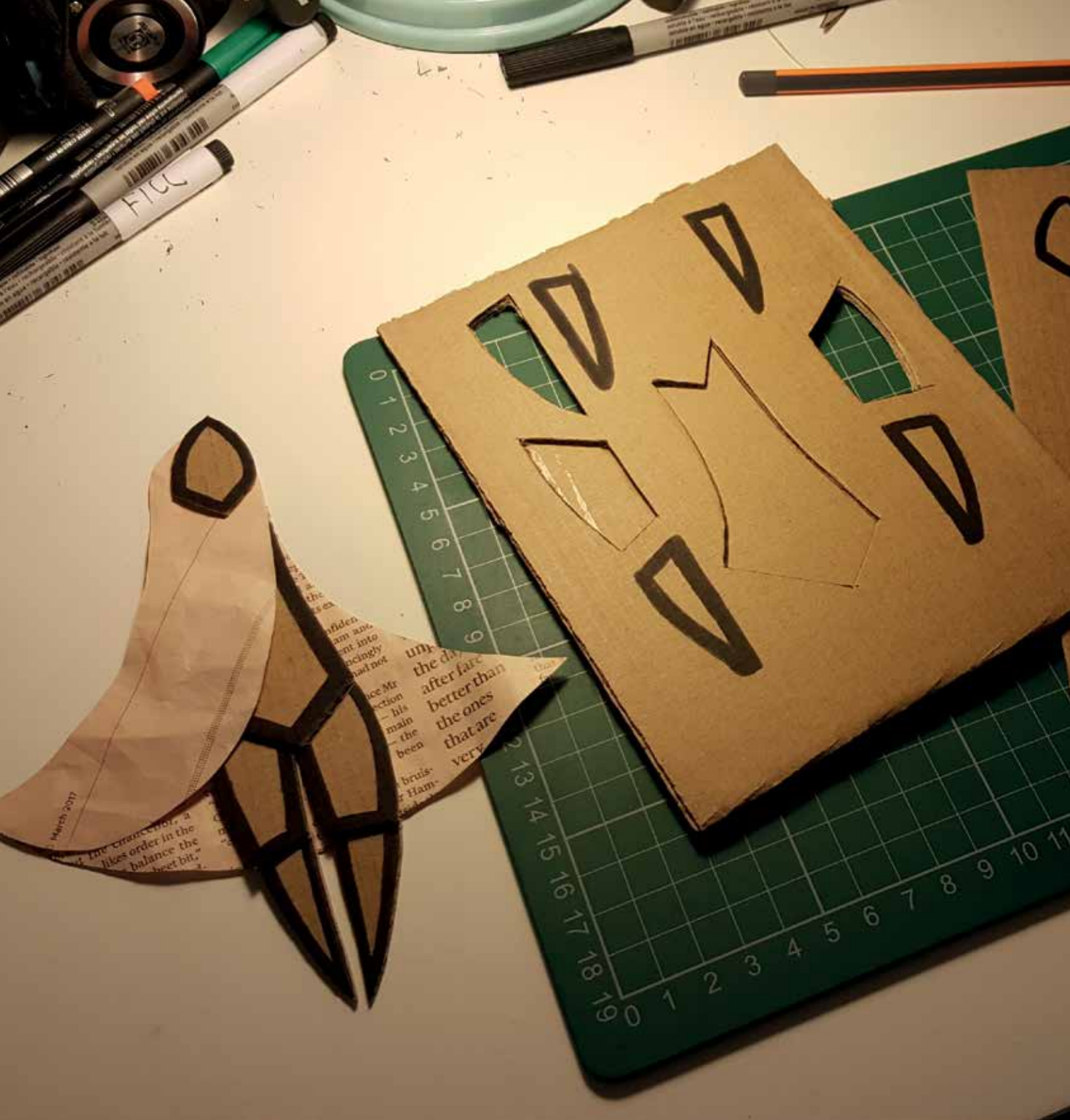
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Denizen is a 2D puzzle-platformer set in a world constructed from found objects. Together with your companion, you must overcome adversity and tragedy to reach your ultimate destiny.

With Denizen, my goal is to create an experience which creates an emotional resonance with players. The ideas behind Denizen originated from my research into homelessness. The summation of this research can be found at sleepclear.org. At sleepclear.org you can play prototype games which highlight some of the hidden issues homeless people may face.

These prototypes are what Denizen is all about, creating gameplay which makes players think about the issues differently. In Denizen, you work together with your companion to explore a landscape of discarded remnants. Aiding you on this journey are your companion's powerful abilities, able to heal, shelter and lift you, your companion is vital to your survival.

My aim with Denizen is to engage players with the ways in which we take shelter and security for granted, and how it is far too easy to lose these basic needs. It is my hope that Denizen will be able to change some of the prejudices people may have about homeless people.



Aaron Williams Designer / Developer

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As a game designer, gameplay is always the first thing I think about when working on a new project. It's my belief that games are at their best when they prioritise gameplay and that game developers should respect the intelligence of their players and create experiences which challenge and entertain them.

I believe that games have the potential to create memorable experiences that convey deep ideas and emotions. The games I design have these beliefs at their core. I find developing games to be one of the most rewarding and creative pursuits because it allows me to use a wide range of different skills. Whether I'm writing code, writing music, designing characters, creating levels or writing story.

What I love most about creating games is how prototyping, iteration and testing informs the creative process. Entirely unexpected methods of play can be uncovered through testing which alters the design in meaningful and exciting ways. It's this relationship between iteration and design that I find most rewarding

Twilleir



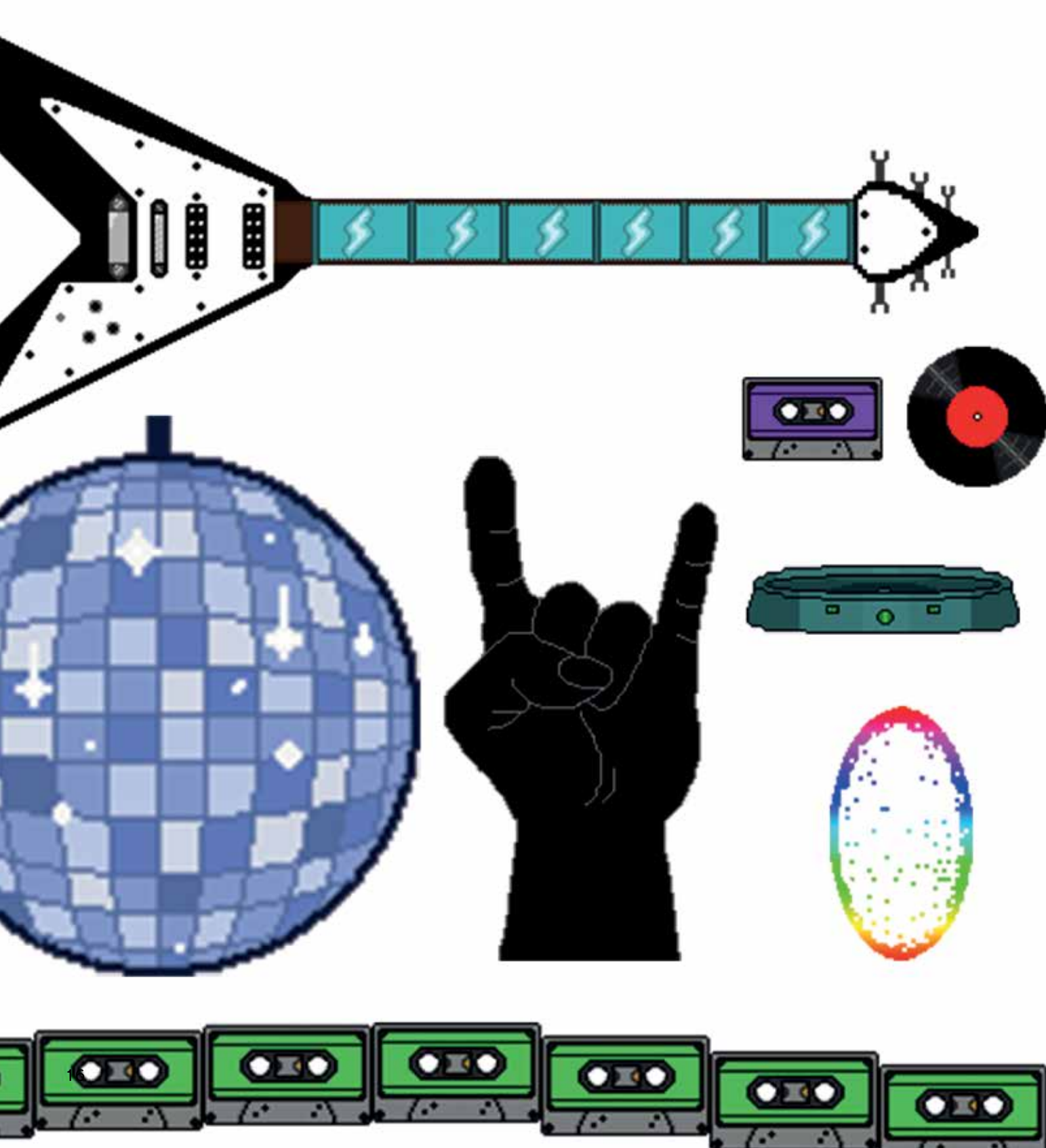
Twilleir Adventure Tycoon

www.twilleir.co.uk
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Twilleir is an Adventure Tycoon game set in the beautifully crafted fantasy world of Ephara. It is a single player game with a cute and endearing illustrative style and would be a wonderful addition to any Tycoon fan's collection.

Your aim is to grow and develop the most successful dreams production store in the town. Respond to your clientele's requests, expand and refine the dream growing process through upgrades to your store and progression of your character. Search for rare ingredients that are essential to dream crafting in the caves beneath Ephara and do combat with the monsters that lurk within.

Remember to bring a trusty sidekick from the rapidly expanding Adventurer's Guild to assist you on the journey. Haggle with crafty suppliers to maximise your profits and ensure customers can afford your wares, visit the market to secure ingredients when the change in seasons spoils a harvest and make sure that the business stays open by paying your rent on time!



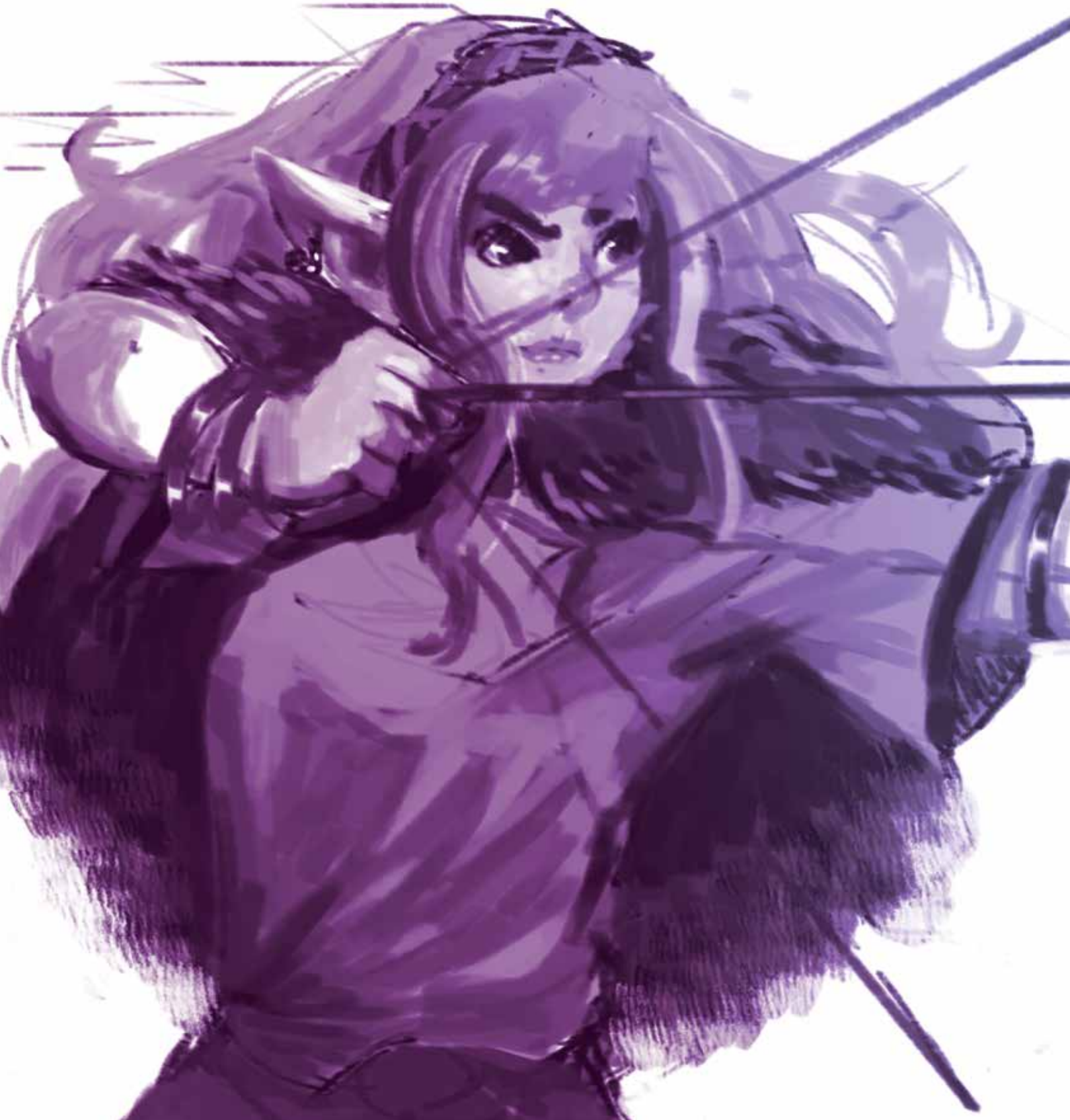
James Pearson Designer / Developer

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Typically the lighthearted member of the team, I enjoy bringing humour (quite often dark) to motivate my team mates and keep everyone from going insane.

My love of games design and personality drives me to create experiences that make people laugh rather than to cry or to think. If I've left a memorable impact on the player then I believe I've carried out my job to the best of my abilities and really, isn't that what we're all trying to do as creatives?

I seek to create those vital interactions that draw in the next generation of gamers, much like how I was attracted by Spyro and Rayman, they were fun and challenging experiences that introduced me to gaming and have played a vital part in my development as a game designer. I'd even go so far to say that they helped shape who I am as a person today.



Amelia Ng
Designer / Developer

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Experimental, ambitious and always making mistakes, I live to try out new things and to make people laugh!

As a games designer, I want to make interactive pieces that connect people and make them experience things that benefits them as a person, be they games or apps or anything in between. I believe that our ability to tell stories is one of the best things about the human race, fiction and fact that broadens our point of view and knowledge, and making that more accessible through game play threads through a lot of my work.



Jess Castle Designer / Developer

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In my working practice, I've always been focused in committing to taking on new challenges and learning something new in projects. After originally coming from an Illustration background, I've spent the last couple of years training myself in a variety of new skills that Games Design has to offer such as 3D modelling and digital painting which has helped me to become more design aware and further realise the importance of design.

Research highly influences my practice as the references I choose, whether through books, films or research trips, create inspiration and has a direct effect on the designs that I produce whether it be for environments, assets or characters. Design to me is key and is something I enjoy exploring. Without thought and design, what you create will have little character or 'pizzazz' no matter how much time you spend on it.

I like to bring my personality into projects through using dressing up (cosplay), music and acting in order to inspire me and really get into the project I'm working on. I think having fun with your work often gets tarred with not being committed or serious, but I couldn't disagree more; you've got to have a good balance and have a little fun or it'll all just be a bit boring and it'll show through your work.



حوري حوري Heal me



Hurry Hurry Heal Me 4 Player Local Co-op

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Hurry Hurry Heal Me is a 4-player, local cooperative game with the aim of publishing for the Nintendo Switch. Hurry Hurry Heal Me flips the traditional shoot 'em up on its head by using healing as its main mechanic. This "Heal 'em up" encourages players to use teamwork and communication. The game aims to induce stress through the concept of no control, with players relying on their team mates to survive.

As an all-female designing and development duo, Bobbie and Claudia have worked very closely together to produce the game.

Claudia was the brainchild of the game, forming the idea after extensive research and iteration. She has overcome many challenges learning 3d animation and modelling. Claudia's artistic design has added a colourful flare to the project, using Moroccan imagery as an inspiration. Bobbie has been key to the development stage as chief coder and level designer. She has learned C# programming for the project and has familiarized herself with all aspects of Unity. Bobbie has also designed some of the patterns and textures found in the game using geometry.

The team are hoping to publish the game on the Nintendo Switch, the next party game that you can use to stress out your friends!



Claudia Thomas Designer / Developer

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University has opened my eyes to the world of games and the potential there is within the platform. From the course I have experienced a range of different development and designer roles, learning how to bring an idea to life while also working in a team.

I am passionate about the industry particularly within the design of casual and multiplayer games, as I believe the interaction between players is an important aspect of gaming. Over the course I have obtained skills within digital painting, idea generation, team management, organisation, researching, level design, user-testing and modelling, in programs such as Maya, Unity and Photoshop.

Not only have I created games for entertainment but I have also explored designing serious games, as I feel games have the potential of being a meaningful platform.

Last summer I undertook an internship as a games designer and artist for the Royal Society of Public Health (RSPH). I created an idea, prototype and report for a gamified healthcare app. The app aimed to spread awareness of the calories within alcohol and the effects on our bodies, to encourage a behavioural change within young adults.



Bobbie Allsop Designer / Developer

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I am a designer who likes to create interactive experiences that solve real world problems. This year, I worked with MangaHigh.com to design and produce a mathematical inequality game called Deepest Ocean. Deepest Ocean is designed to be used as a blended learning resource to help teach 7-12 year olds about inequalities in a fun and engaging way. By playing as a submarine who collects fish that are correct inequalities, learners solve maths questions in a dynamic way.

I believe that play is key to helping people understand abstract concepts, and that games are a great way to learn. I enjoy the process of combining art and technology to help make something complex, seem simple. Last year, I worked in a team to help NATS explore how they could communicate the complexity of air traffic control in playful way. We designed an app where players had to flick the flight path of planes, in order for the planes to avoid problem areas. This would help the player start to think about the complexities of organising flight routes.

I enjoy designing and prototyping, combining my skills as an artist and coder. This allows me to quickly visualize different ideas in order to find the best solution.



NIRVANA

Nirvana AR / VR Experience

www.mygraph.tonline/projects/nirvana.html
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Nirvana is an interactive VR / AR experience involving real time manipulation of visual and auditory elements to create a personal and unique experience for each user. Nirvana looks to create an experience in which the user is placed in a psychedelic-like world and is presented with ideas and themes around the philosophy and tangibility of reality. Ideally, this experience would cause the users to question their own reality and their thoughts on reality and psychedelic experiences (drug induced and other). This idea is inspired by the effect LSD had on the minds of revolutionaries during the 1960s.

Substances that alter your brain's chemistry are, to me, vehicles to the gates of the highest philosophical points of thinking. Automatically you may think about drugs in this instance, but I'd like to bring your perspective to a point of view where you consider how something such as food affects your brain chemistry or the way you feel (mood/emotions). My point is that everything is made from something, and that 'something' is in everything. The way that you are (hopefully) thinking now from reading this is what I hope to conjure within the minds of my experience's users. It's not about right and wrong, it's about what you think / the way you feel and why.



Anjola C. Kola-Adeyemi Designer / Developer

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As humans, I think it's important to think philosophically about life and our existence, to question our creation/ state of being and debate constantly with each other. I find that some of us tend to shy away from this topic as we either feel scared about it or that it's not important. To say thinking about your existence is not important is to denounce your existence. To question is to think and to think is to be alive, as René Descartes said – "Cogito Ergo Sum" or "I think, therefore I am."

As I've matured, I've learned that philosophy is a fundamental part of life that we all, to some extent, partake – some more than others. I hope that through my work and the things I produce (especially from this point onwards), I can in some way influence others to think more about reality, why we do the things we do, the things we appreciate and what happiness means. By doing this, hopefully I'll be able to shed some light on the dark world we sometimes seem to live in.



Mollis Serious Game

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Mollis is a tabletop board game, designed to gamify the consultation process of children who could be suffering from mental health problems. Mollis involves 2-4 players rolling a single sided dice to move around a board. The child answers questions based around life events and emotions, the idea is to give the doctor or medical expert as much information as possible in a short period of time. Each square on the board has a particular question on which the players answer to progress through the game. The game is designed for children in between the ages of 10-13 years. The main area the game might be used is between a psychiatrist and patient.

Taking a game into such a sensitive area isn't easy, but it's clear through research that mental health numbers are rising and Mollis could be a step in the right direction, to help those that are suffering everyday is the goal. Mollis is a stepping stone to allow the children to talk about their feeling and that's the first step on the road to recovery. It's also key to highlight that the game is adaptable and could be used in group sessions in child inpatient facilities. The foundations of the game are to improve a child's resilience through disclosure and communication.



Liam Dummackin Designer / Developer

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Designing games has got to be one of the best jobs in the world, surely? Well I think it is, that's why I'm doing it. My mind is nourished and stimulated when thinking about game concepts, implementing ideas is what I live for. I want to create games that have incredible narrative focused fundamentals, games that captivate and play with your emotions, for me this is the foundations of a good game. I particularly enjoy 3D, but my current project has tested my 2D abilities. I'm comfortable doing anything, I don't shy away. I get stuck in and get it done.

My processes for designing games are primarily thought based and I do a lot of the work in my head, I think deeply about concepts and how I might go about implementing what I have thought about and creating something which is real. I have quite an active mind and I prefer working in teams, but I feel I can be just as productive on my own. I just want to make games which, influence, inspire and help people. The same feeling that all my favourite games have given me there's no other form of media like it.



Ethereal

3D Third Person Adventure

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Ethereal is a game focusing on applying the rules of the Gothic to a 'future world'. It combines the aesthetics and environments of traditional sci-fi with elements of the Gothic. The game revolves around four different types of anti-hero's (playable characters) and their journey to freedom and redemption. This strongly reflects the idea of the 'perused protagonist' as the players escape/evade the law as well as the already popular subject of space-exploration, alien races and inter-stellar travel.

Ethereal is a 3D, third person, adventure game that focuses on exploration as well as combat. The art style is cel shaded (3D art in a 2D style) and based on a combination of Gothic and stereotypical science fiction themed colours and appearances.



Kathryn Malcolm Designer / Developer

www.semester2fmp.wordpress.com
Instagram: @EtherealtheGame

I am a Student of Games Design and Art at the University of Southampton with a particular interest of narrative structure in modern games. I see myself as an indie game designer and prefer making games that are fun and immersive with captivating storylines rather than anything too serious. I believe that players should be able to escape into another world when they play a game.

After completing my degree, I will be moving to Chester and working in the Liverpool area.



BIOSTASIS

Biostasis Education Game

t: @biostasisgame
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Biostasis is an innovative, interactive learning app created to help aid the academic advancement of children in Key Stage 3; in the departments of Geography and Biology. The app is made to give the user a complete understanding of how ecosystems and environments work around the world. This will be achieved by giving the user complete control over the contributing variables of the ecosystem, allowing the user to manipulate them as they so desire. Once they have altered something, the amount of predators for example, they will see the consequence of their actions unfold before them via animations on the screen.

We hope that this app will help positively influence the mindset of future generations, so they realise the vital importance of the delicate balance of the natural world and that we, the dominant species have a huge responsibility to care for the world we live in.



Cameron Niven Designer / Developer

i: @cameronniven

I have always been enthralled by nature, fantasy worlds, mythology and the magic within them. My vivid imagination bears a symbiotic relationship to my art, which always fosters a natural, magical or organic feel to it.

My methods of creating art varies somewhat greatly as a sway between the technological artistic advancements while refusing to relinquish my loving grip for the older, more traditional ways of art.

My subjects range from dark, fantasy themes to beautiful landscapes and animals. My ultimate aspiration to integrate myself within the modern art world would be to become a conceptual artist, for I believe my imaginative and broad approach to art has carved me out to be perfect for this line of work.



Oli Duncanson Designer / Developer

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I'm a Games Design student that thought all I wanted to do starting this course was concept art but have started delving into other areas of Games Design including UI design, coding, general asset design and animation.

Whilst studying at the School of Art I've also found a love for photography and often use my photos for guidelines and inspiration for my drawings. My main interest when it comes to gaming is story driven games or games that have a meaning, hence why I was drawn to working on Biostasis for my final project.

Hopefully after proceeding this course, I'll be able to find my footing in the industry possibly doing UI design or concept art.

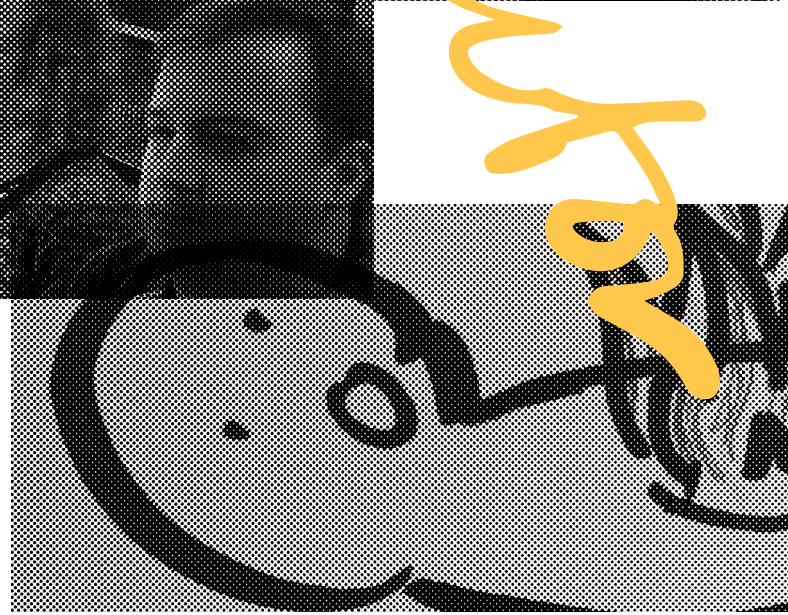
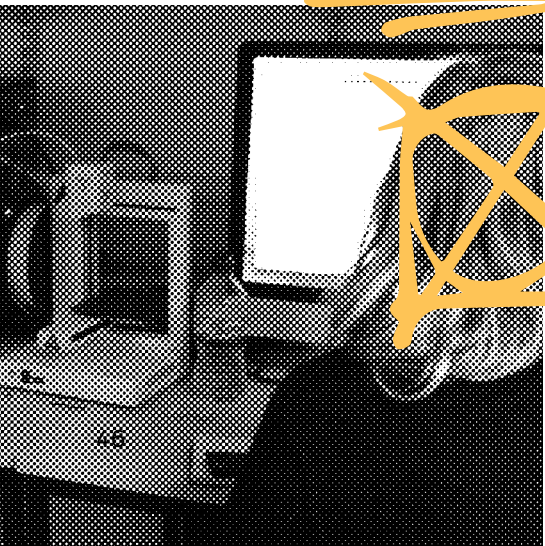
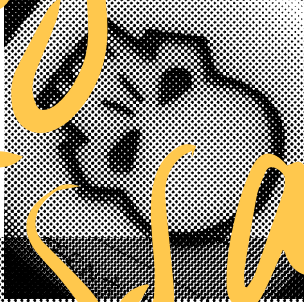
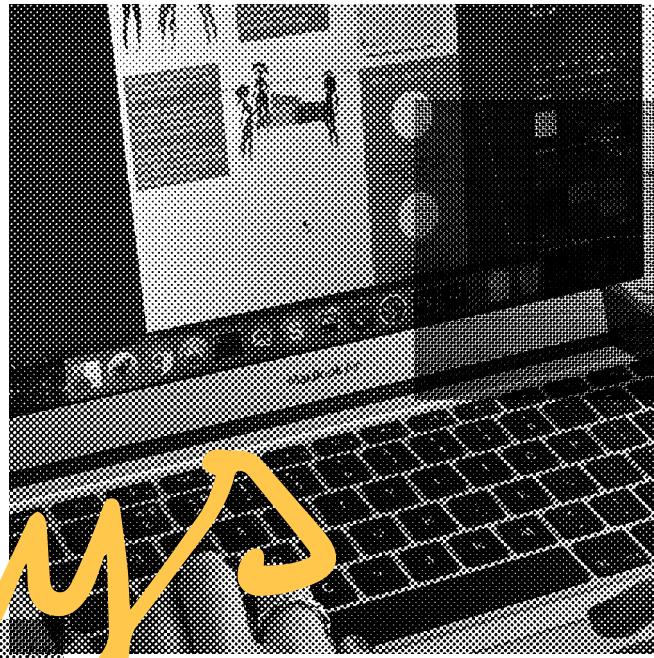
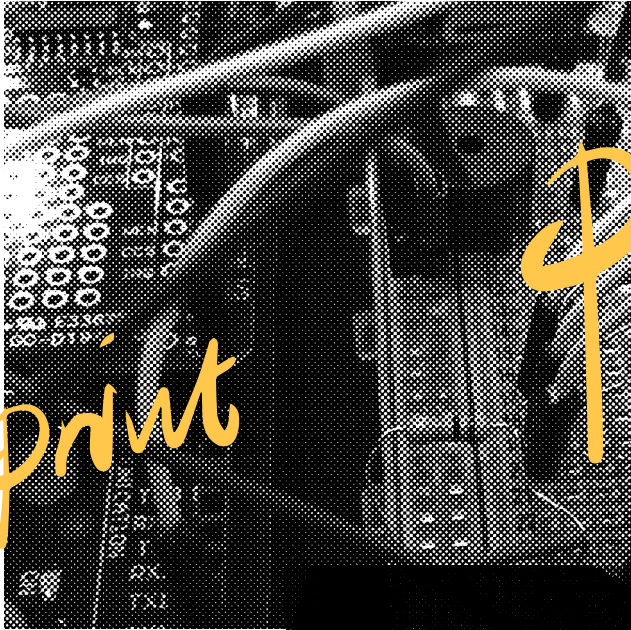
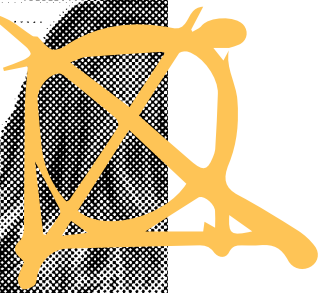
print

Playful Essays

work from

investigate

you know



Aaron Williams

Hard Mode

In this essay, I will discuss the emotional cost of solo game development by exploring the experiences of solo game developers and other professionals in the industry. I will explore a major study from the World Economic Forum which demonstrates the link between well-being, productivity, and creativity. Finally, I will demonstrate that, if we are to keep the ever-growing, and often magical, indie (solo) game development market as a viable job option for game developers, the industry as a whole needs to put more emphasis on the well-being of developers.

The popularity and success of modern independent games has been attributed to the release of Cave Story in 2004 for the PC (Electronic Gaming Monthly 2008). Cave Story was developed by a single developer, Daisuke 'Pixel' Amaya and is a shining example of what a solo game developer can accomplish by themselves. Electronic Gaming Monthly stated that, "the burgeoning Western indie game scene owes a tremendous debt to Japanese pioneers like Studio Pixel, whose freeware hit Cave Story proved that with sufficient vision, skill, and passion, a single developer can still craft a deep, compelling action game." (Electronic Gaming Monthly 2008). Of course, indie games didn't begin with one game and claiming that Cave Story single-handedly popularised indie games would be a mistake.



AARON WILLIAMS
Hard Mode:
The Emotional Cost of Solo Game
Development

In fact, indie games have a long history prior to Cave Story, but in many ways Cave Story's success proved that developing a game with a smaller team could still be viable in an era dominated by publishers and Triple-A game development.

In 2017, the ability for a small team to develop and release a game is now easier than it's ever been. Popular and relatively user friendly game engines like Unity and GameMaker provide anyone willing to learn how to make games with the software and resources to do so. Crowdfunding websites like Kickstarter and Patreon can provide people with the financial support to develop games with backing from their target audience. Ubiquitous digital distribution platforms allow developers to sell their games much more easily and directly. Thanks to this growing access to tools, funding and distribution, the number of indie games released has increased substantially since Cave Story. Steam, the most popular digital distribution platform for the PC, has an increasing number of new indie games released onto its platform every day. This deluge has been dubbed the 'indiepocalypse' by many who view the vast amount of new games as a harbinger for the end of the indie game scene (Wawro 2016). According to Sergey Galyonkin of Steam Spy, a website dedicated to gathering and analysing data from Steam's Web API, the number of new games released onto Steam between April 2015 and April 2016 had increased, but the average number of copies sold had decreased from 13,655 copies in 2015 to 7,188 in 2016. However, Galyonkin explains that, "As you'd probably expect, we saw a lot of new games released since the last year, and they've skewed the numbers toward lower sales. But the distribution of sales remains pretty much the same with some minor increase in lower sales and minor decrease in the middle. Or, in layman terms: we've got a lot of new bad-selling games on Steam, but it didn't affect the top games, which still sell pretty well." (Sinclair 2016a). Whether the so-called indiepocalypse is real or not, what's true is that indie developers have more opportunities than ever to sell their games, but it's now harder than it's ever been to get noticed in such a crowded market place.

For those choosing to develop a game completely by themselves, the current state of independent games allows them to do so, but the great effort that this takes cannot be understated. Even though it's now easier to make games than it was in the past, this is all relative, and developing a game is still a very difficult process. Moreover, as the number of high quality indie games increases, so do audience expectations. Providing all the features your audience expects is no

easy task, especially for a solo game developer who must take on the entire responsibility for a game's success by themselves. Not only does the development of the game rest with them, but with the huge number of games being released, the marketing of a game becomes increasingly more important than ever before. In a conversation with Rolling Stone, Matt Trobbiani, solo developer of Hacknet spoke about the increased role marketing plays due to the amount of indie games now available. "It has made execution irrelevant," he says. "How are you going to convert people that see your game into sales? How are you going to turn the smallest possible description of your game, regardless of how well you execute, into a press article? The expected business and market acumen is getting crazy." (Stafford 2016). Solo developers now need to be skilled in such a wide range of disciplines, from the practical skills of game development to the responsibilities usually undertaken by a publisher such as marketing, advertising and distribution. Running a crowd funding campaign is no easy task either. If you're lucky enough to be successful, you then need to keep your backers happy with frequent updates and open communication. Not to mention the long working hours and financial risks that working independently and being self-employed can bring with it. The burden of all these responsibilities can easily prove exhausting and detrimental to a person's overall health and well-being.

For developers in this position the temptation to work longer hours can be a big one. With the cost of failure so high and with so many responsibilities, working longer hours by neglecting to sleep can seem like a necessary step. Sacrificing your health and well-being to cram as much time as possible into game development is a concept known as "crunch time" in the video game industry. Although, traditionally, this usually involves an entire game studio working ridiculous hours to get a game finished. In a Game Developers Conference talk and later interview with GameIndustry.biz, Alexis Kennedy CEO of Failbetter games spoke about crunch time. "Some of you have no choice but to crunch. If you have a choice about crunching, crunch is bullshit. I've only been a game developer seven years, but I've been in tech 20 years. The data are in. It's really clear. If you work overtime for a week or two weeks, you see a boost in productivity. If you work overtime for four weeks, eight weeks, six months, productivity drops." For a solo developer, without the perverse camaraderie a studio environment can provide during crunch time, working with this same mindset can be a solitary and isolating experience filled with anxiety and sometimes even depression. Further intensifying this mentality is the fact that

many solo developers work from home which means they are unable to separate their working environment from their home environment as easily. Without the input from colleagues in a similar position, or the separation of work life from regular life, things can become untenable. Speaking to Rolling Stone, Becca Bair creator of Arcadian Atlas spoke about the impact developing her game has had on her health. "I've already neglected proper food habits because I've been so busy," says Bair. "Just grabbing some cheese crackers and eating them has become pretty routine. It's going to be a frugal time." (Stafford 2016). Perhaps the most intense example of this kind of sacrifice can be seen dramatized in Indie Game: The Movie, a documentary which followed a few indie game developers during the creation of their games. In an interview with Game Informer, Tommy Refenes, one half of the development team responsible for Super Meat Boy who featured in the documentary, had this to say about his state of mind at the time it was filmed. "It was tough. I was working about 20 hours a day and getting very restless sleep where I'd often wake up taking panic gasps of air," Refenes says. "The success of the game helped in a way, but really just not being in that situation anymore was a much bigger help." (Hilliard 2013). As well as being detrimental to a person's well-being, working in this way is also unproductive. As Alexis Kennedy explains to GamesIndustry.biz "People love making games, and games are a very competitive industry, so there's pressure to perform, as there is in many industries. And if you start getting into a hole, the natural thing to do is just to work more hours or to encourage your team to work longer hours. 'We just need to get this one release out the door and we'll be ok. We just need to fix this one bug.' And once you start going there, it starts to be a natural solution, and your ability to look at the bigger picture and your ability to think clearly are both compromised. So the further in the crunch pit you get, the harder it is to get out." (Sinclair 2016b).

Crunch time has become so common that it's generally just accepted as a necessary evil of working in the games industry. For many big game developers crunch time may seem unavoidable. When livelihoods are at stake and a game needs to be finished, it's understandable why crunch time may seem like the only solution. However, the long-term impact on employee's well-being should give game developers a reason to pause. A study from the World Economic Forum sampled 28,810 employees of large companies in over 15 different countries. The study showed that employees who felt that their company prioritized wellness in the workplace, also viewed their company as higher performing, more

productive and more creative. Employees who felt otherwise, that their company didn't prioritize wellness, viewed their company as lower performing, less productive and less creative. The study also found that companies are four times more likely to lose talent in the next 12 months if they are viewed as not prioritizing wellness. However, if employees have a favourable view, only 5% plan to stay for under one year whereas 64% plan to stay for at least five years. Employee engagement was also linked to wellness. Only 7% of employees felt engaged with their work if they thought their company was not prioritizing wellness, whereas 55% felt engaged if they thought their company did view wellness as a priority (Alistair Dornan 2010). For the games industry which relies on talented, creative and productive employees, this study should be worrying. Essentially, what this shows is that reduced wellness also has an adverse effect on productivity, creativity and engagement. What this means for traditional notions of crunch time is that the practise is self-defeating and more trouble than its worth in the long-term.

The same can be said for a solo game developer. When you consider the amount of responsibility a solo developer has, it's easy to understand how neglecting your own well-being can seem like the only solution. However, wellness should become a top priority for solo developers and the industry as a whole. In her GDC Indie Soapbox talk, Tanya Short of Kitfox Games spoke to a room full of indie game developers about their priorities. "Everyone in this room thinks our number one priority is to make a great game, but it's actually your number three priority. Your number one priority, unfortunately, is to not die," she said bluntly. "And it's important that you survive making this hopefully great game, because your next game will be better." She goes on to explain that prioritizing tasks is essential to avoid crunch time on a project. "You will actually accomplish more if you stop working so much. If you're not prioritizing your tasks that's the next secret. It's actually important that what you're doing right now is actually important... Re-prioritize as often as you need. And actually estimate your tasks ... If you're not estimating, you should because it's a skill that takes time." Short views crunch time as a failure of planning and emphasises a need for indie developers to learn better production skills to avoid working longer and longer hours and burning out on a project. (Brightman 2017)

It's clear that working unreasonable hours is unhealthy and unproductive, so why do so many developers still put themselves through it? In his interview with

GameIndustry.biz, Alexis Kennedy thinks that it's simply a case of pride. Many developers still believe that they can push through any obstacle if they work long enough at it. An attitude further reinforced by an industry-wide tendency towards mythologizing crunch stories. "We all know and love stories of creative individuals or teams who put in 80-hour weeks in order to get this victory out of the bag, who love the myth of the artist who says, 'If I had not wept blood into my keyboard, this game would not have been a success,'" Kennedy said. "But for every one of those stories, there are countless stories of people who wept tears of blood into their keyboard and released a game that nobody ever bought, or didn't make it to release because they lost their minds." (Sinclair 2016b). At this point, developing a game by yourself may seem like an incredibly difficult and taxing process, but it doesn't have to be. If developers make sure to take greater care of themselves and put more importance on production planning, crunch time can be a thing of the past and the emotional impact of working unreasonable hours could be avoided. Kennedy says it best when discussing attitudes to crunch and indie developers. "On the indie end, I think the message to hammer home is that not crunching is not failure of courage. Crunching is failure of courage," Kennedy said. "If you put a 60-hour week in rather than think about what you're doing and finding a smarter way to work, then you're often taking what feels like the hard approach, but is actually the less considered approach. And this goes triple if you're making a team do that, rather than taking a timeout to see if there's an easier way to do things."

Solo developers need to be highly skilled and determined people, but also healthy and stable ones, which is why an emphasis on well-being to be a priority. Games developed by a single person can provide audiences with an authored experience that is traditionally absent from Triple-A games. Unless solo developers take better care of themselves, the potential for games like this to be lost due to developer burnout is considerable. This would be a shame for everyone, because when solo game development goes right, it can produce remarkable games, as is the case for the hugely successful *Stardew Valley*. With sales of over 2 million copies on PC alone, *Stardew Valley* is an extraordinary success story for Eric Barone, the 28-year-old solo developer. Not only was Barone the only developer, but this was also his first commercial game. Shortly after its release in February 2016, the game quickly shot to the number two slot in Steam's best seller list, a position usually occupied by the juggernauts of the industry such as *Grand Theft Auto* and the *Call of Duty*'s. Sitting amongst them was this farming game

created by a single person with pixel art graphics. The premise is simple: you play as a former cubicle worker who is tired of their corporate life and who decides to change their lifestyle and take over their grandfather's farm. You then spend your days meandering around the game, learning how to farm, planting seeds and interacting with the townsfolk. Although it doesn't sound like an immediate blockbuster hit, *Stardew Valley* offers players a relaxed experience packed with interesting characters and an engaging world. In many ways, *Stardew Valley* is an almost autobiographical game in many ways, and as you would expect, the influence of its creator is felt throughout. Barone graduated from University of Washington Tacoma with a computer-science degree in 2011. He then applied for entry-level coding positions at various companies, none of which bit, so instead of working in a cubicle, he decided to try game development. The parallels to the premise of *Stardew Valley* are obvious, but the influence doesn't stop there. Unlike many other farming games, *Stardew Valley* doesn't include butchery. At one point during the game's development and at the request of his audience, being able to butcher your animals was included for some time. Barone experimented with the idea, but eventually removed the feature because it didn't feel right, as Barone himself explains in an interview with *Vulture*. "I didn't want to have that sort of violence. You give the animals names, pet them, and a little heart goes above their head and stuff, and then you butcher them?" he said. "It just felt wrong. It didn't jibe with the feeling I was going for with the game, so I cut that, and I don't regret it." Perhaps the reason it didn't feel quite right to Barone is that fact that he's a vegetarian. Decisions like these can inform so much of what makes a game unique and it's this authorship which allows solo developers to create games which are influenced by their experiences and represent them as individuals. Unlike Triple-A developers, solo developers can create personal experiences unique to them. A game like *Stardew Valley*, Barone said, is "a lot more personal than a game made by a hundred people that's some kind of focus-tested experience where they just want to make as much profit as possible." (Singal 2016).

That's not to say that Triple-A games can't have identities of their own. The *Metal Gear Solid* series comes to mind as a game almost wholly attributable to its director Hideo Kojima. However, the *Metal Gear Solid* series is unique among Triple-A games. Most are focus tested to remove all the rough edges and with budgets and audiences in the millions it's easy to understand why. However, through this process, some aspects of the game's unique qualities can be lost. In a noclip



documentary, Rediscovering Mystery, Johnathan Blow, creator of Braid and The Witness spoke about the Triple-A focus testing process and how it affects those kinds of games for him. "But that's like an outcome of this Triple-A process, right, of like, they put it in focus testing. If people get confused about something in focus testing, then that's like a rough edge on the thing that you get out the file and you file it off. On the one hand, sometimes those are legitimate problems, right, like the game is confusing in some way. But, on the other hand, I feel like this particular way of solving those problems, like kills the games a little bit. It squeezes some life out of them. I'm not saying that the Triple-A games putting all that handholding in is not the best business decision, it may be. On the other hand, Minecraft sure made a ton of money and it doesn't do that." (Danny O' Dwyer 2017).

For solo game developers, the journey must be more important than the destination, because for the majority, the destination is obscurity. Not all developers will find themselves with a hugely successful game like Stardew Valley, Cave Story or Minecraft. Given the sheer amount of new indie games released every day, making a great game just isn't good enough, you need a bit of luck as well. The future popularity of the indie marketplace also shows no signs of abating, with 2017 already set to break the record for the amount of new games released onto Steam in a given year (Galyonkin 2017). What constitutes a successful game in the minds of those developing them needs to shift. A game which allows a developer to maintain the emotional and financial stability to keep making games should be considered a victory. For those who attempt to develop games on their own, the importance of balancing workload cannot be understated. In the current marketplace for indie games, solo developers

need to be skilled in such a wide variety of disciplines aside from game development itself. However, I think most of all, the number one responsibility for a solo game developer is to themselves. Studies have shown that prioritising wellness increases creativity and productivity, so developers need to emphasise taking better care of their own well-being if they want to keep making games and enjoy the process of creating them. This must be the case if not for their own sake, then for the audience of gamers who would suffer for the absence of the kind of games solo developers are uniquely able to provide. The love of creating games must be the reason to make them, and the ability to keep making them must be the goal.

Amelia Ng

Online Companions

It's one of those things you don't really think about until you're already friends, remembering how long ago you met, the date of your first physical meeting, what it was that prompted you to start talking to each other in the first place. My friends and I have been talking for about three years now. We have never met each other in person nor seen each other face to face, but we have three years' worth of paper letters traded overseas and had hour long voice chats into the wee hours of the morning, discussing everything from the coffee shops they like to visit because of the crush they have on a barista there, to the various different kinds of mental exhaustion that he have to deal with as a result of having a mental illness; and more importantly, days' worth of teamwork and camaraderie through our virtual avatars on an MMO.

The classes you play don't have to define you in Final Fantasy XIV, but you tend to stick to kind of weapons and abilities that suit you as a player, I much prefer a ranged and support approach, so I double as a Bard and a White mage. Blue is all about the big damage, so plays a Black Mage, and Feli essentially role-plays as her character, and decided that a Scholar (Support) was the best class that portrays him. It's an interesting way of a first impression. You no longer have that visual and societal expectation of someone, so you turn to how they play the game instead.

Though we knew each other far before we started playing this game together, we have become closer friends as a group, and whenever I get the funding, I will be hopping straight on a plane to the mighty US of A, because we haven't met in person yet and that feels like the last stage in cementing our friendships. A significant portion of my friendships stem from online gatherings and shenanigans, having even gone so far as to have hosted someone in the UK who was travelling back to Canada, to having a very poorly planned trip to Paris for a weekend because I was friends with a girl who lived in the French suburbia. The possibilities when you have even the smallest amount of common sense and trust (and money) are endless!

AMELIA NG
Online Companions: Turning
Gaming Camaraderie into Real Life
Friendships

When I was younger, I used to be told by rote. "Don't talk to strangers you meet online, they aren't who they say they are, they'll do horrible things to you, never tell them your address or age or location, keep any personal details to yourself." But why is it that as a generation, we're so free with our personal lives online? Why do we trust these people who we've never actually met or seen before? There are two kinds of ways to foster a friendship into being: FtF, or Face to Face friendships are the first kind, the one that we associate with people in our immediate physical sphere, like housemates, colleagues and family. FtF friendships develop with a large amount of non-verbal communication and can develop very quickly due depending on the chemistry between the people and the frequency that you meet with each other.

There was a realisation that I had after I left my secondary school that I was only friends with some people because I saw them five out of the seven days of the week for eight hours a day. It's a very strange realisation to have, because you look back on these people with fondness and then come to terms with the fact that you haven't actually talked in years.

Online friendships, or CMC (Computer moderated communication) friendships however, can either be incredibly easy to fall into or very difficult depending on the people making the endeavour. When you find someone online because of a game or a community, you already have one thing in common, then from there you discover if you share any other similarities and talk about those. It usually isn't hard to find more things that you both enjoy because although gaming is vast in the kinds of people it attracts, when you're playing a specific genre of game, players will have interests in that genre. Even further, in multiplayer online games, Guilds and Companies of players have been founded solely on the fact that people in them will share the same profession or hobbies. So, in an age where a vast number of people are accessible at our fingertips, what makes that fleeting connection stable at all? A study that was performed on adolescents that grew up in online infused cultures and made this point about them:

Although communication on the Internet often triggers more openness, slackens restraints, and diminishes stereotypes common in real life communication, the themes and patterns of behaviour tend to remain untouched: youths make their own searches, test their values, establish relationships, and learn to understand adults, peers, their partners, themselves, their sexuality, etc. Basically, online

behaviour reflects real wishes, fantasies and needs; the virtual world only serves as an intermediary for their realisation. (Šmahel, 2007)

We're far more likely to be open with these essential strangers, because we realise that we are also strangers to them. It can be exhausting to keep FtF friendships up, especially for those of us with mental illnesses, something becoming far more prevalent in the younger generations. We have our own coded language online and tend to be far more honest with people when we view them in the abstract, because it almost doesn't matter what they know. It's when you start to arrange things between yourselves that the CMC friendships become more invested. Depending on who you're playing with, you have to make sure that you are actually able to arrange a time you can run the content across the different time zones, make sure you have an avatar in the game that's on the same server, have that avatar be of a complimentary class to your friend's and last but not least, sitting down to play the game. With the advent of social online gaming, FtF's and CMC's can now advance at the same pace, instead of what used to happen between text only medium, which was that CMC relationships took far longer to bloom and were a lot more difficult to upkeep than their counterpart's due to the restricted nature of the communication available.

We now have virtual relationships that only have physical distance as a barrier, as we can talk and see faces thanks to services like Skype and Curse to talk and video chat at minimal expense.

The great thing about these friendships is that when we do eventually meet in person, I don't have any of the lingering awkwardness I occasionally get with new acquaintances and colleagues in which we must do the song and dance of feeling each other out for a couple of weeks until we know the interests and attitudes of the other person.

In general, in the Game Space, this information tends to be the basis for the friendship.

Though I say this, it's almost exclusively through FtF relationships that we meet and befriend people that are vastly different to us but we seem to get along with anyway.

Both kinds of friendships are just as valid, because I would argue that the baseline for a decent relationship is a mutual expenditure of time and effort where the other person is concerned. It just so happens that that is far easier to do when you have a common activity and goal to work towards.

Anjola C. Kola-Adeyemi

Gaming Philosophy

For humans, it seems we are destined to be forever trying to escape our real world problems – and for some, Virtual Reality is the solution. For others, VR is only a temporary band aid to the painful wound that is life. Whilst some believe VR endeavours have the potential to make sci-fi fantasies (and fantasies in general) a reality, others would argue that you would always be able to distinguish between computer generated and 'real'. The point of this piece is to hopefully provide a new perspective and avenue of thinking towards this topic of VR for those that don't always consider the philosophical side of things. The best and worst thing about philosophy is that it is all subjective. However, whether or not you agree with what I say, you're still thinking about it.

For me, VR started when biological creatures started dreaming (humans aren't the only ones capable of dreaming – (Langley, 2015)). Simply looking at a reflection of yourself or an object in the water or the mirror is a form of VR, albeit 'primitive' compared to what we have at our disposal in the modern age. To fully grasp the full extent to which VR can be applied, one needs to look to the past, before the dawn of computers and modern technology as we know it.

The 'virtual reality device' timeline starts, presumably, with paintings and drawings – one of the most basic yet intricate and widely appreciated forms of visual trickery and illusion (VRS, 2017). Masters of Illusion such as Leonardo da Vinci, Michelangelo and Raphael were amongst those who, at the time, best understood visual perception, the different types of perspective and heightened reality. They also seemed to have a very firm understanding on the difference between vision and illusion – what we see and what we think we see. I say 'seemed to' as truly, none of us know whether what we see is the 'intended view' or in other words, how do we know that what we see and experience isn't all just an illusion within itself. As Albert Einstein said:

"Reality is merely an illusion, albeit a very persistent one." (BrainyQuote, 2017)

ANJOLA C. KOLA-ADEYEMI
Gaming Philosophy - What is the
point of exploring VR? How far
can VR go with gaming?

The interesting thing about paintings is that they place you at the scene of what you are seeing. The interesting thing about modern VR technology is that it takes that painting and places you directly into the scene – and it's alive! VR provides a heightened sense of interactivity in turn creating a new level to the reality of 'still imagery'. The days of imagining are over – now you can experience. Let's break down the VR into its constituent parts: Virtual – meaning Almost (Oxford University Press, 2017b) Reality – meaning Real, Existing (Oxford University Press, 2017a)

In other words, VR means 'AR' – no, not Augmented Reality but 'Almost Real'. The strangest thing about that definition is that to admit it is correct is to deny VR's actual existence. However you could argue that 'Almost Real/Existing' refers to the sense that it (being VR) is almost as real as our existence and experiences. A question still remains however – how close is VR to actually being 'real' then? Let's go back to Einstein's quote and juxtapose it with a line from Mr Robot (Season 2, Episode 11) – “Did you ever think if you imagined or believed in something it would become true?”

At this point, I wonder that maybe the ultimate point of life is to master reality. To control and influence what you see and hear/perceive, how you feel, your experience of pain, happiness, etc. Can we really do that with VR? It may sound silly to say 'master reality' but there are plenty of examples where people's senses and emotions (realities) have been manipulated. From burn victims playing an arctic themed VR game that helps ease pain during treatment (BBC, 2011) to a VR therapy simulation that helps those with depression (Donnelly, 2016), you can see how effective this technology is at affecting our realities. Let's go even deeper, and take a look at Plato's Allegory of the Cave. Imagine being born into a VR world but you don't realise you've been wearing a VR headset the whole time and that there is more to life than that VR world. What do you think will happen when you finally take it off? By combining the line from Mr Robot and Einstein's quote, I've created a situation where you are able to escape your reality, but now appears a dilemma – which reality is the real one and many are there? It doesn't really matter.

So what's the point of asking all of these questions? The point is that I think it's important to question everything we do and to consider the value of the things we perceive and interactive with; as it allows us to distinguish between what's worth us putting our time into and what isn't. Should I go to work or go watch

TV? What's the point of anything? Especially if we're all going to die anyway – well I say you should think about what you're going to do before that happens. Consider how you're spending your time – when was the last time you contacted your friends? When was the last time you went on holiday or did something romantic with your partner? Are you doing something you love with your time or are you constantly trying to escape? If you're still trying to escape, try taking off your HMD.

VR (as we know it) used to be nothing more than a concept and a thing of science fiction dreams. Now, we have a chance to explore virtual worlds in ways that seemed impossible before. VR is becoming more and more interactive and immersive as time goes on yet there always seems to be something that can be improved upon. The cheap costs of running equipment and the high processing power of technology in today's world allows the average person to engulf themselves into these worlds (via Google Cardboard, downloadable to most smartphones); however the high end tech such as the Oculus Rift and HTC Vive are still quite expensive.

In relation to gaming, 2016 seemed to be a bag of mixed reviews for most VR enthusiasts as headsets were more expensive than expected and not as compact as most users would have liked. For those that did manage to get their hands on a headset, the experience seemed fun and exciting at first but the 'new item' effect wore off and the headset slowly became useless mainly due to the lack of content (PCGamer, 2016; Iwaniuk, 2016).

One major aspect people seem to be complaining about in regards to VR gaming is the lack of local social interaction. The opportunity to interact with those in the same room isn't easily available as the high end devices (Oculus, PlayStation VR, HTC Vive) don't support any type of Video or Optical See-Through options. This means the users are left feeling isolated and closed off at a time where social gaming and community based gaming is prevalent. The problem also lies with the fact that you as a user are no longer able to communicate with your external environment unless you remove the headset (Bary, 2017).

These issues have left some users seeking the cheaper alternatives such as Google Cardboard made apps downloadable straight from a smartphone, with some commenting that overall the experience is generally almost similar with a

few exceptions (when used in conjunction with Samsung Gear, Google Cardboard or equivalent headset). One thing to note is that these cheaper alternatives, i.e. smartphones, are Video See-Through devices so users can experience AR and interact with their real environment. So what does this mean for the future of VR and gaming? Is it over?

Not necessarily. From those that purchased the headsets, most of the disappointments tend to be the same, mostly aimed at the heftiness of the devices, being too isolative, the devices being tethered and not standalone, lack of hand tracking, wanting better resolution, etc. The positives are also quite similar in terms of the praise related to immersion, head tracking, etc. The top dog at the moment seems to be the HTC Vive (Lamkin, 2017), mostly due to the ability for the device to track the movement of your hands assisting your biological sense of proprioception and the ability for users to move about within a mapped space. If the tech companies take into account the complaints and continue to innovate, it'll be a matter of time before we're all enjoying VR together.

One thing that is constantly brought up about VR is the fact that you know what you are experiencing isn't real. However, this doesn't seem to matter, and most people seem to be aware of this. The point of VR/AR, right now, isn't all about visually recreating what we know as the real world. This isn't Inception – well, not yet anyway. I believe it's more about the trickery of our senses, creating experiences/illusions that fool our senses and allow us to learn more about ourselves and the world we live.

FINAL FOOD FOR THOUGHT:

I saw a meme recently putting forward the following statement: "What if your dreams are your alternate reality selves and all of their adventures?"

Cameron Niven

How To Integrate Games Into The Classroom

In the past decade or so games have slowly started seeping their way into the realm of the classroom. There are hoards of clear, overwhelming and undeniable proof that games are a fun and effective method of teaching students new topics and methods, not to mention key life skills. These games can really be anything, ranging from team based physical games, board games, verbal games to video games. There is an archive of pre-existing games to be integrated. However, with a bit of thought and time to iron out the creases and define the rules of the game, anyone can think up their own. Before doing so there is a certain set of pre-definitive structural guide lines one should follow to better create a game fitting for the classroom and in an appropriate fashion to address a certain subject or a procedure of skill building. The query in hand is evident: how can you as the teacher utilise the excitement and fun in games, while combining this with pedagogical benefits?

Firstly, you must instil the core value of the game into the pre-set learning schedule. Games must foster curriculum based values which contain explanations and constructive responses so that the children will gain a better comprehension of what occurred during the game play and how what they played out in the game, structures the core value of the goal of the game. What have they accomplished and why have they done this? The greatest achievement of utilising games to aid the learning process happens when a tri-tiered procedure is implemented. The educator must initially familiarise the students with the activity and then the educational goals that should be achieved via playing the game. Post game play, the educator should explain to the children what it is that they have learned by playing this game. This practice solidifies the educational benefits to the students via the activity that they have just played out.

Activities and in-class games must foster a foundation of guidelines and directions for the students to follow. Without these pre-set guides for the children to follow, the children are more than likely simply to enjoy the game for what it is,

CAMERON NIVEN
How to Integrate Games Into The
Classroom

a game, without considering the educational target which has been concealed within the activity. They must be aware of that, and that they are in fact learning, as well as playing. By instilling the academic guidelines embedded within the game, this dramatically increased the educational integrity present in the students' minds as they engage in the game, allowing them to mentally target the information and skills gained, rather than just focus on the rules of the game, or winning. However, one must still encourage the children to be competitive with each other. This in itself may encourage the children to do better.

As the educator and now games master, you must ensure the goals of the game and/or activity must regulate with that of the curricular targets. The educational after-effect gained via the process of playing video games, specifically on the fashion in which the educator coordinates learning itself, for example: enlightening target specifics and the overall goal of the game or activity. The educational features and pedagogy supported within the pre-sets of the game are of the utmost vitality. To reiterate, when the core objectives of the game are aligned with the boundaries of the curricular structure, disambiguation becomes null and void. The greater the alignment of the curricular achievements during end-game, the more effective educational outcomes are axiomatically formed within the students' minds.

“The game-based learning approach has already shown its strengths from the learners' point of view. However, there are numerous unrevealed ways to support teachers' work within the game-based approach. Unfortunately, games that exclude the teacher from the game-based learning process dominate the markets, which is of great concern. Thus, the aim of this chapter is to study the use of novel game features that enable teachers to participate in game-based learning events. In this chapter, the teacher's role in the game-based learning process is considered through several different game examples that are designed to fulfil both learners' and teachers' needs. The examples show that there are both computational and non-computational methods that can be used to support learning and teachers' work in the game world. Based on previous results it can be argued that the diffusion of game-based learning can be facilitated only if both learners' and teachers' needs and goals are taken into account.” (de Freitas, 2013)

The epigrammatical approach to creating, finding and then using educationally beneficial games in the classroom is a good one. At this crucial stage of mental

development, the students must be given some at least basic structure to follow. However, it is in good practice to allow the students themselves to form their own thoughts, opinions and methods. This is not only healthy for them in order to become their own people and become efficient at problem solving etc. This is also a great opportunity for the teacher to be able to gauge the mental capabilities of each student and allow them to bridge an interpersonal ladder to help them foster new abilities within the topic. Observing the students' mindsets also allows the teacher an opportunity to either plant the seeds or nourish growing moral outlooks within the students. As an educator, you have a great responsibility not only to ensure the students are capable of fulfilling the curricular perquisites at the end of their educational journey but to make sure they become better people. Alongside their parents and other peers, you have a unique place of influence within the children's minds and should utilise this with maximum effect.

You can accomplish such a feat by carefully selecting lesson content and the games and activities you choose. Games can present moral choices either via a direct approach, or by more subtly ebbing the diligent perspective into the player's thought process. For example, when a child watches a movie and sees a character he or she likes, they may then aspire to be like that character. This is subconsciously instilling the pertinacious core values within them. This same concept is certainly applicable within the confines of a game. By allowing and encouraging your students to play games that imply these ethical themes, it is more than likely that such morals will rub off on them.

“Play is often talked about as if it were a relief from serious learning. But for children play is serious learning. Play is really the work of childhood.” — Fred Rogers

The core obligation of teachers is to take in to account the soul doctrine in creating a stable environment that harbours the unyielding captivation of young minds. One must foster a positive approach to adroitly creating a fascinating experience of gameplay which will in turn encourage mentally stimulating thoughts and growth. Fundamentally, one must be aware of how to utilise the environment around you in terms of physical opportunities and social situations that coexist in a manner in which most effectively initiates experiences which are in optimal form, the most effective, fun and exciting activities to benefit mental progression.

The perception that games, and in particular video games, predominantly revolve around violence and other such undesirable principles has been perpetuated by uninformed blockheads for too long. The time of castigating games is over. In this age, denying the superior approach to education via utilising these recently approved methods would be little short of foolish. It has been proven time and time again that using games in the classroom truly enraptures young and old minds alike. They can encourage so many different beneficial aspects within the classroom. These aspects can and will grow henceforth in to a plethora of applicable life skills. It is so important to nourish these newly found approaches and use them every single day, to ensure students get the most out of the educational system, and in turn give back great things to the world.

Claudia Thomas

Is the Nintendo Switch's focus on Local Multiplayer the Right Move

Long gone are the days of sitting at home smashing the A button trying to beat my brothers at a race of Run Ratata Run on the N64 or arguing over a Pokemon trade with friends before connecting up our Gameboys.

These childhood memories of local multiplayer are just that, memories. The rise of online play has all but killed of the genre with technology allowing for an allmore convenient way of playing games with others through online servers (Loomis, 2015). Nowadays people no longer have to arrange when to play or whose house to go to, it's as simple as sitting on the couch and heading online.

There has been much speculation over the Nintendo's latest console, the Switch, (Nintendo, 2016a) as to whether the console has a local multiplayer focus and if so whether it could revive the genre (Boyle, 2017; Gartenberg, 2016), but is this really what gamers want?

Announced back in October 2016 (Nintendo, 2016a) the Nintendo Switch is somewhere in-between a console and a tablet, though it feels altogether like a completely new breed of gaming. Containing the portability of a tablet, with its three different modes, Docked, Tabletop and On the Go, games can be played on the big screen like a normal console, then can easily be removed from the dock and continue to be played on the console screen itself (Nintendo, 2017a).

Memories of the Wii U spring back to mind with a similar functionality of gameplay transferring from the big screen onto a portable device (Nintendo, 2013). Though altogether it seems far less portable or polished than the Nintendo Switch. However with many claiming the Wii U to be "Nintendo's worst selling console" (King, 2017; Whitehead, 2016) and the latest console building upon the same concept, it begs the question of whether this is the right business move for the company.

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On closer inspection the Switch has managed to expand out from the Wii U, removing the individual play style of the console, created when games were transferred from the TV to the controller screen. Social play seems to have become more of an integral part of the Switch's design model, with all elements revolving around the ability to play locally with others. From the easily disconnecting Joy-Cons forming 2 controllers, to the ability for 10 LAN connected consoles (8 players, 2 Spectators) (Boyle, 2017), the Nintendo Switch is almost shouting at us to play with others, everywhere and anywhere. Separating it's identify from the Wii U and hopefully its success too.

The marketing follows suit and exudes social and local play, with nearly all of the marketing shots including the ones below showing groups of people to be the focal point for the console (Nintendo, 2016b). This highlights the social experiences and memories players will have together rather than the console itself. Expressing that it is the people you play with that will make the fun and the Switch is simply a tool to help players achieve this.



Release titles for the console also indicate its strong local multiplayer orientation, such as Snipperclips, Super Bomberman R and 1, 2 Switch, (Nintendo, 2017b) which all utilise the inclusion 2 Joy-Con controllers and LAN console connection for 2 or more players to play locally together (Nintendo, 2017b). Again showing the social design of the product.



Comparing the marketing of the Switch to that of one of its clear rivals PlayStation (BBC, 2016), it becomes apparent the stark contrast between them and how much the Switch stands out in the console market place.

None of the PlayStation 4's current marketing material contains any suggestion of multiplayer features that aren't online. With all images of the product containing a single controller, promoting individual play (PlayStation, n.d.). The company also appears to pride itself on its online system claiming to have "the best online multiplayer" and states its online PlayStation Plus service is "where the players are" (PlayStation, 2016). Making a clear statement that its business model is driving on the success of online multiplayer and that local playable experiences are not a key area for their brand.

It is this difference in focus that is helping the Switch to stand out from its key competitors. Nintendo has taken the right move in finding its own gap in the market, useful from a business standpoint, but is there a demand for it. In recent years board games have started to become the new trend (Jolin, 2016), with an annual increase of 25% to 40% of sales since 2010, (Jolin, 2016; Duffy, 2014) they even managed to out-fund video games on Kickstarter in 2013, \$52.1 million to \$45.3 million, (Wingfield, 2014) highlighting the demand for it within the market.

Board game store owner Peter Wooding (2016) attributes this heightened demand to a wider audience appeal, due to the genre no longer just being attractive to typical hard-core gamers, but it has opened up to the casual market making the genre feeling "more inclusive".

Celebrity endorsements and social media have helped to expand the following, by making gamers more aware of what board games are out there. Wooding even claims how Wil Wheaton's YouTube series Shut Up and Sit Down, along with TableTop, will create any board game an instant success overnight if featured (Wooding, 2016).

With board games being an aspect of the local multiplayer genre, due to the social or cooperative nature of many of them (Jolin, 2016), it could show a clear demand in the market for this type of game play. So perhaps the Nintendo focus on local multiplayer is what their consumers are after.

However, a surge in board games sales hasn't impacted on the console market, with none of the highest grossing games (see figure 4) listed below focussing solely on local multiplayer experiences (Superdata, 2017). The majority don't even include the feature and have a far greater focus on campaign or online content, such as Destiny an action game played completely through online servers with others (Bungie, 2014).

Top Grossing Titles by category
Worldwide, ranked by January 2017 earnings

	PC	CONSOLE	MOBILE
1	League of Legends	FIFA 17	Clash Royale
2	Crossfire	Grand Theft Auto V	Monter Strike
3	Dungeon Fighter Online	Call of Duty: Infinite Warfare	Clash of Clans
4	Overwatch	ARK: Survival Evolved	Pokemon GO
5	World of Warcraft (Blizz)	Call of Duty: Black Ops III	Fate/Grand Order
6	World of Tanks	Battlefield 1	Mobile Strike
7	World of Warcraft (Epic)	Star Wars Battlefront	Fantasy Worldwark Journey
8	Lineage 1	Duolingo	King of Glory
9	Counter-Strike: Global Offensive	NBA 2K17	Angry Birds
10	DOTA 2	Madden NFL 17	Candy Crush Saga

Source: Superdata Research. Top 100 highest-grossing games worldwide, 2017

SUPERDATA

Starting to indicate the rise in board gaming hasn't followed through into raising the sales of digital local multiplayer games. Multiplayer developer Doug Wilson (2014) backs up this statement expressing "things are going to grow, but it's going to be a very long process". Therefore it could be seen as a large risk for Nintendo to base their new console around a concept which doesn't appear to actually sell well in the market.

Users would claim differently (Xbox User Voice, 2014). Recently searching through the Xbox forum has revealed posts stating the desire for local multiplayer games within consoles. "The idea of only playing games with your kids in separate rooms on different Xboxes is just crazy." (Omega2125, 2015.) Other stating they can't play games the way they want to due to the lack of local multiplayer compatibility and gaming options (Deadly Devil, 2017), as well as believing that "split screen... should have never been removed" (Stizz, 2016). Showing there is clearly a voice within the console community that wants the option to play with others locally. With both Xbox and PlayStation seemingly not fulfilling these requests, the Nintendo Switch could be taking the opportunity, with its 2 Joy-Con set up and LAN connectively, it is better designed to facilitate for social gaming around a single screen. So though the Nintendo Switch's focus on local multiplayer may be a risk, it may be one worth taking.

Other companies have also created products revolving around local play, trying to capitalise on the style. AirConsole (n.d.) is a subscription based platform where players connect their phones to the TV to act like gaming controllers. A database of over 50 games is available for them which revolve around local play (Gaudiosi, 2017). The company's owner states they are trying to "bring back that social casual gaming experience" (Ruppert, 2017). Having others focussing on the genre adds to the evidence that there is a market and demand for this type of social play, as companies wouldn't utilise this genre otherwise.

During writing the Switch has since been released, managing to sell "faster than any other Nintendo system in America" (Frank and Kuchera, 2017). It is showing positive signs that this is indeed the right move for the company. Reviews have surfaced praising the local multiplayer functionality.

"The idea of immediate local multiplayer built into the machine is genius. I've spent more time with my family playing Snipperclips in the past week than I'd played any other multiplayer game in the several months before, simply because the Switch is so easy to use." (Phipps, 2017).

Local multiplayer focus is clearly a strong selling point and has lived up to expectations.

Nintendo appears to be moving in the right direction with its portability, local console connectivity and Joy-Con controllers creating for strong locally social gameplay experience. The rise in board game culture, smaller companies utilising the play style, and its uniqueness from its key console competitors (Xbox and PlayStation), is all evidence that suggests there is a high demand and market for local multiplayer. Concluding that the focus on a social and local play style for the Nintendo Switch has the potential to be successful. Though more time will tell if this will pay off and if it could help bring about a great rise in the genre once more.

James Pearson

Gameplay review: Dishonored 2

“Today’s News! Dead people fall from sky, masked assailant in the city of Karnaca at large! His strange affection for launching our dead citizens from the rooftops has left the population both confused and concerned for their safety. The city guard has stepped up their vigilance in the search for this murderous scoundrel.”

Arkane has managed to capitalise on the hugely successful Dishonored by bringing us a well-deserved and excellently executed sequel. Back with double the carnage, you’re able to play as both Corvo Attano and his daughter Emily, each with their own skillset and as a result, completely different ways to approach the game.

My expectations were high after playing the critically acclaimed original and I was very much looking forward to getting to grips with the new skills and taking the opportunity to fully explore the new environment, Arkane have outdone themselves in extending the steampunk aesthetic to Karnaca, and pay homage to the grungy Dunwall in both the first and the last missions of the game. Much like the first game, there are hidden tasks and items tucked away in the corner of areas you would never think to look if you weren’t experienced with the series, it certainly rewards curiosity.

The story begins quickly, and starts with the subsequent usurp of the throne from Emily Kaldwin by her aunt Delilah on the anniversary of her mother’s death. You are then presented with your choice of character, bear in mind that despite their unique abilities and slightly altered dialogue, the story is very much the same for either. After your decision, the rest of the story follows your efforts to reclaim the throne, again with your choice in playstyle effecting the eventual outcome and the state of the world. I must admit I was a little bit disappointed with the narrative due to its similarity to that of the first game, but I must praise the story telling and world building that Arkane have done regardless.

JAMES PEARSON

Gameplay review: Dishonored 2

I chose to play as Corvo in my first playthrough, partially through loyalty to the original game and because many of his abilities allow you to set up some really interesting combo's, however, Arkane did a great job of splitting the abilities between the two characters and it definitely adds replay value to the game as you'll want to go back and try the other on subsequent playthroughs. Corvo's "Blink" and Emily's "Far-Reach" work in essentially the same way and there are some abilities that are shared between the two, this means that you aren't necessarily missing out when you pick one over the other. I did find that Arkane have really outdone themselves with several of the new abilities, for example, Emily's "Domino" links together several enemies which means that they share the same fate, you could assassinate all of them at once or use a sleep dart to pass by undetected. There has been some careful thought afforded to the synergy of these abilities and it's really this that forms the backbone of Dishonored 2's gameplay, the game does an excellent job of handing you all of the tools you need to form creative and sometimes downright maniacal ways of handling the mission.

I did have a qualm with the upgrade system, essentially the 'heart' you receive shows the locations of both the Runes and the Bonecharms to upgrade your character, these are hidden throughout the game world, and despite being there to encourage the player to explore more of the world, I found that it felt a lot more forced than in the original. You would be very unlikely to happen upon one of these whilst playing a mission which I was a little bit disappointed by. However, the upgrades themselves are definitely worth the time and the Bonecharms offer some really interesting gameplay choices that can drastically effect your approach to a level, I am a big fan of the options that Arkane have provided in terms of character progression, I wasn't able to upgrade many of my abilities on the first playthrough and am eager to progress further and find more inventive ways to complete missions in my second.

I was overall quite happy with the change in theme for each level which you can tell has been carefully planned out to prevent you from relying on the same tactics each chapter. For example, at Kirin Jindosh's clockwork mansion, the rooms and layout can be altered by pulling levers, this can allow you to hide in the walls out of sight, and find otherwise hidden routes through the house. In A Crack in the Slab, you can move between two timelines, where your actions in the past influence the present, this was one of my favourite missions just due to the insane assassination potential and the sheer number of possible approaches to

the level that would all result in the same outcome. The variety in gameplay kept me on my toes and added to the difficulty of each level, forcing me to remain engaged and alert.

Much like the first game, choice in morality can affect not only the ending of the game, but also the consistent gameplay throughout. Stacking up the body count in disruptive and explosive ways can lead to High Chaos, although the fastest way to play the game, results in pest infestations which make certain areas far less accessible. If you're particularly adept you can play the entire game without being seen or killing a single person, something that the new quick save and quick load system supports. My first playthrough was aimed at mercilessly annihilating everyone, but I decided on the second to try and remain undetected and harm no one, an endeavour that took an hour rather than the fifteen minutes on the first run. However, I also discovered several side missions I hadn't seen before, and the effort required me to think far more tactically, so I'd definitely recommend this approach.

The world lives and breathes, which is a quality I admire very much in the series. Unlike other games, you are rewarded for eavesdropping on NPC's to find out useful information rather than diving in and killing everything in sight. Hearing civilians discuss your previous actions in the chapters preceding makes it all the more immersive and engaging. Arkane have truly crafted a magical world, backed up by swathes of newspapers and books that you can pick up and read in the game to find out more about the lore of Karnaca. Unlike Dunwall, which was plagued and militarised in the first game, the city thrives and is alive with shop merchants and civilians, this provides ample opportunities for side quests, but also encourages the player to take careful note of their surroundings before attempting an assassination, as aggressive actions can cause civilians to call the city guard. The AI is as receptive as ever, and it's very interesting to see their attentiveness increase when a member of their own goes missing, or diverts from their standard patrol, I was rather pleased I could exploit this to complete several missions.

Again Arkane did extremely well by providing mission hints through overheard dialogue, hidden letters, and audiographs littered around the game world to allow you to play the game how you want to, a staple of the Dishonored franchise at this point.

For all of the great parts of Dishonored 2, there are several points I must address that brought the quality of the game down. Firstly, I found the combat system and camera controls to be clunky and completely out of tune to that of the first game, it felt like a very painful struggle to fight multiple NPC's in the case of a botched assassination, something that could've been helped by a lock-on system. I also found the final mission to be somewhat underwhelming and I was unhappy with the way they decided to finish the narrative. I would have liked to see progressive addition of the level mechanics as you experienced them rather than each level trying to do something completely different, this may have connected them more rather than "This level you've got time travel, next you've got sand storms!" as well as providing you with further options to play the game your way. Regardless, I was a huge fan of this instalment of the Dishonored series and look forward to both the DLC and future releases from Arkane. I would thoroughly recommend the game to anyone with a flair for tactical thinking and fans of the steampunk aesthetic.

Jess Castle

Virtual reality: The Machine for World Peace?

“We can shape VR to not be a tech platform but a humanity platform.”

Virtual Reality has been dominating the world of tech over the past few years with Oculus in particular stealing the limelight. Using their first headset, the Rift and the Kickstarter game that accompanied it, they produced *Among the Sleep* which was the first VR game to become live and funded on the Kickstarter platform.

Since the campaign in 2012, video games have been embracing Virtual Reality yet it's started to creep away from being predominately games and entertainment based and is instead being used within other industries such as Medical, Business and Education. Its uses are only just beginning to emerge and develop to add to our quality of life in a practical sense, but could the platform provide more than this?

How do you use it to teach someone how to feel empathy?

I'm not sure if the world is just getting more and more messed up or if I'm just becoming aware of the politics that surround us as I grow older through exposure from the media. However, imagine if we could deal with some of these sensitive subjects through the use of VR. Virtual Reality uses a headset with goggles and headphones in order to immerse you into an alternative environment. So, think for a moment, if world leaders were able to experience through VR how we, the public, were feeling through this technology:

Would they adapt their policies?

Would they feel more responsible for their actions?

Would we change our views on world leaders and politicians if we got to experience first-hand how strenuous and stressful their job was?

Imagine how the world could benefit just by simply understanding some of the fundamentals as to how our world works from both sides of the coin. The world

JESS CASTLE

Virtual reality: The Machine for
World Peace?

could change drastically and for the better. That could be just the start of it too. Throughout my Facebook newsfeed, each day I'm seeing more racist, homophobic and generally awful comments on pretty much any post that appears. Everyone has and is entitled to their own opinion however projecting these views on to each other in an aggressive manner through social media is occurring more so now than in the early ages of Facebook and Twitter. People have become too comfortable in ripping others to pieces with no knowledge or consideration as to how others feel about the issue at hand and this is the core issue.

So how could we help solve some of these issues through Virtual Reality? Chris Milk, an American entrepreneur and founder of the VR Company Within, produces immersive films and documentary pieces in order for people to experience and empathise with the situations and stories he creates. He believes that as humans, we care most as to what affects us immediately or in a local setting so by bringing these experiences to people through the use of VR, we are able to make any situation feel local and immediate to us. "We are still hardwired to care the most about the things that are local to us. And VR makes anywhere and anyone feel local. That's why it works as an empathy machine." (Chris Milk – The Birth of Virtual Reality as an Art Form, 2016)

His film, *Clouds over Sidra* is a key example where Milk filmed his time in a Syrian refugee camp in Jordan. Due to this foreign technology, the refugees would stare at the camera that was set up which made the perfect visual aesthetic as whilst you have the VR headset on, you believe their staring at you. This pushes the boundaries of immersion as when you watch a film, despite the story being gripping or emotional in some way, it's probable that you won't connect to it on a personal level like it truly affected you. Whereas in Virtual Reality, through wearing the goggles, you immediately feel as if you are physically in the environment in real-time therefore making VR the ideal platform to provide immersion and the ability to empathise.

For instance, I was fortunate enough to be able to play *Lucky's Tale* on the Oculus Rift which is a third person VR platformer. Yet despite not being in first person, as I was wearing the goggles I felt fully immersed as when I moved with the controller, due to the camera shift in my eye-sight, I thought that I too was moving physically with it. It's these aspects of VR that make this technology an amazing platform which can be used to create empathy because if I managed to feel

'at one' with this cartoon platformer then what could happen if we applied this technology to real life situations?

Despite VR having the potential to have these empathetic effects on people, there is a great number of opposition to using this technology as a way of empathising with others. Paul Bloom, technology columnist of *The Atlantic* news makes a valid point that just because you see how a homeless man lives doesn't mean you're going to empathise with how he is exactly feeling; you'll just empathise with the situation and conditions that he is in. "Homeless people are often physically ill, sometimes mentally ill, with real anxieties about their future. You can't tap into that feeling by putting a helmet on your head." (Bloom, 2017) Whilst I understand the premise of this argument as to empathise is to identify with and share feelings of others, surely it must be recognised as to how big a start this is towards its development in being a fully fledged empathy machine? Virtual Reality is only in the beginning stages of production and there is much potential for it. The fact that it has begun to produce films such as *Clouds over Sidra* in its early stages of development leaves the platform wide open to creating other immersive experiences.

If people really wanted to fully empathise with situations such as being a homeless person, for instance by being subjected to the anxieties they face and mental illnesses, then this could cause ethical issues unless they agree to the experience knowing full well what is going to occur. There is also the issue whereby these VR situations could trigger those who have the illnesses specified too, however, if they have consented and understand the potential risk than it is up to the participant. So who knows how this sort of experience will go down until we have one like this available.

Regardless of this, art collectives such as the *Be Another Lab* group are using Virtual Reality to produce a performance art piece that puts the headset user into the perception of someone else. The participants experience different situations to each other which is particularly interesting, so a male user could look down to see instead of a man's hand they could see a woman's instead. Jeremy Bailenson of Stanford University has been creating experiments such as these to show how it can have an effect on the participant's behaviour. For example, he ran a study in which the VR users see themselves as an avatar at the age of 65 and whether it influences them to save more for their

retirement. (Alsever 2017) Apparently, it does have a positive effect which is a little surprising but also quite cool. If we are able to do these sorts of studies and work out how the behaviours and reactions of the individuals change, empathetic situations could be tailored better to each participant meaning that a better understanding could be had overall.

Considering the leap in which Virtual Reality has taken already, the fact that we are starting to develop something that could be used as a humanity platform in order to work towards a better and more understanding society is quite astonishing. If everyone was educated just that little bit on situations such as, but not limited to, racism, discrimination and homophobia through Virtual Reality, I like to imagine what social media and society would be like.

Would it change or would people just be more reserved about their opinions?

It leads me to think of what else could be possible with VR technology, I mean, if you can make someone who is so set in their ways understand how the person they're victimising is feeling, what could the next step up be. What if the next step was using empathetic situations in order to get Artificial Intelligence to understand and share feelings with a human? The possibilities are only just surfacing so I guess we just have to watch this space. *Stares into the distance pensively*

Kathryn Malcolm

The Evolution of The Video Game Industry

In 1962, one of the very first video games, Spacewar, was created on a PDP-1 computer at the Massachusetts Institute of Technology by students Steve Russel and Martin Garaetz. It is almost primitive in comparison to modern games with high-definition graphics and complex mechanics and narratives, but the creation of this game arguably set things in motion for programmers to create more games like this. Tennis for two and XOX were created before Spacewar, and they did not have the same impact in the then very small programming (gaming) community, but Spacewar was definitely the first science fiction video game in existence. '...conceived of a complex program which would fully utilize the computer's vector based, circular cathode ray tube monitor, while fulfilling their ambition to see a game that reflected pulp science fiction sensibilities.' It is interesting that the developers of this game chose to make it science-fiction themed. This could simply be because (as indicated in the quote above) it was a shared interest of theirs. Science-fiction was very popular in films and comics at the time, not to mention the influence of the space race. Another theory could be that because computers were such a new piece of technology and the skill of programming was in the early stages of development, people saw the potential in what it could achieve and to them that idea was futuristic. Essentially, the use of this technology to make a game could in itself have been considered futuristic at the time, so making Spacewar a science-fiction game may have seemed second nature to the creators.

It is interesting as to why so many early games were science-fiction themed, of course not all games were, but especially in the 60s and 70s, the genre heavily outweighs any other such as adventure or western. This may be because of Spacewar's influence on the gaming industry, it was the first game to become popular and perhaps programmers were just going by what they know. A lot of things from film, literature and TV were influenced by the space race in the 1960s, and the genre was already outweighing previously popular genres such as cowboy and western. This was arguably a great factor over the influence of science-fiction themed games.

KATHRYN MALCOLM
The Evolution of The Video Game
Industry From 1962 to Now and
The Science-Fiction Genre

Games as we know them today didn't really become popular until the 1970s, before then games were often made for training purposes rather than for fun and there wasn't a huge market for it like there is now. In the 70s, arcades made games accessible to the public, and interestingly some of the most popular games were also science-fiction themed just as Spacewar was. Lunar Lander, Computer Space and Asteroids Breakout were just some of the games, and their names are even recognisable today due to their popularity. One of the most popular games during this time, and to some extent still remains prevalent today is Space Invaders. 'In the early 1970s, you had to go to the arcade for the good games. Home video games were far behind...having the time of your life bouncing a square "ball" that is a few pixels off a rectangle that you control.' The 70s also made way for the start of console gaming. Games were becoming more accessible to people as they came into the home, however consoles were still very expensive, some roughly four times what you would pay for a console today. However, science-fiction games remained popular although there did appear to be a rise in adventure games and sports games. Some games such as Computer Space even made it from arcade gaming to console, and was one of the early console games in 1971. In the first half of the decade, sci-fi remains popular with games like Galaxy Game, Spasim and Space Race. Later in the decade, although games of this genre are still very evident, the number of games available to people is growing, as well as the variety of genre. Roughly by 1976, the competition between sci-fi games and other genre's is even.

In 1982, the world of gaming changed drastically when Atari brought out E.T the extra-terrestrial on console. The game was a disaster, and not just because it was a game-from-film format. The developers were given a matter of weeks to complete the game causing it to be very poor quality and disappointing a lot of fans of both the film and Atari. The game sold much less copies than expected and Atari was left with millions of unsold copies that nobody wanted because the game was just so bad. 'There were too many opportunities where you could suddenly wind up in an odd situation. That was too much for a lot of people and caused them to put the game down.' -Howard Scott Warshaw, programmer of E.T the extra-terrestrial. The collapse of Atari triggered a chain reaction in the gaming industry. People just didn't want to play hastily put together games, they wanted to play something, good, complex and entertaining. Previously people had thought that almost any game would sell because it was new technology, but that simply wasn't the case. However, Atari's blunder paved the way for future games to be made to a better standard, but in the following years there was

certainly a dry patch in the world of gaming. The E.T game may or may not have caused the decline in the game industry, but as developer Warshaw states: 'Is ET really the worst game of all time? Probably not. But the story of the fall of the video game industry needed a face and that was ET.'

After the crash in the market of console gaming, the popularity of home computers picked up in the 80s. The games on home computers often had better quality graphics and colour as well as sound. Using them for games was their most popular use, largely due to the fact that home computers had a much better memory and faster processors. 'By 1983 consumers found that most predicted uses of home computers were unrealistic, except for games. Children used most home computers.' - Mitchell, Peter W "A summer-CES report". However, despite all this, there was still a price war between both home computers and what was left of the console world. Home computers were becoming cheaper, just as much as consoles were, and they could already do so much more. Companies were losing money and the idea of computer games was starting to be considered a dying trend. 'I noticed that the word games became a dirty word in the press. We started replacing it with simulations as often as possible.' - Gutman, Dan "The Fall And Rise of Computer Games". Additionally, console games flooded the market in the early 80s, but nobody wanted them and companies making them had insufficient funds to refund. This ultimately ruined the video game business in the west.

Additionally, this rise in gaming again didn't have much in the way of sci-fi games. There were still some games of this genre being produced in the west, but it seemed that those being made by bigger and more popular companies tended to lean more towards fantasy gaming if anything. In the early 80s before the industries new giants appeared on the scene, there were games like Scramble (1981), Lunar Jetman (1983) and the Star Wars (1983) games being sold amongst the then very cheap games that had flooded the market. But very few of these stood the test of time and were arguably unable to compete with games like The Legend of Zelda in a few years' time. It would seem that overall during this decade, science fiction games were just not as popular as they once were. This could have been because of the E.T being within that genre and causing developers to avoid that theme altogether. Or it could even be because the genre had been done so much in the past that it was now considered dated, and perhaps developers wanted to push the boundaries of what type of games people would enjoy.

However, the gaming industry was far from over. By 1985, Nintendo was on the rise and took the western market with the Nintendo Entertainment System, and eventually revived the home console market. In response to the previous crash in the market, Nintendo was one of the first companies to put into place strict rules and regulations on the standard of their games. This is something that has paved the way for game companies and developers alike up to this day. Japanese games really saved the gaming industry, and were producing much higher quality games, many of which are still popular today or have even been remade or remastered as part of a franchise. Some of the most popular games of the late 80s were: Final Fantasy, Legend of Zelda, Prince of Persia, Sim City, Donkey Kong and Super Mario. By this point in time, it was safe to say that the video game industry was progressing successfully and was a lot more stable. '1986, a year of foundation for today's many giant companies in the field of gaming and computers. While Steve Jobs and Beny Alagem were forming Pixar and Packard Bell Computers, gaming companies like Bethesda Softworks, Ubisoft, Codemaster were being founded that revolutionized the future of gaming.' -ACY Entertainment.

In 1991, Sony publicized that the new PlayStation would be able to play Nintendo games, and the two companies entered into a partnership. However the two companies had previously been in a partnership where Sony made sure that the venture would be more beneficial to them than Nintendo. As a result, Nintendo quickly decided that they would be working with Phillips instead. Regardless of this, the PlayStation one was released in 1994 and quickly became popular amongst console gamers. Not only that, but it was the first brand to introduce CDs and cemented their use in games for years to come. Nintendo responded to this by releasing the Nintendo 64 in 1964, it is safe to say that at this time there was little choice of consoles on the market. 'The original PlayStation would go on to sell over 104 million units by the time it was discontinued in 2006.' - Stevens, Michael. "A brief history of video game consoles from the early 1970s to the late 1990s"

While games like Super Mario and Sonic the Hedgehog were continuing there popular franchise in the 90s, science fiction games were becoming popular again. However, it could be argued that in this decade, the style of this genre was greatly altered. Previously sci-fi games had been rather traditional, often about exploration and very much had a brave new world feel about it. Possibly influenced by increasingly popular sci-fi cinema, the games on this genre in the 90s often

had a darker feel to them: Alien invasions and attacks or apocalyptic scenarios, for example, and often took on a first person shooter style of gameplay. A good example of science fiction games in the 90s are games like Alien vs Predator (1994), Super Metroid (1994), StarCraft (1998) and even Fallout (1997) and Half-Life (1998) can be classed in this genre. What made them so good in this decade was often their style of storytelling, the addition of 'missions' in games, and the overall choice and scope of games that were being introduced. By this point in time games were starting to exhibit that sort of open-world experience that had not been seen before. 'the original isometric open world RPG was wowing gamers with its quirky, compelling vision of a post-apocalyptic US... the way in which you could explore the world in any way you wished and do things your way became an influential hallmark of most future Western RPGs.'-Mark Butler on Fallout "35 greatest 90s video games (that defined a generation)".

By the year 2000, the video games industry was bigger than ever and was beginning to catch up with the film industry in both popularity and profit. This was the decade where old consoles were either scrapped completely to make way for newer, more modern and innovative ones, or upgraded, e.g. the PlayStation two. Likewise, games were doing the same thing: more types of games were available than never before and some games were well into their sequels and franchises. By this point the science fiction genre in games is still doing well but it is just one genre in sea of racing, sports and predominantly fantasy games. Super Metroid clings to life with its sequels in the franchise, Metroid Fusion, Metroid Prime in 2002, however this wasn't exactly one of the most popular games in this decade. Likewise, the Star Wars franchise continues to being out reasonably popular games on the PlayStation 2 from 2003 to 2007, with Lego Star Wars having a little more success. Additionally, Nintendo tests the water with a science fiction game with Super Mario Galaxy and many games experiment with a more subtle take on the genre by having near-future setting. Ultimately, the 2000s gave way to the start of blockbuster games, many of which were science fiction games that remain popular in gaming nostalgia. Halo 2 was released in 2004, and a chain of triple A games followed: Gears of war (2006), Mass Effect (2007), and arguably Bioshock (2007) could be considered as part of the science fiction genre in games.

During the 2000s and after, the various PlayStation models remained popular for consoles, PC games were equally available and the XBOX was Sony's main rival.

Nintendo are possibly better known for handheld consoles nowadays and although they have released other successful consoles they were never a rival for XBOX or PlayStation. After the 2000s, science fiction game did not dominate the market in games but they do remain very popular and are by no means a minority in the gaming industry. Many of the franchises mentioned in the 2000's have continued or produced sequels but nearly all of them are a stark contrast to the first sci-fi games made in the 60's and 70s. This is not because of the fact that the quality of graphics, memory and mechanics in games have changed, but arguably people's ideas. Early science fiction games were more of a stereotype on the genre and often had the themes of space exploration, new worlds and hope – they were much more light-hearted. Over the decades, these ideas have changed to become something a little darker and more serious with sci-fi games giving the player the addition of fear and suspense.

To conclude, the science fiction genre in games has remained popular despite the lack of quality and dwindling numbers of the genre in the 80s. Luckily the likes of the E.T. game didn't seem to deter developers from making sci-fi games, in fact it did a lot of good in terms of how all games are developed and produced. Different styles of game will always go in and out of fashion, and although science fiction games do not currently flood the market, it appears that they do remain a firm favourite amongst gamers and developers alike.

Liam Dummackin

Serious Games?

Playability:

A serious game is a game designed to educate, rehabilitate or cause change. They can be of any genre and any format. Some might say that entertainment isn't the primary goal, but I would say this shouldn't be the case and entertainment should have a large role in the design of a serious game. A game in general is meant to be enjoyable if you take that away then it's difficult for the game itself to be playable. Let's created a scenario, let's take a board game. This game is designed to help children with mental illnesses and improve their resilience and understanding of their emotions and past events. The game is played by a child and medical expert this could be a child nurse or doctor. The players take it in turns to roll a dice and make their way around the board. Each square has icon, which relates to a card, the players then take the relating card form a pile of cards. The card then has a question on it, the players answer the questions before they can then roll again and continue moving around the board. This on its own seems pretty mundane and sounds very unplayable to myself.

Now let's look at this slightly deeper, the game will only be played once due to the fact the game is used in the consultation process and is designed to give the medical expert information about the child through questioning, once the child has played once the doctor will have everything he or she needs to get a rough idea of what's happening to the child. Because it's only played once; does that mean playability doesn't matter anymore? I'd say that playability still matters for the reason that a serious game shouldn't be uncomfortable and unsettling it should run smoothly from start to finish.

The Issues:

The issue at the moment, we as designers are looking at serious games in the wrong way. We are looking at them in a single dimension. We are creating serious

LIAM DUMMACKIN
Serious Games?

games to do a job and that's it. Playability and enjoyment seem to be secondary. I've played serious games for educational purposes and I would have been more engaged watching paint dry.

Traditional games of any genre, inspire, motivate and connect with the player through emotional factors in most cases, whether that's through story telling or puzzle solving to name a few. Why aren't we taking what we are already doing and implementing this into a serious game, it seems bizarre that developers who are extremely creative people are creating in most cases the most 'black and white' games. Something has got to change within the whole concept of serious games.

The market as a whole is predicted to be worth according to (Anon, 2015) "the serious game market as a whole is estimated to be worth around five billion dollars." I need help, because I have no idea why we aren't making the most fantastic and stunning serious games for \$5,000,000,000. That is a serious amount of money.

I'm not a serious game expert, but what I have found in terms of serious games designed to treat mental illness particularly board games are laughable if I'm honest. To put it bluntly they pretty much don't exist except for a few. One of which is 'All About Me' which is very similar to the scenario which I portrayed previously, but they seem to be doing something Virtual Reality (VR) and Augmented Reality (AR) right because this board game is a best seller at Barnardos which is the publisher of a large amount of serious games.

I have spent weeks and months looking at board games designed to help children with mental illnesses, so why is there only one board game that I have found that is doing reasonably well on the market. I will tell you why because serious games are a huge broad range of games. The majority of that \$5 billion is being invested into military treatment of post-traumatic stress disorder (PTSD). Exact figures aren't available but here's a quote from (Senson, 2017) "Military funding has allowed rigorous studies to be conducted. However, smaller private companies developing VR therapy applications with limited budgets must still demonstrate clinical efficacy if they hope to penetrate this market." You get the idea that huge amounts are being spent on treating soldiers. I'm certainly not saying don't treat the soldiers. I'm merely implying that the investment of money within serious games should be distributed more effectively.

According to (Anon 2017) from the YoungerMinds foundation, "850,000 children and young people in 2016 have a clinically significant mental health illnesses". This is a crisis to say the least. The cuts in mental health in the UK is crazy and the similar investments in treating soldiers with PTSD is pretty stunning when you think about it this way, because soldiers suffering with PTSD is but a mere fraction of that 850,000 children and young people. I'm not saying let's stop treating people with PTSD because these 850,000-people's lives are worth more than these other groups of people life's. What I'm saying is that the money should be distributed in such way that its proportionate to the numbers.

The investments are all being made into VR and AR, a technology which is very new. We know very little about the consequences and benefits from using these forms of media to treat a person's mental illness. I'm all for exploring new ideas and technology's, but investing huge amounts of money in something we don't know works on a selective few people while hundreds of thousands of people are suffering is completely irrational and uncommendable to most people. (Anon 2017) "The lifetime costs of a one year cohort of children with conduct disorder is estimated at £5.2billion, total costs of mental ill health are estimated at £105 billion." We have looked at the global serious games market worth, which is currently around \$5 billion and the actual amount being invested into treating children and young people with mental illnesses in the UK is but a fraction of this amount. The total costs of mental illnesses on the NHS is around £105 billion. What I'm trying to get across is that serious games could be massively cost effective for helping or assisting experts in treating people suffering with mental illnesses.

When you have a dysfunctional and confusing society it returns the same with people, the stresses of life, struggling to pay the bills and having minimal aspirations due to a person's restricting circumstances, mental illness is something that comes about. When society becomes fairer and more compassionate then the mental illness crisis might begin to decrease. At this stage of the capitalist mentalities of big business and government a fairer society doesn't look to be coming anytime soon. For now, let's make some incredible serious games that nurtures, embraces, encourages and teaches our children and young people who are suffering with how to deal with the circumstances they are currently in which have led to them being crippled with mental illness.

Summary:

Change happens all the time and a change in mentality from our creative game designers needs to happen. What we have now isn't good, but what we can have with collaboration the relevant backing from business, government and of course time, we can start to change serious games and their influences on society especially within mental health. I want to emphasize on 'We' it's going to take everyone, not just the designers, developers and investors everyone is involved. I'm almost certain everyone has a relative or a close friend or loved one suffering at this very moment in time.

As a designer, I have grown a particular passion for serious games. I don't want to make millions out of people suffering. I'm quite happy to have a mediocre financial life. What I do want is change. I want to help people who are suffering every day. The people who take things day by day because they aren't sure they are going to make tomorrow. Let's get these people back to full health and let them join in with the creation of games for change. I want these 850,00 people to be assisted by a serious game which helped them through their struggles with mental illness. Let's show compassion and allow them to tell their stories and influence how we improve mental health treatment through serious games.

Here's a little analogy if you have an argument or a falling out with a friend of family member and your relationship isn't at its best, how do you go about fixing it? Do you buy a load of VR equipment and sit in a simulation of the argument, trying to solve the problem. Or do you sit down with that person and discuss how you are feeling? It's as obvious as that, no simulation is going to cure someone's relationships, anxiety, depression or any other mental illness for that matter. Compassion, communication, close nit relationships and time are the relevant external factors which are going to assist someone in their recovery.

Oli Duncanson

Are Interactive Narrative Games Starting To Lack Innovation?

Interactive narrative games have always interested me more than the standard First Person Shooter and any other game genre. The idea that everyone's experience could be different depending on how they play the game intrigued me, it makes you feel like you are in control of the game's story. While the actual narrative for these games in the past few years have been amazing and moving, recently I've felt that there's been no innovation or originality in the mechanics and gameplay in these types of games for a while, it's all quick time events, the games feel like you're playing a slightly playable film, like you'd be able to play on the extras on a Disney DVD, there seems to be a lack of balance between play and narrative. Many games could be seen as interactive narrative games, even a lot of free roam RPGs can have multiple endings depending on how you tackle the quests but I'm going to be concentrating more on games whose main mechanics mainly focus on the branching narratives and the consequences of your actions and are considered interactive fiction/narrative.

Interactive narrative stories didn't start from games, that's only a recent thing, interactive narrative stories started in choose your own adventure (CYOA) books. Choose Your Own Adventure books are classified as gamebooks but often referred to as choose your own adventure books because of the popularity of the CYOA series'. The first gamebook was created in 1941 by Jorge Luis Borge when he wrote 'The Examination of The Work of Herbert Quain' which has three parts to the story and nine endings. Then the first video game with multiple endings was Don Rawitsch's The Oregon Trail made in 1971 but has had multiple iterations and changes since then and now has 3 story paths, 37 choices and 17 endings then if we fast forward 30 years we have Don't Nod's Life Is Strange and Chunsoft's 428 with a ridiculous 85 possible endings.

In 1971 a student teacher named Don Rawitsch was teaching a History class at Carleton College, he decided to create a game to help teach students about the pioneer's life in the 1800's on the Oregon Trail. The game has 4 main gameplay

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aspects: Travel, Hunting, Death and Scoring. Players could decide where and how to travel and through their decisions they'd learn about different scenarios actual people on the trail would experience, like different causes of death, disease, learn where people would travel and how people would sell and hunt. I believe video games should be used more in the classroom and interactive narrative games could be a very effective way to implement it into the curriculum because of the ability of being able to put the learner into the situation you're teaching about whilst being taught at the same time, instead of the student reading it or listening to it from someone else's perspective, they can experience it from a personal perspective meaning that they'll be able to relate to it on a more personal level possibly leading to more retention of the subject matter. This could be implemented into possibly teaching a child about morals through using a game, I've found that interactive narrative games use a lot of discovery learning, "Discovery Learning is a method of inquiry-based instruction, discovery learning believes that it is best for learners to discover facts and relationships for themselves" (Learning-theories.com, 2017) So if a games designer were to design an interactive narrative game to teach morals they'd have to make a game world somehow showing what things are right and wrong to do morally so the player would be able to bring that back into the real world.

Quantic Dream's Heavy Rain was an amazing example of a story driven interactive narrative game, I think it's the reason interactive narrative games have become so popular in the past decade. Heavy Rain is a detective game following 4 playable characters trying to find a serial killer. The mechanic which makes this game so much better than the others is that the decisions you make as the other characters can change/influence the outcomes for the other characters. The actions and decisions you make don't feel forced / spoon fed to you, to the point where when in certain events if the character is killed then they are no longer playable in the game, this makes you truly feel that the story can be change/influenced. You can tell that the stories were written and finessed so thoroughly that there's practically no plot holes even if one of your decisions changes the direction of the game dramatically. The game does include a lot of quick time events, that I'm not too fond of because it doesn't feel like gameplay to me, it feels like a cut scene but I don't mind too much because even though there's multiple story plots every one was so compelling.

Tell Tale Games' The Walking Dead first debuted in 2012 and was a massive hit. The Walking dead game was based on graphic novels which makes it interesting as in the novels there's only one set story but in the game your actions have consequences and changes the story depending on what you do. The Walking Dead was so great because it was the first popular game where your decisions not only controlled the story, but they also affect how the NPCs see you. The player has to think of who they want to like them so it can benefit them in the story. No Interactive narrative game before The Walking Dead has incorporated NPCs 'though' and opinions into the player's tactics when playing the game. One of my issues now with Tell Tale now is that they basically re-skin the game and mechanics for their games now, like The Wolf Among Us and the Game of Thrones series. My other issue again, the quick time events and the lack of exciting gameplay, the story of the game is great but not good enough for quick time events to be plausible enough to use every few minutes.

My main problem with interactive narrative games recently is that the games don't particularly feel like games, they feel more like playable films as the only game play is either walking or quick time events then the rest of the it is cut scenes. Gamasutra put out their rules for creating an effective interactive story telling experience which included this problem. They say that "Videogames are an interactive medium and therefore the bulk of the experience must involve some form of interaction." (Grip, 2017) If quick time events are used sparingly then I'm fine with it, it can enhance the cut scenes but when the main movement or combat mechanic is quick time events then I don't really count it as interaction

Twine is an open source app for people to make their own interactive, branching narrative stories. The users don't need to be able to know how to code which makes it more accessible to more people, I think it could be a great platform for games designers and story writers to collaborate. Twine was used to create Depression Quest. Depression Quest was created in 2013 by Zoe Quinn. Depression Quest isn't a video game but the reason and way it's used is interesting to me. "Depression Quest is an interactive fiction game where you play as someone living with depression. You are given a series of everyday life events and have to attempt to manage your illness, relationships, job, and possible treatment." (Quinn, 2017) The story follows someone suffering with depression and you choose what you do during the day, but because it's following someone with depression their thoughts aren't as simple as it looks. This game brings an insight of what a

depressed and anxious person's head is like. Throughout the story your mood, whether you're getting anti-depressants or going to therapy. One thing which stuck out to me was when you got to a certain level of Depression some of the possible decisions were crossed out because the represented rational thoughts leaving you with the more self destructive choices because that's what anxiety does to you. Because Depression Quest is very text based when it got debut on Steam it got a bad rap but I think if someone created a game with more visuals or one where you could play the character it could be a compelling experience. I'm thinking that hopefully this playable film phase is going to be over soon because I'm starting to lose my interest in interactive narrative games, especially seeing some innovative ways that it is being used. Interactive narrative could be used more in schools to raise awareness to different social issues and educate users in different subjects. If not that I just want there to be more play in the game because if there's more watching than playing then it shouldn't be considered a game.

Bobbie Allsop

Casual Games Design

I want to start by admitting that I am currently on level 842 of Candy Crush Saga (King.com 2012). Since the relationship began in 2014, I have swiped left and right to make sweets and chocolate explode. I find myself religiously coming back for more, apart from the few weeks in a year when I lose my phone, I have consistently played Candy Crush Saga (King.com 2012). Now if I wanted to quantify the amount of time I have invested into this game I can do some simple maths:

I have been playing for 3 years, on average, every day.

1 year = 365 days

365 days x 3 = 1095 days.

The average player spends 7.2min (Murdok 2016) in a play session.

On average I play 2 sessions a day.

7.2mins x 2 = 14.4 mins

1095 days x 14.4 mins = 15768 mins

Or in hours: 15768 / 24 = 657 hours

My own experience reflects a larger picture, currently Candy Crush Saga (King.com 2012) has 93 million player who collectively play 2.6 billion hours every.

That's a lot of time people are investing into a casual game. The interesting things about casual games is that the people who play them don't generally identify as gamers (Juul, 2012). A common misconception of casual gamers is that they will not invest much time into a gamer (Juul 2012), but the statistics of Candy Crush Saga (King.com 2012) and my own experience suggest a slightly different story.

Casual games are designed to have a gentle learning curve, with easy to learn controls and plenty of positive reinforcement (Juul, 2012). This differs to hardcore games that are design to make the player learn through failure, casual games

are designed to teach their players through small successes (July, 2012). In educational terms, casual games try to create a Zone of Proximal Development (ZPD) (Vygostky, 1978) where the difficulty is just outside the skill set of the player, but not so difficult that they have to ask someone for help.

When a game puts the player in the zone of proximal development: where the player uses a high level of skill, mixed with a high level of challenge, flow can be achieved (Csíkszentmihályi, 1990). Flow, is the feeling of being completely absorbed in the task at hand and creates a heightened sense of enjoyment. To produce flow, a person must be attempting a challenging task with just enough skill for them to complete it. In games design this process is achieved through a gentle learning curve.

Candy Crush Saga (King.com, 2012) uses a simple control system to make the game as accessible as possible before getting into the game mechanics. The mechanics are then slowly introduced, making sure that the player never feels out of their depth, trying to match the player's skill level to the difficulty of the game. Candy Crush Saga (King.com, 2012.) combines this gentle learning curve with instant feedback, feedback is strongly related to achievement (Belio et al, 1991). Achievement is tied to a person's self-esteem, esteem is a basic human need (Maslow, 1943). By incorporating instant feedback into a game, a designer can strength someones self-esteem, making the player feel happy to play the game.

This feeling of achievement and progression can be heightened using positive reinforcement. If the player is rewarded for doing well they will want to keep playing (Ferster & Skinner, 1957). Candy Crush Saga (King.com, 2012) does not reward it's players through extrinsic reinforcement; King.com does not pay it's players to complete levels. Instead, Candy Crush Saga (King.com, 2012) uses an incremental reward system full of intrinsic rewards such as boosters, stars and levels. Intrinsic motivation is a much more powerful motivator than extrinsic (Deci & Ryan, 1985) as people will keep doing something because they enjoy it. Candy Crush Saga (King.com, 2012) only uses rewards that exist inside the game as extrinsic rewards can reduce intrinsic motivation (Deci & Ryan, 1985).

Candy Crush Saga (King.com, 2012) is a popular casual game because it incorporates so much positive psychology into it's core design principles. A good casual game will include a: gentle learning curve, simple controls and an

incremental reward structure. Candy Crush Saga (King.com, 2012) uses simple controls to make it accessible to the most people possible. It then uses a gentle learning curve to give a player a sense of flow. Candy Crush Saga (King.com, 2012) also uses an incremental reward structure which intrinsically motivates the player, this is heightened by the use of a rich in game feedback system that gives the player a sense of achievement, heightening their self-esteem.

I want to conclude by saying that I may have spent over 650 hours of my life on Candy Crush Saga (King.com, 2012) but I have enjoyed every minute of them. I don't think it is a waste of time if you gain a sense of flow, achievement and self-esteem from something as simple as playing a game for a couple of minutes each day.

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