Independent or Indie?
Creative Autonomy and Cultural Capital in Independent Video Game Production

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ABSTRACT

The use of the word 'indie' in relation to video games has shifted from referring to games made independently of a large publisher to being a more nebulous term that is harder to define but that is clearly used at times to refer to games other than those made without the financial assistance of publishers. This thesis seeks to contribute to the ongoing debate in academic writing on video games as to the meaning of the phrase 'indie games'. The thesis combines textual and institutional analysis to contextualise the modern indie game by investigating the history of independent video game production in the UK and USA from the 1970s to the modern day, with reference to how changes in technology have shaped independent video game production over time. Alternative models of production that existed before the indie games of the mid-2000s onwards are an under researched area, and this thesis argues that a number of independent counter trends to dominant industry practices set precedents for many of the features of later indie games, in terms of content, style, distribution methods, and models of production. The thesis also contains a case study into the publisher-funded indie games of Jenova Chen and Thatgamecompany which investigates the conflicting definitions of indie in academic writing on video games and other forms of media, arguing that as with indie in cinema, indie in games functions as a form of cultural capital for the audience and developers. Finally, through an investigation into games made in the 'independent space' of the games industry, or games made independently of publishers, the thesis explores the notion of creative autonomy, arguing that there is not a straightforward correlation between 'independent thought' and 'independent funding', and that this independent space is a often a site of co-creation and audience participation that at once functions as a modern independent counter trend to dominant industry practices while also influencing and changing those same dominant practices.

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There is debate in academic writing on video games as to the meaning of the word 'indie'. Since the early days of the video game industry in the 1970s there have been examples of games produced independently of publishing companies, but much writing on indie games notes that the word 'indie' in relation to video games has shifted from referring to games made independently of a large publisher to being a more nebulous term that is harder to define (Martin and Deuze, 2009; Lipkin, 2013; Juul, 2014). It is clear the word is being used to refer to something other than the production models of independently funded projects made outside the so-called "developer-publisher model". (Anthropy, 2012a: 34)

Aims and objectives

The central question of this study is 'What is an indie game?' In order to answer this question and provide an analysis of the range of different meanings indie can have in relation to video games, the thesis aims to do the following:

- Contextualise the modern indie game by investigating the history of independent video game production in the UK and USA from the 1970s to the modern day, with reference to how changes in technology have shaped independent video game production over time.
- Investigate the conflicting definitions of indie in academic writing on video games and other forms of media.
- Examine the notion of creative autonomy, defined as a lack of interference in artistic decisions made during the development process of a game, by questioning the relationship between "independent thought" and "independent funding". (Gril, 2008: online)

Structure of the thesis

To address the above aims, this thesis will be split into four chapters. In order to provide context and an exposition of the debate and differing approaches taken to the subject of indie in academic writing on video games, the thesis will begin with a review of relevant literature. The second chapter will then provide a chronology of independent video game production, from the bedroom hobbyists of the 1970s and shareware developers of the 1990s, to the emergence of the commodified 'indie game' in the mid 2000s. Parker has argued that the "independent or alternative game development" that existed before indie games became a commodified entity is "the least developed area of indie game studies". (Parker, 2013: 3) This second chapter seeks to make a contribution to indie games studies by addressing this under-researched pre-history of indie games, discussing how alternative models of production and 'independent counter trends' to dominant industry practices set precedents for the indie games that would emerge in the mid 2000s and investigating what factors led to the modern indie game emerging. This section will also investigate how changes in technology have played a part in shaping the history of the indie game.

The third section will be a case study into the games of Jenova Chen and his studio Thatgamecompany, specifically *Flow* (2006), *Flower* (2009) and *Journey* (2012). These games are considered to be indie games, but were actually funded by Sony, one of the industry's leading platform holders and publishers, under a three-game contract. 'Indie' in this context could be understood as a form of cultural capital for an 'indie audience' or a marketing term determined by the publisher. (Hoogendoorn, 2014) Simultaneously, it may be possible to address the games in relation to Juul's notion of an 'Independent style', or of Lipkin's "mainstream co-optation" of the term indie. (Juul, 2014) (Lipkin, 2013:8) This section will attempt to answer what or who makes these games indie by analysing them in terms of academic writing on indie, both in videogames and other media.

While the word indie is evidently used to refer to a range of games that do not necessarily fit this model, developers making games without funding from large publishers still exist, and the final section of this thesis will address this 'independent space' of the games industry and

provide an overview of the varied games being made without publisher funding. Key games that will be analysed in this section are as follows-

- *Star Citizen* (forthcoming), which is an example of a crowd-funded game that has attracted a higher budget than many games funded by publishers.
- *Papers, Please* (2013), which is an example of a game that was 'green-lit' through Steam's Greenlight system.
- *Prison Architect* (2015), an example of a game released to the public while still in development via Steam's Early Access system.
- *Farmville* (2009) and *Farmville 2* (2012), as examples Free to play social games where monetisation is built into the game design via In Game Purchases.
- *Dys4ia* (2012b), as an example of an autobiographical game made using game maker tools.
- *Hotline Miami* (2012) and *Hotline Miami 2: Wrong Number* (2015), an example of small scale commercial development funded in part by a specialist 'indie publisher'.

These games have been chosen to illustrate some of the varied models of production used within this 'independent space', and are representative examples of wider trends that will allow discussion of a variety of overarching issues impacting independent game development. This section will examine these games both to provide an overview of the types of games made in this space and to address whether making games outside the developer-publisher model necessarily results in more creative autonomy for developers.

Methodology

In order to address the academic aims of this investigation, this thesis will make use of methodology developed from other academic writing on video games as well as textual analysis and institutional analysis. Writing in 2002, game designer Eric Zimmerman posed the question 'Do Independent Games Exist?' Relating his argument to examples of how the notion of independence has been used in writing on cinema, Zimmerman argued that "three overlapping vectors" determine the independence of video games, those being the "economic, technological or cultural status" of said games. (Zimmerman, 2002: 121) In 2013,

Parker surveyed academic writing on indie games and identified Zimmerman's piece, which concludes with a rallying call to players, critics and developers to "Start a revolution" and "solve the unsolved problem of independent games" (Zimmerman, 2002:129), as the start of "indie game studies". (Parker, 2013: 2) While much writing on indie games since 2002 has wrestled with the existence and implications of indie or independent games in more depth than Zimmerman, the broad framework described above is still a useful starting point in considering indie games. These 'overlapping vectors' are evident in the structure of this thesis, with Chapter 2 focusing on technology and it's role in the history of indie games, Chapter 3 investigating the cultural status of games that have been described as indie but were not developed with complete financial independence from large publishing companies, and Chapter 4 looking specifically at games developed with economic independence from publishers.

In his book *A Casual Revolution*, Juul explored the emergence of 'casual games' by examining the history of the medium and analysing the games themselves to identify common elements that marked them as a distinct new category of games, and this is the approach that will be taken in this thesis. (Juul, 2010:21) Part of this thesis will also take the approach of imposing a purposefully restrictive definition of 'independent', of 'a game made without funding from a major publishing company', then seeking to problematise this definition. The purpose of imposing this restriction is developed from Bogost's argument that it is possible to "grasp a medium's cultural influence" and "understand the relevance of a medium" by exploring "the variety of things it does", or the medium's "field of uses". (Bogost, 2011: 3) Bogost describes this as a "media microecology" approach, which "seeks to reveal the impact of a medium's properties… through a more specialized, focused attention to a single medium". (Bogost, 2011: 7)

This thesis will also seek to examine indie video games in relation to writing on indie in other forms of media. In his article on indie culture and American cinema, Newman questions the notion of "autonomy as authenticity", or the idea that "Independent cinema's authenticity as an alternative to Hollywood is sustained by the notion of the filmmaker as a creative artist working unhampered by corporate influence" (Newman, 2009:24). Through close textual analysis of games' content, in terms of aesthetics, gameplay, genre, themes and narrative,

this thesis will similarly aim to address the commonly held assumption, noted by Newman in relation to film, that indie refers simply to a form of authenticity related to autonomy from corporate influence. Newman has applied the conclusions of Bourdieu on taste to argue that indie is used as a form of distinction for an indie audience. Bourdieu's conclusions on taste and the notion of distinction are particularly significant to this study as they have been influential in existing studies of indie, for example Newman's writing on indie cinema and Hoogendoorn's writing on indie video games. They provide a framework to explore how the audience of indie interacts with indie texts and the role said audience plays in categorising which texts are indie. As such, Bourdieu's conclusions on the notion of taste, as well as Hoogendoorn's application of Bourdieu's arguments to video games, will be used as a way of understanding the audience's interaction with indie, and its function as a form of cultural capital. (Bourdieu, 1984; Hoogendoorn, 2014)

1. LITERATURE REVIEW

1.1 Introduction

Fourteen years on from Zimmerman asking the question "Do Independent Games Exist", which Parker suggests was the start of indie games studies, there is still debate in academic writing on video games as to the meaning of the word 'indie'. (Zimmerman, 2002; Parker, 2013) Since the early days of the video game industry in the 1970s there have been examples of games produced independently of publishing companies. Parker has argued "In the early days of digital games, all games were independent, in the sense that there was no established industry or economic framework to be dependent on" (Parker, 2013: 3). However, much writing on indie games notes that the word 'indie' in relation to video games has shifted from referring to games made independently of a publisher to being a more nebulous term. Simon began a themed issue of *Loading… The Journal of the Canadian Game Studies Association* in 2013 by asking "What is this Indie thing?" (Simon, 2013:1) While not an identical question to Zimmerman's eleven years earlier, as it significantly seems to include an implicit acceptance that indie games do exist, it still suggests that Zimmerman's 'unsolved problem of independent games' remains unsolved. What is clear is that the word indie is at times being used to refer to something other than the production model of independently funded projects, and Martin and Deuze have situated what they describe as an "independent venue" of indie game production within, rather than necessarily in opposition to, the "greater games industry", further problematising the assumption that finance is the only, or even the primary, factor in categorising a game as indie. (Martin & Deuze, 2009: 278)

Simon goes further than just questioning whether indie games can be defined as something other than games made with financial independence from publishing companies, arguing that attempting to reach any "formal definition or classification" of indie games is not a useful approach to take. (Simon, 2013:1-2) Similarly, Parker has argued that the phrase 'indie games' "is not a fixed or stable idea, and means different things depending on where you are and how it is deployed". (Parker, 2013:1) This argument coincides with Hoogendoorn's conclusion that there are three 'forces' which classify games as indie, those being the

audience, developers and publishers, and that the classification of indie is used differently by each of these forces for different reasons, specifically as a method of production for developers, a marketing tool for publishers and a form of 'cultural capital' for an indie audience. (Hoogendoorn, 2014) However, Lipkin, who argues that the act of producing a game independently of a perceived mainstream is in itself an act of protest, suggests "the very notion that the definition does not matter only strengthens the hegemonic control over the discourse of "indie" gaming by depriving the term and developers that use it of the political potential inherent to claims of independence", and sees this "shift in discourse" around indie games as a factor leading to a "depoliticization of indie gaming". (Lipkin, 2013:8) Others, for example Juul, have tried to pinpoint a particular style or aesthetic that could be considered indie. (Juul, 2014)

This literature review will explore such, at times contradictory, conceptualisations and approaches to the study of indie games. The review will begin by looking at writing on the industrial context of indie games, before focusing on writing around the notion of what Lipkin calls the 'politics of production' (Lipkin, 2013), exploring the possibility of indie games as an outlet for under-represented groups and the idea of indie as a means of greater 'creative autonomy' for developers. This chapter will then focus on writing that looks at indie in terms of the audience, before discussing writing that has tried to identify a particular 'style' or 'aesthetic' in indie games. Where relevant throughout the literature review, writing on indie in other media will be referred to, primarily the work of King and Newman on indie cinema.

1.2 Industrial context

A useful text to use as a starting point when looking at indie games in terms of the context of their production is Martin and Deuze's 2009 *Games and Culture* article 'The Independent Production of Culture: A Digital Games Case Study'. Martin and Deuze apply the 'production of culture framework' to analyse independent game production in terms of five "domains" which form distinct sections of the article: technology, laws and regulations, industrial and organisational structure, occupational careers, and markets. (Martin & Deuze, 2009: 280) However, while acknowledging the "importance and influence" of the production of culture

approach, Guevara-Villalobos argues that it offers a "static and vertical vision of cultural consumption" (Guevara-Villalobos, 2013: 24), and it is logical that while the production of culture framework may provide a useful overview of the games industry at a particular time, significant developments in the games industry may require conclusions to be updated and the model re-applied to account for said developments. One such development is that in the seven years since Martin and Deuze applied this framework to the games industry the three major platform holders in the console market have released their new 'generation' of hardware, with Nintendo's Wii U, Sony's Playstation 4 and Microsoft's Xbox One having been released. As a result of these and other developments, the below summary of Martin and Deuze's conclusions will refer to more recent writing to update some of their conclusions.

On technology, Martin and Deuze focus primarily on digital distribution, arguing "Digital distribution has a significant influence in shaping the structure and identity of indie game development". (Martin & Deuze, 2009: 280) They point specifically to the requirement of smaller file sizes for digital distribution as shaping the identity of indie games, arguing that this is the reason for an emphasis on game mechanics over realistic graphics and audio, a more abstract visual style, and shorter, less expensive games being the norm. However, the implications of digital distribution cannot be over-generalized without consideration for the differences between particular platforms. File size may be a more important consideration for a developer making a game for an Iphone, for example, where the audience expectation is also of lower prices, but it is common for digital distribution platforms on home consoles as well as Steam and other online marketplaces to make many AAA games with large file sizes available for download. Hoogendoorn, writing five years after Martin and Deuze, elaborates on many of their points but argues "With download speeds getting higher and broadband getting more bandwidth… big file sizes are not the problem anymore". (Hoogendoorn, 2014: 18) Hoogendoorn instead posits that the 'identity' of indie games discussed by Martin and Deuze is a style based on deliberate choices made by the developers, the basis of which is nostalgia for earlier video games. Without explicitly giving it a name, Hoogendoorn and Martin and Deuze are both pointing to a particular 'Independent Style' evident in many games, which will be considered in more depth below.

On laws and regulation, Martin and Deuze focus on the ownership of 'Intellectual Property' (IP) as a possible means of determining whether a developer is truly independent of a publisher. They then go on to challenge the assumption that if a publisher rather than a developer owns the IP the game is not independent, using examples such as Jenova Chen's *Flow* (2006) which was developed independently then sold to Sony, to highlight "instances where IP transfer and management has empowered developers for further independent game creation." (Martin and Deuze, 2009: 282) They argue that developers who develop the game themselves and present a finished product to a publisher can negotiate better terms, particularly if they are able to generate an audience buzz for the game's release, as they will have taken on much of the risk. It is worth noting, however, that the example used of Jenova Chen, who sold a game created for his Masters thesis to Sony and signed a three game contract with Sony that resulted in Chen's company Thatgamecompany creating *Flower* (2009) and *Journey* (2012)*,* was written years before the 'porting' to the Playstation 4 of these games was in effect outsourced to a separate company. It cannot be assumed that Chen was not involved in this decision, but it does point to potential problems with IP transfer and the loss of developer control and autonomy that can result. Phillips has also written of independent game production in terms of laws and regulations, noting that there is a spate of "clones" of independent games and that the "informal" copyright regulation that exists amongst developers may be insufficient. (Philips, 2015: 150) The very existence of cloning could be argued to contradict Lipkin's view of indie as a supportive subculture of developers. (Lipkin, 2013) In discussing the area of the Market of indie games, Martin and Deuze also point to the success of cloned games as illustrative of a disconnect between reality and the "Utopian" view of indie. (Martin and Deuze, 2009: 288)

Discussing the area of industrial and organisational structures, Martin and Deuze write of the "hierarchical" structures of game production, where the "independent work of the individual", or of the small team working on a small part of an unseen whole, is "subjugated into the greater product vision". (Martin and Deuze, 2009: 286) While they go on to challenge this idea to an extent, pointing out that it ignores the potential for relationships and conversations between members of different teams, they nevertheless paint a picture of an industry where individual workers can feel very little ownership over the finished game as a whole. In exploring the area of Occupational careers, they go on to argue that

dissatisfaction with this method of working or other aspects of the mainstream industry is one of the two ways that people become involved in indie game development, the other being to begin as an amateur with no experience of the industry. However, the idea that there is necessarily a 'dissatisfaction' leading to leaving the mainstream industry is a debatable point. While Whitson (2013: 124) has written of the growth of social and mobile games as a "lifeboat" for dissatisfied developers often having to deal with exploitative working conditions, which implies the same dissatisfaction written of by Martin and Deuze, Hoogendoorn adds a third route into indie development to the two already mentioned, that being the route of a new group of indie developers making social and mobile games who often started in the sales or marketing departments of large publishers before becoming developers. (Hoogendoorn, 2014: 29) Hoogendoorn argues that this new type of indie game is characterised by 'free to play' games featuring mechanics designed to maximise monetisation.

Martin and Deuze's above approach, looking at the "independent venue" of games production in terms of how it relates to the "greater games industry" (Martin & Deuze, 2009: 278) arguably succumbs to the 'pitfall' identified by Parker, or the tendency in writing on indie games "to reduce 'indie' to small-scale commercial development" or view it as "a kind of farm team for the majors". Parker argues that this narrative of indie games, perhaps most famously evident in the film *Indie Game: The Movie* (2012), omits the equally valid objects of study of "non-commercial, not-for-profit, activist, and amateur games". (Parker, 2013: 2) This homogenous conceptualisation of indie is also present in many accounts of the history of video games, as will be discussed in the next chapter. There are, however, some who have written of these underrepresented forms of 'indie'. Westecott, for instance, has written of indie games as a form of craft, as has Jesper Juul, who also links indie games to the contemporary maker movement in art. (Westecott, 2013; Juul, 2014) Anna Anthropy's 2012 book *Rise of the Videogame Zinesters* focuses on hobbyist, so-called 'zinester', developers of games using game-maker tools and the potential this trend has for increasing representation of under-represented social groups within games. (Anthropy, 2012a) This thesis will adhere to Parker's argument that these "competing discourses and practices… must be situated in relation to one another" by game scholars, and aims for an inclusive examination of numerous possible interpretations of indie. (Parker, 2013: 2)

1.3 Indie as opposition, or 'the politics of production'

While seeking to offer an overview of the video game industry in the 2008 book *Understanding video games,* Nielson, Smith and Tosca write "Despite dreams harbored by would-be-developers, video games are not typically made in someone's basement. They are made by real people- often highly trained men and women- working within big companies with real production structures". (Nielson et al, 2008: 12) There are a number of assumptions inherent in this statement, and a closer examination of these assumptions serves as a useful starting point for discussing a strain of indie game scholarship, criticism and production that emphasises the political potential of indie games. There is a value judgement implied by the statement, placing more worth on large-scale commercial development. It is unclear what is meant by the inclusion of the word 'real' in this context. Video games, after all, can be made by 'real people' who do not have formal training, outside of the commercial games industry or 'in their basements' as it were. The inclusion of the word seems to diminish the work of the "non-commercial, not-for-profit, activist, and amateur games" that Parker points out are worthy of serious analysis but often overlooked. (Parker, 2013: 2)

One text that makes these games its focus is game developer Anna Anthropy's 2012 book *Rise of the videogame zinesters.* Anthropy, whose games are often autobiographical and made using game maker tools aimed partly at amateur developers, paints a picture of an industry dominated by the "developer-publisher model", where a small number of publishing companies have become the "gatekeepers" of video game creation, removing an ever-increasing amount of creative autonomy from the developers who make the games as costs of production, and therefore risk to investment, increase. (Anthropy, 2012a: 34) Anthropy looks outside the established industry to a growing number of games being made by first time and amateur developers using game maker tools, seeing these games as zines that are widening participation in video game creation to different social groups, and as a result widening the types of themes and subjects explored by games. While Martin and Deuze point to digital distribution as a major factor in "shaping the identity" of indie games, as discussed above, Anthropy notes that online marketplaces such as Steam, the App Store, the Playstation Store, and others, "are maintained and regulated exclusively by the corporations

who built them", in this case Valve, Apple and Sony respectively, and as such they are not necessarily sites of unrestricted self expression and creative freedom, and nor are they necessarily a way to entirely avoid the developer-publisher model. Anthropy points to a particular instance in February 2010 when Apple deleted 5000 games from their App Store for being "too sexual" without offering a more detailed explanation of what was meant by the term. (Anthropy, 2012a: 40) This brings into question the level of freedom an indie developer has to explore particular subjects or themes if they intend to release their games on these platforms and make a profit, even if they have developed the game with financial independence from the publishers.

Returning to Nielson, Smith and Tosca's statement, the assertion that video games are made by "often highly trained men and women" can also be unpacked. While the statement is true, it does ignore the reality that commercial games made within the industry are, by a large majority, mostly made by men. Fisher and Harvey note the disparity between a 2011 report showing 38% of gamers in Canada were female and another report showing that between 2001 and 2011 men made up 90% of the workforce in the games industry. (Fisher and Harvey, 2013) Extending an argument made Anthropy that "Mostly, videogames are about men shooting men in the face", Higgins argues that most video games "are about cisgendered, heterosexual, and white men who shoot men in the face" before going on to argue that "Nonwhite protagonists are disproportionately rare, and women often play supporting or even submissive roles" and that "The homogenous experiences portrayed in games are paralleled by the homogenous gender and race identities of game developers". (Higgins, 2015: 4-5) Newman and Vanderhoef similarly argue that the mostly white male creators of indie games "tend to challenge design dogmas more than gendered hierarchies". (Newman & Vanderhoef, 2014: 385) This conclusion coincides with that of Fisher and Harvey. They argue that while "subversive design tactics" within indie games can be understood as "political statements" that "offer a viable alternative to participating in mainstream practices" (Fisher & Harvey, 2013: 27), the indie games scene in Toronto, much like the 'mainstream' industry, is dominated by white men, and programs intended to increase inclusivity serve to recreate the dominant ideology of the industry by casting the intended participants in the program in the role of a "helpless, unknowledgable female" stereotype (Fisher & Harvey, 2013: 30), as well as through a "Reluctance to deviate from sanctioned,

normalized practices". (Fisher & Harvey, 2013: 36). Ultimately, Fisher and Harvey conclude that "Being indie in no way translates to being inclusive" and instead "a great deal of the values and meanings associated with going indie actually reify the structural inequalities of the mainstream industry" partly through a narrative of "supposed meritocracy that… denies persistent systemic exclusion". (Fisher & Harvey, 2013: 37)

While the conclusions of Fisher and Harvey and others suggest that, in many ways, the production of indie games can share the same problems, at least in terms of inclusivity, with the production of other games, the notion that the very act of making games outside the established industry is in itself a political act is one that recurs in some writing on indie games. Lipkin, for example, writes of the "politics of production", arguing "Being indie both implicitly and explicitly opposes mainstream practices by choosing to deviate." (Lipkin, 2013: 20) However, as has been argued in relation to indie cinema, 'mainstream' is as nebulous a term as 'indie'. (Newman, 2009) Parker has argued "game scholars should avoid mythologizing oppositional relationships between various forms of indie game development and the hegemonic, mainstream industry" as the mainstream is not "a fixed or singular entity" (Parker, 2013: 2) and Ruffino, while acknowledging the "political and moral connotations" of the word independence (Ruffino, 2013: 107), warns against "naive oppositions or forms of engagement with an alleged mainstream". (Ruffino, 2013: 119)

Linked to the contested notion of indie game production as an oppositional or political act is the concept of creative autonomy that will be explored within this thesis. Autonomy is a notion that recurs in much writing on indie games, but is rarely examined in depth. Martin and Deuze, for example, briefly note the potential for "creatively autonomous game development" in small team or individual production, linking the phrase to the concept of authorship and to the early days of the game industry. (Martin & Deuze, 2009: 279) Whitson also uses the phrase, writing of how creative autonomy for developers is reduced when publishers are unwilling to allow them to take risks. (Whitson, 2013) This is a similar argument to that of Lipkin who, while not using the exact phrase, refers to the potential for "freedom of expression" and "uncompromised artistic vision" in games made independently of publishers. (Lipkin, 2013: 14) In all of this writing, the phrase seems to be synonymous with 'creative freedom', which is implied as an ideal that cannot be fully attained if working

with a publisher. Guevara-Villalobos examines the notion in more depth, however, describing autonomy as a "political struggle" (Guevara-Villalobos, 2013: 14) and a "political pursuit to create digital games according to developers' own creative decisions" (Guevara-Villalobos, 2013: 12) but also describes how the autonomy, or "flexibility" and sense of "ownership" felt by the developers working for publishers or hired by indies, "easily turns into self-regulation/exploitation" as the developers feel accountable for something which they only symbolically, rather than legally, own, and so will work "exhausting timetables at critical moments". (Guevara-Villalobos, 2013: 55) As has also been noted above and will be explored more in later chapters, there may be other pressures that can restrict creative choices made by developers who are working outside of the developer-publisher model.

1.4 Indie audiences and taste

One such pressure, aside from involvement of a publisher, is that imposed on the indie game developer by their audience, particularly as crowd funding becomes increasingly common even for games linked to a publisher. Newman argues in relation to indie cinema that "Determining what indie means requires that we be attentive to its cultural circulation as well as to economics, storytelling, and thematics". (Newman, 2011: 10) In order to consider the 'cultural circulation' of indie, it is necessary to consider how these texts are sold and consumed. Bourdieu describes the act of consumption of art as "a stage in a process of communication, that is, an act of deciphering" as well as arguing that "To the socially recognized hierarchy of the arts, and within each of them, of genres, schools or periods, corresponds a social hierarchy of the consumers". (Bourdieu, 1984: 1-2) Bourdieu's conclusions on the notion of taste have been applied to indie culture across different media by scholars such as Hoogendoorn and Newman to explore the idea of an 'indie audience', the role said audience plays in categorising indie and the way major studios, record labels and publishers are able to sell a notion of indie to them. For Newman, the act of deciphering that is involved in consumption of indie is dependent upon "common knowledge and competence- which are products of indie community networks". (Newman, 2011: 11) Building on the arguments of Bourdieu, Newman describes indie as "a taste culture, a site for the exercising of distinction". (Newman, 2009: 23) Following this approach, indie can be understood as "a source of cultural capital, a form of knowledge that elites use in

differentiating themselves from masses and perpetuating their own privilege". (Newman, 2009: 23) Hoogendoorn takes this approach, applied to indie cinema by Newman, to argue that indie in video games is also used as a form of 'cultural capital', a means of preserving, as Hoogendoorn puts it, "certain social-cultural classes". (Hoogendoorn, 2014: 39)

Bourdieu (1984: 6) famously argued:

> Taste classifies, and it classifies the classifier. Social subjects, classified by their classifications, distinguish themselves by the distinctions they make, between the beautiful and the ugly, the distinguished and the vulgar, in which their position in the objective classifications is expressed or betrayed.

As discussed above in relation to the notion of the mainstream, the indie audience, unconsciously or not, seeks to classify themselves and their tastes higher in this social hierarchy than 'mainstream' audiences and texts. However, Hoogendoorn argues that indie has also become "a market segment for publishers". (Hoogendoorn, 2014: 7) This idea of indie as a 'market segment' is also suggested by Newman, who argues that "media conglomerates offer their own alternative to themselves, bringing in even those consumers who might be contemptuous of their very existence" (Newman, 2009: 17) and that so-called 'mainstream' culture selling "an alternative, independent sensibility" can actually "promote and disseminate" said sensibility. (Newman, 2009: 29) Elsewhere, Newman has also argued that indie is either "a judgment that we make about the film or which comes premade for us as part of the film's promotional discourse." (Newman, 2011: 11) While this may be the case, Hoogendoorn acknowledges that a game being marketed as indie does not necessarily mean the game will be accepted as indie by the audience, while Newman notes of films that categorising texts as indie happens through "discursive positioning, which is partly a matter of locating a film's similarity to established central instances of indie film- whether by textual or contextual (including industrial) criteria", a point which also acknowledges that a film being marketed as indie is not a guarantee that its audience will accept it as authentic or indie. (Newman, 2011: 9)

1.5 Independent Style

This notion of 'authenticity' is also referred to in writing which attempts to understand indie in terms of particular shared stylistic or aesthetic qualities within the games themselves. Juul, for example, analyses the winners of the Independent Games Festival award from 2000 to 2013 and identifies the emergence over time of a "specific visual Independent Style shared by many independent games". (Juul, 2014: online) It is an observation also made by Brett Camper, who analyses the game *La Mulana* and situates it as part of an "indie retro trend". (Camper, 2009: 191) Juul argues that the style, most often evident in games with "Pixel style" graphics but not restricted to just these games, is an "authenticity work", a "high-tech representation of low-tech, and usually cheap, materials", and a "constructed signifier chosen to signify low-budget production". (Juul, 2014: online) Juul points out a number of contradictions inherent within this so-called Independent Style, specifically contradictions between old and new as in the new technology used as opposed to the old technology being represented, between DIY and the expertise needed to create the games, between local and global in regards to distribution of the games, and between "democratisation" and "rarified" consumption or issues of taste. Ultimately, however, Juul argues "if the claim of the independent game is exactly that of having virtue due to it being developed with few resources", then Independent Style does in fact allow for lower budget production. (Juul, 2014: online) Lipkin similarly argues that an "indie style" is the result of the conditions behind the games' creation. (Lipkin, 2013: 15)

There are limitations to Juul's approach, some of which are acknowledged by Juul himself, who makes clear throughout that he is not attempting to define 'independent games', rather identifying a particular visual style within a curated selection of games. Juul identifies four phases in the winners of the IGF, those being "Before Independent Style" between 2000-2004, "The rise of pixel style" from 2005-2009, "Pixel style in the 3rd dimension" from 2010-2012 and "New themes" in 2013. This final phase is problematic, based at the time of writing on one game, the 2013 winner *Cart Life.* Juul argues this game uses pixel style graphics but "towards documentary and political ends". While the following year's winner *Papers, Please,* discussed in more depth in Chapter 3 of this thesis, uses pixel style towards similar ends, both of these games actually return to a more straight forward 'pixel style', rather than any

distinct new development in the visual style. Contrary to most of Juul's analysis, this 'phase' is characterised by Juul in terms of its narrative and thematic content rather than its visual style. However, accepting Juul's later suggestion that Independent Style has become an established visual style in its own right, these games could be understood as a distinct phase in terms of the development of a visual style, representative of a point in time where Independent Style has become established in its own right thereby changing the implications of the use of the style, so it is no longer being used as a means of referring to older games or evoking nostalgia. (Juul, 2014: online) The 2015 winner, *Outer Wilds* (forthcoming), does not fit into Juul's visual Independent Style and may signal a further 'phase'.

Juul's analysis of a relatively narrow selection of games sheds some light on particular games not discussed by Juul, but the selection is not necessarily typical of broader trends. There are also other stylistic and aesthetic qualities besides the visual elements discussed which some have argued are shared by many indie games. Camper analyses the game *La Mulana* (2005), which could be seen as an example of Juul's Independent Style in terms of the graphics. Camper points to the greater emphasis on exploration compared to the 2D platform games that *La Mulana* resembles, arguing that the "trend" of retro-styled games made by independent developers is characterised by these innovations of mechanics and gameplay, but that these are innovations of older "ancestors" rather than "direct parents". (Camper, 2009: 187) Camper also suggests this trend is a "response" to large publishers re-releasing their back catalogue of games on digital distribution channels. (Camper, 2009: 169-170) This is a questionable point that will be returned to in Chapter 2. Although the trend of games using this style does seem to coincide with the rise of digital distribution channels, a point Juul also makes in discussing the rise of Independent Style games, Juul and others see the rise of this style of games as representing a solution to a number of problems faced by small developers exclusively distributing their games digitally, such as fewer resources, inferior technology, the need for smaller file sizes in the early days of digital distribution, and the problem of how to make a game where the lower budget is perceived as a 'virtue'. (Juul, 2014; Martin & Deuze, 2009; Hoogendoorn, 2014) Like Camper, Lipkin also notes "the trend to recreate styles and game mechanics of the earlier era", but in line with his running argument regarding the political potential of independent game production, he interprets

this trend as something that "speaks to dissatisfaction with gaming and game design practices today." (Lipkin, 2013: 10)

Lipkin also writes about how developers have at times tried to present themselves as indie not just through "more simple graphics", but also through "retro game designs", as in the mechanics and gameplay, and through the use of audio, particularly 'chiptunes' or music that deliberately resembles the low-tech audio of early video games. To understand the implications of the stylistic elements of many indie games, it is useful to look to writing on indie in other media, particularly the idea of the "foregrounding of the forms and materiality of the medium of use" that King argues is evident in many American independent films (King, 2005: 137) Martin and Deuze describe this as "gamerism", summarised as "the celebration of all things 8-bit". (Martin & Deuze, 2009: 291) Understood in these terms, Independent Style games are self-reflexive. They are a "representation of a representation" (Juul, 2014: online). Amongst other things, they are games about games.

However, Lipkin argues that the existence of an identifiable aesthetic that can be called 'indie games' is leading to the co-optation of indie by the mainstream, with games that 'look' indie being made by large publishers. In semantically loaded language he writes of the "infiltration" of the mainstream into indie territory, and argues that this co-optation will remove the political, oppositional power of the term indie by confusing the meaning. (Lipkin, 2013: 18) This is a point supported by the conclusions of Hoogendoorn, who argues that indie is used by publishers as a method of marketing low budget games. (Hoogendoorn, 2014) Looking to other writing on indie outside video games, Newman looks at American independent cinema and argues against the type of approach taken by Lipkin. To Newman, indie is at once a form of opposition to a perceived 'mainstream', a phrase he problematises, but also a form of 'cultural capital' for a privileged class of consumers who seek to maintain their privileged taste by defining not just themselves but also 'the other' that they exist in opposition to. Newman challenges the idea of indie as wholly autonomous or necessarily authentic, and disputes the idea that the mainstream are co-opting indie, calling assumptions such as these the "brand-bully position" and arguing that it is an overly simplistic interpretation of the relationship between the mainstream and "alternative" cultures. (Newman, 2009: 33)

Returning to the notion of Independent Style, Juul (2014: online) offers the following as a complete definition:

> Independent Style is a representation of a representation. It uses contemporary technology to emulate low-tech and usually "cheap" graphical materials and visual styles, signaling that a game with this style is more immediate, authentic and honest than are big-budget titles with high-end 3-dimensional graphics.

While this definition restricts 'Independent Style' to the visual elements of a game, the same concept and term could be widened to include other aspects of a game's design. In restricting the definition to visual elements of a game, elements such as 'chiptunes' and 'retro' game mechanics, which could be understood in the same terms, are omitted. This thesis will use Juul's concept of Independent Style throughout, but will widen the definition so it is not restricted to just the visual.

1.6 Conclusion

Indie games, and indie culture more generally, have been approached in a number of ways by scholars since Zimmerman asked if independent games exist in 2002. Firstly, there is independence as an industrial or economic context. It is clear that indie is sometimes being used to refer to games that are not financially independent of publishers, and Martin and Deuze and Hoogendoorn argue that indie games are a part of a "greater games industry". The 'production of culture' model used by Martin and Deuze, however, risks narrowing the definition of indie to contemporaneous commercial games, omitting both non-commercial and less recent examples of independent video game production. Chapter 2 of this thesis will explore the pre-history of the modern indie games movement, which Parker and Anthropy have both noted is under-explored. Secondly, some have written of indie in terms of the political potential of production models that challenge dominant industry practices. However, as many have noted, indie games development companies are often replicating an imbalance of mostly white, mostly male developers that exists in the 'greater industry', and the autonomy of a developer making games outside the developer-publisher model is subject to other restrictions. Thirdly, the indie audience has been written of, largely in relation to indie in other media, with Newman and Hoogendoorn concluding that indie is a 'taste

culture', in which audience's self-perception of themselves as an opposition to 'lower' mainstream texts serves as a form of distinction in Bourdieu's terms, reinforcing their status as a rarified and privileged consumer. Finally, some have written of the style and aesthetic of indie games, with Juul identifying a particular visual 'Independent Style' that is evident in many games. A slightly widened definition of this 'Independent Style' applying to other aesthetic qualities of games aside from the visuals is offered above and will be used throughout this thesis.

There are some gaps in what has already been written on indie games, and it is the aim of this thesis to contribute to addressing some of these gaps. As has been noted, the history of video games in terms of independent production and the immediate pre-history of the modern indie game are under-explored, and Chapter 2 aims to go some way to addressing these areas. Secondly, what or who defines publisher-funded games as indie, and what does indie mean in this context? Chapter 3 will explore this in relation to the games of Jenova Chen and Thatgamecompany. Thirdly, while indie has come to mean something other than economic independence, Chapter 4 will address the games that are still made with economic independence from major publishing companies.

2. THE PRE-HISTORY OF INDIE

2.1 Introduction

The overarching question of this thesis is 'What is an indie game?' To answer this question, it is necessary first to trace the modern indie game's pre-history and origins. Lipkin has argued that 'indie games' as they are currently understood are a "contemporary movement in game development". (Lipkin, 2013: 9) While Lipkin does not offer a defined timeframe for this movement, the concluding chapter of Donovan's *Replay* similarly suggests that indie games are a trend that belongs to a specific time period, and that they began to emerge in the mid 2000s when higher speed wireless internet and new online distribution platforms made digital distribution a more viable route to market for dissatisfied developers making games for large publishers. (Donovan, 2010) Although it is a point that has been disputed, others have pointed to *Cave Story* (2004) as the "first modern indie game" (Watlington, 2015:online). However, Nielson et al have argued "to understand the wider significance of contemporary games - from their aesthetics to their technology to their cultural influence - one must often look to history for explanations". (Nielson et al, 2008: 49) What the above accounts have in common is that they arguably fall into the 'pitfall' identified by Parker of academic writing on indie games, or "the inclination to reduce 'indie' to small-scale commercial development", therefore only considering one type of 'indie game' and not taking into account the precedent that existed before the mid 2000s for the types of games that have come to be known as indie. (Parker, 2013: 2) In the same article, Parker goes on to argue that all games were independent in the earliest days of video game production because there was no industry upon which to be dependent (Parker, 2013: 3), while Martin and Deuze similarly suggest a link between early video games and developers having 'creative autonomy' during production (Martin & Deuze, 2009: 279). Reducing the definition of 'indie games' to recent, small-scale commercial games overlooks the fact, acknowledged by Parker and by Martin and Deuze, that since the earliest days of the video game industry there have been examples of independent video game production, defined here as games that were developed without publisher interference.

This chapter aims to contextualise the modern indie game by investigating the history of independent video game production in the UK and USA from the beginning of the video game industry to the emergence of the commodified indie game in the mid to late 2000s, with reference to how changes in technology have shaped independent video game production over time. In order to do this, the chapter will begin with a brief review of key accounts of the history of the video game industry, looking specifically at how these accounts tend to give prevalence to commercial games, with 'independent counter-trends' such as the 'shareware' games of the 1980s and 1990s often only being discussed in terms of how they feed into the narrative of the development of commercial games rather than being considered as an object of study in and of themselves. The chapter will then examine the earliest examples of video game production, before the games industry existed, both to examine how changes in technology over this period widened the potential for video game development and consumption and to explore whether the games being made at this point were 'independent' in the sense outlined above, or if they were a very early example of the developer-publisher model that would come to dominate the industry later. The chapter will then look in turn at arcades, home consoles and PC gaming, investigating how changes in technology and the industry enabled or restricted the potential for independent video game production. Finally, the chapter will seek to outline the conditions that led directly to what became known as 'indie games', looking for precedents for the characteristics of early 'indie games' and an explanation of what, if anything, is new or unique about the earliest 'indie games'. The running argument of this chapter is that independent video game production has existed throughout the history of video games, sometimes in the form of under-explored 'independent counter-trends' that run simultaneously to dominant industry practices, but also at certain points within those dominant industry practices themselves.

2.2 Literature Review

There is a tendency in accounts of the history of video games to prioritise the more commercially successful games and trends at the expense of equally valid objects of study that have had less commercial impact. Indie games have been described as a "strong counter-trend" to dominant industry practices (Nielson et al, 2008: 16). Shareware could be

seen as an example of an earlier counter-trend, the treatment of which in writing on video game history correlates to an extent with the treatment of indie games.

Shareware is an alternative method of distributing games that was most prevalent during the 1980s and early 1990s, but was revived by some developers such as PopCap in the early 2000s. It involves the consumer taking on the cost of distributing a game or piece of software, originally by copying said software onto floppy disc, but it is also a term used in relation to developers using early methods of digital distribution to give away demos or sections of a game while offering the full game or an expanded edition for a price. While some writing on the history of games, such as Sheff's *Game Over* (1994) and Hayes & Dinsey's *Games War* (1995), approach the history of video games as a 'battle' or a 'war' between large corporations and omit shareware altogether, others mention shareware but only in relation to how it relates to dominant trends within the industry. For example, Kent's *Ultimate History Of Video Games* and Nielson et al's *Understanding Video Games* both mention shareware only briefly while discussing *Doom* (1993) and the game's developer Id Software. (Nielson et al, 2008; Kent, 2001) More recently, Donovan's *Replay* contains slightly more information on shareware, mentioning it twice, once when discussing how Scott Miller and Apogee were able to monetise shareware with the game *Commander Keen* (1990), and again in relation to how Popcap games revisited the distribution model in the early 2000s, again using *Doom* as the illustrative example of a game distributed via shareware. (Donovan, 2010).

A commonality in the above writing is that shareware is being discussed in relation to how it feeds into dominant trends, rather than as an object of study in its own right. As Anthropy has noted, "there's a swath of weird, personal, and experimental share ware games around that could never have come from the hit-driven mainstream". (Anthropy, 2012a: 37) These games are worth further inquiry, but are mentioned within the context of this literature review because while 'indie games' as a commodified entity may be specific to a particular time period, these counter trends of independent video game production existed long before 'indie games'. Parker has argued that before what has become known as indie games, "independent or alternative game development went by other names: amateur, enthusiast, hobbyist, fan, shareware, demoware, freeware, and so on" and that "This history is the least

developed area of indie game studies". (Parker, 2013: 3) This under-researched pre-history of 'indie games' will be the focus of this chapter. Recent historical accounts of the video game industry that incorporate indie games, such as the documentary *From Bedrooms to Billions* (2014) and the previously mentioned *Replay,* seem to suggest a gap in independent video game production between the mid 1990s and the rise of the indies in the mid 2000s, and this chapter will also examine this apparent 'gap' in independent production, looking at what existed during this time period in terms of independent game production and how this became the 'indie game'.

2.3 Pre-industry and the arcade boom

While *Spacewar* (1962) is demonstrably not the first videogame ever created, Nielson et al have argued "claiming that things started with Spacewar*,* as some have done, is not entirely unjustified". (Nielson et al, 2008: 51) This section will briefly discuss some key examples of pre-*Spacewar* game development in order to trace significant technological advances and their significance in widening participation in game development, before providing an exposition of the development of *Spacewar* and a discussion of the game's production in relation to the notion of 'creative autonomy'. The chapter will then explore the influence of *Spacewar*, particularly on Nolan Bushnell, discussing the development of Bushnell's *Computer Space* (1971). *Galaxy Game* (1971), a very similar game to Bushnell's more famous equivalent that was released months before, will also be discussed as a means of illustrating how and why less commercially impactful games or trends can be overlooked in accounts of the history of video games.

While *Spacewar* is a useful game to use as a starting point in exploring the history of independent video game production, there are relevant examples from before this that help to demonstrate how advances in technology over time widened participation in video game development before the industry was established. The Cathode Ray Tube Amusement Device (1947)*,* created by Thomas T. Goldsmith and Estle Ray Mann, is one such example. Hunter describes the game as "the very first interactive electronic game displaying graphics on a screen". (no date:online) While the game was innovative, the fact that it was tied to a particular machine and was not mass-produced or distributed to be played by the public

meant that its influence was limited. Five years later, technology had developed sufficiently for A. S. Douglas to create and store *OXO* (1952), an electronic version of the game 'Noughts and Crosses'*,* as part of his PhD for Cambridge University using the Electronic Delay Storage Automatic Calculator (EDSAC). Again, it was not possible to distribute the game, as it was stored on the prohibitively expensive and large EDSAC. William Alfred Higinbotham's *Tennis For Two* (1958), another example of an early game often mentioned in accounts of the history of video games and a pre-cursor to *Pong* (1972), was made as an exhibit for the Brookhaven National Laboratory in New York and so is possibly the first game designed for public consumption. However, as with the above-mentioned examples the game was tied to a particular machine, in this case the *Donner Analog Computer Model 30*, and not mass-produced. *Spacewar* is a significant game in part because it was designed so it was not tied to one particular computer. This is one of the reasons that it had an "enormous influence on early programmers", perhaps most significantly Nolan Bushnell, as will be discussed below. (Nielson et al, 2008: 51)

Spacewar was created at MIT in 1962. In the year prior, 'The Hingham Institute', a small group of engineers who were an off-shoot of the so-called 'Tech Model Railway Club' collective of engineers and programmers, developed early digital games such as *Bouncing Ball* (1961), *Mouse in the Maze* (1961) and *Hax* (1961) using MIT's TX-0 computer. The development of *Spacewar* was facilitated by the university's purchase of a PDP-1, which was more compact and allowed a single programmer access to the processor rather than having to share with others. While the Hingham Institute were dependent on their institutions to provide the expensive technology needed to create their games, Graetz, one of Spacewar's developers, describes a production process in which the developers were working collaboratively but with complete creative autonomy from the funding institution. For example, the content of the game was inspired by the group's shared interest in the *Skylark* and *Lensman* science fiction novels of E. E. Smith, and when deciding to create the demonstration program for the PDP-1 that would eventually become *Spacewar*, the Hingham Institute devised their own three point criteria of what a good demo program should be which ended with "in short, it should be a game". (Graetz, 1981: online)

Furthermore, Graetz's article affectionately describes how Stephen Russell, who programmed the game, was slow to make progress and would often only do so as a result of internal pressure from the other developers rather than any involvement or imposition of deadlines by MIT, and he describes how the community of computer users at MIT shared "not much in common other than their need for large amounts of largely unstructured computer time". (Graetz, 1981: online) Graetz's description of the game's production suggests a loose, collaborative development process with little or no interference from the "tolerant when not actively implicated" MIT. (Graetz, 1981: online) Anthropy has argued in relation to video games made in the 1970s that "games, as with all works of art, contain the values of the people who make them" (Anthropy, 2012a: 28). While made earlier than the games Anthropy was discussing, due to the autonomy that the developers had to make their own creative decisions, the 'values' and interests of the people who made *Spacewar* are evident in the game.

Aside from the game itself, two particular aspects of *Spacewar* and how it was made allowed for the game's influence to exceed the earlier examples of video game precursors. Firstly, the game was programmed so it was not bound to one particular computer. This allowed the game to be distributed somewhat wider than the above examples of pre-*Spacewar* games, although distribution was in the form of free copies of the game being given away. This potential for slightly wider distribution led to Nolan Bushnell, founder of *Atari*, playing *Spacewar* while studying at the University of Utah on the university's PDP-1. (Hunter, no date: online) Secondly, no patent was sought for the game, possibly due to the game's commercial potential being limited by the computer required to play it costing $120,000 and being "the size of a large car". (Donovan, 2010: 10) This lack of a patent meant developers could create their own version of the game and profit from them. It was the desire to do this that led Bushnell to spend eight years developing his own, commercial version of *Spacewar* that was not tied to such an expensive and remote system, resulting in *Computer Space*, described by Hunter as "the first mass-produced arcade video game". (Hunter, no date: online)

A key development in technology that allowed *Computer Space* to be made and was a contributing factor to the arcade game boom that would eventually follow was the invention

of integrated circuitry. Bushnell and his associate Ted Dabney originally attempted to create a game using the Data General Nova computer, which was significantly less expensive at $3,995 than the PDP-1 so could have potentially made its money back if coin-operated and able to run a number of different games on different monitors simultaneously. It became apparent during development that the Nova did not have the processing power to handle this (Donovan, 2010). By making the game with integrated circuitry instead of a computer, each function that would have been performed by the Nova could be given its own individual circuits, which Donovan points out also had the added benefit of being significantly cheaper to make, allowing for mass production at a much lower cost (Donovan, 2010). This manufacture and distribution required capital investment, which Bushnell got from the company Nutting Associates in exchange for a percentage of the sales of the game.

Accounts of the actual development process of *Computer Space* suggest that Bushnell and Dabney were in control of their creative decisions, at least in the sense that a publisher or other interested party was not dictating or interfering in the content and design of the game. Both Bushnell and Dabney worked other jobs during the eight-year development process of the game in order to fund the project, and maintained control over details of the game such as the design of the arcade cabinet, which was based on a clay model Bushnell had sculpted on his kitchen table. (Hunter, no date: online)

However, Anthropy argues that it is around this point in time and the arcade boom that followed, when mainstream culture was first coming into contact with video games, that "businesspeople gained their foothold (soon to be stranglehold) on videogames". (Anthropy, 2012a: 29) Other accounts of the histories of games paint a similar linear narrative- that the expense of the advancing technology required to create games, coupled with the larger teams needed to use this technology and the cost of marketing and distributing games, result in the increasing need of capital investment, and as publishers are more exposed to financial risk they exert an increasing amount of control over the development of the game. This narrative is not necessarily untrue- Bushnell's reliance on publishers for capital that began with Nutting eventually led to him being ousted from his company Atari by Warners, losing all control of the company he founded. However, counter trends of alternative or independent video game production have existed throughout the history of the video games

industry, and such a linear narrative of games history often downplays or omits many of these counter trends or anomalies.

As an example of this, earlier in the year that *Computer Space* was released, another game indebted to *Spacewar* was released as an arcade cabinet. *Galaxy Game* (1971) was created by Bill Pitts and Hugh Tuck and was installed at Stanford University. In some ways, the game was more advanced than *Computer Space*, particularly when the machine was updated to allow 8 people to play against each other at once. One machine cost $20,000 dollars to manufacture, however, and so the game could not be mass-produced. It is understandable, given that 1500 units of Computer Space were manufactured, and considering how significant a figure in the history of video games Nolan Bushnell would go on to be, that *Computer Space* is given more attention than *Galaxy Game*, but this example is mentioned here to highlight how a linear history of video games that prioritises commercially impactful games and trends can omit significant innovations and developments.

A linear narrative of games history that suggests a gradual transfer of control from developers also omits other pressures, besides publisher involvement, that can and did impact the development of a game. Bushnell and Dabney did not have absolute freedom to make any game that they wanted to before they sought investment. Other restrictions, besides pressure from publishers, limited their creative autonomy. For example, not all the features from *Spacewar* could be replicated on the budget Bushnell and Dabney had, such as a multi player mode. Capital investment earlier in the development process, while legally relinquishing absolute ownership, may have in other ways provided more freedom to develop the game they originally intended.

2.4 Home consoles

This section will briefly outline the earliest examples of games consoles, before focusing in more depth on Atari and specifically the Atari VCS/2600 (1977 onwards) and what led to the US games industry crash of 1983. The section will argue that, in part, a proliferation of independent video game companies creating games for the 2600 in the aftermath of a court ruling involving Activision and Atari rapidly saturated the market with often low quality

games. The 2600 was dominating the marketplace to such an extent at the time of the crash that it is necessary for the purposes of this thesis to focus on this platform, both to explore the role played by independent game development in causing the industry crash and also in order to contrast console game development before and after the crash. However, while dominant in the marketplace, the 2600 was neither the first nor the only games console, and this section will begin by briefly looking at examples of games consoles before the 2600 and how changes in technology allowed for independent games to be made, before moving on to looking specifically at the 2600, the formation of Activision who were arguably the first independent games company, and the role played by both independent developers and large publishers in causing the industry crash.

The "first commercially available home videogame system" was the Magnavox Odyssey created by Ralph Baer and released in 1972. (Hunter, no date: online) Guevara-Villalobos has argued "It was not until the introduction of games powered by microprocessors in 1975 that the aesthetic and commercial potential of digital games became possible and the foundations of the modern industry were established." (2013: 95) The Odyssey did not utilise microprocessors. It was a console that could be plugged into a television and had a number of games built into it, much like Atari's home adaptation of their arcade game *Pong* (1975). The Fairchild Channel F (1976) was the first home console making use of microprocessors to allow the games to be stored on cartridges. This is a significant development. When the games that can be played on a console are stored on a separate cartridge, a third party developer with the means and the knowledge, such as Activision, is able to create games. Without this innovation, there would have been room for no independent game development on early consoles, or at least independent in the sense of not being tied to the platform holder. While innovative, the Channel F was overshadowed by the release of the Atari 2600 the following year, which also featured separate games on cartridges.

As was alluded to above, much as Nolan Bushnell sought capital investment from Nutting to manufacture and distribute *Computer Space*, when his company Atari required capital to develop the Atari VCS and expand in 1976 Bushnell sold Atari to Warners for $28 million. (Hunter, no date) In 1978 he was forced out of the company, meaning Atari was a corporate entity owned entirely by a large publisher, without any formal link to its founder. By most

accounts, the atmosphere changed at Atari after Bushnell's departure, but it would be an overly simplistic argument to paint Bushnell as a creatively pure auteur fighting against the forces of industry. Bushnell, after all, was a businessman and entrepreneur. The creation of *Computer Space* was in part inspired by a desire to monetise an existing game. The design of his later arcade machines such as *Pong* was influenced by the limited success of *Computer Space* and an attempt to create something with a larger commercial impact. Some of the problems with how Atari treated its developers existed under his watch, such as the flat salary for programmers regardless of how successful their games were. However, there is some suggestion that Bushnell had acknowledged this as a problem and was pushing for a system of bonuses for developers before he parted ways with the company (Fahs, 2010) and it was dissatisfaction under Bushnell's successor Ray Kassar that led to the formation of Activision.

When David Crane, Alan Miller, Bob Whitehead and Larry Kaplan, the so-called 'Gang of Four' of Atari staff, found out how much money their games had made for Atari, they asked for more compensation. The exact details of the exchanges between the different parties depends on whose account is believed, and Guevara-Villalobos has made the point that histories of videogames are often overly based on personal accounts. (Guevara-Villalobos, 2013) In Kent's *Ultimate History of Videogames,* for example, Kassar claims to have had the utmost respect for programmers. (Kent, 2001) In an article on the history of Activision for the video game website IGN, however, Crane claims "[Kassar] looked us in the eye… and said 'You guys are no more important to this product than the people on the assembly line who put the cartridges together." (Fahs, 2010: online) Regardless of which account is to be believed, the result of these disagreements was the formation of Activision as a third party developer of games for the Atari 2600. Activision still operates to this day, making games such as the *Call of Duty* franchise. These sorts of AAA games are used as an example in the film *Indie Game: The Movie* of what modern indie developers are reacting against*,* so it is ironic that the company began as, in the words of one of its founders, "the first independent video-game publisher" (Kent, 2001: 194). The story of how the company formed is in some ways similar to the formation of many mid 2000s indie companies. For example, the formation of the studio 2D Boy is described in Donovan's *Replay* as being the result of

dissatisfied developers working for a large publisher before finding a viable alternative route to market and forming their own company (Donovan, 2010).

Figure 1: *Kaboom* **gameplay (Retro Gaming Times, 2006: online)**

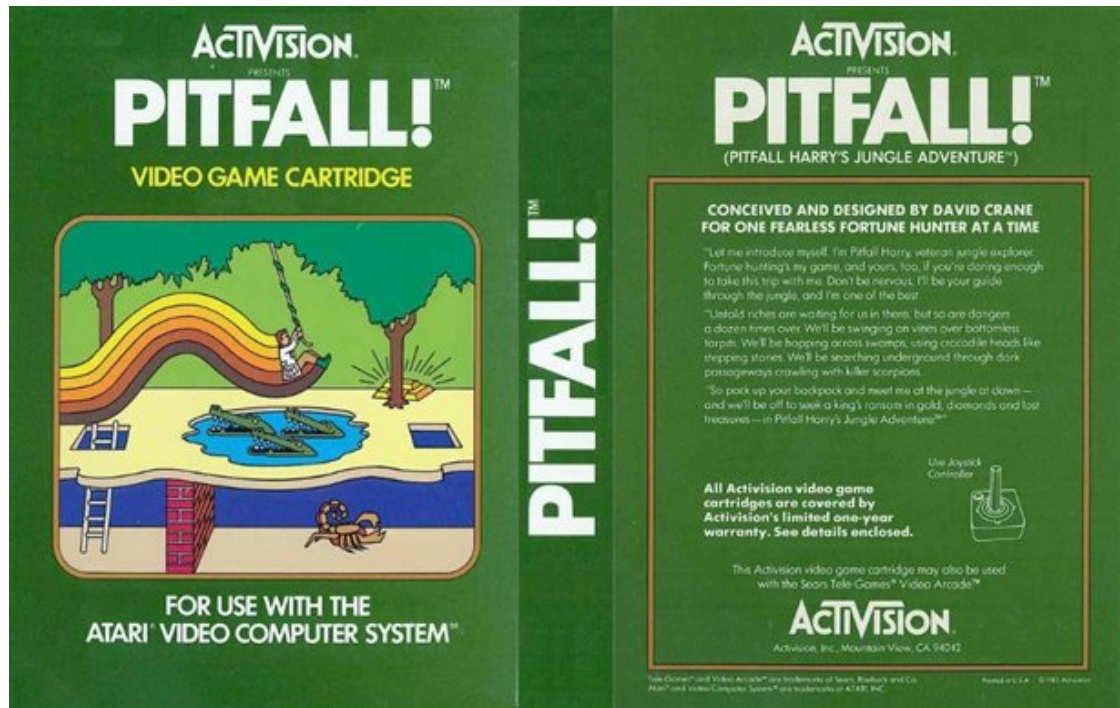**Figure 2:** *Pitfall* **gameplay (8-bit Central, no date: online)**

Figure 3: *Pitfall* packaging (Gameinformer, 2013: online)
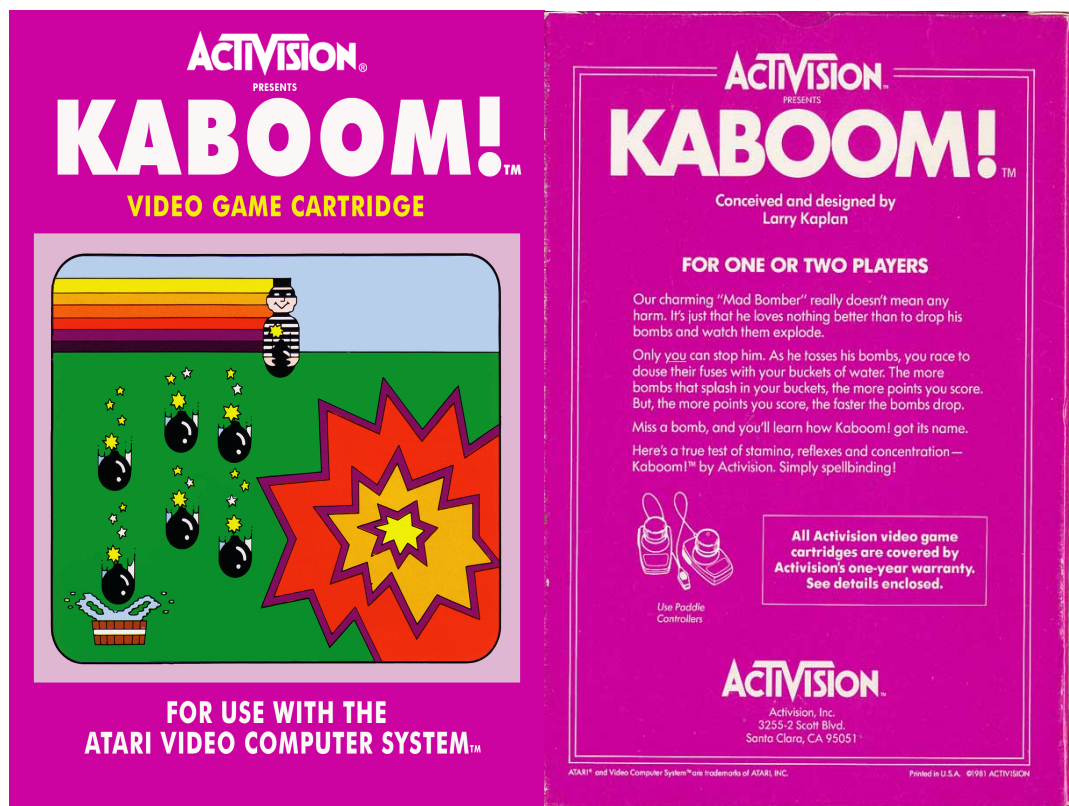

Figure 4: *Kaboom* packaging (Giant Bomb, no date: online)

Fahs writes of the challenge Activision faced as the first third party developer making games for Atari's console to prevent their games appearing "off brand" and low quality. (Fahs, 2010:

online) Their games, such as *Kaboom* (1981) and *Pitfall* (1982), featured black borders (see Figures 1 and 2), which minimised a number of common glitches in Atari 2600 games such as colour-bleed and dot crawl. The games also featured use of deliberately restricted colour palettes, making them visually striking in comparison to many other games of the time. Activision's games were also very clearly branded as having been made by Activision. The packaging was uniform, with the background a single colour and a bordered drawing on the front representing the gameplay, featuring a rainbow (see Figures 3 and 4). The company's logo featured prominently at the very top of both the front and back of the box, and again on the back of the box near the bottom. The mention of a warranty also connotes a professionalism and trustworthiness, and the prominent mention of the game's creators on each box also promotes the game's designer as a second brand as well as Activision. Within the game itself, the inclusion of the company's logo within the black borders around the game's graphics meant that even while playing the game, the player is constantly reminded who made it (see Figures 1 and 2). This considered approach to branding their games was partly responsible for a growth in sales from $6.3 million in 1981 to $66 million in 1982, the year before the video game industry crash. (Donovan, 2010).

Numerous sources point to unregulated third party video game development as a major factor that led to the games industry crash of 1983. (Donovan, 2010; Kent, 2001; Guevera-Villalobos, 2013; Fahs, 2010) Even Activision's co-founder David Crane has claimed "Activision was the main cause of the crash - although indirectly". (Donovan, 2010: 98) While Atari repeatedly sued Activision to try to prevent them making games for their console, in 1982 it was ruled that third party development for the Atari 2600 was legal. This essentially made the 2600 an open platform, and coupled with the financial success of Activision and the growth of the games industry as a whole, it led to a rapid saturation of the market with games of varying quality made by third party developers. Guevara-Villalobos claims that in 1981 there were five game development companies in total and by 1983 there were sixty. (Guevara-Villalobos, 2013) Some of these companies, such as Videa and Imagic, were similar to Activision in that they were formed by developers with a level of expertise in game design who had previously been working for Atari or their competitors. The manufacture and distribution of physical copies of games for the Atari 2600 was expensive and so these developers sought investment from venture capitalists who saw the potential for profit in

third party games following the massive success of Activision. (Fahs, 2010) The lack of a viable digital distribution platform is one of the key differences between these '1980s indies' and the indie games that began to emerge in the mid 2000s. However, not all of the games that flooded the market were made by skilled games designers forming their own companies. The games industry had boomed to such an extent that many existing companies were keen to cash in on the success of video games and existing companies such as Fox and Quaker Oats established their own games divisions, selling often low quality products. (Donovan, 2010)

Manny Gerard, a Warner vice-president with responsibility for Atari at the time of the crash, has claimed that the "single greatest failing" of Atari was that "we couldn't control the software for our system". (Donovan, 2010: 98) While the lack of regulation and quality control of third party games was a major factor in the crash, leading to both a loss of consumer trust and a proliferation of low quality cut price stock effecting the sales of full price new release games, Atari's approach to their first party game development was also a major factor that led to a loss of consumer trust. When Bushnell left Atari and Kassar took over, money for research and development was stopped and rerouted into marketing, and this trend continued so that by the time of the crash Atari was "completely focused on marketing and sales while stripped of what made it creatively successful". (Guevara-Villalobos, 2013: 96) The Atari brand was synonymous with video games, to the extent that by 1981 they had more than 75% of the market share in the US. (Guevara-Villalobos, 2013) By 1983, however, Atari were imposing a two month production cycle on their first party developers, and the now famous example of *E.T. The Extra Terrestrial* (1982) was made as a first party game by Atari under these conditions. The game became a symbol of the games industry crash and the subject of an urban legend, recently proved to be true in the documentary *Atari: Game Over* (2014)*,* about millions of copies of the game being buried in the desert when they could not be sold. By the time of the crash, the Atari branding on the packaging could not be trusted by the consumer to represent quality any more than the third party developers could. While independent development without regulation was a factor in causing the crash, a lack of quality control in the first party games of the publisher that had been so synonymous with the video games industry and dominated the market to such an extent would also have been a major factor in losing the consumer's trust in the industry.

For this study into the pre-history of the modern indie game, the factors leading to the industry crash in the US in 1983 are crucial because the resulting measures undertaken by Nintendo during their expansion from Japan to the US market that regained the trust of retailers and consumers also increased cost and reduced creative autonomy for developers, and meant even games made by 3rd party developers for consoles were regulated by the platform holder. When the crash hit the US games industry, many games companies that had international divisions went out of business, and this was a factor in Nintendo achieving a 90% market share of the Japanese market with the 1983 release of their Famicom home console. (Guevara-Villalobos, 2013) When Nintendo rolled out the Famicom, now known as the Nintendo Entertainment System or NES, to the US in 1985 they retained the same business model that had found success in Japan, and in a number of ways this meant far more control over the games released for the console. For example, in contrast to earlier consoles such as the Atari 2600, the NES had an in-built security chip that prevented any games that were not approved by Nintendo from playing on the console. Consumer and retailer trust in the quality of the products was an important element of Nintendo's growth in the US in light of the lack of confidence in the industry in the lead up and aftermath of the crash, and all games released for the console featured the 'Nintendo seal of quality', guaranteeing "quality and no gameplay glitches". (Guevara-Villalobos, 2013: 103)

However, as well as allowing Nintendo to take control of the quality assurance of gameplay and graphics, Nintendo also had control over other elements of the games released for their console, such as the content. Guevara-Villalobos notes that Nintendo had "tight control over creative decision-making and the process of production". (Guevara-Villalobos, 2013: 104) An example of this is the list Nintendo provided to its developers detailing what could not be included in games for the NES. Comparing the list to the Hays code in Hollywood from 1934 to 1968 and the Comics Code of 1954, Donovan (2010: 170) lists the following as being banned from inclusion in NES games:

> …graphic depictions of death… sex, nudity, random or gratuitous violence, criticism of religion and illegal drug use… tobacco and alcohol… sexist and racist content…

Nintendo would not release games that featured any of these. Furthermore, to release games for Nintendo, developers had to purchase a license. This license gave Nintendo the rights to manufacture the game, and the licensees were charged double the cost of manufacture and had to order a minimum of ten thousand units, with the cost being paid upfront. Nintendo tightly controlled the number of licensees making games for their consoles, starting with six then gradually increasing as the market became bigger to sixty in 1993. (Guevera-Villalobos, 2013) However, as the number of licensees grew, Nintendo began to put limits on how many games each licensee could release per year. While Nintendo's measures addressed many of the factors that led to the US video games industry crash, preventing a flood of product driving down prices while restoring consumer and retailer trust, they also greatly increased the cost and risk to the developer while removing the developer's independence from the platform holder, in turn removing much of the developer's creative autonomy over the content of their games.

The documentary *From Bedrooms to Billions* in part details how Nintendo's expansion into Europe following their US expansion saw many UK games companies closing down due to the growing industry dominance of home consoles and the rising costs and risk of getting a game licensed and approved. Meanwhile, Nintendo's business model meant that "even if a game sold badly Nintendo made a profit". (Donovan, 2010: 168) The rise of Nintendo and the effect the above measures had on the consoles market essentially resulted in the end of widespread independent video game production for home consoles. The way Activision and the '1980s indies', or third party console game developers, that formed following Activision's success were able to create and commercially release games for the Atari 2600 without any involvement or approval whatsoever from the publisher of the console was not possible on the Nintendo Entertainment System or on any console that has since replicated or built on Nintendo's quality control strategies. Furthermore, many of the features of the modern home consoles market can be traced back to Nintendo's measures in the aftermath of the US games industry crash. With some exceptions, such as Sony's Playstation which will be discussed in more depth below, the story of games consoles from the NES onwards, at least until the rise of digital distribution marketplaces, has largely been a movement towards AAA games- bigger teams requiring more specialisation, more expensive production, and increasingly risk averse publishers controlling production. However, the story of console

gaming does not tell the whole story of independent video game production, and this chapter will now move on to exploring a counter trend that existed, particularly in the UK, during the previously discussed time period.

2.5 Personal computing and alternative distribution

During the 1970s and 1980s, PCs became more affordable and their user base grew. (Guevara-villabolos, 2013) With this came a growth in hobbyist, and later small-scale commercial, computer game creation. Concluding a section on the growth of personal computing as a hobby in the late 1970s and early 1980s, Guevara-Villalobos states that "the computer game creative culture was very different from that of the console and arcade industry" as the "low costs of making a game invited regular people and low-risk investors to experiment with the medium". (Guevara-Villalobos, 2013: 99) This section will explore some of the changes in technology that impacted early hobbyist or 'bedroom' game creation on PCs, before looking at how alternative distribution methods allowed both commercial and non-commercial developers to get their games to players, with a particular focus on shareware and the Bulletin Board System, an early method of distributing games online. As has been previously mentioned, Parker and Anthropy have both noted that the history of shareware games is an under-explored one. While it is beyond the scope of this chapter to offer a thorough account of the history of shareware, this section will conclude with a discussion of some representative examples of shareware games as a means of demonstrating how this 'independent counter trend' was resulting in interesting and overlooked games while the console market was in some ways becoming increasingly restrictive.

As mentioned previously in relation to console games being stored on cartridges, microprocessors were an important invention in terms of the history of games. Nielson et al have argued that "few inventions rival the microprocessor in importance" (Nielson et al, 2008: 53). As well as enabling the creation of arcade machines and console games stored on cartridges, the documentary *From Bedrooms to Billions,* which tells the story of the British games industry from the late 1970s to the modern day, states that it was not until microprocessors became cheaply available that amateur coding began. *From Bedrooms to*

Billions points to the Nascom 1 and the Sinclair ZX80 as two early examples of limited personal computers that were used to create games, but argues that it was the Sinclair ZX81, released in 1981 at a cost of £70, that popularised 'bedroom' coding, at least in the UK. (*From Bedrooms to Billions*, 2014)

Anthropy suggests of the computer games made before the popularisation of home computers that even if someone had access to a computer, the use of the complex and unintuitive Assembly programming language was a barrier to game creation. (Anthropy, 2012a) The code used on the ZX81 was BASIC (Beginner's All-purpose Symbolic Instruction Code), a programming language invented in 1964 at Dartmouth College. While unintuitive by today's standards, when game maker tools are available that remove the need for coding when creating a game and coding languages such as Ruby exist that are "designed to be readable by human beings" (Anthropy, 2012a: 25), BASIC was nevertheless designed to be as straight forward and intuitive as possible, and was possible for those without an existing knowledge of coding to master. (Bouchard, 2014) The ZX81 also came with a manual that explained how to code. As such, users of the ZX81 were able to teach themselves to code and create programs such as games. As the trend for hobbyist game creation grew, specialist magazines also began to emerge, and would include lines of code that readers could replicate to create games, which would also have helped many to learn to code.

While the release of the ZX81 has been argued by some to be the point at which the trend for hobbyist computer game creation started to become more widespread, the 1K of memory built into the computer limited the actual games that could be created. Even with the official Sinclair 16K RAM pack peripheral, this was very limited memory. It was with Sinclair's follow up, the Spectrum, which had 48K of memory, colour, sound, higher resolution pixels, and allowed programs to be written and saved more reliably, that more sophisticated games began to be created by hobbyists. Other personal computers released in the early 1980s featured further technological innovations that made it possible for hobbyists to create more sophisticated games. For example, the BBC B had built in graphics resources and allowed for the mixture of BASIC and Assembly code languages, and the Commodore 64, which had increased memory in comparison to earlier computers, also featured the SID chip, which essentially made the computer a synthesiser, leading to much

more experimentation with game soundtracks. The style of music being referenced in many contemporary 'Independent Style' games can be traced back to the capabilities of the SID chip and the resulting experimentation with music in Commodore 64 games. (*From Bedrooms To Billions,* 2014)
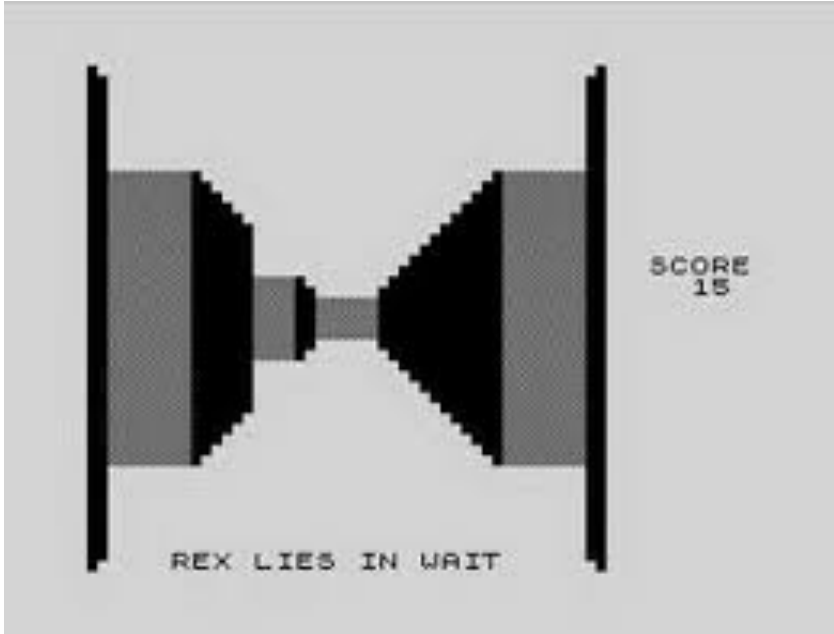

Figure 5: 3D Monster Maze gameplay 1 (Game Set Watch, 2006: online)
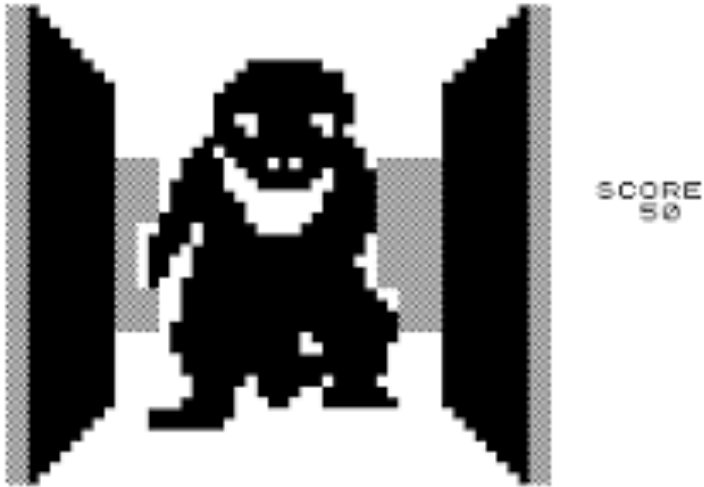

Figure 6: 3D Monster Maze gameplay 2 (ZX81 Stuff, no date: online)

Despite the technical limitations of the ZX81, however, it is possible to trace examples of current video game tropes back to early hobbyist games. For example, while the first game to use a first person perspective was the racing game *Night Driver* (1976), the use of this perspective in Malcolm Evan's ZX81 game *3D Monster Maze* (1982) (see Figures 5 and 6)*,* in which the player must navigate maze-like corridors and overcome obstacles in the form of 'monsters', bears some resemblance to later first person action games such as *Doom.*

As the technology used to create games became more advanced and allowed for more to be included in the game, team-built games made by people with particular specialisms became more common, with *From Bedrooms to Billions* suggesting the tendency for developers working with the Spectrum to enlist help with graphics and artwork as the start of this trend. This is a trend that has continued and intensified over time in larger scale commercial game development. As was discussed in the literature review in reference to Martin and Deuze's writing on "hierarchical" structures of game production, it is difficult for a worker creating this type of game to have a sense of ownership or creative autonomy over the finished game when it is not always clear where their individual work fits once it is "subjugated into the greater product vision". (Martin and Deuze, 2009: 286). As game teams grew, it also became more difficult for bedroom coders to make a profit from their games without more widespread distribution.

Anthropy notes that "Distribution - whether it's intended to make a profit or not - has been the major problem of most small game creators". (Anthropy, 2012a: 35-36) However, some hobbyist and bedroom coders made use of alternative methods of distribution, sometimes using these alternative distribution methods to try to make a profit but also sometimes to distribute their work for free. The example of shareware has been discussed above. Another example of these alternative distribution models is freeware, where full games are given out free of charge with the cost of manufacture taken on by the developer and often the code being made available to edit and build upon. Some developers used variations on freeware such as 'beerware' and 'pizzaware', where software or elements of code are given out on the informal understanding that if the player ever meets the developer they will buy them a beer or pizza. For some coders, these 'otherware' licensing arrangements were deceptively ideological. For example, while not written by a game developer, a well-known example of a

beerware licence that is often appropriated by coders is Poul-Henning Kamp's (no date: online) "Beer-Licence (Revision 42)":

> THE BEER-WARE LICENSE" (Revision 42):
> <phk@FreeBSD.ORG> wrote this file. As long as you retain this notice you can do whatever you want with this stuff. If we meet some day, and you think this stuff is worth it, you can buy me a beer in return Poul-Henning Kamp

For Kamp, these types of licences were a response to an ongoing legal debate within the coding community around the best way to release software or code for free that can then be built upon and commercialised by others. Kamp writes "I have had it with lawyers trying to interpret freedom. If I write software which I intend to give away, I don't want to have to stick several pages of legalese on it to make sure nobody exploits it". (Kamp, no date: online) Kamp has stated that as he sees his beerware licence as an answer to this question, the phrase "Revision 42" within the licence is a reference to the book *The Hitchhikers Guide to The Galaxy*, in which the answer to the "Ultimate Question of the Life, The Universe and Everything" is the number 42. (Lin, 2014: online)

While these games were sometimes distributed physically, this did require capital for manufacture. Some hobbyists and developers of smaller games found a solution to this problem in the form of the Bulletin Board System (BBS), a "public online space" that grew from the 1970s to 1990s, and which was accessible through a landline to those with a computer and a modem and allowed users to upload or download files, including games. (Anthropy, 2012a: 36) This was digital distribution of games, which played a major part in the mid-2000s indie cycle, in its earliest form, and it was used to distribute demos of shareware games, as well as other types of so-called 'otherware' games such as the examples mentioned. The games distributed through BBS were in many cases very different in nature to the types of games available through physical retailers, especially as regulation, cost of production and the risk associated with releasing a game all increased in the console market following the rise of Nintendo. An example given by Anthropy is that of *Evolve! Lite* (1993)*,* made by Matt Bace and Mike Wall, in which the player creates a digital creature with different characteristics and must then survive for long enough to mate, at which point the 'DNA' of the creatures is passed on but with random mutations that could be beneficial or

detrimental to the next generation's continued survival. In Anthropy's words, the game "provides a working model of evolution". (Anthropy, 2012a: 37) In gameplay and content, this game is very different to the platform games and action games that were the commercially dominant genre in the early 1990s. (Reeves, 2012) However, the low speed and high cost of internet access, with most providers still charging by the minute, meant that access to this early digital distribution was limited. Shareware games were also distributed as free attachments on games magazines, and the same magazines would advertise companies offering other games via mail order. (Cobbett, 2013)

Guevara-Villalobos states "computer games constituted a space for exploration and artistic expression". (Guevara-Villalobos, 2013: 99) While it is possible to see significant elements of design, content, and distribution that mark hobbyist computer games as a counter-trend to the dominant commercial trends of the industry, as in the example of *3D Monster Maze* and *Evolve! Lite,* it would be overly simplistic to assert that regulation and publisher involvement in the console market since the NES has always acted to restrict the creative autonomy and independence of developers. One example that demonstrates why this may not be the case is the Sony's Playstation console, and their consumer-facing development kit for said console, Net Yaroze.

2.6 Sony Playstation and Net Yaroze

Partly as a result of a dispute between Nintendo and Sony following the break down of a partnership between the two companies (Kent, 2001; Donovan, 2010), Sony entered the games console market in 1994 with the release of their Playstation console. A number of factors allowed Sony to gain a foothold in the console industry with the Playstation at a time when the industry was dominated by Nintendo and Sega. They had an unprecedented marketing budget of $2 billion, the console cost much less than other consoles with similar technological capabilities, specifically Sega's Saturn, and the console utilised CD-ROMs rather than cartridges, which were much cheaper to manufacture and allowed for comparatively advanced 3D graphics, high quality sound and full-motion video. (Guevara-Villalobos, 2013) Another important factor was the scaling back of some of the measures discussed above that were put in place by Nintendo in the aftermath of the US games industry crash and had been,

to varying extents, replicated by other platform holders since. For example, Sony charged far lower fees to make games for the console than other platform holders and did not impose any restrictions on developers in terms of the number of games they could develop. (Guevara-Villalobos, 2013) Sony gained a reputation as a developer-friendly platform holder, resulting in a larger catalogue of games for the Playstation than their competitors, as a result of many of the factors already stated but also by providing developers making games for their platform with a series of development kits offering technical support. The UK-based developer Psygnosis, who made the popular *Wipeout* games and were bought by Sony in 1994 to act a first party developer, created the first of these. (Donovan, 2010)

These professional development kits were essentially an exclusive form of 'middleware', or "software that enables a studio or team to create an [sic] game product without having to start from scratch". (Martin and Deuze, 2009: 281) Middleware is used by many developers of indie games to reduce the cost of creating an entirely unique game engine and assets, and the use of such technology is one distinguishing factor between a lot of AAA games and indie games, although as Hoogendoorn notes, not all AAA developers create their own engine and some indie developers may choose to create an engine as it can then be sold on to other developers as middleware. (Hoogendoorn, 2014) While developers making use of Pysgnosis' kit, and others released by platform holders since, arguably lack independence in the sense that they are reliant on the platform holder who provided the kit, the ability to build upon existing assets rather than building them from nothing opens up new creative avenues to those with limited resources.

Psygnosis' development kit was aimed at professional game developers, but Sony also released a consumer-facing software development tool aimed at non-professional game creators. Net Yaroze was released in 1997 and allowed owners to create their own games for the Playstation by connecting the system to a PC. It was commercially available, although somewhat more expensive than a Playstation console at £550. Net Yaroze developer Chris Chadwick argues that the cost of the system was the main barrier that prevented Net Yaroze from becoming more widespread and eventually led to the end of the system. (Chamberlain, 2015) However there were still roughly one thousand sold in Europe alone (Owen, 2013) and a series of price cuts eventually reduced the price to about half its original cost.

(Chamberlain, 2015) There are also numerous reports from developers that they bought a Net Yaroze but their credit cards were never charged or cheques never cashed by Sony. Presumably an oversight on Sony's part, this meant Net Yaroze was given away for free to many developers. (Szczepaniak, 2012)

While publisher-backed, consumer-oriented development kits such as Microsoft's XNA (2005-2014) would become more common with the rise of digital distribution and the increased need for IP that came with this, at the time this was less common, and despite being endorsed and supported by one of the biggest publishers in the industry, Net Yaroze development in some ways ran counter to the dominant industry practices of publisher controlled console development where for most people "games and game development became a mysterious, closed system". (Smith, 2015: online). Paul Holman, head of Sony's UK Net Yaroze division, has said that for him the system was about allowing a new generation a similar experience of creating games to that available in the late 1970s and early 1980s with personal computers such as those discussed above. (Szczepaniak, 2012)

Smith has pointed out the contradiction between the content of Net Yaroze games, which he describes as feeling like a form of "outsider art", and the fact that it was Sony, one of the largest publishers of video games, who created and supported the initiative. (Smith, 2015: online) However, while Sony provided a means to create games, as well as a private social networking site where each developer had their own page so a community of developers could be established, they did not at first support the developers with any infrastructure through which to distribute the games to the public. While internet speeds at the time made downloading games online very time consuming, developers could share games through the Net Yaroze forums with each other, although only fellow developers who owned a Net Yaroze would be able to play them. The forums were also isolated by region, so there were separate EU, US, and Japanese communities. The general public could not play these games until Sony began to include some of the games as 'Demo discs' with their *Official Playstation Magazine*.

Analysis of some of the games created using Net Yaroze reveals many similarities to later indie games. *Psychon* (1998)*,* created by Ben James, is a 'top down' shooting game that is

somewhat similar in graphics and gameplay to the later indie franchise *Hotline Miami,* but also similar to earlier games such as *Metal Gear* (1987) or *Smash TV* (1990). With the 3D graphics now allowed by the Playstation and its competitors, this 2D perspective was no longer common. Camper has argued that later indie games often feature design that is an innovation from "ancestors" rather than "direct parents". (Camper, 2009: 187) This is evident earlier than the indie games Camper is discussing in Net Yaroze games such as *Psychon,* which may not compare favourably in some respects to the bigger budget games of the time, but when understood in relation to the earlier games they are referencing could be said to contain innovations. Similarly *The Incredible Coneman* (1998) and *Haunted Maze* (1998) are in some ways clones of the game *Pac-man* (1980), but they both add a 3D perspective that would not have been possible when *Pac-man* was made. *Ping Ping* (1998), an update on *Pong* with added colour, a different perspective, and mechanical advances from the original game such as it being possible to rotate the panels, is also building on an earlier game. Perhaps the most developed example of this style of Net Yaroze game was *Timeslip* (1999)*.* This was a 2D platform game, which was a genre that had been popular in the early 1990s but with the advances in 3D graphics on consoles had gone out of fashion. (Reeves, 2012) However the game adds a number of gameplay mechanics that allow the player to manipulate time in a variety of ways, which the player is required to do in order to solve puzzles and progress through the game. It is similar in this respect to Jonathon Blow's *Braid* (2008), one of the subjects of *Indie Game: The Movie*.

Other Net Yaroze titles referenced games in different ways. *Blitter Boy* (1998), for example, references well-known iconography from earlier games, featuring ghosts as enemies that seem to be a reference to the ghosts from *Pac-man*. The use of video game iconography from other games assumes an audience with a shared knowledge of those games, and can perhaps be explained by the fact that the game would have been created under the assumption that Net Yaroze games can only be played by fellow developers. *Adventure Game* (1999) repeatedly breaks the fourth wall, with dialogue regularly referencing the fact that the characters are aware they are in a video game. For example, at one point the playable character states his mission as being to "Break out of this dodgy game", at another he refers to himself as a "computer character" and at numerous points throughout the game characters complain about "the programmer" and about flaws with the game's design.

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Gravitation (1998)*,* meanwhile, visually seems to be evoking the early 1980s trend of action games set in space that followed *Spacewar*, *Galaxy Game* and *Computer Space*. The spaceship controlled by the player closely resembles that of *Asteroids* (1979). It did not need to do so- the same technological limitations did not apply to the developer on a Net Yaroze in the mid-1990s as did the developer of *Asteroids* in the late 1970s. *Gravitation* is an example of the 'Independent Style' referred to by Juul, but evident before the games Juul uses as his object of study. While visually *Gravitation* may look similar to *Asteroids,* the visual style changes meaning in games made so far apart with completely different technology. Brett Camper proposes a different interpretation of this type of "retro styled" aesthetic in many later indie games, arguing that they are a "response" to publishers using digital distribution to re-package their back catalogue. (Camper, 2009: 169-170) While the continued availability of older games on new platforms may have helped to validate a particular visual style, many Net Yaroze games demonstrate that independent developers were using a similar visual style long before digital distribution was a viable means for publishers to profit from their old games.

Smith argues that Net Yaroze "occupies an interesting, conflicted place in gaming history" as it "launched at a time when hardware and publishers were pulling the ladder up on development, when the closed ecosystem of consoles was encroaching rapidly on the open PC. But it was also a progenitor… of how console brands would eventually circle back around and clear room for independents in the mainstream." (Smith, 2015: online) Chamberlain concurs that "The developers on the Net Yaroze were the vanguard of console indie development as we recognize it today" as well as that the system represented "a commitment from the world's largest console developer to foster future talent by way of building a thriving indie scene." (Chamberlain, 2015: online). A close analysis of some Net Yaroze games reveals many similarities to the indie cycle of games that is suggested, by Donovan and others, to have emerged from the mid 2000s onwards. (Donovan, 2010) Supported by a large publisher but with relative creative autonomy in comparison to big budget game development of the time, with mechanics that are building on older genres and tropes rather than current dominant industry design trends, and often self reflexive in the content and design- the games created by Net Yaroze developers are indie games before

indie games became a commodified entity. The key difference is that Net Yaroze developers had no viable digital distribution channel through which to release their games commercially.

2.7 Direct predecessors to indie games

As discussed at the start of this chapter, accounts of the history of games seem to suggest a gap in independent development between the decline of BBS and shareware in the mid to late 1990s and the rise of digital distribution and the commodified 'indie game' in the mid 2000s. (Donovan, 2010) Tairne staes that "For about a decade, the bedroom developers all but vanished", and argues that this supposed "gap" happened because "the Internet hit the mainstream" and "bulletin boards dried up, as did their ratio-based uploading, so there was no distribution", as well as attributing it to the increase in file sizes and complexity and expense of development with the proliferation of 3D graphics cards. (Tairne, 2013:online) However, in the example of many Net Yaroze games, it can argued that games with many similar characteristics and with a similar production context to later indie games existed in the late 1990s, and other independent game production took place between the mid 1990s to the mid 2000s that suggest this gap did not exist. In fact, the Independent Games Festival, which continues to this day, began in 1999. Games made using what will be referred to as 'game making tools', or tools designed to "minimize, if not obviate, the need for coding entirely" (Anthopy, 2012a: 25), are also evidence against this idea of a 'gap' in independent game development.

A trend for this type of game making tool first began to emerge in the 1980s, possibly as a capitalisation from publishers on the popularity of hobbyist game creation at the time. For example, Electronic Arts' *Pinball Construction Set* (1983) and *Adventure Construction Set* (1984), Activision's *Garry Kitchen's GameMaker* (1985), Sensible Software's *Shoot-'Em-Up Construction Kit* (1987) and Livesay Technologies' *Arcade Game Construction Kit* (1988). These early game making tools were essentially 'level editors' of varying degrees of customisability, ancestors to games such as Sony's *LittleBigPlanet* (2008) and Nintendo's *Mario Maker* (2015). During the "gap" proposed by Tairne, online communities of hobbyist developers were making games using more advanced game making tools such as RPGMaker, Official Hamster Republic Role Playing Game Creation Engine (OHRRPGCE) and GameMaker.

One possible reason that there may be a perception of a lack of independent game development during the late 1990s to mid 2000s is that these hobbyist game development communities were fragmented in the years prior to the commodified indie game. As with Net Yaroze games until they were integrated into demo discs, games made on these game making tools were normally not played by people other than the fellow users of that tool, and the games would be distributed and in a sense marketed by word of mouth on the forums of that tool's website. There was a community of independent developers using GameMaker and a separate community of developers using RPGMaker, for example. (Yu, 2010) Another, less isolated, form of independent development during this time period were games made using programs such as Adobe Flash that could be played over the internet in the user's browser. Sites such as Newsgrounds posted these games, and developers were even able to make a profit through advertising space on the webpage. (Anthropy, 2012a) A number of blogs covering alternative games began to emerge in the mid-2000s, such as *TIGsource*, *IndieGamer*, *Game Tunnel*, and *DIYGames*, the forums of which helped to bring together some of the fractured communities of hobbyist gamers in shared online spaces. (Yu, 2010)

Donovan describes a situation in the mid 2000s where a spate of developers working for publishers in a sense followed the Activision path of splitting off to form their own companies after seeing an alternative route to market, specifically the spread and increased viability of digital distribution platforms. (Donovan, 2010) However there were small-scale developers before this trend arose and developers such as 2D Boy went this route, such as the UK based Introversion. A post by Introversion co-founder Chris Delay on the company's website from December 2001, two months after the company founded, shows Delay describing Introversion as "the last of the bedroom programmers". (Delay, 2001:online) As Newman has explored in relation to indie cinema, "indie culture… derives its identity from challenging the mainstream". (Newman, 2009: 16) This problematic notion of indie culture as oppositional will be examined more in the next chapter, but is mentioned here as Delay marketing the company on its differences from other modes of production is a sign of the indie games that are more clearly established in the mid 2000s beginning to emerge in the marketing of certain games in 2001. Delay also requests that fans help the company to spread the word of

their game *Uplink* (2001) by contacting major gaming websites of the time, suggesting that a fan base is beginning to congregate around these types of games. (Delay, 2001)

The example of Introversion is also a useful one as it shows the difference digital distribution made to small-scale production of video games. The company's co-founder Mark Morris describes a situation where, as an independent company, there was no viable digital distribution, and so they were having to search for a way to meet an order of thirty thousand physical units of their game, but that Valve opening up their digital distribution platform Steam to other developers' games was the point for Introversion when digital distribution became viable. (Donovan, 2010) In addition to Valve's Steam, other digital distribution marketplaces emerged in the mid to late 2000s, such as IGN's Direct2Drive, Stardock's Impulse, Microsoft's Xbox Live Arcade, Nintendo's eshop, Sony's Playstation Network, and numerous online marketplaces on smart phones and tablets such as Apple's App Store. A viable method of digital distribution is the key difference between pre-indie games and indie games, rather than necessarily a change in the games themselves. Lipkin argues the "absence of a commodification platform" before high speed internet "left such games little chance of popularity". (Lipkin, 2013: 16) A proliferation of digital distribution platforms far increased the games' reach, allowing them to break into the public consciousness and establish a larger fan base. Like the blogs mentioned above, digital distribution platforms also assisted in bringing a fractured online community of hobbyist developers together into shared online spaces with each other and with players. Lipkin argues that a "subculture of fans is a structural necessity to the existence" of an indie movement in any media, and these shared online spaces allowed such a subculture to develop. (Lipkin, 2013: 13)

2.8 Conclusion

This chapter sought to contribute to answering the question 'What is an indie game', contextualising the modern indie game by investigating the history of independent video game production in the UK and USA from the 1970s to the modern day, with reference to how changes in technology have shaped independent video game production over time. In conclusion, it is possible to see examples throughout the history of the video game industry of 'independent counter trends' to the dominant industry practices of the time. Before the

games industry was established, accounts of the production of *Spacewar* suggest the game's makers were operating collaboratively with creative autonomy from their funding institution MIT, but that the size and cost of the computers of the time prevented any form of distribution of the game. Nolan Bushnell's *Computer Space* was made with creative autonomy from financiers, but this lack of capital investment during the development process of the game could be argued to have restricted the choices that could be made by Bushnell, and accounts suggest the finished game was a compromise in a number of ways due to the expense of the technology that would be required to meet Bushnell's initial vision. The Atari developers who went on to form Activision did so as they felt a sense of ownership over the games they were creating for Atari that was not reflected in their remuneration for commercially successful games. Atari's marketing and branding emphasised quality, trust and the reputation of the game's authors. The result of legal disputes between Activision and Atari resulted in the Atari 2600 essentially being made an open platform, leading to a spate of third party developers creating games for the Atari 2600. These could be considered the 'first wave' of indie. However, the saturation of the market with games of varying quality, both from indies and Atari themselves, caused in part by a lack of control by Atari over their own platform, led to a loss of consumer trust in the games industry in the US and to the market crash.

In the UK over the same period, a trend for hobbyist, or 'bedroom', coding had emerged as a result of a new generation of home computers being available at far reduced cost to earlier computers. Magazines aimed at this market emerged, printing lines of code for the users to practice creating games, and some of these systems came with an instruction manual teaching the user how to code. Consumer game making tools aimed at this market also emerged, further fuelling this rise in hobbyist development. While the rise of Nintendo and the increasing regulation, cost and risk of development, professionalisation, and restrictions on game makers' creative autonomy that this represented made game development for home consoles more closed off to smaller-scale game development without publisher support, bedroom coding for PCs runs as a counter trend to this change in the console market, with alternative distribution methods such as shareware and BBS allowing bedroom coders to reach an audience, albeit a limited one unless they were willing to go the route of becoming a publisher themselves.

While changes in the console market listed above became exacerbated over time, this is not necessarily a linear progression from complete independence of developers to complete publisher or platform holder control, as the example of the original Playstation shows. With the Playstation, Sony scaled back many of the measures put in place by Nintendo in the aftermath of the console market crash in the US, in many senses giving control back to the companies who made the games. However, the cost of producing games on the latest technology and the changes in the industry since the mid 1980s meant that it was the by now entrenched developer-publisher model, rather than necessarily the measures put in place by the platform holder, that arguably restricted the independence of the developers.

From the late 1990s to the mid 2000s, shareware games and BBS declined. Meanwhile the console market increasingly became closed off to small developers as the costs and risks of producing a game increased with advances in technology, and the publishers solidified their positions as a result. However, independent game production continued in the form of games using Sony's consumer oriented development kit Net Yaroze and other game making tools such as Game Maker and RPGMaker. There is a large body of literature on the practice and motivations of modding and modders that place an in depth investigation into the history of the practice beyond the scope of this thesis, although the subject will be discussed briefly in Chapter 4 in relation to *Hotline Miami*. However a study of the history of independent game development would be remiss to not briefly mention that independent production also existed before indie games in the form of player-produced modifications of existing games, sometimes encouraged by the company behind the game, as with the *Civilization* franchise, but sometimes 'hacked' and not endorsed by the original game's publisher.

This varied hobbyist development took place in fragmented online communities around specific tools or, in the case of modding, the specific game. Independent development also existed in the form of browser games. The success of some small developers in the early 2000s such as Introversion, who marketed themselves in opposition to dominant industry practices, as well as the introduction of a number of websites covering alternative game production, and the rise of digital distribution platforms, began to bring these fragmented

communities together. As digital distribution became a more viable route to market with the introduction of higher speed internet, and following some early successes, dissatisfied developers working within publishers saw an alternative and companies such as 2D Boy were founded, made up of developers who formerly worked for large publishers making smaller scale games with the intention of distributing them digitally.

However, 'indie game' became a nebulous phrase. A particular visual style referencing earlier means of production was used by some indie developers, or 'Independent Style' as Juul has labeled it. When this style became an established signifier of 'indie' or authenticity, it could be and was used, some argue 'co-opted', by large publishers to make lower cost content for their digital marketplaces and to develop new ideas and talent in a lower risk context. (Lipkin, 2013) Indie also became harder to pin down to a simple definition as games emerged that did not fit this 'Independent Style' but were sold as somehow different to a notional mainstream, even when they had actually been funded by the publishers who represent said hypothetical mainstream. Examples of this type of indie game include *fl0w* (2006), *Flower* (2009), and *Journey* (2012), made by Jenova Chen and his company Thatgamecompany but distributed and funded by Sony. These games will be the focus of the next chapter.

3. PUBLISHER-FUNDED INDIE

The aim of this chapter is to investigate the conflicting definitions of indie in academic writing on video games and other forms of media. In order to do this, the chapter will focus on the Playstation 3 games *flOw* (2006)*, Flower* (2009)*,* and *Journey* (2012)*,* all of which were created by Jenova Chen and his development company Thatgamecompany (TGC). Hoogendoorn argues that three classifying forces determine whether a game is indie- the developers, the publishers and the audience. (Hoogendoorn, 2014) There are examples of all three of these forces classifying the work of Jenova Chen as indie. Chen has described himself and his work as indie. (Smith, 2012; Takahashi, 2013) The games have been included in sales on Sony's online Playstation Store, categorised as indie. There is also evidence of games being categorized as indie in audience discourse online. For example, they have been included in lists of the best indie games on video game websites. (Gamespot, no date) However, the development of the games was actually funded by Sony, one of the largest publishers and platform holders in the industry, and as a result the games are not 'independent' in terms of finance, and in fact are legally the intellectual property of Sony rather than Chen or TGC. (Martin and Deuze, 2009)

This chapter will consider in what sense these games, and by extension other publisher-funded games that have been classified as indie games, can be considered indie, looking at the industrial context of the games' production, the content of the games, issues of aesthetic and style, and issues relating to the games' audience with reference to Bourdieu's arguments on the subject of taste. The chapter will draw on the conclusions of writing about indie in other media, primarily the writing of Newman on American indie cinema, an area that shares similar contradictions in terms of financing and perception with indie games. In preparation of this chapter interviews and talks by Jenova Chen have also been compiled and studied, in order to better understand Chen's intentions, his perceptions of his own work, the production processes, and financial and other industrial pressures. These sources will also be referred to where relevant.

While an earlier version of *flOw* was originally created using Adobe Flash as part of Chen's Masters thesis and released online, Chen then signed a three game contract with Sony and a

new version of *flOw*, and later *Flower* and *Journey*, were developed and released under this contract. Newman argues that as with indie music, tracing indie cinema to it's origins reveals that a defining element was a perception of "artistic authenticity contingent on the autonomy of its production from major media companies, and as such was distinctive as a cultural genre defined as much by industrial criteria as textual features" but that over time "a distinct form of cinema and a promotional discourse supporting it" emerged so that now "independent cinema describes aesthetic and social distinctions as often as industrial ones" and "is a matter of cultures of consumption as much as those of production". (Newman, 2011: 5-6) The same can be seen to be evident of indie games. While the example in the previous chapter of Introversion operating as an independent in the early 2000s, and later companies such as 2D Boy breaking away from the large publishers to become financially independent from them, suggests the indie games movement began with economic freedom from publishers as an important distinguishing feature, Chen's three games discussed here were made under contract to Sony with their financial assistance, and so it is not possible to understand them as indie based purely on their "economic category". (Newman, 2011: 8)

Furthermore, if industrial context were the only means of categorising indie then Chen's games are not indie but the games of Bungie, the game development studio behind such blockbuster, or AAA, titles as the *Halo* franchise could be considered indie as Bungie bought a majority of their shares in 2007, taking "full control" of their company from their owners Microsoft. (Martin and Deuze, 2009: 276) There is anecdotal evidence from developers making Playstation exclusive indie games with funding from Sony that the company are very hands off during the development process, so the idea that accepting funding from them to make a game and results in automatically surrendering all autonomy over the game is an overly simplistic one. For example, Sean Murray of the UK based developer Hello Games, currently developing the high profile indie game *No Man's Sky* (forthcoming), claims that in his experience Sony "don't want to get involved", and that "the idea of them fixing something on the game terrifies them". (Diver, 2016: 26) However, the very act of acquiring funding from a publisher and being under contract to them can have an influence on developers even if said publisher is not actively involved in the day to day process of making the game. For example, Chen has acknowledged that the "small scope" and length of *flOw* "helped reduce the risk and concerns from the publisher". (Samyn, 2008: online)

While Newman's analysis of indie cinema is more concerned with 'textual features' than industrial ones, he acknowledges that there can sometimes be differences in terms of economics in comparison to other films, such as the average cost and length of production and marketing budgets. With this in mind there may still be a distinction to be made in terms of the industrial and economic context between the production of Chen's games and the production of AAA games. While *flOw*, *Flower* and *Journey* were all made with financial investment from Sony, and the IP is legally owned by Sony, the production process was limited in terms of budget and resources. Chen has spoken of how he kept the team size of *Journey* to a maximum of thirteen at any one time as a smaller team is "easier to direct" (Smith, 2012: online) but that despite the small team in comparison to AAA development, TGC went bankrupt during the production of *Journey.* (Takahashi, 2013) A comparison of the resources available to TGC or the team sizes during development against that of a particular AAA game such as *Halo* may reveal differences in terms of the industrial and economic context, but there would be problems with attempting to understand the games as indie in this way. For instance, at what budget or team size does the game stop being indie? Having completed the production of *Journey* and fulfilled their three game contractual obligation to Sony, Chen's company acquired $5 million of funding from Benchmark Capital, a venture capital firm who provided funding to eBay and Instagram. (Warren, 2013) If there is a limit to the budget that can be spent on a game and it still be considered indie then it may be that TGC's next game is not considered indie, regardless of the game itself, simply because of the budget. This is despite TGC now literally being a company making games independently of Sony.

With the above in mind, it may be more useful to look outside the "industrial definition" of indie to the idea of these three games as a part of a particular "cultural category" of indie, defined by textual features and cultural discourse. (Newman, 2009: 17) Beginning with the aesthetics of the games, Juul writes of an 'Independent Style' identifiable in many games, in which "contemporary technology" is used "to emulate low-tech and usually 'cheap' graphic materials and visual styles", originally as a way to make a virtue of games made with limited resources but eventually becoming an established visual style in its own right. (Juul, 2014: online) In the Literature Review of this thesis, an extended definition of this Independent

Style was proposed, encompassing other aesthetic qualities of games as well as just the visual. Juul himself states that this notion is not an attempt to account for all indie games, and indeed none of Chen's games are Independent Style because, as Juul has noted of Journey, they do not "remediate any earlier visual style". (Juul, 2014: online) *flOw* is aesthetically somewhat abstract. The player controls what appears to be a sea creature of some kind, and must eat other creatures in order to evolve and progress. The creatures appear as if they are omitting light against mostly blank backgrounds, and ambient chimes can be heard as the player eats other creatures. *Flower* is less abstract, at least in terms of its visuals, in that it is clearer what is being represented on screen. In it the player controls the wind, and must amass petals from particular flowers in order to bring a meadow to life and progress to different areas. As the game progresses, the peaceful, calm meadows and blue skies of the earlier levels are gradually replaced with darker, increasingly urbanised environments. *Journey* features vast expanses of desert and increasingly volatile atmospheric conditions that create emotion and mood, and build tension as the game progresses. While the games look quite different on the surface, there are aesthetic similarities. Chen has stated in relation to designing his games that "the design is perfect when you cannot remove anything else" and that less "clutter" means that "the voice of your work is more coherent." (Smith, 2012: online) All three of these games share a minimalism in design, but while this could possibly be said to make them distinguishable as Jenova Chen games, this does not account for why they are considered to be indie games. Despite a particular 'Independent Style' being identifiable in some games that have been classified as indie, as with indie cinema there is not a "unified aesthetic" that unites all indie games. (Newman, 2011: 21)

However, there may still be elements of form that factor into these games being considered indie. Newman argues that indie audiences, a category in which he includes the creators of indie films, "share viewing strategies for thinking about and engaging with the texts- they have in common knowledge and competence". (Newman, 2011: 11) Newman lists a number of viewing strategies, most relevant here is "the viewing strategy of finding in the forms of indie films an invitation to play, of seeing unconventional or prominent formal appeals as game-like" (Newman, 2011:16). Newman uses 'play' here to refer to a type of active spectatorship in which the audience's pleasure is in part derived from making use of their pre-existing knowledge of other texts and of the medium more generally, in order to feel a

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deeper appreciation of the text in some way. Many indie games share an added level of play with indie cinema, on top of the literal gameplay involved in manipulating the on-screen events. A game does not need to be Independent Style to be a 'game about games', as can be deduced from interviews with Jenova Chen in which he discusses his inspirations and intentions when making his games. He often explains his games in relation to what they are not. In an interview with the website Gamespot, for example, he explains that *flOw* was intended to induce "a sense of peace, tranquility, and meditation" because "so many games are about violence, racing, competition…". Of *Flower*, he states "because so many games are about destruction, we wanted to evoke a feeling of life-giving", while in relation to *Journey* he explains "We looked around and saw that most of the console's online games are about killing each other or killing something together. Therefore, we felt that rather than having a game where other players are hostile and rude… you could potentially make a friend and an emotional connection". (Leo, 2012: online) While the games may also be about other things, they are in part about other games, in the sense that they are a reaction against a perception of popular games of the time.

For Newman, who applies Bourdieu's conclusions on taste to an analysis of indie cinema, there is a "contradiction at the heart of indie culture" that may be evident within these interviews with Chen, in that while indie "derives its identity from challenging the mainstream", and "counters and implicitly criticizes hegemonic mass culture, desiring to be an authentic alternative to it", it is simultaneously "a taste culture perpetuating the privilege of a social elite of upscale consumers". (Newman, 2009: 16-17) Studying Chen's interviews and talks, it is possible to see a shift in his position over time in relation to this notional mainstream. In a 2008 interview for the games website *Tale of Tales*, Chen makes repeated reference to mainstream games, for example he describes himself as "a long-time gamer who is nearly bored with most of the mainstream games on the market", and he describes the "emotional differences" of his games "in contrast to mainstream games". (Samyn, 2008: online) In 2012, following the commercial and critical success of *Journey,* he was interviewed by trade website *Gamasutra* and asked if he would ever be interested in making a mainstream game. The interviewer writes that he became annoyed and asked "What is mainstream?" (Smith: 2012: online) Even later, in a talk at the Independent Games Summit Soapbox at GDC2015, Chen talked of the limited range of emotional fulfilment offered overall

by games as a medium, a common theme in his interviews and the mission statement of TGC, and argued that rather than being a niche concern, indie games are broadening the appeal of games as a medium as at present "games are not mainstream". (GDC, 2015: 6min 13) There is a shift in position evident here- in 2008 Chen saw himself and his games in terms of how they are different to a perceived mainstream of games, but by 2015 Chen is looking outside games to a mainstream that he perceives as being shared with other forms of entertainment. Furthermore, rather than setting himself and his games against this perceived mainstream, Chen's recent interviews and talks suggest he is pre-occupied with broadening the appeal of his games. For example, Chen has spoken of studying the history of Disney while considering his follow up to Journey and seeing "a big vacuum in the market" for something similar in games. (Warren, 2013: online) The idea that in video games, the most commercially successful titles are limiting the potential appeal of the medium, while the range of different emotions and experiences offered by indie has the potential broadest appeal, is an interesting notion that will be unpacked more below.

Newman argues that the mainstream does not have a fixed definition, and is "a fluid, relational category whose critics construct it as an Other to justify their investment in their own subculture" and that "Belief in its own distinctness from the mainstream sustains the indie community and makes it cohere". (Newman, 2009: 20) While it is possible to see Chen's perception of this notional mainstream shift over time, what is nevertheless evident in the above suggestion that games can offer a wider range of emotions to those currently on offer is "The oppositional stance that defines indie culture", which Newman argues is "a means by which its audience asserts its superior taste". (Newman, 2009: 22) This sense of one's self, work and consumption as in some way 'oppositional' to dominant industry practices, whether justified or not, is an important element that explains why some games are accepted as 'indie' and some are not regardless of the context of their production and their relationship to a publisher.

However, the idea that the work is oppositional, or that there is a particular "Indie spirit" (Diver, 2016: 29) or "ethos" (Lipkin, 2013: 14), could be understood in the terms of Bourdieu as indie culture functioning as a form of distinction, denigrating "lower" or "natural" enjoyment while implying "an affirmation of the superiority" of those who require more

"distinguished pleasures". Bourdieu argues this practice is the reason art and consumption of culture fulfills the "social function of legitimating social differences". (Bourdieu, 1984: 7) Bourdieu's conclusions are particularly relevant to this study of indie games as they have been influential in studies of indie in other media. For example, Newman works with these conclusions in relation to how indie functions in cinema, arguing "by seeing independent cinema as the alternative to Hollywood films, the indie audience makes authenticity and autonomy aesthetic virtues that can be used to distinguish a common mass culture from a more refined, elite one". (Newman, 2009: 22) In relation to video games, Hoogendoorn has also used Bourdieu's arguments on taste as a framework for understanding the audience's relationship with indie games, reaching many of the same conclusions as Newman did in relation to indie in cinema. (Hoogendoorn, 2014) This explanation of indie as being defined by a self-perception from the audience and creators of themselves being in opposition to something accounts for a lot of indie but is not all-encompassing, and the next chapter will in part discuss a number of examples of game development that are financially independent of publishers but may be lacking this self-perception, for example so-called Triple I developers who are attempting to create AAA-like content in an independent production context.

Lipkin has argued that the notion of independence has been co-opted by the mainstream, removing the "political potential" of independence from dominant industry practices. (Lipkin, 2013: 8) Newman, working with Bourdieu's terms, argues that the problem with the idea that "supposedly authentic indie culture" is being co-opted is that "it gives too much uncritical credibility to the 'authentic' subculture, failing to identify its function in maintaining class distinction" and "misrecognizes the relation of indie culture to commercial culture as one of actual autonomy" (Newman, 2009: 33). While it is important not to overstate this point and apply it to all indie games, it would seem that Jenova Chen has actually made the games with a larger degree of creative autonomy than higher budget games made with larger teams under "hierarchical production methods" where, as teams get bigger, the work of the individual becomes "a smaller and smaller part in the overall project" and as such "the independent work of the individual becomes subjugated into the greater product vision". (Martin and Deuze, 2009: 285-6) The largest production out of the three games Chen made under his contract to Sony was *Journey,* and during the development of this game Chen worked with a team of no more than thirteen because, as noted above, he

believed a smaller team to be easier to 'direct'. Other interviews with Chen reveal games made collaboratively but working towards his vision and betraying his influences. For example, Chen has stated that *flOw* is a response to the writing of Mihaly Csikszentmihalyi, while Journey is his attempt to retell Joseph Campbell's Hero's Journey. In contrast to a lot of AAA games, Chen's games are authored texts made by a small team under the 'direction' of a creative lead who is close to the development process and attempting to realise a particular vision.

However, an area where it is clear from interviews with Chen that working with a publisher removes control from indie developers is in the marketing of the game. Chen has stated of his relationship to Sony "When you work with a giant publisher, you can control what's in the box, but not what's outside. You can't control how it's marketed, only what's inside of the game." (Warren, 2013: online) It is here that the publishers as, in Hoogendoorn's terms, a 'classifying force' can commodify indie and make it a saleable brand, and in the case of Chen's games, the games are made for Sony who then own the intellectual property. While Chen and TGC may feel a sense of ownership over the game, and there is a royalty system once the games break even so they are invested in the game's commercial success, they do not legally own the finished game. This can have an impact beyond the marketing of a game. All three of the games discussed here were created for the Playstation 3 console, but have since been 'ported' to Sony's newer Playstation 4 console in re-mastered form. This was not done by TGC themselves, who's three game contract with Sony has now been fulfilled, but was outsourced to the UK-based developer Tricky Pixels. While Martin and Deuze have noted that "there are numerous instances where IP transfer and management has empowered developers for further independent game creation" (Martin and Deuze, 2009: 282) and the example of TGC's three game contract with Sony is one of these instances, the outsourcing of the re-mastering of TGC's games to a company other than Chen's has implications for other publisher-funded indie games. Specifically, as much control as a developer has over a game during development, surrendering IP rights means said developer is potentially losing control of future iterations of their game, as well as the way the game is branded and sold.

In conclusion, while in the early 2000s games emerged that were 'independent' in terms of their financial relationship to publishers, 'indie games' as a category has been used to cover

such a variety of games that the economic context of the games' production is not a sufficient determining factor in defining indie. A number of ways of understanding what and how games are categorised as indie can be identified, but no one of these explanations can account for such a breadth of games. One key factor that seems to account for indie across different media is the self-perception of indie audiences as oppositional in some way, or as Hoogendoorn puts it when discussing how audiences may experience indie music as somehow "authentic", "There are numerous definitions of authenticity, but what all these different definitions share is that they are exclusionary... there is authentic rock and the rest". (Hoogendoorn, 2014: 37) As Newman has noted, this notion of authenticity in indie texts should not be accepted uncritically, as indie functions as a taste culture in Bourdieu's terms and this narrative of opposition can be understood as a means of a form of distinction or cultural capital for a subculture of fans. (Newman, 2009)

What is clear is that in many ways an understanding of indie games can be aided by writing on indie in other media. King et al have argued of indie cinema "it is important to be aware of the plurality of what has gone and continues to go by the term... and not to reduce this just to the confines of one model" (King et al, 2013: 2) before going on to argue that "American independent cinema has often been difficult to define as a result of its own evolution. The result of this can be that it ends up including apparently contradictory strains, each of which require careful elaboration in their own right as well as in relation to the broader spectrum within which they are located". (King et al, 2013: 5) These same conclusions can be seen to apply to indie games, where the financial independence from publishers was a determining factor in the late to mid 2000s. However, while 'independent from publishers' as an economic category is not a sufficient way to define 'indie', what will be referred to as an 'independent space' still exists within the games industry. While it has been argued that the "developer-publisher model" dominates the games industry, and publishers act as "gatekeepers" to video game creation, developers making games without the financial assistance of large publishers do exist. (Anthropy, 2012a: 34) The varied, at times contradictory, games development that exists within this independent space will be the focus of the next chapter.

4. THE INDEPENDENT SPACE

4.1 Introduction

In a 2008 article for video games website *Gamasutra*, Juan Gril, the head of production at games studio Joju Games, discussed the different ways people interpret the phrase 'indie game', distinguishing between those who take indie to mean "independent funding" and those who take it to mean "independent thought". (Gril, 2008: online) This chapter aims to examine the notion of creative autonomy by questioning the assumption of an automatic correlation between 'independent thought' and 'independent funding' in video game production. Autonomy is a notion that has been referred to previously in this thesis. While some have suggested autonomy of production is linked to authenticity, and is used by an audience seeking to maintain their cultural status in relation to the texts they consume, this chapter will return to the definition of autonomous offered by Bourdieu, who wrote "The pure intention of the artist is that of a producer who aims to be autonomous, that is, entirely the master of his product". (Bourdieu, 1984: 3) While 'pure' ascribes a value judgement to the term, it is not the intention of this chapter to suggest that games made under publishers, in Martin and Deuze's so-called "hierarchical" structure, are in any way of less worth than games that can be more clearly linked to an 'author'. It is instead the intention of this chapter to problematise the idea that developers working without funding from publishers necessarily have more autonomy over the creative decisions they make in their work, and to highlight how other pressures beside the influence of a publisher can act to restrict a developer's autonomy over their work.

In categorising the two schools of thought in the above way, Gril suggests that 'independent thought' is not dependent upon 'independent funding'. The previous chapter explored how games considered indie but funded by a publisher can reflect the intentions and values of the people who made the game, suggesting a level of creative autonomy is possible when working for a publisher. By examining interviews with Chen and analysing his games, it is clear that the games, while made collaboratively, reflect to some extent his interests, thoughts on the medium of video games and values. This chapter will further explore the link

between independent funding and independent thought by imposing a deliberately restrictive definition of 'independent', that being the economic definition of games made without funding from a large publisher, and taking the varied games that exist in this independent space as the object of study. This chapter will argue that the breadth of games made outside of the developer-publisher model are in many ways contradictory and so an 'economic definition' of indie is insufficient to explain the term, but that there are recurring features in the development of games in the independent space, specifically the increased involvement of the audience at difference stages of production, distribution and consumption.

Bogost has argued "we can understand the relevance of a medium by looking at the variety of things it does". (Bogost, 2011: 3) In many ways, games made in the independent space of the games industry vary widely, from games where monetisation is built into the design of the game, as is the case with many 'Free to play' games such as those made by Zynga, to so-called zinesters making personal games using game maker tools with no intention of making a profit from their work at the other extreme. Between these two extremes are smaller scale commercial developers, often formed by ex-AAA developers, making a wide variety of games, ranging from games that seem to share a sensibility with many AAA games to other games that are formally experimental or in terms of their content somehow innovative. This chapter aims to achieve the above aims through a number of case studies of games made outside the developer-publisher model, which fit at various points on the above spectrum. The games that will be discussed are *Hotline Miami* (2012) and its sequel *Hotline Miami 2: Wrong Number* (2015)*, Papers Please* (2013), *Prison Architect* (2015), *Dys4ia* (2012b), *Star Citizen* (forthcoming), and *FarmVille* (2009). These specific games have been chosen as representative examples of wider trends, that will allow discussion of a variety of issues that have an impact on independent game production including issues of autonomy and co-creativity. Banks argues "Co-creativity occurs when consumers contribute a non-trivial component of the design, development, production, marketing and distribution of a new or existing product." (Banks, 2013: 1) The independent space is often a site for this co-creation between amateurs and professionals in a number of different ways that will also be explored below.

4.2 The *Hotline Miami* franchise and participatory cultures

Writing in 2016, Diver argued "The present position of indie gaming in the public consciousness can be traced back to the release of Indie Game: The Movie", which was released in 2012. (2016: 9) *Indie Game: The Movie* follows the developers of three small scale commercial video games, specifically *Fez* (2012), *Super Meat Boy* (2010) and *Braid* (2008), respectively before, during and after the releases of their games. Each of these games is a 2D platform game, a genre of game that was popular during the 1980s and 1990s, and the games all have Independent Style visuals, defined by Juul as a representation of often inexpensive low-tech visuals made using high-tech equipment (Juul, 2014: online). Each was also made either individually or in a small team and distributed digitally. If it is the case that the public perception of indie games stems from *Indie Game: The Movie*, then *Hotline Miami* (2012) and it's sequel *Hotline Miami 2: Wrong Number* (2015) could be understood as archetypal indie games, sharing as they do many similarities in terms of style, content and context of production with the three aforementioned games. For example, their graphics are also Independent Style, and the 2D 'top down shooter' genre of the game, like the 2D platform games featured in *Indie Game: The Movie*, is a genre that was more common on previous generations of game platforms. The *Hotline Miami* franchise also serves as an example of how production models of independent development can replicate models at work in the greater games industry, and also how games made in the independent space can serve as objects of co-creativity and what Jenkins has called "participatory culture". (2006: 3)
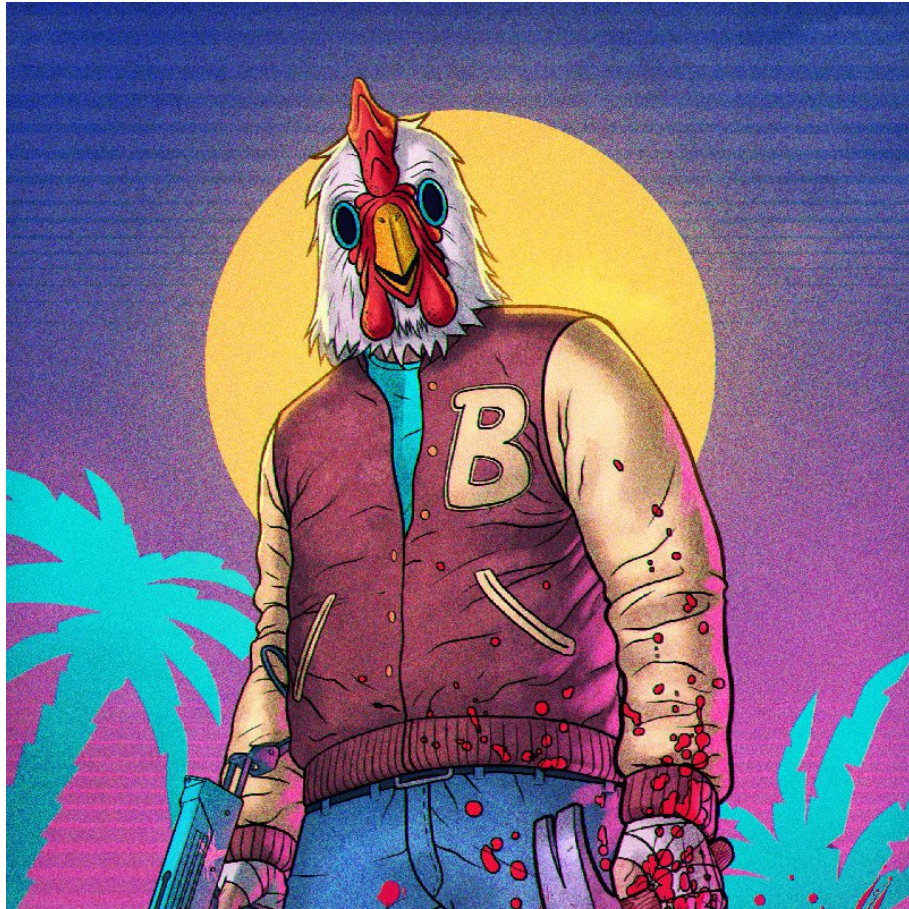
Figure 7: *Hotline Miami* **promotional image (Overkill, no date: online)**

Figure 8: *Hotline Miami* **masks (NotYourMamasGamer, 2015: online)**

Figure 9: *Hotline Miami* gameplay (Just Push Start, 2013: online)

Hotline Miami was created by Dennaton Games, a two person team consisting of Denis Wedin and Jonatan Söderström, in Wedin's apartment. The game is set in Miami in 1989, where an unnamed playable protagonist, nicknamed 'Jacket' by fans due to his outfit (see Figure 7), is receiving phone calls from an unknown caller encouraging him to kill members of the Russian mafia. Betraying the influence of David Lynch that Söderström and Wedin have acknowledged in interviews, the calls become increasingly surreal as the game progresses, and it is not clear for much of the game if the calls are really taking place or if they are a hallucination of the protagonist that are manifesting as a way to justify his desire to kill and deal with his guilt. The player earns masks as they progress in the game, which are worn to give various abilities to the character such as increased speed and power (see Figure 8). Each mask resembles a different animal and has a human first name assigned to it, adding to the suggestion in the narrative that the character is confused about their identity and struggling to deal with the guilt brought on by their acts of violence. Game play is characterised by fast-paced trial and error, as a single hit from an enemy places the character back at the start of the level. The game's aesthetics are distinctive, with a colour palette that is often reminiscent of neon lights and bass-heavy chiptunes, but they are essentially a straightforward example of Independent Style games, or games that contain representations of 'low-tech' aesthetics created using 'high-tech' equipment (see Figure 9) (Juul, 2014: online). *Hotline Miami 2*

largely repeats the formula of the first game, but adds more playable characters, a more complex narrative and longer levels, as well as a level editor which will be discussed below.

Prior to making *Hotline Miami*, Söderström, also known as 'Cactus', was a prolific developer of freeware games and a part of the online GameMaker community, which was discussed in Chapter 2. Both *Hotline Miami* and *Hotline Miami 2* were made using GameMaker, and the GameMaker community seems to have had an impact on Söderström's games. When asked in an interview about what influenced the art work within his games, Söderström stated that he was mostly influenced by "people who I encountered within the Game Maker communities." (Saraintaris, 2014: online) According to interviews and accounts by the games' developers, the decision to shift from freeware to commercial game production was borne out of financial necessity, as the two developers had run out of money to support themselves. (Edge, 2013: online) Despite the financial success of *Hotline Miami*, which sold 130,000 copies in the first seven weeks on sale and 300,000 copies by the end of February 2013, the developers still chose to keep their team to two people for the sequel. (Purchese, 2012; Edge, 2013)

However, an analysis of the *Hotline Miami* games' development demonstrates how independent game production can replicate the models of production in the greater games industry. This is despite a number of facts that on the surface may suggest otherwise. The team creating the game only contained two people, and the game itself reflects the influences and interests of its authors in a more obvious way than might be the case with a larger production. It is based on an unfinished freeware game that Söderström began making in 2004 when he was 18 and is influenced by the film *Drive* (2011) and the work of David Lynch. In order to develop the game while struggling financially, Söderström and Wedin secured funding from Devolver Digital. Devolver Digital is an example of a new kind of 'specialist publisher', which focuses specifically on funding small scale, lower-risk, indie games to be released through digital distribution platforms. They are essentially an indie publisher. Other alternative sources of funding have emerged in response to the proliferation of indie games since the mid 2000s. For example, Indie Fund, a "funding source for independent developers, created by a group of successful indies" such as Jonathon Blow who created *Braid* is intended as an "alternative to the traditional publisher funding model".

(Indie Fund, no date: online) However, it is partly as a result of pressure from Devolver that the developers of *Hotline Miami* entered a period of 'crunch', an industry term meaning very long working hours in the run up to a release date, leading to stress on both developers. (Games TM, 2015) The developers have also claimed the game initially being released with bugs was partly as a result of pressure from Devolver. (Hamilton, 2015) So while Dennaton managed to develop the game in their apartment, in a team of two, the involvement of a specialist, indie publisher altered their working practices. Even without any publisher involvement it is possible that the industry practice of crunch periods would be replicated by indie developers seeking to hit commercial deadlines.

The audience of the game can also serve as an external force influencing choices made within the development of an 'indie franchise', and this is one of the ways in which independent games could be considered as sites of 'co-creation' or of 'participatory culture'. The game's developers stated in an interview during the development of *Hotline Miami 2* that they were making a game for "people who liked the first one." (Hamilton, 2015: online) The audience's influence over the sequel is evident in the inclusion of the most significant new feature that was not the present in the first game- the level editor. Shortly after the release of *Hotline Miami,* Wedin mentioned in interviews that he had received feedback from some fans that they would like a level editor and he and Söderström were looking into if it was possible to create one. (Matulef, 2012: online) The community of users creating levels using this level editor is also an example of participatory culture. User-generated content can "bestow on a game a depth beyond that initially designed by the commercial developers" and "adds to the life of a game title", which therefore has economic value to the game's original creators. (Postigo, 2007: 302) In the case of *Hotline Miami,* this user participation and co-creation has been taken further with *Midnight Animal* (forthcoming)*,* a full-length fan-created sequel made using GameMaker, which makes use of modified assets from *Hotline Miami* and has been endorsed by Dennaton on the agreement that the game is released for free and the source code kept hidden. (Wawro, 2016) Aside from being an example of co-creation and fan participation in the sense of user generated content and even full length mods, *Midnight Animal* is also being released through Steam's Greenlight programme, which will now be discussed in relation to *Papers, Please* (2013) and *Prison Architect* (2015)*.*

Figure 10: *Papers, Please* gameplay (Moby Games, 2014: online)

Figure 11: *Prison Architect* gameplay (Ideas For Smart People, 2014: online)

4.3 *Papers Please*, *Prison Architect* and 'New themes'

Like the *Hotline Miami* games, *Papers, Please* and *Prison Architect* use Independent Style visuals (see Figures 10 and 11). However, the way these latter games use the style is significantly different, and marks a shift in some games in how the style is used. Bourdieu writes of "the shift from an art which imitates nature to an art which imitates art" which "asks to be referred not to an external referent, the represented or designated 'reality', but to the universe of past and present works of art" (Bourdieu, 1984: 3) The use of Independent Style evident within *Hotline Miami* is in line with the 'traditional' use of the style discussed by Juul. It is referring not to an external reality, but to past video games, and is a "representation of a representation". (Juul, 2014: online) Wedin has stated that the game is intended to make the player question "Why do you like violent games?" (Edge, 2013: online) Like many indie games, *Hotline Miami* is a game about games, specifically about violent games. It is about the medium itself, and the Independent Style visuals are one example of how this is so. *Papers, Please* and *Prison Architect,* however, are using Independent Style as an established, "well-understood visual style" (Juul, 2014: online) to explore external issues.

Papers, Please and *Prison Architect* were both developed and released without a publisher. *Papers, Please* was created by developer Lucas Pope, who moved from AAA development with Sony's first party developer Naughty Dog to creating smaller indie games. *Prison Architect* was created and published by Introversion, the indie developer led by Chris Delay and Mark Morris, discussed in Chapter 2. Both games explore real world issues. In *Papers, Please,* the player controls an unseen worker at an immigration checkpoint in the fictional state of Arstozka, described by Pope as a "dystopian, fascist setting". (Cullen, 2014: online) The player must check documents of increasing complexity and decide who to let through the border and who to turn away, while also negotiating the human impact of the player's choices on the people being turned away and on the playable character's own family. At the end of each 'day', or level of play, the player sees a summary of the money they have earned that day and must spread the insufficient amount between food, heat and rent. As the game progresses, the wrong choices in allocating this money, which is earned through strict and efficient adherence to the rules during play, can lead to the character's family members becoming sick and eventually dying. Pope has stated that his intention with the game was to

"show that in politics, all sides of any kind of issue have some justification." (Cullen, 2014: online)

Prison Architect similarly places the player in a position where they must make difficult choices. The original demo of the game, for example, walks the player through a tutorial in which they must build a basic prison with an electric chair and watch a prisoner be executed. The game's creators have described how it was their intention with this and other aspects of the game to make the player feel uncomfortable, and how they are "taking a topic which is interesting because it doesn't have any clear yes or no, good or bad answers, and we're making a game out of it" (Lipscombe, 2015; Yin-Poole, 2012: online). The game, inspired by lead developer Chris Delay's visit to Alcatraz, places the player in a position where they must design and run a prison with financial restrictions, but can accept grants from government and business to build certain elements, such as prisoner labour. The overarching aim of the game is to create a prison that is financially sustainable in order to sell it on and start again with greater resources. This can involve accepting more prisoners than is safe, or profiting from prison labour. The game touches upon the marketisation of the prison system, and as such both this and *Papers, Please* are examples of Juul's "New themes" phase of Independent Style games, as they are using an established visual style towards "documentary and political ends" rather than necessarily as a reference to the medium itself. (Juul, 2014: online)

What both games share with *Hotline Miami* is that they are in some senses co-created games. *Papers, Please* was released through Valve's popular digital distribution platform Steam, using their Greenlight system. With Greenlight, developers create a page for their game prior to release and the Steam community vote for the games that they want to see released through the marketplace. In theory, this makes the audience active participants in choosing which games are released, as well as building a fan community around a game while it is in development. Developers writing 'post-mortems' on their experience of Greenlight have argued that the system lacks transparency and consistency. Corey Warning of Jumpdrive Studios, for example, writes "no one knows exactly what it takes to get greenlit… Valve is notoriously vague when it comes to the number of yes votes or how high you need to be ranked in the top 100 before being approved to sell your game on Steam."

(Warning, 2015: online) In the case of *Papers, Please*, Pope credits fans creating 'Lets Play' Youtube video, where a game is played through and commented on, as gaining the game enough of a following to get through the Greenlight system quickly. (Cullen, 2014: online) This contribution of a "non-trivial component" of the game's marketing, simultaneously enabling the game's distribution through Steam, is a clear example of co-creation by Banks' definition. (Banks, 2013: 1) *Prison Architect,* too, is an example of a co-created game. Prior to the game's eventual full release in 2015, unfinished versions of the game were released at a cost to the consumer from 2012 onwards using Steam's Early Access system. Early Access allows the developers to interact with players, receiving feedback from them and making changes to the game accordingly. Not only is this a 'non-trivial' contribution to the game's development, as with the mods and user-generated content discussed in relation to *Hotline Miami* this form of co-creativity has a tangible economic value to the developers of the game. It is at once a focus group that the participants pay to be a part of and a form of crowd-sourced QA, a process that would otherwise add to development costs.

Figure 12: *Star Citizen* gameplay 1 (Fantasticpixcool, no date: online)

Figure 13: Star Citizen gameplay 2 (Gamerant, 2015: online)

4.4 *Star Citizen* and crowd funding

Star Citizen is a crowd funded first person game that is currently in development and serves as an interesting example of a game made in the independent space. The game's lead designer is former AAA developer Chris Roberts, who made games such as the *Wing Commander* franchise before forming his own studio, Cloud Imperium Games. Unlike many other developers who make the move from AAA to making games independently of a publisher in order to make smaller experimental games, such as Lucas Pope with *Papers, Please,* Roberts' vision of *Star Citizen* was ambitious and expensive, and he has stated "I don't want to build a game. I want to build a universe". (Roberts Space Industries, no date: online) Early access 'modules' of the game are being released to backers, some of which vary widely in terms of gameplay, demonstrating the ambitious scope of the project (see Figures 12 and 13). In the face of controversies about delays with the project, Cloud Imperium's community engagement and content strategy head Ben Lesnick suggested that the project is crowd funded because "the game is so big and such a challenge" to create that a publisher would never risk funding it. (Hall, 2015: online) As of May 2016, the game's website shows that it has attracted a record $113,693,733 of funding from backers, a figure that exceeds most of the AAA budgets revealed in a 2014 article for games website *Kotaku*. (Kotaku, 2014)

Smith has argued that there is an increased interaction between developers and players from early in development with games that are crowd funded in comparison to those funded by a

publisher, and that this increased interaction is an example of co-creativity as "communications between studios and prospective players during crowdfunding campaigns can instigate significant shifts concerning proposed project details", "developers and prospective players can negotiate and contest the parameters of a project" and "studios often ensure that crowdfunding communities serve important roles throughout the development process". (Smith, 2015: 209) This is the case with *Star Citizen*, with 'modules' of the game being released to backers during development and changes to the game being made in response to their feedback. The game's website also markets *Star Citizen* on the strength of this relationship with it's backers, claiming "Star Citizen's backers have a voice in every step of the project" and "We're giving players ownership of the Star Citizen world". (Roberts Space Industries, no date: online) However, while the development of the game can be seen to have been influenced in a 'non trivial' way by the backers, for Cloud Imperium to be seen to be responding to the disparate voices of 1,375,591 individual backers is arguably a public relations and marketing exercise as much as it is an interaction between fans and developers, and the idea that backers have "ownership" of the game is problematic. Smith (2015: 210) has argued of crowdfunding:

> …the requirement for backers to contribute money directly to development distinguishes crowdfunded processes from many other examples of co-creativity. While a modder or a fan fiction writer or message board user might willingly enable media companies to profit from their activities without receiving any payment in return, crowdfunding communities are in addition often paying for the opportunity to function as free labour.

So while a backer who's feedback on the game appears to have influenced the completed project may feel a sense of attachment to or responsibility for the game, they are in a more concrete, legal sense "without ownership of content they have helped finance." (Smith, 2015: 210)

Kline et al argue that the videogame industry can be understood as the "interplay" of circuits of production, consumption and commodity, which form an overarching circuit of capital. (Kline et al, 2003: 31) Hoogendoorn argues that the agents within these three "subcircuits", those being developers (production), publishers (commodity), and audience (consumption), are the 'forces' that act to categorise games as indie. (Hoogendoorn, 2014: 13) What is

interesting about the co-creation evident in the example of *Star Citizen* is that the audience is not restricted to the subcircuit of consumption, and is in fact playing quite an integral role in each stage of this cycle. Banks has argued "The boundaries between playing and producing and consuming are blurring" (Banks, 2013: 1) and this is illustrated in the example of *Star Citizen*. As well as the audience's traditional role in consuming the game, the audience's feedback and interaction with the developers contributes to the production and sees them take on some work that would traditionally be performed by QA during the game's development, and the contribution of finance through crowd funding and the role played by a community marketing the game online would traditionally be the role of the publisher in the subcircuit of commodity. The audience could also play the role of the publisher in potentially restricting the creative autonomy of a developer, as it is risky for a developer who has gained funding based on certain expectations to veer away from what is expected of them by the backers.

While *Star Citizen* has used an alternative funding model to garner a AAA sized budget and in some ways recreated a AAA production model, with four large teams based around the world working on content for the game and well known actors such as Gary Oldman, Mark Hamill and Gillian Anderson starring in the game's upcoming single player mode, the removal of a traditional publishing company from the production model has resulted in a distinct variation on the AAA model. With *Star Citizen*, the audience have replaced the publisher, and taken on some of the roles that the publisher of a large budget game may traditionally have, such as a level of involvement in the development decisions of the game. However, crowd funding is not unique to independent development, and publishing companies are increasingly using crowd funding campaigns to build a community around games prior to their release, to test the market for interest in potential releases, and to reduce their costs, as could be argued to be the case with Sony and *Shenmue 3* (forthcoming)*.* (Klepek, 2015: online) Unlike a traditional publisher, the backers of *Star Citizen* and other crowd funded games are not rewarded for their financial investment with any legal ownership over the intellectual property. The backers of the game may be rewarded in a sense with a game that they enjoy, and the process of involvement in the game's development may provide them with further enjoyment, but as with the above examples of *Hotline Miami*, *Papers, Please* and *Prison*

Architect, in the case of *Star Citizen* co-creation has a tangible economic benefit for the game's developers*.*

4.5 *Farmville* and Free to play social and mobile games

So far this chapter has looked at a number of games where the developers have taken different routes into developing games independently of large publishers. With *Hotline Miami*, the developers made freeware games as a hobby before financial necessity led to them developing a commercial game. Introversion was similarly formed by three university students who had not previously worked in AAA development. *Papers, Please* and *Star Citizen,* while very different games in terms of scope and style, are similar in the sense that they are the result of developers wanting to make games that they felt they could not make with a publisher. These two routes into independent development are similar to those identified by Whitson in her writing on social and mobile games. (Whitson, 2013) While some developers 'go indie' to experiment or make new kinds of games that could not be made with publisher support, and others start as an amateur and commercialise the product of a hobby, the idea that economic independence from a publisher necessarily results in unfettered creative freedom or self expression, or that 'independent funding' always results in 'independent thought', is not the case. This is illustrated most clearly in the independent space of mobile and social game development.

Hoogendoorn states that in contrast to the console market where the rate of market growth is not offsetting increasing costs to develop state of the art games, leaving many developers struggling financially, the social and mobile games market is still experiencing healthy growth and is a site of much independent game production because in general "lower investment costs are required and developers can easily publish the games themselves to platforms" without the need for a publisher. (Hoogendoorn, 2014: 25) Whitson also notes the greater potential for publisher-less development in social and mobile games, stating "Whereas console development is rife with hierarchies and chains of command, social and mobile development is perceived as relatively flat, composed of small agile teams centred around smaller game projects" and "lower budgets and timelines, promise an escape from the increasing publisher oversight that characterizes console development." Whitson goes so far

as to characterise the social and mobile game market as a "lifeboat" for unsatisfied and exploited developers stuck in a 'sinking ship' of creating AAA titles. (Whitson, 2013: 124-125)

Figure 14: Ian Bogost's *Cow Clicker* (Bogost.com, no date: online)

However, while the social and mobile gaming market is a site of a lot of game development without the involvement of publishers, it is not always a site of unrestricted creative autonomy, and as Whitson also notes "developers are discovering that social and mobile game design is closely imbricated with designing for monetization, marketing, and advertising needs, rather than an idealized freedom to experiment". (Whitson, 2013: 125) This monetisation built into the game design is most evident in 'Free to play' games that allow in-game purchases or micro-transactions, such as the games of the developer Zynga, creators of *Farmville* (2009) and it's sequel *Farmville 2* (2012), both of which are social games played on the social networking website Facebook. Bogost, who's own game *Cow Clicker* (2010) (see Figure 14) served in part as a satire of social games, has argued "Social games are games you don't have to play", suggesting a link between the games of Zynga and "partial reinforcement techniques of slot machines", and arguing of social games more generally "The play acts themselves are rote, usually mere actuations of operations on expired timers…

even the enacting of those rote maneuvers can be skipped, through delegation or (more often) by spending cash money on objects or actions." (Bogost, 2010: online) This description applies to both *Farmville* and it's sequel, in which the player gradually progresses by harvesting crops for in-game currency, but then must wait for a period of time to perform the task again and progress. In game currency can be spent on objects or actions that can speed up the wait-time, allowing the player to increase the size of their farm. However objects and in-game currency can be purchased for actual currency, allowing the player to progress faster.

While this chapter has so far explored a number of ways that the independent space of game development can lead to co-creation and increased interaction between developers and players, this is not the case with the *Farmville* games. It has been argued that 'Free to play' game design such as that evident in *Farmville* alters the "player self-images" from "community membership to market consumption" and that this results in a shift in mind-set "from player to consumer". (Lin and Sun, 2011: 283-285). Zynga are also unpopular amongst communities of developers, with it having been suggested by developers that their games are often 'clones' of other games. (Phillips, 2015) Whitson states this type of game is indicative of a new type of indie developer working in social and mobile game development "who have come from different backgrounds and cultural milieus (e.g. web design, marketing, etc.)" in comparison to those who began as hobbyists and those who made the shift from AAA. (Whitson, 2013: 125) Hoogendoorn also draws a distinction between a "New group" of indies concerned primarily with "making profit", and what he calls "Traditional indie developers", who he links to notions of "personal expression" and "making games with a certain cultural value", who are more likely to make 'Pay once' games. (Hoogendoorn, 2014: 25-27) As the name suggests, 'Pay once' games involve a single up front charge to access the whole game. The "low marginal revenue per game" in pay once social and mobile games, where the audience expectation is of low prices and the low cost of production mean the market is crowded, mean the game must connect with a very large audience to make a profit, which leads many so-called 'Traditional indies' to adopt 'monetised game design' tactics. (Hoogendoorn, 2014: 25) What is clear from this is that economic independence from a publisher creates other pressures that may restrict the creative freedom and choices available to a developer.

4.6 *Dys4ia,* and widening participation in game creation

This chapter has focused primarily on commercial game development that takes place without a large publisher, but this does not account for all game development that exists within the independent space. As was discussed in Chapter 2, amateur and hobbyist game development has played a significant role in the history of the medium, and has often existed as an under-explored counter trend to dominant commercial practices. A thorough investigation into modern amateur game development is a research topic in and of itself, but to explore the variety of games made without a publisher it is useful to focus on an illustrative example. Game designer Anna Anthropy's 2012 book *Rise of the Videogame Zinesters* makes an argument that video games as a medium will not reach 'maturity' unless the uses of the medium are widened and participation in video game development is opened up to amateurs and more varied social groups. (Anthropy, 2012a) Using her own games as examples of the different things that can be done with amateur games, Anthopy argues for the 'decentralisation' of video game creation through the use of game making tools, and writes that she wants to see games used as "zines", or "transmissions of ideas and culture from person to person… personal artifacts instead of impersonal creations by teams of forty-five artists and fifteen programmers". (Anthropy, 2012a: 9) Anthropy's *Dys4ia* (2012b) is one such example.
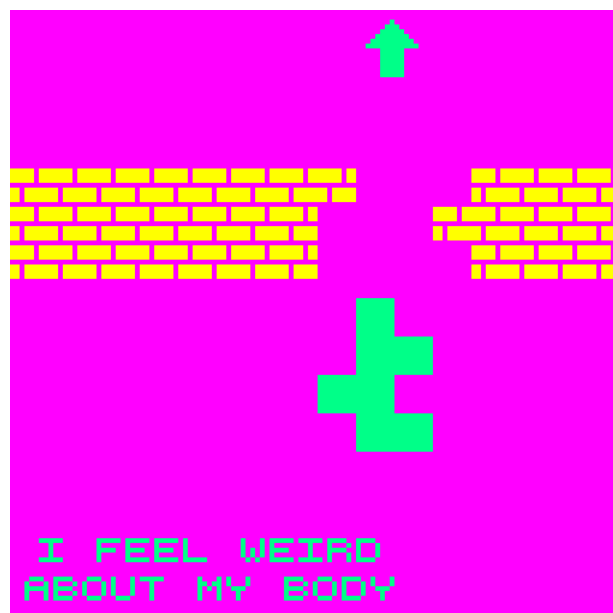

Figure 15: *Dys4ia* gameplay 1 (Admiral's Log, 2013: online)

Figure 16: *Dys4ia* gameplay 2 (Movie Gossip News, no date: online)

Dys4ia is an 'autobiographical game' about a six month period of Anthropy's life when she decided to start hormone replacement therapy, and is comprised of a series of very short, single screen mini games that "catalog all the frustrations of the experience". (Anthropy, 2012c) For example, the first mini game (see Figure 15) sees the player controlling a shape that must try to fit through an incongruous hole in a wall. When it becomes clear that it is not possible a message appears on the screen saying "I feel weird about my body". As many of the mini games do, this level demonstrates the ability of video games to create empathy in the player by forcing them to play as a character less powerful than themselves, or "operationalized weakness" as Bogost has described it. (Bogost, 2011: 20) The game then suddenly switches to the next mini game (see Figure 16), where the player controls a shield, avoiding objects being thrown across the screen by lip-sticked mouths, while the screen displays the message "These feminists don't accept me as a woman". The game continues to tell Anthropy's story from her perspective through these very brief mini games. It is a formula Anthropy recently returned to with the game's sequel *Ohmygod are you alright?* (2015), which tells the story of her experience of being in a car accident. While it is possible to see in Chen's games discussed in Chapter 3 how commercial games can reflect the interests of their designers, Anthropy argues that amateur games can be personal in a way

that commercial games "designed to appeal to target demographics" can not. (Anthropy, 2012a: 11)

Amateur games, be they 'zinester' or 'hobbyist', are reflective of a trend identified by a number of writers on games. Anthropy argues that the existence of game maker tools for amateur developers mean "A medium that was formerly accessible only to those with money and training can now be used by anyone for personal ends" and characterises this as 'decentralisation' of the medium. (Anthropy, 2012a: 12) She also writes about how the tools make it is easier for people to "engage with games in a role beyond consumer", which contrasts with many free to play games made in the independent space. (Anthropy, 2012a: 17) Bogost speaks of the same phenomena as Anthropy, of the means to make and distribute games becoming "cheaper and more accessible", but characterises the implications of this phenomena slightly differently, describing it as the "demystification" or "domestication" of videogames, and arguing that the 'novelty' of video games may be lost as the medium's uses and participation are widened. (Bogost, 2011: 148-150)

In some cases, amateur game development could be understood as co-creation in the terms laid out by Banks, which is a similarity to many other games created in the independent space. Banks argues that "Co-creativity is not only a bottom-up and peer-to-peer dynamic among amateurs" but rather it "requires the craft skills and knowledge and commitment of professionals and experts." (Banks, 2013: 3) While some amateur development may not fit this definition, in amateur game development where game maker tools are used by non-professionals, development is in a way dependent on the expertise of those professionals who created the tool.

4.7 Conclusion

While the economic relationship of a game developer to a publishing company is not a sufficient explanation of all indie games, a closer analysis of what does exist in the independent space of games development, where games are made without the financial backing of large publishers, reveals interesting differences and commonalities between the games that exist in this space. For example, new sources of funding have emerged for

independent developers, including specialist indie publishers focusing on smaller low risk games and alternative sources of finance such as 'Indie Fund'. Crowd funding is often being used, and has found its way into use by publishers as a result of the added benefits it brings of testing the market's interest in a title before committing to development and building a community around a potential title prior to release. As a result of low margins in social and mobile games, some independent developers have also adopted monetised game design strategies.

A key recurring, although not all-encompassing, feature is that games made in the independent space are often the result of co-creation between developers and their audience. This co-creation includes the creation of mods and other user-generated content for existing games, audience involvement in picking which games will released through Steam's Greenlight, audience contribution to development through Steam's Early Access, marketing of a game by players through online posts and 'Lets play' videos, and in the case of *Star Citizen '*non-trivial' audience involvement at every stage of the 'circuit of capital'. However, in the examples analysed in this chapter, co-creation is benefitting the developers of games disproportionately, at least economically. Co-creation can function not just as free labour, but also as a labour force that actually pays their employer in order to work. While there have been studies into the motivations of modding cultures, the perceived benefit of co-creation of games from the audience's perspective is worth further research.

While commercial development in the independent space is varied, amateur development also fits within this space and is equally varied. The proliferation of new game maker tools is widening participation in video game creation. The existence of a growing number of tools and smart phone apps, such as Hopscotch which is aimed at children from the ages nine to eleven, mean that the tools to make games and the ability to distribute them to players is in more hands than ever before. This 'opening up' of the means of production is a significant moment in the history of games, as it is allowing participation by different voices and increasing the purposes for which the medium is used. Whether this is characterised as 'decentralisation', 'demystification', or 'domestication', there is the potential for the medium to be changed by this development.

5. CONCLUSION

Independent video game production has existed since the start of the games industry, both in the sense of independence from publishers and in the form of developers who work for publishers successfully exercising a level of creative autonomy over the games they create. This independent development has often taken the form of independent counter trends, running in parallel to dominant industry practices but often being somewhat overlooked in accounts of the history of video games. Indie games in their modern form emerged in the mid 2000s, as digital distribution became a viable alternative to expensive physical distribution through the developer-publisher model, leading many developers working within the publisher model to form their own small studios or work on games alone. However, there were precedents for many of these games' key recurring features. For example, there was a trend in the 1980s following the success of Activision of dissatisfied developers working under publishers breaking away to form their own studios, and this trend was a contributing factor to the US market crash of 1983. In the early 2000s developers such as Introversion were also operating independently of publishers, but were struggling to meet the financial demands of physical distribution. Furthermore, the self-reflexive content and design evident in many indie games is also similar to many games made using the Net Yaroze, a platform for game creation around which a vibrant participatory community of amateur developers emerged. The key difference between these earlier examples and what came to be known as indie games was the emergence of viable digital distribution platforms, which proliferated from the mid 2000s onwards.

With the success of indie games, publishers and platform holders began to purchase and fund games that resembled indie games in their design, production or marketing. These games functioned as low risk IP for publishers, providing content for the platform holders' digital distribution platforms and serving to distinguish their platforms from those of their competitors. Often these games shared a distinct Independent Style with other games, but other times, as with the work of Chen and Thatgamecompany, they did not. 'Indie game' therefore became a less straightforward term that was not defined by the financial independence of the developer. When indie is not a straightforward economic category, it is functioning as something else. Looking to writing on indie in other media, two methods of

understanding indie seem particularly relevant to indie in games- attempting to understand indie in terms of shared features of the texts themselves, and exploring how indie functions as a form of distinction for audience groups. There are recurring elements of some of the games that have come to signify indie, such as Independent Style aesthetics and self-reflexive content and design. These are not present in all games considered indie, however, and indie can also be understood as a form of distinction and cultural capital for subcultures of indie developers and consumers. Examining interviews with indie developers reveals a recurring self-perception that the games, and the production models of the games, are in some ways a form of opposition to a perceived mainstream, even when development is taking place with the backing of publishers.

However, while the economic category from which indie has developed does not offer a sufficient means of accounting for all games that are considered indie, closely examining what still exists in the independent space of game development away from large publishers reveals interesting developments with significant implications for the future of the medium. There are a number of key recurring features of many games currently being made in the independent space that have the potential to change the medium going forward. Some of these, such as alternative funding sources and monetisation of game design, have become evident in games made in the developer-publisher model, suggesting the independent space functions on one level as a testing ground for publishers and platform holders. The co-creative nature of the space is also altering the relationship between developers, publishers and audience, which Hoogendoorn (2014) concluded are the three forces at play in categorising games as indie. In some ways the distinction between these three groups is being made increasingly difficult to distinguish by co-creative activity, with *Star Citizen* being an example of a game where the audience is heavily involved at all stages of development, commodification and consumption. While the argument could be made that co-creativity is disproportionately benefitting the developers of the games over the audience and blurring the line between labour and recreation, it is nevertheless the case that co-creative activity has the potential to change the medium and dominant production models within the industry.

The increasing proliferation of tools for amateur developers also has massive implications for video games as a medium. More so than at any time in the history of video games, the tools to make and play games are available to a wide base of people, rather than a narrow group of people with expertise and access to remote and expensive technology. Free apps such as Hopscotch offer easy to navigate user interfaces, allowing amateurs to make games while learning the fundamentals of coding. These sorts of tools are widening participation in the medium, resulting in different kinds of games, different uses for the medium of video games, and more games being made by previously underrepresented groups. For this reason, it is the argument of this thesis that the independent space of game development where games are made without the involvement of large publishing companies, incorporating amateur and non-commercial games, is a worthy object of further study. The types of games and the models of production in this space can be seen in some cases to be the vanguard of the greater games industry, acting as a counter trend to dominant industry practices while at once influencing and changing those same dominant practices.

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