
Scarcity and Survival Horror

Trade as an Instrument of Terror in Pathologic

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ABSTRACT

This paper questions the extent to which the relative scarcity of both gameplay options and in-game resources in survival horror video games can be read as a subversion of the metaphorical and idealised capitalist systems that underpin many forms of gameplay. While survival horror games do tend to offer an alternative to the usual rhythms of work, reward and empowering reinvestment found in many video games, the dystopian absence of common resources, gameplay and features (particularly that of an in-game economy) can just as easily be read as creating a nostalgic longing and appreciation for the norms of more conventional gameplay. Ice-Pick Lodge's *Pathologic* (2005) is considered as a rare and potentially subversive example of a survival horror game that creates an atmosphere of terror and uncertainty for the

player through the fluctuations and predatory movements of its in-game economy, rather than through the absence of this feature.

Keywords

Survival horror, scarcity, in-game economies

INTRODUCTION

In an early discussion of survival horror games, Tanya Krzywinska notes that the often-maligned movements between cut-scene and gameplay, common within videogames, are particularly well suited to address and explore a recurrent theme found in horror fiction “in which supernatural forces act on, and regularly threaten, the sphere of human agency.” (2002, 207) Indeed, many elements of survival horror gameplay might be seen as restrictive or frustrating when compared to other titles. Survival horror players are often limited in terms of in-game movement, field of view and, crucially, their ability to acquire and stockpile in-game resources such as healing items, weapons and ammunition.

The conditions of scarcity that players of survival horror games are required to operate under becomes very apparent when considering the ways in which more conventional forms of gameplay tend to emphasise patterns of progressive acquisition. As Kelly and Nadri (2014) note, many games associate success on the part of the player with a trajectory of growth, expansion and accumulation, where the player moves from a position of scarcity in early gameplay to a position of abundance as they complete various tasks and challenges. This trajectory can be identified in many different categories of gameplay, from action-focused first-person shooters like *Doom* (Id Software 1993) where players acquire increasingly more powerful weapons as they progress through the game allowing them to defeat larger numbers of adversaries; to strategy games like *Civilisation* (Microprose 1991) where successful players will usually increase their territory from a single settlement to an entire

map; to role-playing-games such as *Skyrim* (Bethesda Softworks 2011) where success is achieved by acquiring wealth, items and experience as the player explores and completes quests. Online multiplayer games of various kinds (such as *League of Legends* (Riot Games 2009) and *Eve Online* (CCP Games 2003)) also tend to associate successful play with acquisition, whether of rankings, cosmetic items, abilities or in-game resources.

Laurie Taylor (2004) argues that most forms of gameplay take capitalist arrangements as their underlying structural metaphor, wherein the successful labour of the players inevitably produces value that is then reinvested in gameplay in a satisfying and reliable manner. Jane McGonigal (2011) offers a similar analysis, arguing that one of the chief appeals of video games is that they offer players a more satisfying form of work than they can often find in their real lives. McGonigal characterises the work-like tasks found in a game like *World of Warcraft* (Blizzard 2004) as a “virtuous circle of productivity” (53) in that they invariably result in rewards that improve the player’s position and open up new, more interesting forms of labour within the game, encouraging them to continue “working”. This regularity of reward and advancement in return for the investment of time and labour supports McKenzie Wark’s (2007) contention that many games present their players with an idealised version of capitalist relationships, where there is an uncomplicated relationship between work, skill development and material reward, essentially operating as they should rather than as they frequently do in real life.

This trajectory of work, reward and reinvestment is explicitly represented by the “in-game economies” that can be found in a variety of single and multi-player games, which allow players to trade the accumulated rewards of successful play for useful resources or abilities. While common in role-playing, strategy and action games, in-game economies tend to be either entirely absent or minimised in survival horror, as they do not usually fit with either the fictional context of these games (which typically isolate the player within a dystopian

environment) or with their gameplay, as the condition of scarcity that they impose is intended to prevent the player from accumulating a reassuring quantity of resources. The intention of this paper is to explore the implications of this absence as one of the ways in which scarcity is used in survival horror games, questioning the extent to which the disruption of the normal patterns of work and reward can be read as a critique of the capitalist systems that provide a metaphorical structure for many forms of gameplay. The 2005 game *Pathologic* by Ice-Pick Lodge will be examined as a case study to explore the ways in which scarcity may be used as a means of not just indicating the dystopian absence or breakdown of these systems, but as a way of revealing their predatory and (at times) terrifying nature. *Pathologic* is unusual in that it offers a rare example of a survival horror title that not only includes an in-game economy as one of its features, but also uses it to build an atmosphere of tension and terror. Before *Pathologic* can be examined, however, it will be necessary to define both in-game economies and survival horror gameplay.

IN-GAME ECONOMIES

In his study of video game economies *Synthetic Worlds* (2005), Edward Castronova (2005) argues that all video games can be understood as economies, in that they present a virtual environment in which players are required to make choices under scarcity. These choices may be between gameplay options (e.g. deciding which strategy to pursue or which direction to move in) or, more generally, deciding how they will allot the limited amount of time that they have to spend within this environment. According to Castronova, time is the resource that players most frequently expend within all game environments, with players choosing to allot their time in ways that they believe will generate the most fun.

Castronova understands in-game economies as systems that track a very specific set of choices within the larger economies of the games themselves. An in-game economy operates as a designated system for

buying and selling various in-game resources and attributes. These types of “economic systems” are designed with the sole or primary intention of creating or enhancing fun for players through either real trade (exchanges and deals made between human players) or simulated trade (exchanges between human players and merchant bots). Castronova considers the first type of in-game economy as providing “real economic activity” in that the trades have the potential to create value within the game’s real economy. The second type is dismissed as simply a mechanism for converting one form of in-game resource into another as the stable, static nature of these exchanges means that nothing is added or subtracted from the real economy of the game.

While Castronova is uninterested in simulated trade, these types of exchanges can nonetheless provide players with an area in which to exercise their agency by choosing which in-game resources they will prioritise, as well as tangible and reliable rewards for in-game “work” due to the fixed rates at which these exchanges are usually made. For example, in a single-player role-playing game like *Baldur’s Gate* (Black Isle 1999), the player will usually be assured that once they receive a reward, they will be able to convert it into needed resources in a safe environment at a predictable rate of exchange. Trading does not usually present players within a challenge or a difficulty within most single-player titles, but rather it offers them relief from more stressful and demanding actions and provides reliable sense of progress by allowing them to directly apply the outcomes of successful gameplay.

Taylor (2004) understands these types of in-game economies as “narrativised and explicit” (147) representations of the metaphorical capitalist system that provide the underlying structure for many forms of gameplay. They work to further immerse the player in the familiar treadmill of work, reward and reinvestment, accepting the arrangements and values of these systems as norms. In *Persuasive Games* (2007), Ian Bogost briefly considers the “procedural rhetoric” that is imparted through the types of gameplay associated with in-game economies. Bogost suggests that games like *Animal Crossing* (Nintendo 2001) may

train players to function as consumers through the ways in which they use their explicit in-game economies to present the player with goals that create a stronger desire to complete in-game tasks (e.g. performing well in the game will provide them with resources to improve their in-game house, buy furniture, etc.). In this sense, Bogost argues, the procedural rhetoric conveyed through game economies works to behaviourally condition players to function within a capitalist society, where the goal of labour is to produce surplus value for aspirational reinvestment. Bogost suggests that the patterns of work, reward, and reinvestment that players are encouraged into through both explicit in-game economies and gameplay more generally could be understood as operating in the same way as “ideological state apparatuses” (ISAs) in the writings of Louis Althusser (1970), where state institutions (particularly education systems) are perceived as working to condition their participants to accept both the values of capitalist society and their role within it by reproducing the processes of production.

Furthermore, the usually static, safe and reliably player-centric nature of in-game economies in single-player adventure, role-playing and action titles can be read as further supporting McKenzie Wark’s (2007) argument that digital games provide players with an “atopian” refuge from the real world “game” of contemporary consumer capitalism, where both the rules and chances for success are often stacked against them. Trade and investment in real life can often be fraught, complex and exploitative, whereas the digital “gamespace” usually presents these activities as simple, pleasurable, and empowering for the player. As Tanya Krzywinska (2015) argues:

“A leading pleasure of games is that they provide an ordered predictable system which affords players a multi-sensory, clearly demarcated affirmation of their skill, competency and autonomy, thereby providing a counterweight to an arbitrary, unpredictable and anxiety-inducing real world.” (295)

Survival horror titles, by contrast, attempt to frighten players by disrupting the predictability of these systems. Therefore it is unsurprising that they do not often include an in-game economy, given the sense of reliability and stability that is usually associated with this feature in single-player games. Coupled with the conditions of relative scarcity imposed in survival horror, this presents the possibility of a critique or subversion of the rhetoric that is expressed through forms of gameplay that emphasise acquisition. However this needs to be contextualised within a more detailed examination of survival horror.

SURVIVAL HORROR GAMEPLAY

A number of scholars emphasise the “survival” element as a distinguishing feature of survival horror, noting that many games tend to frame the player’s successful actions as great accomplishments (saving the kingdom, the world, etc.) whereas in most survival horror games the player’s main goal is simply to escape a threatening situation and/or not die (Therrien 2009; Taylor 2009). The player character is often, if not always, presented as being trapped in an enclosed environment, which may constrain their exploration, movement and field of view (Kirkland 2005). The weakness or vulnerability of the player’s in-game avatar is considered to be another key characteristic, as survival horror games tend to present them as facing overwhelming odds, and being constantly harried and threatened rather than as empowered and conquering (Hand 2004). This vulnerability may be conveyed through the relative normalcy of the player characters in survival horror who tend to be ordinary citizens rather than highly trained or exceptional individuals (Pruett 2011). This vulnerability can also be conveyed through the player’s access to in-game resources, with players being forced to contend with underpowered weapons and less plentiful ammunition and healing items (Perron 2009; Kirkland 2005). The limitations placed on the player’s powers, movements and resources are what force them to inhabit a “survival space” (Browning 2011) in which the decisions they make are unusually fraught.

Tanya Krzywinska (2015) notes that survival horror games are defined by the contrast they present to the usual pleasures of gameplay, working to produce a very different effect by undermining the player's confidence in their own skill and the reliability of reward. Krzywinska elaborates: "Survival means scraping through, simply to face yet another dire situation, rather than providing any clear signification of dominance..." (ibid., p.296) Rather than seeking to provide the player with a sense of power, success and affirmation that will encourage them to continue to reinvest their time and effort in the game, survival horror games make the player feel vulnerable and afraid, often by removing the sense of control and self-determination present in other forms of gameplay. Krzywinska (2015) provides the classic survival horror game *Silent Hill* (Konami 1999) as an example of this trend, in that it "deliberately interferes with player performance by taking away the power to see what is coming..." (296).

While Krzywinska is discussing the player's limited field of view in *Silent Hill* in this passage, the "power to see what is coming" could arguably be one of the chief pleasures found in gameplay outside of the survival horror category, in that the mastery of game systems allows for a kind of predictability, meaning that the player can accurately anticipate the rewards for their labour and how these rewards may be applied to future challenges. For example, the acquisition and mastery of new firearms in a *Call of Duty* (Activision 2003) leads the player to anticipate how they might be utilised in new gameplay contexts. Survival horror builds its fear out of unpredictability, attempting to disrupt and withhold this sense of mastery for as long as possible, leaving players "... unable to act as efficiently as would be expected..." (Krzywinska 2015, 296). Success in a survival horror title ideally creates a sense of relief for the player at having survived, for the moment, in an unsettling environment, rather than the sense of triumph that accompanies success in many forms of more conventional gameplay, where the player may feel that they have demonstrated their mastery of a particular gameplay system or feature.

In-Game Economies and their Absence in Survival Horror

As survival horror titles attempt to frighten the player by limiting their ability to predict and plan for future in-game challenges, they tend to strictly limit the in-game resources that can be acquired within their environments, e.g. ammunition, weapons, healing items, etc. The relative scarcity is intended to limit the player's confidence, emphasising a conservative, methodological approach over risk-taking and experimentation (Therrien 2009) and forcing players to explore at a slower pace while making careful, sometimes anxious decisions about how their resources are applied (Kelly and Nardi 2014). Giving players access to an in-game economy would therefore work to lessen the tension of survival horror, allowing players to plan ahead more easily by choosing which resources to prioritise or convert.

Taylor (2004) briefly considers the scarcity of resources and lack of a 'narrativised' economy in survival horror games, suggesting that they might serve as a subversion of the capitalist system that she identifies as underpinning the structure of most single-player gameplay. In survival horror games, Taylor argues:

"... players cannot progress in the typical game manner – that of killing enemies and gaining more experience or items in order to become stronger and kill more enemies. Instead, horror games... alter the typical gaming metaphors to make players operate in a system where work (running around and killing enemies) does not always grant payment (additional ammunition or items)." (150)

This suggestion, however, does not address the way survival horror games present their disruption of typical game progression as a terrifying experience for the player. The restrictions placed upon players in survival horror games may arguably make them long for the relative abundance and ease of more conventional gameplay rather than question or critique the assumptions upon which that gameplay is premised. Furthermore, the ways in which survival horror games deviate from

the usual objectives and pleasures of conventional gameplay are often reflected in their narrative and setting, which typically confront players with a dystopic landscape where normal social order has broken down. Survival horror games create a sense of terror through the contrast that they present with the stable, reliable and idealised systems of work and acquisition that are present, both metaphorically and explicitly, in other games.

Gianni Vattimo (1992) observes that dystopian fictions and fantasies often evoke a mood of ironic nostalgia for the world that has been lost, allowing readers or viewers to approach its artefacts and affordances with a contemplative attitude that emphasises their desirability over what may be problematic or contestable about the social and technological trajectories that they belong to. For Vattimo, the pleasure of dystopian fiction often tends to reside in the ironic longing that the audience can engage in for the norms of the technological or social order that has broken down, rather than in any genuine critique. Survival horror games can be seen as providing their players with a similar ironic longing, both in terms of how their dystopian narratives and settings may create the desire for a normal or welcoming social order – with titles like *Silent Hill* and *Resident Evil* (Capcom 1996) often forcing players to transverse the ruins of locations that might have been the source of valuable resources and services in other games: hotels/inns, hospitals and shops – and also in regard to the limitations and restrictions that define their gameplay according to Krzywinska (2015), creating a contemplative appreciation and desire for the rhythms of more conventional gameplay.

With regard to the rare examples of survival horror games that do feature some kind of in-game economy; when it is implemented the feature is usually presented as a remnant of the older, civilised order that once existed within the now devastated location. Games like *System Shock 2* (Looking Glass Studios 1999), *Bioshock* (Irrational Games 2007) and *Dead Space* (Visceral Games 2008) allow players to use in-game currency to purchase resources from terminals and vending machines that appear at intervals within their various levels. While the human

populations of the sites within these games have died or fled, the machinery of commerce remains in place, offering players the welcome opportunity to purchase extra goods at stable, predictable prices in usually safe locations. In this sense, the in-game economy can also be used to provide the moment of relief or dissipated tension that Pinchbeck (2009) identifies as a part of the cultural schema of horror as a genre. Thus when they are implemented at all, economies in survival horror games are often used to provide players with a brief respite from anxiety and dread and to indicate the security and stability of the normal capitalist social order that is otherwise absent from the game's narrative.

While it is certainly true that the structure and rhythms of the "work" performed by players in survival horror games are very different to those found in other types of games, this alone does not support Taylor's (2004) suggestion that survival horror constitutes a subversion of the metaphorical capitalist systems that underpin "normal" gameplay. The absence of the normal (reliable and idealised) relationship between work and reward in survival horror could just as easily be read as reinforcing these systems through the sense of terror, vulnerability and unpredictability that this removal is intended to create. A more genuinely subversive survival horror game, along the lines implied by Taylor (2004), might attempt to create its atmosphere of terror through the manipulation of these systems rather than their dystopian removal. This is something that Ice-Pick Lodge's *Pathologic* manages to do, especially with regard to its implementation of an in-game economy as a source of dread and anxiety for the player.

ICE-PICK LODGE'S *PATHOLOGIC*

Ice-Pick Lodge's *Pathologic* (originally titled *Pestilence: the Utopia*) frames the player as a visitor to an isolated town in the early twentieth century who quickly becomes caught up in the outbreak of a deadly and mysterious virus known as "the Sand Plague". Players are required to explore the town from a first-person perspective, navigating its geography and social hierarchies in order to find a potential solution

to the crisis. The player has twelve in-game days in which to resolve the crisis before the game ends, each of which passes over two real time hours. During each in-game day, the player is presented with a range of objectives that will take them to different locations within the town, and it may not always be possible to complete the objectives within the game's strict time limit. When the twelfth day is reached the game will end, offering the player various outcomes depending on how successful they have been in completing the daily missions. The tasks demanded by the game's missions are not usually challenging in and of themselves (typically involving the player talking to the townsfolk and/or collecting items), but the time limit and the increasingly hostile, infected and dangerous terrain of the town make each of the days' activities fraught and stressful. Furthermore, the player is required to scavenge, loot or trade for the in-game resources they require to survive combat encounters, Sand Plague infections and the simple passage of time.

In *Pathologic* the chief threats to the player's survival are not monsters and other adversaries (though these are present to some degree) but the more prosaic dangers of hunger, exhaustion and infection. As in a role-playing game, the player's in-game avatar is defined by a set of attributes and statistics, but the role-playing trajectory of *Pathologic* involves the player doing their best to manage the degeneration of their character from a starting point of good health and fitness rather than the normal progressive accumulation of new abilities and enhancements. The player character will become hungry and tired as they struggle to accomplish their objectives, making regular meals and rest essential, as well as medical supplies to treat their exposure to the sand plague, or to heal wounds sustained in combat with looters and arsonists. In *Pathologic* the typical scarcity of survival horror impacts not just upon the player's ability to prevail in combat, but their continued ability to exist in the game world at all, even when performing tasks that would normally be considered low risk (e.g. travelling, resting or talking). Further complicating the player's struggle for survival are the interconnections between various attributes that demand their attention.

Eating food items and resting to decrease hunger and exhaustion can increase the player's level of infection. Frequently using drugs to decrease infection may also damage the player's health. Whereas most survival horror games require players to maintain just one attribute (usually health or hit points, that can only be depleted in encounters with enemies), managing the player-character's overall well-being in *Pathologic* becomes a challenging juggling act.

It should be noted that *Pathologic*'s categorisation as a survival horror game could be contestable due to its lack of emphasis on the horrific monsters and jump scares usually associated with such titles. Its focus on managing the physical deterioration of the player character might also allow it to be understood as a pure survival game (similar to titles like *Don't Starve* (Klei Entertainment 2013) or the "survival modes" found in games like *Minecraft* (Mojang 2011) and *No Man's Sky* (Hello Games 2016) where limited resources are imposed in order to create stress but not fear for the players). However, *Pathologic*'s gloomy, oppressive atmosphere, the unsettling surrealism of both its dialogue and imagery, and the grotesquely organic nature of the Sand Plague infection itself support its inclusion, especially when coupled with the sudden, destabilising shifts in the game's environment and narrative. This is supported by the general tendency on the part of both players and critics to understand *Pathologic* as a survival horror title, despite its less conventional elements. For example, *Pathologic* is described by Sophia Edwards as an "open world psychological survival horror game" in a 2015 review of the Classic HD edition, and was included in a 2015 retrospective feature on "the 20 best horror games on PC" in the magazine *PC Gamer*.

Movement and Time in *Pathologic*

As a survival horror game, *Pathologic* is unusual in terms of the freedom of movement afforded to the player. As noted earlier, one of the defining characteristics of survival horror games is that their settings tend to be

restrictive and often claustrophobic, which helps to build an oppressive and terrifying atmosphere (Kirkland 2009). Girard (2011) goes so far as to argue that it would be impossible to maintain the mounting tension that defines survival horror game play in an “open world” environment. *Pathologic*, however, is able to maintain and build tension by imposing a limitation on the player’s time, rather than their movement.

While time limits of various kinds are commonly found in video games, they are usually restricted to very specific tasks – such as fleeing from a monster, or reacting in combat. Failure to perform within these time limits usually results in a failure or game-over state, and the player may then make further attempts until they succeed and are rewarded for their effort. In *Pathologic*, not only are players able to continue the game if they fail to complete their major or minor daily objectives within the two hour time limit (though this may result in more citizens within the town succumbing to the plague), the game ends once twelve in-game days have passed, irrespective of the player’s actions, which provides an interesting contrast to the ways in which narrative time is usually handled in video games.

While games in adventure, role-playing and survival horror categories may track in-game time in particular ways (for example with day/night cycles), narrative time within the game (i.e. key developments that lead towards the conclusion of the game’s plot) only tend to move as a result of player actions. For example in the role-playing game *Skyrim*, innumerable in-game days and nights can pass, but the dragon attacks that are central to the game’s main quest will only begin once the player has performed a certain set of actions. Most survival horror titles follow a similar pattern in their use of narrative time, with key events only occurring when the player triggers them or is present to witness them. Particular challenges may need to be completed within a limited space of time (e.g. avoiding a deadly alien within certain areas of the space station that provides the setting for *Alien: Isolation* (Creative Assembly 2014)), but the narrative of the game will not proceed without the player’s action (the space station will only explode at the moment that the player

makes their escape and not before, no matter how long it takes them to accomplish that escape in real time). Barring a few exceptions (like *Shenmue* (Sega 1999), for example, where a fail state will result if too many in-game days pass without the player taking action to advance the plot), urgency in a game's narrative is usually indicated via dialogue or environmental cues rather than a time-limit on the gameplay itself.

It is unsurprising that games are generally unwilling to impose a restriction on the time that players spend within them. As discussed earlier, Castronova (2005) identifies time as the principal resource that players expend within game environments. The most successful (i.e. "fun") games are those that encourage players to invest as much of their limited time in them as possible. Rettberg (2007) expands on this, noting that the commercial success of a game has a lot to do with the amount of time that the player can potentially spend within it, with the "treadmill" of work, reward and reinvestment found in massively multiplayer games like *World of Warcraft* encouraging players to continue to pay monthly subscription fees, or the "size" and "replay value" of single player games affecting the perceived value-for-money that they offer players in comparison to other games on the market. As games essentially compete for the time of their players, they do not usually impose strict limits on exactly how much time they can spend within the game, instead allowing them to largely determine the pace of their progression – if a player is inactive or "wastes" time within a game they will not usually lose the opportunity to experience narrative and gameplay content when they eventually choose to do so. The players' "real time" is limited, but "game time" is often an essentially limitless resource.

In *Pathologic*, time becomes another scarce resource within the game's "survival space" (Browning 2011), making the possibility of this kind of loss a constant factor, depending on how and when the player chooses to accomplish in-game tasks, or the speed at which they are able to explore game environments. This makes the player's in-game choices even more tense and fraught than in a typical survival horror title, as what is at stake is not just success or failure within gameplay and fiction (surviving each

day or ultimately solving the town's crisis), but also within the "real" economy that underpins all games, according to Castronova, in which time is traded for fun.

Pathologic's In-game Economy

The scarcity of time as a resource becomes a major factor in the player's engagement with *Pathologic's* in-game economy. From the outset, the player is required to trade for vital in-game resources if they are to survive to the end of the day. As opposed to most role-playing and survival horror games, resources like food, medicine and ammunition cannot often be found within the game environments and therefore must be either purchased with currency in shops, or bartered for with various non-player characters (NPCs). On Day One it appears that this gameplay feature will provide at least some of the types of "fun" that Castronova (2005) associates with in-game economies; allowing players a space in which to exercise their agency (choosing what to purchase) and setting goals (which future purchases they will save for). However, where most in-game economies in single-player titles are essentially static or closely mapped to the player's advancement and progression, *Pathologic* attempts to simulate an economy that fluctuates in accordance with the events of the game's plot. The outbreak of the Sand Plague causes the populace to panic in Day Two and attempt to buy and hoard food, resulting in a drastic hike in prices. Day Three sees a downwards adjustment after the spike in demand passes, but also leaves many of the food shops understocked or entirely empty. As prices continue to fluctuate and shops become less reliable, players may find themselves engaging in an alternative economy of barter with NPCs on the streets: some may be willing to trade medical supplies for bottled water, others bullets for jewellery, or scrap metal for canned goods. Particular NPCs may offer better trades, but they will also become harder to find safely as the plague worsens and bandits and arsonists start to stalk the town.

The in-game economy works to decentre the player by responding to the game's plot and environment rather than their progress and needs. Rather than providing a safe, reliable space in which the rewards of successful gameplay can be reinvested through a "narrativised and explicit" feature (Taylor 2004), the instability of *Pathologic*'s in-game economy, coupled with the strict time limit, makes trading as tense and uncertain as battling monsters in more typical survival horror titles. While struggling to complete their daily tasks, the player must also race against time to acquire resources and currency to trade and make it to the shops, without necessarily knowing if the goods they need will be in stock or the price at which they will be offered. As Krzywinska (2015) notes, survival horror as a genre is often best defined by the features of more conventional gameplay that it deliberately withholds from the player. The trading in *Pathologic* takes this a step further, often requiring players to deliberately sacrifice gameplay options and longer-term goals so as to ensure their short-term survival. Saving for expensive protective clothing and simultaneously buying enough food becomes impossible due to rising prices. Firearms and ammunition may need to be sold in order to purchase much-needed medicine. Trading in *Pathologic* doesn't simply empower the player by allowing them to reliably reinvest the rewards for their in-game work, but is often an agonising and deeply uncertain process through which hard-won resources and gameplay advantages can be just as easily stripped away.

The unusual instability of the in-game economy impacts upon the role and importance of in-game currency. In *Pathologic*, currency loses (and regains) its meaning quite suddenly at various points. This often has the effect of disrupting the player's confidence in their own sense of progress; in that time-consuming activities, which would normally be rewarded in most games (completing side-quests or defeating enemies and looting their valuables) can be rendered inconsequential due to a sudden increase in prices, or a shortage of goods. This lack of safety and the unreliability of the in-game economy may cause the player to question the play styles that they have been trained into in other types of single-player games – where in-game currency (if it is present) typically

only loses its meaning or value once the player has reached a point of such success and affluence that there no more meaningful purchases for them to make. Instead of offering rewards and resources that make the game easier, completing side-missions (or “distractions”, as they are frequently referred to by key NPCs) in *Pathologic* may result in a meaningless or entirely absent reward, and require players to expend resources that they may need later in the game.

Furthermore, the unstable nature of the in-game economy and the value of its currency make the player’s moral position within the game harder to track. Many games use choices surrounding the altruistic donation or ruthless acquisition of in-game resources/currency as ways of defining player characters as “good” or “bad”, which often works to reduce the complexity of moral decision making to a binary of right or wrong (Heron and Belford 2014). Furthermore the fact that these decisions are so frequently linked to in-game economies (such as in *Knights of the Old Republic* (Bioware 2003) or *Baldur’s Gate*, for example) constructs “goodness” as another reward or resource that can be purchased through the reinvestment of value under Taylor’s (2004) understanding of typical gameplay systems, while also reinforcing the meritocratic assumptions that Schultz (2012) identifies as underpinning them – constructing players as making charitable decisions about their individually owned wealth without reference to any collectivist approaches to redistribution. *Pathologic* presents players with the opportunity to make altruistic gestures – using accumulated medicine to ease the suffering of NPCs, or donating food or money to help those in need, but there is no consistent system of reward or acknowledgement for this behaviour, like the karmic “good vs. evil” axis found in games like *Fallout* (Interplay Entertainment 1997), and these decisions do not result in the player receiving a “good” or “bad” ending to the game’s narrative, as in *Bioshock*. Because the unstable, fluctuating economy denies the player a reliable sense of progression, there is always the chance that these sacrifices may lead to a literal self-sacrifice further down the track (i.e. reaching a point where it is impossible to complete or persist within the game) and this is reflected in the game’s narrative, where players are frequently told that paying

attention to their own needs and health ahead of others is important, as they are vital to resolving the crisis within the town, so the indifference or callousness that would simply be constructed as “bad” in many games could also be read as sensible, or directed towards a greater good. The moral positioning of the player within the game is consistently presented as murky or ambiguous throughout *Pathologic* – no matter the choices they make as they struggle to save themselves and the town, a certain number of NPCs will come to perceive them as a malign presence.

The positioning of the in-game economy within *Pathologic* (unstable and unpredictable, yet also essential to the player’s survival) directly feeds into the sense of fear, unease and alienation that the game attempts to evoke for the player by overturning or disrupting many of the certainties they might expect from other games, with regard to both their sense of success and progress, and also their role as hero or protagonist. However, it also reflects the broader themes of *Pathologic*’s narrative, which deals with the predatory nature of both the town’s internal hierarchy and the broader national/political system that the town is situated within. The town is repeatedly referred to by NPCs as a carefully calibrated machine geared towards the production of beef through the countless bulls that are slaughtered in its abattoir. Its social order is strictly divided between the legions of butchers and workers who are segregated in a decrepit slum known as the “terminity”, the ordinary merchants and citizens of the town proper, and the three ruling families that exist in an uneasy alliance, each dominating a different sphere of influence within the production process (labour, capital and civic authority). Just as the outbreak of the plague disrupts and complicates the player’s ability to balance the various statistics that define their character’s physical well-being, it also disrupts the balance of the town, resulting in the deaths of vital leaders within the various sections of its society, internal conflict, sudden movements in the game’s various markets, and a breakdown of law and order that is followed by a brutal and oppressive reassertion of first civic and then military control. Just as the player characters are constructed as being prepared to sacrifice the lives of individuals to halt the plague, the higher levels of the

social hierarchy are prepared to sacrifice entire sections of the town to restore balance and functionality (with one member of a ruling family locking down the terminity early in the game to prevent the plague from spreading). As the days progress, the ruling families themselves are revealed to be disposable cogs in the capitalist machine, when the arrival of a government inquisitor places their status and lives under threat. The authority and safety of the inquisitor herself is then called into question by the arrival of an army regiment.

Depending on their choice of character at the start of the game, the player may receive letters from ominous government officials (“The Powers That Be”) who make it clear that they value the town solely as an economic unit of production – the player is instructed to halt the outbreak at all costs and is informed that the complete eradication of the town’s populace will be considered acceptable so long as the town’s infrastructure remains intact. Just as the player may frequently find themselves the exhausted victim of the fluctuating economy, the economic order that surrounds and defines the town itself is constructed as oppressive and capricious. While the town’s chief unit of production, the bull, is never seen in the game, it acts as a guiding metaphor for the town’s layout and organisation, with various districts taking their names from items of a bull’s anatomy. When the player zooms their view of the map out, they will see that the layout of the town resembles a bull’s body, and when they do so again, in the last few days of the game, the map of the town will be entirely replaced by a crude anatomical diagram of a bull. The town and its populace are reduced to a simple understanding of their role within a vast, uncaring economic system. Both the surrounding narrative of the game and many of its ludic elements work to invert or counter the idealised version of capitalist arrangements that are implied through the in-game economies found in many forms of conventional gameplay (and also implied through their dystopian absence or minimisation in most survival horror games). The capitalist system and its attendant meritocratic assumptions, as represented in *Pathologic* through its in-game economy and narrative,

does not principally work to promote the rising success of the individuals within it, but rather to reduce them to disposable components.

CONCLUSION: SCARCITY AND *PATHOLOGIC*

Like most other survival horror titles, *Pathologic* uses scarcity as a gameplay feature to create an unpredictable atmosphere of tension and unease. This disrupts the usually reliable connection between in-game “work”, progress, and wealth/resources identified by Castronova (2005) as a component of what makes game economies fun, and by Taylor (2004) in her critique of the assumptions that underpin gameplay structures. However, *Pathologic* also offers an unusual variation on the survival horror formula, which allows it to present a more substantial critique or subversion of the typical work/reward/investment rhythms of conventional gameplay. Rather than simply removing or avoiding gameplay features like freeform exploration or an in-game economy, *Pathologic* incorporates these usually reassuring or empowering features into the survival horror experience, which allows it to present a provocative critique of the metaphorical capitalist systems that underpin many forms of gameplay. This operates at both the procedural and representational levels of the game, with the player’s increasingly frantic struggle to manage the degeneration of their various attributes under a strict time-limit, mirroring the degeneration of the town itself. Rather than terrifying the player by isolating them within a ruined or dystopian environment, *Pathologic* positions them as entering the town’s social order just before the moment of crisis, allowing them to witness and participate in the terrifying logic of its movements between chaos and the re-imposition of order. Rather than denying players access to an in-game economy, it uses it as a tool to terrify them with its predatory movements in response to conditions of danger and scarcity.

Aldred and Greenspan (2011) note that Game Studies in the 21st century has tended to emphasise thematic and cultural understandings that build out of the “procedurality” of game mechanics, while neglecting the representational techniques used in the narratives and aesthetics that

frame and contextualise gameplay. They argue that both aspects need to be considered, as the understandings derived are often complementary, rather than contradictory or oppositional. I would suggest that this is particularly true in the case of survival horror games, where investment in the gameplay often requires at least some level of investment in the game's fiction, chiefly with regard to the desire/willingness to be scared by both its procedural rhythms and representational content. In this regard, survival horror titles may be unusually well suited to delivering social/political/cultural forms of critique in ways that have not yet been fully explored by game developers, critics, or scholars. *Pathologic* demonstrates this by expanding both the gameplay and subject matter of survival horror to apply the idea of scarcity in a novel manner, using it to explore (in both a ludic and narrative sense) how terror can build not just out of the absence of familiar systems, but also the player's placement within them. *Pathologic* ultimately demonstrates that impersonal and unpredictable systems can be as terrifying as any monster, positioning the market's brutal indifference as a horror that is truly challenging to survive.

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