“A train is passing through Stardew Valley”: Post, Complex, and Cyberpastoral Video Games

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ABSTRACT

This article extends existing scholarship on the pastoral video game *Stardew Valley* (ConcernedApe 2014), highlighting the diffuse ways in which pastoral video games act as sites of encounter between oppositional impulses of nature and technology. Drawing on diverse literature, including Leo Marx’s ([1964] 2000) description of the American pastoral, Paul Martin’s (2011) idea of the video game landscape as a garden, and Amanda Phillips’s (2014) concept of “algorithmic ecologies,” this paper proposes the term “cyberpastoral” to capture the nuanced interplay in how these games articulate the relationship between the natural and the technological. This framework is further tested through a close playing of *Satisfactory* (Coffee Stain Studios 2024), demonstrating the utility of the cyberpastoral in understanding contemporary video game environments. The analytical approach applied here has implications not just for scholarship of similar titles, but for wider study of games engaged with ecological and environmental care.

Keywords

Pastoral games, algorithmic ecology, Stardew Valley, farming sim, Satisfactory

INTRODUCTION

The opening cutscene of Eric Barone’s *Stardew Valley* (2016) frames the player’s experience of moving to the eponymous town as one of a return from the busy, modern world to a simpler, agrarian one. After completing the character creator, gamers play witness to their character’s grandfather lying on his deathbed, who tells them, “There will come a day when you feel crushed by the burden of modern life…and your bright spirit will fade before a growing emptiness.” He hands the player an envelope, to be opened at the right time. Some years down the line, the player character finds themself employed by the game’s primary antagonist, the Joja Corporation. The grandfather’s prophecy finally rings true: the player character starts to shake behind their desk, and a water droplet appears in a speech bubble from the avatar. Finally fed up with the job, the player character opens the grandfather’s note, learning that they have been bequeathed a farm in Stardew Valley, where they can find what truly matters in life: “real connections with other people and nature.” A bus ride later, the player arrives in town: against the drab, greyness of the corporate office, Stardew Valley appears lush and green; the game’s cheery, eight-bit music

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begins to play; and the neighborhood carpenter introduces the player to their new home. In only a few minutes of gameplay, *Stardew Valley* thus reinscribes part of what Terry Gifford (2013, 18) calls the "essential pastoral momentum": "retreat and return." The player character, having left their modern, corporate desk job retreats to the countryside, searching, as the grandfather says, for "real connections."

Read in this manner, the game seemingly rearticulates what Leo Marx ([1964] 2000) might call a "sentimental" pastoral. For Marx ([1964] 2000, 11), the sentimental pastoral is "an expression less of thought than of feeling…an inchoate longing for a more 'natural' environment." The game, at least, frames itself as a sentimental pastoral, not in the least through its "cozy" aesthetics. Existing scholarship concerned with the game's production and embodiment of these "cozy" aesthetics often harnesses Daniel Cook's (2018) concept of the "cozy game," which highlights three factors that make cozy games feel low risk: "safety," "abundance," and "softness." Cook argues that coziness means gamers should not experience danger or coercion (safety), they should not lack food or shelter (abundance), and they should be in a world that aesthetically reminds them of their safety and abundance (softness). Agata Waskiewicz and Martyna Bakun (2020, 233) posit *Stardew Valley* as exemplary of a coherent cozy game, noting that the game's "mechanics, aesthetic and message" all work together to "give the player a relaxing, non-threatening experience." But this sentimental affect[1] obscures some of the game's more complicated relationships with pastoral ontologies.[2]

Once in game, the player must work to clear away their overrun farmstead. The game is open-ended: players can plant crops, tend to animals, craft items, go fishing, or even engage in combat deep underground in the town's mines. They earn money by selling objects they've grown or scavenged. The town is full of non-playable characters with whom the players can interact, either by completing quests for them or trying to establish relationships. Along the way, the player has the option to try and restore the town's Community Center or give cash to the local JojaMart, a box chain run by the player character's former employer. Altogether, the game offers several modes of play: at once, the game is a farming simulator, a role-playing game, an adventure game, a tycoon game, and a dating simulator.

Stardew Valley thus collates diffuse forms of play into its pastoral network, marking itself as a point of encounter between various oppositional impulses: escape and return; leisure and labor; nature and technology. *Stardew Valley* is a site of encounter between all these seemingly contrasting modes. The inciting sequence introduces *Stardew Valley* as a sentimental pastoral, although I will show in this paper that the game is more complicated than that. To do so, I start with both Paul Martin's (2011) concept of the video game landscape as a garden and Leo Marx's ([1964] 2000) concept of the pastoral garden to explore the game's complicated relationship to its own environment. I find that the game's rearticulation of these seemingly opposing, ambivalent terms places the game in a lineage of complex American pastorals. I consider how the game stretches Marx's ([1964] 2000) idea of the "machine in the garden," the invasion of technology into the pastoral landscape, in creating its gameworld. Turning more directly to the game's mechanics, I harness Amanda Phillips's (2014) conception of "algorithmic ecologies," the mixing of mathematical and ecological models, to underscore how *Stardew Valley* produces its version of nature. I suggest that careful attention to the game's coded structures can highlight how the video game pastoral produces a novel understanding of the relationship between nature and technology. I argue that the video game pastoral flattens

ontological distinctions between natural and technological ecologies, and, ultimately, I suggest that a turn toward the term "cyberpastoral,"[3] will more effectively articulate contemporary games' ambiguous relationships with pastoralisms. In the latter half of the article, I test the usefulness of this term through a reading of the cyberpastoral impulses of the recent science fiction survival-crafting title, *Satisfactory* (Coffee Stain Studios 2024), as a salient example of the usefulness and expansive scope of this term.

THE PASTORAL VIDEO GAME GARDEN

Martin's (2011) early exploration of the landscape in *The Elder Scrolls IV: Oblivion* (Bethesda Game Studios 2006) ends with a critical assertion about the relationship between video games and nature:

> [The game landscape is] merely a garden. It does not extend beyond the horizon but is bounded on all sides. It is not as you find it, but carefully arranged and ordered. It is not, like the wilderness, a sublime chaos, but, like the garden, a picturesque design. (Martin 2011)

Of course, more than a decade later, Martin's claim seems less intuitively true, especially with an exponential growth of games promising endlessly generated terrains for exploration, such as *Minecraft* (Mojang Studios 2011) or *No Man's Sky* (Hello Games 2016). The existence of these infinitely generating games might, at first, seem to dismiss the validity of Martin's argument – after all, there are not any boundaries or end to the world in *Minecraft* as exist in *Oblivion*. But procedural generation of this manner has existed since the 1980s, starting with Michael Toy and Glenn Wichman's *Rogue* (1980) which generated entire dungeons, and environmental generation even appeared in *Oblivion's* precursors, notably *The Elder Scrolls II: Daggerfall* (Bethesda Softworks 1996). These procedurally generated landscapes are still similarly "arranged and ordered" (Martin 2011), but this is done simply at the level of code rather than at the level of graphics. As Amanda Phillips recognizes (2014), these "algorithmically generated and procedurally expanding environments…are theoretically infinite but bound by the operational constraints of the software." In other words, while no physical boundary may exist within the gameworld, there are still software limitations for that generation. As such, approaching games at the level of their code allows us to access the "bounded" nature of Martin's gardens, even of games that appear to exceed those boundaries.

Figure 1. Three different starting farms in *Stardew Valley* (2016), including the Riverland Farm (left), Standard Farm (center), and Hill-top Farm (right).

Stardew Valley, for that matter, fits more obviously with the types of games that might appear directly as bounded gardens, although that relationship remains complex. The gameworld has physical boundaries and borders which the player cannot escape, and much of the game's environment and various structures always exist in the same location. In this way, we find a reiteration of Martin's garden in the production of *Stardew Valley*'s environment: gamers will always own a farm to the west of Pelican Town; the ocean will always be in the south; and the cave will always exist north of town. These aspects of the gameworld never change. The player does, however, have a choice at the start of which of the eight farm maps they would like to play on, ranging from the Riverland Farm, which replaces many of the game tiles with water for fishing, to the Hill-top Farm, which has its own special mining area (see Figure 1). Each of these several farm maps affects the initial layout of the farm and favors different player activities, but none of the farm landscapes are procedurally generated in the way that the landscape of *Minecraft* is.

Crucially, for our purposes however, there is the overlap in terminology between Martin's video game garden and the ambivalent figure of the garden that Marx finds in American pastorals. For Marx, the early American concept of the garden harnesses the metaphor of the garden as both "a wild, primitive, or pre-lapsarian Eden" and "a cultivated garden" (Marx [1964] 2000, 55). Thus, while Martin's video game garden might, in its boundedness, privilege an understanding of itself as carefully arranged and cultivated, the pastoral garden does so while it continues to recognize its wildness. In describing *Stardew Valley* as a type of garden, I highlight the degree to which its computational systems render it more akin to Marx's complex pastoral garden in its attempt to concurrently embody both metaphors. That is, although the gameworld's boundaries are cultivated, like Marx's latter metaphor suggests, it still contains some of the "wildness" – as we will see in the game's algorithmic affordances – of the former metaphor (or at least, the code attempts to produce something which may look like wildness). *Stardew Valley*'s environment is not completely deterministic. While the initial farm map selection decides which tiles are land and which are water (and even moves the boundaries), the rest of the game's environment is produced algorithmically. *Stardew Valley*'s landscape is predominately handcrafted, but the way flora and fauna spawn within that landscape is not; instead, these processes are handled computationally. What is at stake, however, is that a computationally-bounded production of nature works simultaneously to simulate a "wild" garden just as it is necessarily "cultivated" by that same code.

Stardew Valley's rearticulation of the pastoral garden's ambiguous metaphor places it in a traditionally pastoral mode, but the player and code's coproduction of this garden underscores the video game pastoral's commonality with what Marx calls the "complex" pastoral. As op de Beke (2021) recognizes, the town in the game has a railroad running through it, perhaps as an intentional nod to Marx's seminal work. For Marx, she notes, the interruption of the train "distinguishes the complex pastoral from the more naïve expressions of the genre" (op de Beke 2021, 177). While earlier pastorals might work to express a nature undisturbed by technology, Marx contends that the complex American pastoral requires interaction between nature and technology. The pastoral always requires some counterforce which undermines its portrayal of a bucolic nature. In Marx's ([1964] 2000, 21) estimation, the preeminent signifier of that counterforce is the train; as he says, "The locomotive, associated with fire, smoke, speed, iron, and noise, is the leading symbol of the new industrial power." We can think of the complex pastoral as a sort of meeting-place between these two seemingly opposing forces: on the one hand, the intruding industrial machine, and, on the other, the rural, pastoral landscape. The in-game train may yet be a playful callout to this framework, but it also effectively asserts that the game's pastoral landscape is one which is necessarily mediated through technology. After all, the game only exists by virtue of technology itself. It's not so much that the machine is in the garden in *Stardew Valley*. In this case, the machine *is* the garden.

ALGORITHMIC ECOLOGIES AND THE PRODUCTION OF NATURE

Thus, we can interrogate the game's production of nature by attending to the code that informs it. To do so, I turn to Phillips's (2014) idea of "algorithmic ecology" in an effort to extend this discussion of *Stardew Valley*'s machinic garden. Phillips names this term as it "gestures toward the fact that automated computational processes govern nature in the game and in many ways, thanks to aesthetic design and game mechanics, subsume the ecological within the mathematical" (2014). In other words, Phillips recognizes that algorithmic processes within game code produce a game's representation of nature and, in doing so, make ecological relations merely computational. Yet, they note that attention to these underlying coded structures might offer space for a more expansive understanding of a game's aesthetics of nature. Phillips then uses the term to investigate procedural terrain generation in *Minecraft*, but, as I noted, *Stardew Valley* does not have this type of procedural generation. Instead, I find useful the way in which the concept lets us think concretely between algorithmic game code and the digital environments – or ecologies – it creates through attention the way the game renders plants and animals.

Consider, for instance, how *Stardew Valley* handles fish spawns. The game's 70 different species of fish have unique code detailing their appearance. Certain fish only spawn in certain bodies of water, during discrete seasons, dependent on weather conditions, and at certain times of day. A modding guide on the "Stardew Valley Wiki" explains how these probabilities operate at the level of code, for players interested in changing these values:

> Every time the player casts with their fishing rod, a new spawning queue is created containing every available type of fish (including algae and seaweed) which meets the criteria based on location, season, time, and weather…The relative probability that a specific type of fish (including algae and seaweed) in a location will spawn during a specific time and weather is: *{relative spawn probability} = {base spawn probability} * POWER(({all fish failure rate} - {this*

> *fish failure rate}) / ({number of fish} - 1}), ({fish queue position} - 1))*, where *all fish* and *number of fish* are all other fish present at the same location during the same time and weather conditions. This calculation is repeated for each possible position in the spawning order (*fish queue position*) for a type of fish, and then averaged. ("Modding:Fish data" 2024)

Direct probabilities can be gathered from the game's individual .xnb files (the various guides also offer solutions to extracting those files), but what becomes useful for us to see in this example is how these spawning mechanics mathematize the presentation of nature. An equation determines the very existence of the fish. As a result, the game's algorithms make sure, for instance, that players can only ever encounter a Tuna in the Ocean and that the Tuna's spawn rate is drastically higher than the Super Cucumber's ("Fish" 2024). But while these mechanics may gesture at some sort of ecomimesis (certain fish will only be found in environments similar to their real-world counterparts – an attempt, perhaps, at producing a "wild" natural landscape), this algorithmic mode of production lays bare the tension at stake behind such a reading: the fish only spawns as a result of the gamer's attempt to catch it.[4]

Stardew Valley's algorithmic ecologies thus disrupt the divide between human and nature in the game's environment. Like Phillips (2014) notes about *Minecraft*, "operator and machine share a subtle copresence based on location, an ecological simulation that underscores both the embeddedness of the human in an environmental system as well as their irrelevance to its mundane operations." Fish spawn in *Stardew Valley* only if the player attempts to catch one, yet the player is subservient to the underlying code which dictates where one can be caught. The Dorado, for example, can only be caught in the Cindersap Forest River, in the Summer, before 7pm ("Fish" 2024). For a player desperate to catch a Dorado, they are required to wait for these conditions before it is possible to do so. It may be some time before the player is able to, even if they need to catch one for a quest or for some other reason, and thus it becomes of high importance once the conditions are met. Ultimately, the game's ecological algorithms require the player's presence just as they exist independently of that player; the player is at once crucial for the production of nature as it is irrelevant to it.

And this is not a scenario that is unique to fishing in the game; returning to the train here stretches this theoretical lens to its limits, but the example should suffice to show the unique way that *Stardew Valley* renders its environment. According to the "Stardew Valley Wiki," trains spawn randomly between 9am and 6pm, accompanied by a train whistle and a message banner telling the player that "A train is passing through Stardew Valley" ("Railroad" 2024). The very appearance of the train, then, relies on the game's underlying algorithmic code; it is already indicative of these types of algorithmic ecologies, but the train that appears itself is also subject to these mathematical affordances. Trains usually have a locomotive and anywhere between 8 and 24 cars; however, there is a 10% chance for the train to be considered a "long train," in which case the number of cars is doubled. There are various types of trains and cars: open-topped resource cars, passenger cars, or sealed resource cars, again with varying chances (the resource cars do have slight chances of dropping resources for the player). Perhaps most entertainingly, during only the Winter season, there is a 13.85% chance of a "Christmas" train appearing, carrying only red resource cars filled with presents. Put simply, all that which spawns is algorithmically bounded.

What I mean to tease out by means of this example is the difficulty of imagining the video game environment as pastoral as a result of these algorithmic ecologies. Games necessarily mathematize the production of nature and the player's experience of it. This mathematical production, while, Phillips (2014) notes, "not necessarily an anti-ecological gesture," does certainly destabilize a clear distinction between Marx's machine and his garden. For Marx ([1964] 2000, 207), the appearance of the machine in the garden is a counterforce, an "intrusive artifact" that "exposes the illusory character of the retreat to nature." In *Stardew Valley*, the machine is coproductive of that retreat. Rather than calling attention to the differences between technology and nature, algorithmic ecologies question whether we can even distinguish between these two impulses.

CYBERPASTORAL GAMES

In some ways, *Stardew Valley*'s algorithmic ecologies resemble Gifford's concept of the "postpastoral"; as he says, "The post-pastoral is really best used to describe works that successfully suggest a collapse of the human/nature divide while being aware of the problematics involved" (2013, 26).[5] As far as the players' copresence is required for spawning certain animals, the game's algorithmic ecologies do collapse this typical pastoral divide. However, I suggest that, rather than eliding the distinction between human and nature, *Stardew Valley* primarily collapses the distance between nature and technology. Unlike the complex pastoral where technology is always already threatening the pastoral, and unlike the postpastoral as Gifford describes it, *Stardew Valley*'s pastoral impulses present the machine as constitutive of the pastoral itself through the algorithmic ecologies that produce that pastoral nature. In this respect, I suggest a move toward using the term "cyberpastoral" to delineate *Stardew Valley* and games like it in the recent canon of the pastoral.

The idea of the cyberpastoral is currently undertheorized, yet it offers a framework which is more directly attuned to the way that pastoral video games navigate these blurred distinctions between the technological and the natural. In a sense, the cyberpastoral represents Marx's complex pastoral pushed past its theoretical limits: technology no longer threatens the natural because the natural is technological. That is, the cyberpastoral suggests a collapse of the divide between nature and technology that simultaneously recognizes the irony of doing so. Crucially, though, for my use of this term, is to recognize video games as a form which best articulates the entangled relationship between the technological and the natural. Moving toward cyber-focused ecologies emphasizes the algorithmic and technological processes underpinning the player's experience of the pastoral landscape; to play a pastoral game is to play the underlying procedural logics which compose that game. Attention to the cyber of cyberpastoral thus offers us unique insight into this particular, almost paradoxical inversion. In the rest of this paper, I consider the implications of this reading: What, then, is afforded by the cyberpastoral video game? What does it mean, for instance, to attend to the technological structures which uphold the production of nature in games? What does that do to our readings of environmental spaces within them? In working to answer some of these questions, I hope that my conception of the cyberpastoral offers us as researchers another valence through which to examine the games that we play, and the way those games imagine social, economic, and environmental ecologies.

As a way of starting to answer these questions, I turn to a recent – and perhaps unintuitive – example: the space colonization title *Satisfactory* (Coffee Stain Studios

2024). At first glance, to claim *Satisfactory* as any sort of a pastoral game might seem ridiculous. *Satisfactory*, a first-person, open-world adventure game, asks players to construct and automate factories on an alien planet. This industrialist framing given to the game, both in its published marketing copy as well as the name, articulates a gamic experience that seems far removed from the pastoral impulses of retreat and return from urban environments to rural ones. In many respects, *Satisfactory* may be read as another science fiction game which manifests expressions of late capitalism (Higgins 2016) or a continuation of the types of Robinsonade conquest (Lobo 2019) of similar survival game titles. Its inclusion here, then, might seem strange, especially as there are already a host of titles often put in conversation with *Stardew Valley*. For instance, *Animal Crossing: New Horizons* (Nintendo EPD 2020) offers a similar pastoral trajectory to *Stardew Valley*: players escape to a deserted island and craft and customize it as they see fit. In its cyberpastoral inversion, the game's production of nature relies, in part, on the gamer's own geolocation, as the environment in the gameworld changes seasons according to what hemisphere the player is living in in real life. This is but one example of that game's cyberpastoral impulses, but we could list any number of farming simulators or cozy games here and make similarly generative claims. For the rest of this essay, however, I am primarily interested in using *Satisfactory* for the way in which it asks similar questions of gamers in a very different context. That is, *Satisfactory* defamiliarizes the pastoral role of retreat and escape by relocating it extraterrestrially – in this alien landscape, the game offers a unique engagement with its production of the natural and the technological, and it thus, I suggest, offers a salient example of how we can harness the term of the cyberpastoral to investigate games across a wide range of video game genres.

Satisfactory

Unlike *Stardew Valley*, *Satisfactory* gives the player clearly articulated goals throughout the game. Players work as employees of FICSIT Inc., an amorphous corporate entity to whom the player is subservient. FICSIT sends the player, a Pioneer, to an "uninhabited" alien planet, diffuse with resources for the player to collect and refine. Players must build increasingly numerous and complex factories to automate the extraction and production of various resources. Ultimately, players work to mass produce components required for FICSIT's "Save the Day" program, the name for the game's nebulous end-goal. From the opening sequence, *Satisfactory* instructs players to inhabit its capitalist, extractivist logics; the game opens by showing the player a FICSIT instructional video, which presents the Pioneer's three core assignments: Construct, Automate, and "Explore & Exploit." Astute readers may notice that there are four principals here, but in the game's typical tongue-in-cheek style, the last two are joined together. On the one hand, we can leave it as merely a humorous intervention by the developers; but, on the other, the mashup of Explore and Exploit in particular signal a more insidious move by the game, but one which recognizes the unstable grounds on which we conceive a divide between the natural and the technological.

By combining Explore & Exploit as a single directive, *Satisfactory* articulates a worldview that perceives these two actions as inextricably and necessarily linked. A Pioneer cannot, in other words, explore the planet without then exploiting it. There is a clear colonial, extractivist logic at play here, but we can think further about this by pulling it back to our nascent idea of the cyberpastoral. ADA, the Pioneer's in-suit AI system, tells the player, "FICSIT-selected planets are rich with resources suitable for direct use or further investigation" (see Figure 2). Here, again, we see the slippage

connecting exploration and exploitation. The planet's resources exist only insofar as they are directly useful (whether for production lines or epistemological gains). Like most survival-crafting games, much of the environment around the player appears to exist solely for the player's use (Dooghan 2019): most of the planet's flora can be cut down for wood and leaves, which the player can convert to biomass for fuel, and many of the planet's fauna hunted for ingredients. That, at least, is the ideological frame that the game presents to players through the figure of FICSIT Inc.

Figure 2. The third directive, Explore & Exploit, from FICSIT Inc. to Pioneers in *Satisfactory* (2024), shown in the form of an animated, corporate informational video.

But FICSIT is simply a framing device that spurs players to do what they may already be primed to do. As we already mentioned, even games with cozy aesthetics tend to reify neoliberal, capitalist, and extractivist logics.[6] This is no doubt true of a game like *Satisfactory*, which avoids those cozy aesthetics in favor of behemoth industrial components. At the very least, *Satisfactory* complicates the relationship between the player and the player's imperialist acts by placing them in the position of a laborer working for a dystopian corporate entity. The player-character, through the figure of the Pioneer, is thrust onto the new planet and given instructions by the corporation; there is no method for escaping the planet, and only through following the company's assignments can the player progress. What I am interested in teasing out in *Satisfactory*, however, is the way the game knowingly acknowledges this problematic ideology, references it, and then yet fails to offer significant counter-discourse, all through the framework of the cyberpastoral. That is, *Satisfactory* articulates an extractivist logic which does not recognize a meaningful difference between nature and technology; ultimately, the collapse of the natural/technological divide, however, fails to offer successful resistance to the capitalist ideologies the game humorously espouses.

Still, we might read the arrival on MASSAGE-2(A-B)b as a type of retreat to nature that is similar to the one we find in *Stardew Valley*, although, in this case, *Satisfactory* forwards questions of labor. In much the same way as the vision of a typical pastoral, players arrive in an untouched, bucolic nature; the planet becomes a garden in which the gamer may play. Yet almost immediately, the mythos of the unexplored planet recedes, and ADA barks a series of extractivist orders to the player, who dutifully

searches for iron ore to begin mining. If the pastoral suggests a rural landscape exists for leisure, *Satisfactory* suggests the pastoral landscape exists for labor. It is a retreat, perhaps, to the natural, but only so far as it is a space to industrialize. In *Satisfactory*, the player becomes Marx's train. (Of course, players are able to build their own trains, too, after the progress far enough.) And so the game sets out to order the world as one subservient to the labor of the player, who in turn is subservient to a corporation. In this sense, the game is hardly pastoral, or, at least, it is only pastoral in its desire to embrace counter-pastoral modes. One might ask: Where do we then locate the cyberpastoral?

While *Satisfactory* frames its play as clearly exploitative (both of labor and of nature), in doing so it flattens the various ecologies it represents and articulates what I call a cyberpastoral impulse. By this, I mean that, while the game's narrative framework articulates a logic which distinguishes between the natural and unnatural, the gameplay does not. In the game's narrative, FICSIT Inc. explains that the planet's resources exist solely for extraction, such that the player can build and automate production lines of products to fulfill the corporation's needs. This structure defines a divide between nature (the basic resources) and technology (the various Miners and Fabricators players utilize to produce components): anything found on the planet is natural; anything built by the player is technological. But mechanically, this distinction erodes.

Take, for instance, the process by which a player might fuel a coal power plant. To produce power, the Coal Generator requires two inputs: water and coal. Players must find, then, a body of water and a coal node, set up extractors at each location (a Water Extractor and a Miner, respectively), and connect those extractors to the generator using pipes and conveyor belts. This, admittedly, still sounds like it retains the divide, yet, in practice, both the node and the body of water become a part of the power generation technology. Resources in *Satisfactory* do not deplete: a player can place a miner on a coal node and, as long as there is adequate storage and power, the miner will extract coal ore infinitely. Thus, the process by which players extract resources from the planet no longer recognizes a difference between the natural that the coal node represents (which would, assumedly, deplete at some point) and its position in the greater production line of power generation. In other words, once connected to the factory, the natural world is subsumed into the technological.

Even the game's nomenclature, calling the places where ore can be mined "nodes," seems to articulate a recognition of these spaces as simply yet-unconnected parts of some future factory. It is worth noting, too, that the game allows players to "clip" objects they are constructing through other game objects; that is, a player can run a conveyor belt directly through one of their machines, and the game will still treat that belt as unobstructed just as it treats the machine as whole. Crucially, this ability also extends to the environment – players can construct game objects that clip through terrain in just the same way, meaning that there are no "natural" obstacles to construction. In other words, there is no necessary space where the environment stops and the technological factory begins. The game, then, rejects any clear distinction between the natural and the technological: planet MASSAGE-2(A-B)b is itself already the factory, if only temporally unrealized. That, ultimately, the end-products of the player's automation are sent off-world back to FICSIT further complicates this relationship. Yes, the game orients the player toward extracting and exploiting the natural resources of the world (biomass, metal ore, or otherwise), but it simultaneously suggests that the automated factories created by the Pioneer may

as well also be natural resources for extraction. The erosion of distinction, then, between nature and technology works both ways, ultimately positing an ecology of extraction that bears no regard for a resource's ontological position as natural or technological. In flattening the games' ecologies, *Satisfactory* thus expresses the primary cyberpastoral move: there is not any distinction between nature and technology; any divide that seems to exist only does so visually.

Figure 3. Smoke emanates from several Coal Generators while iron ore is mined nearby, but planet MASSAGE-2(A-B)b does not suffer any visible (or mechanical) ecological harm.

Such an elision of the nature/technology divide could offer a useful interrogation of the extractivist, imperial logics inherent to this type of space colonization game. One of the potential usefulnesses of a flattened ontology of nature and technology might be to provide a clearer recognition of our coproduction of ecological disaster. In this manner, a cyberpastoral game might offer a possible articulation of what Benjamin Abraham (2022, 62) considers to be an "ecological game": "the truly ecological game must acknowledge and account for the harms it produces in the world, its own direct and indirect material costs for the environment, and its participation in worsening (or aiding) the climate crisis." However, *Satisfactory*'s failure to represent the negative effects of its ecological exploitation renders it unable to do so (see Figure 3). Although this is certainly typical of the space colonization genre (Frelik 2022, 282), it is worth explaining here. As players progress through the game, they inevitably cause significant ecological damage to the planet. Almost all available power generators are "dirty" power sources; players can generate power by burning biomass, coal, or oil (in-game, known as fuel), placing a geothermal generator on a geyser, or building a nuclear power plant. Notably, though, the biomass, coal, and oil plants signify their potential to pollute the planet by emitting black smoke when they are running. Yet there are no long-term consequences to using these power production methods. The smokestacks do not contribute to growing pollution on the planet – no such pollution mechanic exists. Even nuclear power, which produces harmful nuclear waste as a biproduct that directly harms the player if they are too nearby, fails to provide a significant source of lasting, noticeable ecological harm. The Uranium Waste biproduct can simply be repurposed as another power source or stored long-term

without consequence. In *Satisfactory*, there is no recognition of the role the player and the game itself play in perpetuating ecological harm. Perhaps its refusal to acknowledge its position in the very ecological space it inhabits is the game's most pastoral quality.

CONCLUSION

Video game pastorals are contested sites. Just as they offer players a leisurely retreat, they simultaneously ask players to perform capitalist labor. While they present abundant, rural landscapes, they concurrently articulate the necessity of technology in those spaces' coproduction. These games exist at a crossroads of myriad oppositional modes. Yet the medium seems well-equipped for embracing these contradictory impulses – or at least it affords serious and generative inquiry of them, just like the long line of pastorals that came before. The cyberpastoral framework, more specifically, seems readily equipped to suggest modes of resistance against typical capitalist forms, especially those we typically find in pastoral video games (op de Beke 2021). With recent titles such as *Lightyear Frontier* (FRAME BREAK, Amplifier Studios 2024), a cozy, extraterrestrial farming game where players work and explore in giant mechsuits while attempting to be sustainable, or the upcoming *Solarpunk* (Cyberwave 2025 [Planned]), a farming/crafting game built on emphasizing green energy production, video game developers' interest in continued exploration of the video game pastoral seems as diverse and expansive as ever. *Stardew Valley* and *Satisfactory* demonstrate the cyberpastoral's ability to collapse seemingly opposing boundaries and provide critical positions. While many of these games still retain problematic engagements with industrialist logics that privilege work over environmental care, cyberpastorals yet offer enough critical insight to be worthy of continued hope for imagining better futures, and better presents.

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ENDNOTES

[1] There is significant space here to further locate Marx’s “sentimental” with Ian Bogost’s (2015) idea of the sentimentalism of hard work in video games about labor and Audrey Anable’s (2018, 73) idea of “contemporary rhythms of work and play.” For now, I will settle for a recognition that this language gestures towards a more substantial conversation about the nostalgic way labor is presented as play in *Stardew Valley*.

[2] For instance, scholars have found that, despite the game’s cozy appearance, games like *Stardew Valley* simultaneously “(re)present and (re)enforce neoliberal doctrines of individualism, extractivism, and the neverending pursuit of progress and growth” (Bódi 2024, 60; see also, Scully-Blaker 2019). Similarly, the game fails to adequately show the various forms of labor necessary for agriculture (Chang 2012; 2019), including specifically various forms of animal labor (Morrison 2024). Similarly, as Laura op de Beke recognizes, *Stardew Valley* and other similar titles “can and do feature counterpastoral elements, strengthening the genre with socially and ecologically insightful representations of rural life” (op de Beke 2021, 190).

[3] I am not the first to suggest this term. Tison Pugh, notably, deploys it to articulate a concept of a version of the pastoral in which character retreat not geographically, from urban to rural, but computationally, from reality to cyberspace (Pugh 2007). For all its merits, Pugh’s definition has not caught on, and so my understanding and use of the term is somewhat different here.

[4] For a more complete discussion of the processes of the fishing mini-game, see Leon Xiao's admission to this conference in 2023: "What's a Mini-Game? The Anatomy of Fishing Mini-Games".

[5] I recognize, of course, the uneasy ground on which I start this argument: after all, defining the pastoral is reasonably difficult to do, although various attempts have been made (Marx [1965] 2000; Weitz 1982; Buell 1995; Garrard 2023; Gifford 2013). Most will admit that the genre begins with Theocritus's *Idylls* and Virgil's *Eclogues*, which together establish some of the basic qualities we expect when defining the pastoral: "a sense of idealization, nostalgia, and escapism in a poetry of the countryside written for a court audience" (Gifford 2013, 18). My concern here is less to disambiguate a particular definition for that umbrella term than to add to the list of potential "new versions of pastoral" which Marx readily imagines (qtd. in Gifford 2013, 17).

[6] For better or worse, I won't rehearse arguments about how survival-crafting games in general reify these ideological positions. For one, most of these arguments seem relatively clear to make, and others have done a more complete job of articulating them than I have space for.