Claustrophobia, Repetition and Redundancy: The Economy and Aesthetics of User-Generated Content in Sandbox Computer Games

by Peter Nelson

Abstract

Computer game sandboxes have facilitated an immense wave of user-generated creative content. Titles such as *Roblox, Minecraft* and *Garry's Mod* combine sophisticated digital tools for producing, consuming and sharing such work, increasingly within the same software environment. The game sandbox and creation system *Dreams* presents a complex enfolding of creative tools, a game engine and a game-sharing platform, where there is no importing of external media other than sound, and virtually all game content is created within the system itself. By integrating the socio-historical context of modding with the technological aesthetics of software studies, this article identifies a dynamic tension between the precarity of the user and the precarity of the platform and examines how we might understand the works created and the system itself on an aesthetic level. Cultural theorists such as Sianne Ngai have pointed to aesthetic categories such as the "zany," "cute" and "interesting" as affective qualities that index key social and economic structures, which can be applied to a large portion of internet culture (Ngai, 2012, pp. 1-2). As sandbox platforms evolve in complexity, this article identifies three variations of Ngai's aesthetic categories -- namely claustrophobia, repetition and redundancy -- which can help us understand the significance of a new generation of creative software and practice. Using *Dreams* (Media Molecule, 2020) as a case study, I examine the functionality of the system, works created within it and its extrinsic legal and economic circumstances to form an aesthetic critique. In analysing these extrinsic circumstances, I also revisit the literature on modding and suggest that material critiques based around the economic exploitation of modders might benefit from a more balanced reading that looks at the precarity of both the users and the platform. I argue that the dynamic tension between copyright holders and users offers a more useful and accurate socio-historical context.

Keywords: *Dreams*, aesthetics, user-generated content, modding, computer game sandboxes, visual culture, digital labour, platform studies

Introduction

If an art historian were to analyse the images on the interior ceiling of the Sistine Chapel, they might start by examining the life of Michelangelo and his relationship with Pope Julius II (Gordon, 2005), or the iconographic depictions of biblical figures (Chivers, 2009), or indeed the chemistry and practicality of painting a fresco 20 metres above ground level during the sixteenth century (Pfisterer, 2018, p. 47). Together, such analyses might balance the iconographic, the technical and the materialistic to offer an understanding of the content of a cultural work as well as its status as an object of history. Like the whims of fashion or the process of our own ageing, what is close to us is the hardest to see, and contemporary aesthetic analysis gets fragmented and complex as we try to analyse works of our own milieu. Toolkits expand to encompass the aesthetic of experience and perception (for example John Dewey's *Art as Experience*), aesthetics and ethics (for example Susan Sontag's *Regarding the Pain of Others*), aesthetics and identity (for example Homi K. Bhabha's *The Location of Culture*), aesthetics and ecology (for example Timothy Morton's *Ecology without Nature: Rethinking Environmental Aesthetics*) and aesthetics and technology (for example N. Katherine Hayles's *How We Became Posthuman*). In each of these examples, the confrontation between the individual and the work is reframed as a confrontation with the self and with the unrepresentable present that surrounds us. The notion of what a work can reveal versus how we distort our experience of a work to match our worldview is the paradox of ideology, and one that I argue often distorts our ability to aesthetically evaluate game mods and user-generated content. The undeniable presence of economic inequity in Web 2.0 platforms can distract us from more delicate balances, which I later identity using the concepts of the Media Hybrid and the Midas Limit. In *Our Aesthetic Categories* (2012), Sianne Ngai highlights a fascinating inflection point in Fredric Jameson's conclusion to *Postmodernism* (1991), where Jameson strives to separate taste (or opinion) from analysis and evaluation. Jameson suggests that our experience of the artwork and our understanding of its socio-historical context form a dynamic relationship, where what we find "interesting" forms a hinge of personal reflection between our taste and our worldview, and where our experience of the artwork allows us to "step back and attend to the system of fine arts itself" (Jameson, 1991, p. 300). For Ngai, the "lack of descriptive of conceptual specificity" of taste (or opinion) allows us to arrive at new intellectual evaluations based on the analytical knowledge we have of artworks, or even systems of art making (Ngai, 2012, p. 51). I hope to create a similar inflection point in my revision of the socio-historical context of modding and how it intersects with the enfolding of creative software, game and social media in Media Molecule's *Dreams.*

Sandbox computer games are those in which clearly defined rules and goals are relaxed, and the player can experiment and explore in an open-ended fashion. The early creative sandbox platform *Garry's Mod* (Facepunch Studios, 2004) sold over 20 million copies; almost 20 years since its initial release, it maintains a daily average of around 30,000 concurrent players (Steam Charts, 2023). Today, *Minecraft* (Mojang, 2011) has around 181 million active players (activeplayer.io, 2023) and *Roblox* has around 217 million active players (activeplayer.io, 2023). In quoting these figures, I want to suggest that the scale of activity within these sandboxes and the trend toward merging creative software with commercial game platforms warrants aesthetic

analysis. My primary case study for this article, *Dreams* (Media Molecule, 2019) is a peculiar example. When I originally started writing this article in 2020, it was unclear if *Dreams* would succeed as a creative platform, and as of April 2023, Media Molecule have announced that they will soon cease providing support and updates. *Dreams* is a dramatic enfolding of diverse software functions into a single application, including 3D modelling and sculpting tools, a game engine and a social media platform. It has the feel of either a gamified Photoshop, a claustrophobic YouTube for computer games, or the Unity or Unreal Engines, but without the distinction between editing and run time, or the ability to export games as independent executable files. In *Software Takes Command* (2013), Lev Manovich describes how the easy-to-use software tools shape human creativity by directing digital editing towards a specific set of accessible functions. I argue that the aesthetic claustrophobia I explore in Dreams is an example of this same process. The cross-media mimicry and ability of users to resample each other's works in *Dreams* also leads to a heightened sense of the postmodern database aesthetics described by Manovich and Hiroki Azuma, which can then be looped back to a broader socio-historical context via Ngai's aesthetic categories, particularly the zaniness of Web 2.0. It is this combination of sophisticated software tools, the warehousing of works, and the substantially large number of users, players and creators that prompts my attempt at an aesthetic analysis of this form of user-generated content. Following the logic of Platform Capitalism (Srnicek, 2017), creative sandbox games are a logical attempt to enfold different software functions into a single walled garden that can enclose and recycle flows of production and consumption. My analysis of these creative works and of the *Dreams* platform looks for what Jameson describes as the "system of fine arts," and hypothesises that similar technological enfoldings are likely to recur, and that identifying their aesthetic look and feel will help us see the world around us a little more closely (Jameson, 1991, p. 300).

Modding, Media Hybrids and The Midas Limit

The enfolding of software functions found in *Dreams* can be situated alongside multiple descriptions from media studies over the past two decades. Susan Morris uses the term "co-creative media" (Morris 2003, p. 9) and Henry Jenkins (2007) identifies a pattern where various forms of participatory culture -- from fan fiction to video remixing and modding -- are drawn into cyclical online networks of production and consumption. Both descriptions point towards the core function of Web 2.0, as well as emergent trends in game design. Companies such as Sony used terms like "Game 3.0" to describe the integration of user-generated content creation and sharing tools directly into game systems, contrasting a previous generation of modding where such tools existed as separate software with a higher level of difficulty (Newman , 2008, p. 176). The emergence of easy-to-use creative sandboxes such as *Garry's Mod* (Facepunch Studios, 2006), *Spore* (Maxis, 2008), *LittleBigPlanet* (Media Molecule, 2008) and *Super Mario Maker* (Nintendo EAD, 2015) invigorated existing debates surrounding the ownership and authorship of co-creative media. Who should own the creative works that players make within commercial games, the players or the platform? The commercial benefit that game publishers draw from modding has led several scholars to conclude that profitable modding platforms were emblematic of labour exploitation in economies more generally (Dyer-Witheford & de Peuter, 2009, p. 23). Julian Küchlich characterised modding as "precarious playbour," due to its blurring of work and play (Küchlich, 2005). He describes the paradox of modders devoting large amounts of time to create work that only profits the platform, defined by terms laid out by the game End User Licence Agreement. However, Olli Sotamaa's user studies indicates that despite these uneven commercial footings, free, non-proprietary and commercial cultures often form a productive co-existence, where modders appear unified in their desire to make and share content with a maximum amount of creative freedom and a minimum amount of proprietary restrictions (2010, p. 250). Rather than characterise modding as either a creative product of the exploited masses or a carefree activity within a proprietary environment, we can locate modding in the dynamic tension between these two poles. George Caffentzis's phrase "the Midas Limit" refers to the Greek King Midas, whose ability to make gold eclipsed his ability to make food and thus led him to die of starvation. In platform studies, the Midas Limit is the tipping point where users either flock towards or abandon a platform, depending on the balance of accessibility versus exploitation it achieves. Economically, Caffentzis explains why narratives of user-generated content based purely on exploitation fail to grasp the precarious balance that platforms must achieve to survive commercially. If we apply the Midas Limit principle to analysing the economic exchanges in creative game sandboxes, we could say that modders seek free access to sophisticated tools in exchange for an environment that can support rapid creative innovation, and on the other side, the proprietors of these tools seek to profit from this activity without alienating or driving the modders to another platform. Lawrence Lessig uses the term "Media Hybrid" to describe platforms that seek to "leverage value from a sharing economy," or to "a sharing economy that builds a commercial entity to better support its sharing aims" (Lessig, 2008, p. 177). Like Caffentzis, Lessig builds a balanced socio-historical context for these works based on numerous legal precedents, where the media hybrid must walk a tightrope between the user and the proprietor:

> If those within the sharing economy begin to think of themselves as tools of a commercial economy, they will be less willing to play. If those within a commercial economy begin to think of it as a sharing economy, that may reduce their focus on economic reward. (Lessig, 2011, p. 177)

This tightrope act is not always visible on paper and the exploitation narratives implied by End User Licence Agreement might not play out when the contract is tested in court. For example, in 2009, Adam Ruch gave a detailed examination of how the combined effect of Blizzard Entertainment's End User Licence Agreement and Terms Of Use claimed commercial ownership over almost every action or expression that their players made within Blizzard games (Ruch, 2009). Whilst Ruch's analysis is an accurate reading of these contracts, studies of case law show how enforcement practices and new agreements are continually rewritten to maintain the tightrope of the Media Hybrid or Midas Limit. For example, in 2001, 14-year-old Heather Lawver led a boycott of Harry Potter

products because her fan fiction aggregator "The Daily Prophet" was served a copyright notice from Warner. Lawver collaborated with members of the fan-fiction community who were served similar notices and together they pushed Warner to accept non-commercial remixes of their trademarks as a valid and important activity of their consumer base (Lessig, 2008, pp. 205-213). Christina Hayes shows that the lessons of Warner were applied to modding by Microsoft and Blizzard Entertainment in their 2007 usage amendments, in which Microsoft's "Game Content Usage Rules" and Blizzard's "Letter to the Machinimators of the World" gave users the right to make non-commercial derivative works from Microsoft and Blizzard games. However, as Hayes points out, their definition of "non-commercial" used in both contracts remains highly unstable (Hayes, 2008). Works can appear on websites that are monetised with advertising (such as YouTube), and they can be submitted for creative awards, but even if the proprietor grants the modder a licence to commercialise their work, these licences can be revoked at any time and for any reason (Hayes 2008, p. 571, p. 585). As Hector Postigo noted in 2008, there is a dynamic gap between the "moral economy" of how modders exchange and transform copyrighted material, and how the enforcement of copyright law seeks to protect the commercial interest of media proprietors (Postigo, 2008, p. 59). Or put another way, the evolution of copyright agreements and case law seeks to maintain the uneasy balance of the Media Hybrid whilst avoiding the Midas Limit.

To edge these socio-historical circumstances back towards the aesthetic, Seth Giddings compares the surreal aesthetic exuberance found in computer games to George Bataille's theories of destruction and excess, where modders ritualistically "burn" their surplus labour, which is simultaneously re-invested by game platforms into an evolving cultural amalgam (Giddings, 2018, p. 776). Community disagreements over whether modders should be paid for their creative works seem to match this description of a surreal ritualistic potlatch. In 2015, the Valve Corporation and Bethesda introduced a marketplace for mods, where modders received 25% of the sales revenue, while 30% went to Valve and 45% went to Bethesda (Joseph, 2018). This ignited what Daniel James Joseph describes as a "community crisis," not just because the share of revenue was disproportionately weighted towards game developers, but because it disrupted a creative exchange by inserting ownership clauses within a process where authorship was generally free and iterative. Like Giddings, Joseph notes that despite the underlying contradiction where mods are already commodified by the platform, the community decided that it was better to defend the general exploitation of their gifted labour than accept a partial remuneration that would disrupt the creative flow (Joseph, 2018). If certain mods require others to function, inserting an ownership clause into the chain would create a commercial dependency between modders, which in the case of *Minecraft* and *Skyrim* modding communities sets up complex power hierarchies. Neither starry-eyed adoration of a sharing economy nor a moral condemnation of user exploitation can provide an accurate socio-historical context for the creative works we find in game sandboxes. As I move into the next section and analyse the intersection of modding technology and its socio-historical context, the inflexion point of the Midas Limit will help us to avoid slipping into deterministic readings of the world based around pure exploitation or utopian co-creation.

Database Aesthetics and Games as Creative Software

This article looks at what happens aesthetically when proprietary computer games transform into creative software for the production, circulation and consumption of user-generated content. Ian Bogost writes that the computer game engine "dramatically increases the scope of unit-based abstraction compared to other forms of cultural production," where a single software environment can host a wide number of operations between an array of digital objects, exemplifying the relationship between postmodern aesthetics and software (Bogost, 2006, p. 55). This relationship, as explored at length by Manovich, formalises postmodern cultural functions such as appropriation, remixing and pastiche into common software operations such as importing files, transforming them via copy/paste and other algorithmic functions, and exporting a new file back into the database of contemporary culture (Manovich, 2013, p. 37). Aesthetically speaking, Manovich argues that cybernetics, the database and the algorithm are of equal significance today as linear perspective was to the Italian Renaissance (Manovich, 1999, p. 81). He uses the term "database aesthetics" to describe how human culture became accessible as an array of discrete entries or files, which be imported, transformed and exported back into an ever-evolving whole. Database aesthetics describe in software what Jean Francois Lyotard described in language: a shift from logically connected grand narratives to a system of fragmented and relativistic "language particles," where meaning and understanding can no longer be based on the assumption of a shared rational ontology, but coalesce in temporary "patches of local determinism" (Lyotard 1979, xxiv). In visual culture, Nicolas Bourriaud describes this as "post-production culture," where creative activities query the database, and new works are "reinvested," referring to Situationist Asger Jørn's claim that "all the works of the past must be 'reinvested' or disappear" (Bourriaud, 2002, pp. 36-37). On a more personal or individual level, Hiroki Azuma studies how Japanese Otaku obsessively remix and curate cultural fragments as a way of feeling at home within a database society. Azuma describes the Otaku as "database animals" whose cultural curation resembles a form of nesting behaviour, creating a personalised reality by surrounding themselves with remixes of characters and narrative fragments (Azuma, 2009, p. 47). Azuma (2014) later acknowledged that Otaku nesting behaviour had shifted into the mainstream, and what Eli Pariser (2011) described as the algorithmic filter bubble can be understood as a co-creative adaptation to database culture. Within this bubble, we all curate a cultural nest from database fragments, whether this be a particular configuration of podcast subscriptions and social media channels -- or as I show in *Dreams*, a familiar mix of game mechanics, characters and ludic memes. Returning to Bogost's observation of the game engine as the postmodern software *par excellence*, I propose that the socio-historical and technological aesthetics discussed so far are intensified and distorted by how game sandboxes tend to fold creative software, game engines and social media into single all-encompassing platforms.

Computer game sandboxes exist at a densely packed postmodern intersection where the remix is constrained by copyright protections over certain cultural fragments. The Midas Limit creates a precarious balance between the cost of creating an easy-to-use platform, and the need to compete with other platforms for users and revenue to offset this cost. As a distillation of these factors, Sianne Ngai's categories of the "interesting," the "cute" and the "zany" provide an invaluable entry point for examining the aesthetics of computer game creative sandboxes. Where postmodern theorists such as Fredric Jameson highlighted the intellectual impotence of pastiche and the unrepresentable nature of the global economic system (Jameson, 1992, p. 10), Ngai argues that the interesting, cute and zany are functional and accessible aesthetic categories that describe how contemporary cultural forms reflect their historical moment. For Ngai, the aesthetic category of the "interesting" refers to the cerebral and detached exchange of information -- the press release poetics of the "merely interesting" conceptual art (Ngai, 2012, p. 13). It is the pause we give ourselves when we describe something as "interesting" that creates an unemotional sense of distance for the intellectual judgement we do not yet have. The "cute" is our sad and pathetic obsession over aesthetic forms onto which we can project intimacy and care. Objects small enough to own, to cuddle, to smother and consume, be they socks, puppies or cookies, share a "cute" aesthetic that converts care into consumption (Ngai, 2012, p. 9). The "zany" refers to our fascination with watching people prostrate themselves for our entertainment, so long as we are not implicated. Deriving from the itinerant servant found in the commedia dell'arte character *zanni*, the zany can be found in the performative exuberance of affective labour, when one person's work is another's entertainment, highlighted in the prostration of the reality TV show contestant, the gregariousness of a livestreamer and in the precarious playbour of Küchlich's modder (Ngai, 2012, p. 14). For Ngai, almost all of Web 2.0 can be read through this lens "with its zany blogs, cute tweets and interesting wikis" (Ngai, 2012, p. 14). In the second half of this article, I suggest that *Dreams* folds the material history of modding into the technological acceleration of software and platform studies, resulting in exaggerations of Ngai's aesthetic categories, which I describe as the claustrophobic, the repetitive and the redundant.

Dreams

Dreams is a sandbox platform developed by Media Molecule for the Sony PlayStation published in 2020 that combines sophisticated 3D software tools with an internal social media network for sharing games, 3D sculptures, assets, rendered images and other user-generated content. For my research, this enfolding of creative software, a game engine and a social media platform into a single system required a peculiar shift between play-based game analysis, software and media studies. I first approached *Dreams* as an object of study by learning to use its internal editing tools and then playing the top 25 ranked player creations on its internal network using a variety of approaches to generate initial observations and calibrate my thoughts. Using Lars Konzack's layered methodology (2009), I learned to 3D sculpt and build game levels within the *Dreams* interface and to understand the cultural references made by creative works on the platform relative to the semantic relationship between game components and the *Dreams* system. In reference to Jon Dovey and Helen Kennedy (2006), I examined how categories of gameplay changed with each creation, and how highly developed user creations exerted resistance and required that I develop skill, whereas less finished sketches or demos required that I suspend ludic disbelief to appreciate the potential of simple tests uploaded for community feedback. Inspired by Christian Elverdam and Espen Aarseth's typological framework (2007), I identified a peculiar teleology in the platform, where playing games like one watches YouTube videos introduced the haste of distraction, and my ability to focus on any particular user creation was disrupted by my curiosity for what better game might be coming up next in the playlist. Cumulatively, this process began to resemble what Sean Duncan described when learning to play *Minecraft,* when the experience of playing a new game more closely resembled that of learning to use a new piece of software (Duncan 2011). This experience also had its own affective quality, a sort of "floppiness" that I identified through Daniel Vella's (2016) notion of the ludic muse. The aesthetic muse to the experiential world of *Dreams* felt floppy: when I was trying to 3D sculpt with a PlayStation Dualshock controller, my skills in Blender had been lost and I felt like I was learning to draw with a rubber pen. When I was playing user creations, the physics driving this voxel environment felt bouncy like rubber or floppy like plasticine. Even when I was skipping through creations on the internal sharing network, my attention span felt overcome with this general sense of plasticine fluidity. When it was no longer feasible to think of myself as a player in any meaningful sense, I returned to Manovich and software studies, and considered how *Dreams* compared to other forms of creative software, noting that the absence of import and export features marked it as a highly unusual walled garden of creative content. In the following three sections, I describe various features of *Dreams*, organised into three aesthetic categories: the claustrophobic, the repetitive and the redundant. I identified these categories as a consequence of my initial experience of the platform, and in the conclusion, I contextualise them relative to Ngai's cute, zany and interesting concepts to reflect on the aesthetic outcome of enfolding creative software, games and social media into a single system.

Claustrophobia

Mary Flanagan (2014) described the ludic aesthetic language of a computer game as that which emerges across the vocabulary of physical and graphical controls, render engines, game resources and scores, resulting in a diffuse aesthetic environment that the player experiences. But by combining the 3D modelling tools, game engine and game sharing platform into a single piece of software, *Dreams* confronts the user with a ludic aesthetic language that feels like it has folded back over itself. Due to a highly innovative use of voxel rather than polygon graphics, *Dreams* has made it easier for users to create game content without having to worry about slow frame rates driven by large polygon counts or the complexities of defining additional meshes for physics simulation; as a consequence, *Dreams* has lowered the barrier for entry for game modification (Evans, 2015) (80Level, 2018). As

a software tool, *Dreams* behaves more like a game than say, Adobe Photoshop, and the first game levels I design are driven by a series of gamified challenges. But with this ease of use comes a high degree of aesthetic consistency, and the closed system of *Dreams* that cannot import external 3D files results in a peculiar "house style" of pastel colours and "floppy" physics. As I play through the top 25 ranked creations in *Dreams*, I find myself comparing all of them to this underlying aesthetic. For example, in "Southpaw Cooking" by *Dreams* user kapten_basse, the pastel colours and floppy character movements are strikingly similar to those found in the first-person shooter "Prometheus" by *Dreams* user rothniel, or the co-op fantasy role play game "Heroes of Aldrenor" by *Dreams* user DarkestEssence.



Figure 1. 'Southpaw Cooking' by user kapten_basse. Dreams screenshot (Media Molecule, 2020). Click image to enlarge.

In a *Dreams* creation that does happen to overcome the house style, this very achievement dominates my first impression. For example, user @MartinNebelong recreated the Unreal Engine 5 product demonstration of a rocky cave and ruined temple (Unreal Engine, 2020), but as a player, I measure this virtuosic work as an exception to the usual pastel floppiness, looking closely and muttering "wow, this was made in *Dreams*!" This aesthetic conformity can be traced back to a debate in software studies between the puritanism of Fredrick Kittler, and the pragmatism of Don Ihde. For Kittler, the more complex a software tool becomes, and the more the user operates at the level of the graphical user interface rather than low-level programming languages, the more distanced the user and the creative output become from the "essence" of computation (Manovich, 2013, p. 20). This aesthetic puritanism is, however, countered by the pragmatic desire for people to use computational tools, which drives the design principles of Game 3.0 and Media Molecule. Ihde argues that where anti-technological rhetoric might steer towards a nostalgia for simple tools like a hammer, which seem to effortlessly imply a sense of embodiment, this embodiment is not constrained to the apparent simplicity of the tool itself. Rather, the desire for the tool to "become me" is balanced by the individual's basic desire to acquire the power that the tool makes available -- be it the power of driving a bulldozer, or in my example, the power to perform complex software operations using a simple graphical interface. Idhe describes this desire as contradictory -- "I want the transformation that the technology allows, but I want it in such a way that I am basically unaware of its presence" (Ihde, 1990, p. 75). The popularity and commercial success of Adobe Photoshop speaks to Idhe's argument of paradoxical desire, but the aesthetic homogeneity of colour gradients and preset filters that filled the world of graphic design following Photoshop's 1990 release speaks to Kittler's concern about creative restrictions and complex tools. The house style of *Dreams* speaks to both of these functions, which I articulate using the notion of aesthetic claustrophobia. It is easier to create works in the house style, and it requires more effort and virtuosity to propel yourself outside of it.



Figure 2. User @MartinNebelong's recreation of the Unreal 5 product demonstration using *Dreams. Dreams* screenshot (Media Molecule, 2020). Click image to enlarge.

The aesthetic claustrophobia of *Dreams* as a software tool extends into its function as a platform for sharing user-generated content. Like YouTube, *Dreams* presents a scrolling feed of creations ranked by play counts and likes, which are curated according to what I have already played combined with what is currently popular with other users. As Pariser (2011) writes of filter bubbles

and Patrick Vonderau (2016) writes of YouTube specifically, the commercialisation of user-generated content requires homogenisation, where viewing history and community patterns are balanced to effectively curate works and engage the individual user. But where YouTube can bring me a vision of the outside world and the lives of others, *Dreams* presents only works made inside this very platform, violating the "import" and "export" function described by Manovich, and replacing it with a world that seems to claustrophobically recycle itself. *Dreams* has achieved significant technological innovation, particularly in the use of a voxel-based environment, but like many similar platforms, it tends to encircle the user with creations based on what the user has already experienced, and unlike other environments, these creations have all been produced within the same software environment. This description of claustrophobia is not intended as a pejorative; it is simply an attempt to describe the aesthetic consequence of folding the creative tool into the run-time engine and the sharing platform.

Repetition

Manovich's description of software studies and remix culture implies repetition, where existing works in a cultural database become the raw material for new creative alterations in a recursive loop. In this section, I suggest that repetition exists beyond the recursion of software operations or duplications of pastiche, and that from creative works to entire legal paradigms, repetition is intensified in *Dreams* as the functions of creative software, play, publication and sharing are all folded into the same environment.

Azuma's notion of the database animal suggests that curating and remixing fragments is a personal strategy for finding identity and comfort in what is otherwise an imperceptibly large and diffuse dataset of contemporary culture. Azuma originally used the term "animal" because of how Alexandre Kojève imagined art after the end of history. Kojève believed that formal processes of artists making artworks would dissolve into an animalistic behaviour where people "would construct their edifices and works of art as birds build their nests and spiders spin their webs" (Kojève, 1980, p. 159). This nesting metaphor helps to explain the repetitive cycles of creation found between *Dreams* and other sandbox platforms. Within *Dreams*, the "DreamSurfing" section allows users to share their creations, which can be rated with likes and remixed by others. The top 25 rated creations I played presented a relatively even split of polished playable games and unresolved demos, but what was noticeable among them all was the replication of characters and mechanics from other games, mods and sandboxes -- so much so that these works seemed to implicitly respond to the question "could I (re)make this in *Dreams*?" For example, the creation "Sonic Adventure: Dreams Edition v1.0.4" by users RichMenace_94 and fivetimesone is a convincing attempt to recreate the world and mechanics of the Sega franchise. "Ommy Kart" by user ManChickenTurtle and Aucratic looks, feels and sounds like *MarioKart* (Nintendo, 1992-2020) and Robo_killerv2's "Fallout 4: Dreams Edition (1.03)" looks and feels like *Fallout 4* (Bethesda, 2015).



Figure 3. "Sonic Adventure: Dreams Edition v1.0.4" by users RichMenace_94 and fivetimesone. *Dreams* screenshot (Media Molecule, 2020). Click image to enlarge.

Repetition in the form of replication is not limited to commercial remakes and is evident in the "mixed-up and memefied" (Boluk and LeMieux, 2017, p. 186) recreations of mods housed in other sandboxes. For example, "Harry Potter Obama" by *Dreams* user BrrrAcaVoy presents a 3D platformer game featuring Shrek, Kermit The Frog and Trump Tower in a remix similar to the "Deathrun Trump Tower" server on *Garry's Mod* (made by Bunsy) or the "Trump Tower Tycoon" role play level on *Roblox*, made by ARE Game Creation Studios. Following Azuma, this repetitive recreation of characters and worlds might be understood as the first act of inhabitation: when players encounter a new platform, they start by recreating familiar cultural works. These repetitive remixes can be a way to test and compare the mechanical capabilities of the platform, as well as a way to feather their cultural nest. On such repetition, Robrecht Vanderbeeken writes:

> ...Baudrillard's looming phantom of the simulacra seems to have been superseded by the individual's compulsion to copy. The urge for repetition and redundancy, the so-called Freudian death-drive, here clearly functions as a vital and primal force of survival. (Vanderbeeken, 2011, p. 47)

This force for survival, what Asger Jørn described as "reinvestment" and Azuma described as nesting behaviour is an unmissable aesthetic feature of the cultural content within *Dreams*, and also one of the most predictable and straightforward. Having

presented a new sandbox platform, users begin to test the waters. But it is not only the remixing of cultural content which evidences repetition: the entire legal ecosystem of the Media Hybrid and the Midas Limit has been reproduced within *Dreams.* The End User Licence Agreement for *Dreams* states:

> By creating, posting, streaming, transmitting or providing SIE (Sony Interactive Entertainment) any User Material, you represent and warrant that your User Material does not infringe on the intellectual property or other rights of any third party. (Sony Interactive Entertainment, 2020)

In March 2020, responding to a copyright complaint from Nintendo, Sony removed certain replications of Nintendo games and characters from *Dreams* (Desatoff, 2020), and in a 2019 blog, *Dreams* users recreated the same basic pillars of the paid modding versus potlatch economy argument that Joseph observed in the Skyrim community. By folding the creative software, the game engine and the sharing platform into a single environment, *Dreams* has intensified aesthetic repetition beyond audio, visual and ludic remixes to the entire socio-historical context of modding, from copyright claims to monetisation debates. Furthermore, as I demonstrate in the next section, *Dreams* replicates the paradox of the Midas Limit and the risks o involved in operating a creative platform that does not have an export function.

Redundancy

In April 2023, Media Molecule announced that they would stop supporting *Dreams* as of September 2023, stating that "whilst we've always had the desire to build on the foundation of Dreams and expand the experience, when reviewing our plans we were not able to define a sustainable path" (Media Molecule, 2023). The term "sustainable" suggests that rather than exceeding the Midas Limit, *Dreams* could not attract enough users to justify software maintenance and development of the platform, illustrating why the economic tipping point of the Midas Limit can give us a more complete picture than simply focusing on the exploitation of users. All forms of digital information storage risk redundancy and decay, due to rapidly changing software environments where the more esoteric the file type and the software required to open it, the greater the risk of redundancy. Since its release, *Dreams* has offered no way for players to import external files other than sound or to export creations into formats exchangeable with other software, thus resulting not only in the claustrophobia described above, but also in a highly precarious archive of user creations. While we cannot predict how long *Dreams* creations will survive without regular updates, we can look nearby for a prediction. In 2019, following Media Molecule's decreased support for *LittleBigPlanet*, Trixel Creative developed a not-for-profit fan game *LittleBigPlanet Restitched* (Trixel Creative, 2019) which sought to house and preserve the user-generated content from the dying platform. In February 2020, Sony issued a cease-and-desist letter to Trixel Creative, and the project swiftly came to an end. When recounting the fate of *LittleBigPlanet's* creations, Jack Yarwood noted that "for most members of Trixel Creative, LittleBigPlanet wasn't just a game, it was a second home" (Yarwood, 2020). The aesthetic feature of redundancy can be directly related to repetition. Returning to Asger Jørn's claim that works of the past must be reinvested or disappear, we can understand repetition as not only a cultural nesting behaviour, but also a hedge against digital redundancy within a database society, a rapid transcoding of ideas to outrun the high entropy of sandbox platforms. For every "Harry Potter Obama" on *Dreams*, there should be a "Trump Tower Death Run" in *Garry's Mod*, a "Trump Tower Tycoon" on *Roblox* and a similar reinvestment as these sandbox platforms age out of developer support. Jørn's claim points to the broader reality that individual works of creation always face a losing battle with entropy, mediated by how patterns of value prioritise the preservation of some works over others. For example, in the ephemeral and quasi-legal culture of street art, local councils have been known to issue fines and paint over some walls while installing Plexiglas over others to protect the works of artists who have risen to fame (Young, 2010). To expand the aesthetic feature of redundancy to the broader relationship between creative input and cultural preservation would require a much longer discussion, but in the case of *Dreams*, it is simple enough to highlight redundancy as a particularly dominant feature. As the platform pursued ease of use and profit by vertically integrating the creative tools, game engine and sharing environment, it increased the risk of total redundancy via the lack of import and export functions. Without an export function, any highly specialised platform faces the flip side of the Midas Limit, where there is no money for developer support without a sustainable user base, and all works will eventually go down with the ship.

Conclusion

In this article, I have attempted to outline an economic, legal, technological and cultural context for the creative works that appear in creative game sandboxes. Beyond the eccentricities of any individual work, we might understand the forces that shape their creation (and recreation), and therefore understand them as artefacts that can crystallise and reflect this very context back to us. I identified the aesthetic features of claustrophobia, repetition and redundancy using a combination of methodologies from game, media and software studies. Parsing them back through Ngai's more wide-ranging categories of the zany, cute and interesting can allow us to see the results of enfolding creative tools, game engines and sharing platforms into a single software system more clearly. The repetition of the zany and the cute found in creative content and the replication of copyright and labour disputes suggests a form of pastiche in both the art and the system, where, to paraphrase Jameson, the system of the arts has revealed itself. This suggests that the zany, cute and interesting themselves are liable to a form of pastiche. On the other hand, the claustrophobia of the software tool creates a form of discomfort that characterizes Ngai's "interesting." Ngai's aesthetic category of the interesting focuses on language and communication, "an aesthetic about difference in the form of information and the pathways of its movement and exchange" (Ngai, 2012, p. 1). The interesting allows for a pause between the Greenburgian limit of instantaneous aesthetic judgement and the reflective justification -- to mark something as interesting gives us the ability

to come back and say why it is interesting (Ngai, 2012, pp. 171-73). The claustrophobia of *Dreams* is an affective quality revealed through an interesting technological enfolding. On an abstract socio-historical level, we might identify claustrophobia in the monopolistic tendencies of platform capitalism, but the claustrophobia of *Dreams* brings this home on a more affective level. It is the outcome of a one-stop-shop for 3D creation, play and sharing, and one of the interesting reasons that this platform feels uncomfortable. Through the interesting, I have discovered the claustrophobic, first as an affective sensation deriving from a house style of easy-to-use tools, and second as a rational consequence of technological innovation in an enclosed software system that does not include the import and export functions expected of software tools in a database society. Redundancy in the software tool reminds us that platforms exist in a precarious balance with their users, the broader user base is extraordinarily large and the competition for a sustainable user base places a large number of creative works at constant risk of going down with a sinking platform. If Game 3.0 predicts similar enfoldings of the creative tools, the game engine and the sharing network, I believe this aesthetic analysis might be of further use.

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